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NEW RESEARCH RESIDENT POSTER SESSION 01
May 14, 2011
10 – 11:30 AM
Hawaii Convention Center, Exhibit Hall, Level 1

NR01-01
PROMOTING HEALTH THROUGH THE BEAUTIFUL GAME: ENGAGING WITH AND ADVOCATING FOR RESIDENTS OF VANCOUVER'S DOWNTOWN EASTSIDE THROUGH STREET SOCCER

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SUMMARY:
Vancouver's Downtown Eastside is one of the poorest neighbourhoods in North America. Mental illness and addictions are prevalent and contribute significantly to marginalization and social disadvantage.Street Soccer for people affected by homelessness re-engages marginalized people into communities (Sherry, 2010). Since 2002, the Homeless World Cup has repeatedly demonstrated that, through soccer, over 70% of people affected by homelessness are able to significantly improve their lives (www.homelessworldcup.org). Following this international movement, the Vancouver Street Soccer League provides friendship for the homeless, physical fitness for the ill and addicted, direction for at-risk youth, and cultural focus for other unique populations such as inner-city First Nations people. Over the last two-and-a-half years of coaching Street Soccer, the authors have seen players create lasting relationships, find jobs, get better housing, reconnect with heritage, and recover from illness. Qualitative data collected through surveys from Street Soccer players in Vancouver also suggests that significant benefits to Street Soccer participants include increased physical fitness, improved mental health, reduction of substance use, increased social contacts, and improved housing.

NR01-02
LE COURLIS: AN INNOVATIVE RESIDENTIAL-SETTING REHABILITATION PROGRAM IN ERSTEIN - ALSACE (FRANCE)

Chp.: Michel Burger M.D., Centre Hospitalier Erstein, 13 route de Krafft BP 30063, Erstein, 67152 France, Co-Author(s): Christelle Nithart, Ph.D., Luisa Weiner, M.Sc., Jean-Philippe Lang, M.D.

SUMMARY:
Introduction We present the psychiatric rehabilitation program we are developing in Erstein, France, since September 2008. This program is based on a residential facility located in the community, which is conceived as an interface between inpatient care and psychosocial rehabilitation. Objective To evaluate the viability of the Courlis residential facility in facilitating patients' psychiatric rehabilitation. Method A comprehensive psychosocial and medical evaluation is undertaken at admission. Criteria for admission are the following: functional disability due to chronic psychiatric illness in symptomatic remission, and very low socioeconomic status. A socio-educative and a psychiatric team act together to improve independent social functioning, symptomatic remission, and quality of life, according to individual profiles and aims. Specific workshops, such as psychoeducation and cognitive remediation, are proposed to residents. Results A total of 33 patients (25 male), aged between 21 and 59 years (mean=35.2) have been admitted. 82 % of them were Caucasian, and 82% single (18% divorced). 67% were inpatients before admission (course of hospitalization mean=8.7 months), 24% homeless, and 9% were living within their families; 91% of them suffered from schizophrenia-spectrum illnesses; 36% were independent concerning medication; 95% were addicted to tobacco, 37% had a problematic use of alcohol or marijuana. 25% were multiple drug users in the past; 10% of them were treated with Suboxone® or Methadone®. 39% presented with somatic comorbidities (i.e., 3 were HCV positive).Two years after its creation, preliminary outcome results are the following: 61% of residents needed to be hospitalized due to psychiatric relapse (less than a week for 70%). 8 residents left the Courlis: 2 of them now live elsewhere, 3 were excluded because they did not abide with community rules, 3 of them needed long-term inpatient care, and 5 others plan to leave in 2012. 4 residents found full-time jobs during their stay, and one of them started a college degree. All residents now consult regularly with a GP, 25% of them have started a nicotine cessation program. 1 patient out of 3 is no longer HCV positive. 42%

now manage their medication independently. Discussion Preliminary results suggest that although half of the residents still needed short-term inpatient care, most of them adjusted well to the residential setting, and became more active and independent regarding namely medication, and work – thus, quality of life was improved. It is worth noting that patients whose functional abilities were probably insufficient left the Courlis early. In the future, admission criteria should therefore be reevaluated. Additionally, other rehabitation tools, such as social skills training should be integrated, in order to facilitate psychosocial recovery.

NR01-03

BRIDGING RESIDENCY TRAINING WITH CONSUMER ADVOCACY GROUP: ASK-A-DOC PROGRAM WITH SAN DIEGO NATIONAL ALLIANCE ON MENTAL ILLNESS

Chp.:Steve Koh M.D., RTO 9116A, 9500 Gilman Dr, La Jolla, CA 92093

SUMMARY:
In psychiatry practice and clinical services, there are many barriers to effective collaboration between mental health professionals, patients and families (1). There still exists mental health stigma and misconceptions of psychiatric treatments and care. Good therapeutic outcome can come from increasing patient and family member educational outreach (2). Furthermore, there continues to be a need to build close working relationship between academic institutions and the underserved community (3). The importance of community outreach and relationship can be taught best early in a psychiatrist's career. Exposure to the community setting and public psychiatry needs to happen early (4). During training, active engagement with the community fosters better relationships and provides valuable advocacy training (5). Consumer advocacy group National Alliance for the Mentally Ill (NAMI) provides excellent models for close relationship building with community members with mental illness (6, 7). There exists evidence of mutual benefit gained by providing advocacy with patients (8). It stands to reason that academic training programs and local NAMI chapters can work together to achieve common goals. In San Diego, residents have established a monthly community outreach program with the local NAMI branch called Ask-A-Doc. Volunteer residents from University of California, San Diego and Naval Medical Center, San Diego have been attending monthly educational events open to all NAMI members from 2009 to present. The format is open with residents introducing themselves on first name basis. NAMI members (patient or peer or family member) ask questions of the residents without any restrictions. The sessions often broaden residents' perspectives and work to decrease barriers between physicians and patients, peers and family members. Work with NAMI has resulted in active partnership with residents leading to participation at a NAMI state conference and local branch board membership. The informal relationship building has contributed to the advocacy and community outreach training for the residents. This poster will present the Ask-A-Doc program, review survey results from residents who have participated in the program, and present perspectives from NAMI members who attend the meetings.

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NR1-04

VARIATION IN SUCCINIC SEMIALDEHYDE DEHYDROGENASE (ALDH5A1) GENE IS ASSOCIATED WITH EYE TRACKING AND EARLY VISUAL PROCESSING DEFICITS IN SCHIZOPHRENIA

Chp: Nithin Krishnal, M.D. Ikwunga Wonodi, MD, Elliot Hong, MD, Sarah Morris, PhD, Colin Stine, PhD, Gunvant Thaker, MD Maryland Psychiatric Research Center (MPRC),Department of Psychiatry, University of Maryland, School of Medicine, Baltimore, MD

SUMMARY:
Background: Several investigators have argued that endophenotypes (i.e., neurophysiological deficits that are stable, heritable and mark disease liability) can play an important role in identifying vulnerability genes and help drug development. Abnormality in smooth pursuit eye movements (SPEM) is a well-established endophenotype that has a significant linkage to chromosome 6p24-21 locus. Methods: We examined the association between SPEM and several single nucleotide polymorphisms (SNP) covering 5 candidate genes mapping on to chromosome 6p24-21 locus (DTNBP1, TTRAP, KIAA0319, DCDC2 and ALDH5A1). The sample consisted of 351 subjects (177 with schizophrenia) on whom we had SPEM data. In a smaller sample we examined phenotypic overlap in reading ability and eye tracking phenotype. Results: Analyses showed significant ALDH5A1 rs2328824 and rs3765310 genotype by diagnosis interaction on closed-loop gain (findings with rs2328824 survived FDR corrections). Minor genotype was associated with poor closed-loop gain compared with the other genotypes. The ALDH5A1gene codes for succinic semialdehyde dehydrogenase (SSADH) enzyme that degrades GABA. The rs3765310 SNP is a missense mutation that decreases SSADH activity by about 46%. The SSADH deficiency results in an increase in GABA and ?-hydroxybutyrate (GHB) levels, and a decrease in cortical GABA-A binding. Based on findings that SSADH deficiency impairs early visual processing, we examined visual evoked potential in a subgroup of our subjects (n=34) and found a significant effect of ALDH5A1 rs2328824 genotype on P1 amplitude ($p<0.05$). Since the gene is implicated in dyslexia, we examined reading disability in a small subgroup of the sample and found a significant correlation between Nelson reading speed and predictive pursuit gain ($r=0.57$, $p<0.05$, $n = 32$). In a pilot study in 6 subjects, we examined the effects of tiagabine, a GABA transaminase inhibitor, on SPEM and found an improvement in predictive pursuit with tiagabine but not with placebo. However, this effect was statistically not significant ($p<0.15$). Conclusion: Our data implicates ALDH5A1 gene in the etiology of schizophrenia, particularly visuomotor abnormality. Based on this we suggest that GABA agonist may have a treatment role at least in patients with such deficits. Visuo-motor deficits and associated impairment (e.g.,working memory), may benefit from such treatment. Variation in ALDH5A1 gene may predict the pharmacological response.

NR01-05

ADULTS WITH SEVERE PSYCHIATRIC SYMPTOMS IN A COMMUNITY PARTIAL HOSPITALIZATION PROGRAM: CHARACTERISTICS AND PREDICTORS OF CLINICAL RESPONSE

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SUMMARY:
Background: Evidence suggests that Partial Hospitalization Programs (PHPs) for adult patients with severe psychiatric symptoms may be as effective as inpatient hospitalizations. Yet, community studies on the effectiveness of PHP are limited. Research is warranted to identify characteristics and predictors of a successful clinical response to PHP treatment. Methods: Patients enrolled in a PHP (N=164) were administered serial clinical assessments using the BASIS-32 (Behavior and Symptom Identification Scale), a validated measure consisting of 32 self-reported questions representing 5 domains that include Daily Living and Role Functioning (DLRF), Relation to Self and Others (RSO), Depression and Anxiety (DAA), Psychosis, and Impulsive and Addictive Behavior (IAB). Multiple regression analysis was performed to identify whether demographic factors (such as age, gender, race, marital status, level of education and living arrangement) and/or baseline domain scores were associated with treatment adherence and improvement in symptom scores. Outcomes were compared between adherent and non-adherent individuals and between 5 domains of adherent individuals. Results: Out of 164, 82 (50%) patients received more than one assessment indicating adherence to the PHP. Among adherent individuals,

45 (27.43%) showed > 30 % improvement and 28 (17.07%) showed > 50% improvement in scores across all 5 domains. Although no significant ($p<0.05$) differences were found between adherent and non-adherent individuals, a trend for non-adherence was associated with younger age ($p=0.065$) and lack of marriage ($p=0.073$). The largest improvement was found in RSO and DAA domains, whereas the IAB domain showed the smallest improvement. The response in each domain significantly ($p<0.0001$) predicted the response in other domains. No significant statistical correlation was found between demographic factors or treatment duration and clinical improvement in any domain. When a question assessing psychosomatic symptoms (PS) was considered as a separate domain, Caucasian race ($p=0.01$) was associated with improvement in PS. Conclusions: Phase dependent symptoms such as DAA may show relatively greater response in PHP than characterological symptoms such as IAB. As clinical response among the different domains is positively correlated, the presence of an early response in one domain may predict a response in other domains over time. Demographic factors and type of psychiatric symptoms do not appear to predict adherence to PHP treatment. Moreover, demographic factors do not appear to predict improvement in any psychiatric domain and so it should not be emphasized when considering PHP treatment. Small sample size and heterogeneous population were the limitations of the study.

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NR01-06

TRENDS IN THE DIAGNOSIS OF PSYCHIATRIC OUTPATIENTS OVER 8 YEARS IN KYUNG HEE UNIVERSITY HOSPITAL

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SUMMARY:
Objective: The Korean society is evolving at a rapid speed and so is the perception of the psychiatry. The National health survey conducted in 2006 showed that only 21.4% of the psychiatric service utilization was for psychotic disorder, while 33.2% was for affective disorders, 22.2% for anxiety disorders, and 8.1% for alcohol abuse. However, it is our belief that the actual number and the composition of patients visiting the university hospital have altered significantly. Based on this hypothesis, we have decided to investigate the changes in the number of the patients and the diagnosis of these patients visiting Kyung Hee university hospital.Methods: From January of 2001 when the hospital system was computerized, to December of 2009, the number of outpatients per year and main diagnosis based on ICD-10 were subdivided into F00-F09, F10-F19, F20-F29, F30-F39, F40-F48, F50-F59, F60-F69, F70-F79, F80-F89 and F90-F98. The trends in each group from 2001 and 2009 were further observed. Results: The number of outpatients are in overall, on the rise and compared to 2001, the number is expected to increase by 50% in 2009 (13167 in 2001 vs 19825 in 2009), and the finding shows that the increase in the number of patients were most significant in teens and the population over 60 years of age. (Teen population: 749 in 2001 vs 1625 in 2009, increased by 110%, the population over the age of 60: 2062 in 2001 vs 5918 in 2009, increased by 180%). There was no significant difference for the conventional psychiatric major illnesses such as F20-F29 (schizophrenia, schizotypal and delusional disorders) and F30-F39 (mood disorders), whereas the number increased significantly for F00-F09(organic, including symptomatic, mental disorders) and F40-F48 (neurotic, stress-related and somatoform disorders) (F00-F09: 867 in 2001 vs 2002 in 2009, increased by 130%, F 40-F48: 2657 in 2001 vs 6116 in 2009, increased by 130%).Conclusion: The increase in the number of outpatients for this university hospital, shows similarity with the findings from the announced the growth in the number of psychiatric outpatients between 2001 and 2006 (35% increase) from the survey conducted by National Health Insurance. Noticeably, the marked increased in F00-F09 and F40-48, is speculated to be the result of the changes in the overall perception about the psychiatry, national long-term care policies for the elderly and early detection of dementia projects by local communities. Even hereafter, the consistency in policies and the continued activities to improve the

perception about the psychiatry would be required.

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NR01-07

DETOX: MEDICAL OR PSYCHIATRIC?

Chp.:Eri Shinozaki M.D., 4904 S Oxbow Ave #203, Sioux Falls, SD 57106, Co-Author(s): Gen Shinozaki, M.D.

SUMMARY:

Background: There is a general guideline available for the treatment of alcohol detoxification1, which also describes outpatient follow up versus inpatient treatment with close monitoring using CIWA protocol. However, there is usually no mention of criteria with regard to deciding upon psychiatry inpatient treatment versus medicine inpatient treatment. Apparently, different institutions have different practices with regards to this aspect. Some psychiatric hospitals do not accept patients only for detoxification; instead, either medical floor or local detoxification centers are utilized. In other places, psychiatric hospitals admit detoxification patients in case of uncomplicated and suicidal ideation/behavioral problems. Some medicine services do not take "detox" cases, claiming no staff available for one to one observation in the case of behavioral dyscontrol or "suicidal" patients. Objective: To review examples of challenging cases and the available guidelines and literature to better understand the current practice in treating detoxification from substances in inpatient settings, with the focus on criteria for psychiatric admission versus medical admission.Cases: Case 1; Mr. A. 46 y.o. Caucasian male, with history of alcohol dependence and history of seizure disorder, admitted to medical floor due to the high risk of complication from alcohol withdrawal, placed on CIWA.Case 2; Mr. M. 40 y.o. Caucasian male, drove his car to ER while intoxicated seeking detox. His blood alcohol level was 398mg/dL. He has been drinking 750 mL bottle of alcohol on a daily basis. The pt. denies any hx of withdrawals or seizures from alcohol withdrawal, but he has been drinking constantly. An ER physician suggested that he say he is suicidal as that would guarantee him admission to mental health, and the pt. did so although he never had any suicidal thoughts. Due to the false information of suicidality, he was admitted to psychiatry.Case 3; Mr. C. is a 30 y.o. Caucasian male, with history of narcotic dependence with co-morbid poly-substance dependence including alcohol and benzodiazepine. His blood alcohol level was 89mg/dL. Reportedly, he denied suicidal/homicidal ideation. He has had a very difficult time stopping vicodin 100mg, for the last 3 years. Every time he tried to stop, he has had severe withdrawal symptoms with nausea, vomiting, flu like symptoms, and insomnia. He reported no history of withdrawal problem from alcohol. He was admitted to psychiatry.Discussions: Points to consider when choosing between medical versus psychiatric admission include, history of alcohol withdrawal seizure, history of suicidal ideation and/or past suicide attempt, psychiatric diagnosis or current medications, ongoing medical conditions, man power needs in order to place close one to one observation, and in reality, resistance from unit staff (lack of knowledge and/or experience). Some take more cautious approach than others, which is probably influenced by financial and/or administrative aspects of care delivery. There were a number of studies looking at clinical and lab predictors for the risk of seizures and/or delirium tremens2 but there are not widely accepted recommendations to guide clinical practice. Conclusions: Standard of practice is needed to avoid inconsistency among providers especially from medicine, emergency room, and psychiatry.

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NR01-08

PATTERN OF SUBSTANCE USE IN THE GERIATRIC POPULATION WHO PRESENT TO THE PSYCHIATRIC EMERGENCY SERVICES

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SUMMARY:
Introduction: Substance abuse in the geriatric population is a topic of interest given the considerable increase in the population of aging adults in the United States. While there is increasing data regarding alcohol use in the elderly, few studies have addressed the question of prescription drug abuse or illicit substance abuse. According to data published by the U.S. Census Bureau, 36 million people in the United States were 65 years of age or older in 2003, making up 12% of the population, a number expected to double by year 2030 and by 2050 this population size is projected to increase to 86.7 million. In 2008, SAMHSA reported an estimate of 20.1 million Americans over the age of 12 used drugs within one month of the survey date. The rate of older adults using illicit drugs has increased from estimated 2.7% in 2002 to 4.6% in 2008 a phenomenon which may be explained by aging baby boomers whose lifetime prevalence of substance use is higher than in older generations. Based on this report it is reasonable to assume that if the baby boomers continue to use illicit substances with similar prevalence, at least one million of American residents over the age of 65 will have an illicit substance use disorder.Methods: The goal of our study was to evaluate substance abuse in the elderly who present to a busy urban psychiatric emergency service (PES). With IRB approval, we obtained medical records of 172 patients age 65 or older who presented to the PES within a one year period. Demographic and clinical data was collected from the medical records, including substance abuse histories, results of urine drug screens (UDS) and breath alcohol concentrations (BAC). Patients were divided into two comparison groups: (1) those with evidence of substance abuse in the medical record (history, positive UDS, positive BAC), and (2) those without. Data was collected in an electronic database (Microsoft Access) and analyzed using EpiInfo. Results: Results demonstrate no significant difference in the mean age between the two comparison groups. Patients with evidence of substance use (either by history or UDS/BAC) were more likely to be males, not married, African-Americans, have a legal history, require psychotropic medications on presentation, and acute psychiatric hospitalization. Most frequent substances of abuse were alcohol and cocaine, often used in conjunction with each other. Conclusion: The use of alcohol and illicit drugs appears to have a sustained prevalence in the geriatric population presenting to an urban PES. There appears to be a difference in demographics of elderly adults who engage in substance use and those that do not. Therefore, the need for psychotropic medication use and acute psychiatric hospitalization is greater in the former comparison group. Further research in geriatric substance use pattern is needed to increase awareness on this topic, decrease morbidity and mortality, and contribute to better allocation of healthcare resources.

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NR01-09

EFFICIENCY IN ROUTINE LABORATORY TESTING AMONG PSYCHIATRY INPATIENTS

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SUMMARY:
Objectives: Psychiatric inpatients are affected by medical disorders far more frequently than is appreciated by their attending psychiatrists. We aim to evaluate the prevalence of results outside the normal range and the direct expenditure needed to find these abnormalities in a battery of laboratory tests applied at admission in a psychiatric unit. Methods: Retrospective study of patients admitted to the Psychiatric Hospitalization Unit of a General Hospital in Madrid (Spain) from January 2006 to January 2009. Biochemical tests were routinely

performed to 894 inpatients in 1278 consecutive admissions. All subjects were 18 years of age or older. Blood samples were drawn the next working day after admission. A common set of lab tests was used for all patients including hemograme, urine analysis, hepatic enzymes, lipidogram, thyroid hormones, and diagnostic tests for infectious diseases among others. The Institutional Review Board approved the study and all subjects included signed a consent form at the moment of discharge. Diagnoses were assigned according to the International Classification of Diseases (ICD-10). Prevalence of abnormal values based on the normal range of values accepted at the same hospital, "number needed to screen to find one abnormal result" (NNSAR) and "direct cost needed to find one abnormal result " (DCSAR) in international dollars (I$) were determined. Laboratory profiles aggregated several tests to examine possible differences between particular diagnoses and the whole sample. 95% confidence intervals were calculated for measures of cost-effectiveness. Results: The total cost of the screening summed 295.1 I$. Rates of abnormal results varied notably between the different lab tests. Hemograme was the routine lab test with most frequent abnormal results (90.9%). Alterations in lipid levels were also common, 20.0% of patients (222/1108) showed increased cholesterol levels and 50.7% low HDL levels. We found high rates of seropositive results for HIV (14.3%; 101/707) and hepatitis B (15.7%; 87/555). DCSAR for HIV was 230.7 I$, but it was less expensive to detect one HBV patient (134.7 I$). Patients with hepatitis C (8.5%; 47/552) presented lower prevalence rates and a higher DCSAR (348.3 I$). NNSAR of patients diagnosed with substance use disorders was significantly different in hematologic 1.8 (CI 1.6-2.1) and hepatic 3.5 (CI 3.2- 3.8) profiles. Conclusions: The cost-effectiveness, measured by the NNSAR and the DCSAR, differs importantly between lab tests. In this large sample of psychiatric inpatients we have confirmed high rates of biochemical abnormalities and metabolic risk factors. A set of tests to rule out medical disorders among psychiatric inpatients is still to be defined. Future studies are needed to develop a guideline of individualized diagnostic procedures according to psychiatric diagnostic categories at the moment of intake. Individualized diagnostic screening could help to detect and treat adequately the important medical comorbidity among psychiatric inpatients.

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NR01-10

INSTITUTIONAL POLICY TO ENHANCE ACCESS TO BEHAVIORAL HEALTH CARE AMONG SOLDIERS RETURNING FROM COMBAT THEATER

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SUMMARY:
Introduction: Stigma and inaccess to psychiatric care is a well known fact. This is especially true for soldiers in the military given special sub-cultural barriers. Here we present current available literature on the underlying factors for such barriers and an attempt by our institution to improve access to behavioral healthcare for all soldiers returning from combat theater. We illustrate this process through the case of a 40 year old soldier who is medically evacuated out of Afghanistan for lymphoma. Case: The patient is a 40-year-old male US Army Staff Sergeant who initially presented with sciatica symptoms secondary to extranodal spread of Burkitt's lymphoma to lumbar spine. On presentation to our military hospital, he was admitted to the oncology service and an automatic psychiatric consultation was generated. There is literature to support concerns that soldiers avoid seeking psychiatric interventions secondary to stigma. In order to reduce barriers to behavioral healthcare, an institution wide policy has been established which requires behavioral health consultation for all returning soldiers from combat theater. This patient had a very difficult time coping with this new diagnosis. Additionally, given the aggressive and prolonged nature of chemotherapy, psychiatric consultation team followed this patient very closely and had required multiple interventions, without which his health and quality of life would have suffered. Conclusion: Soldiers are medically evacuated out of combat theater for many different reasons including non-battle life-threatening illnesses as well as polytraumatic injuries. Many of these patients have had exposure to combat trauma in addition to their presenting medical needs. Research indicates multiple barriers to seeking mental healthcare, and unfortunately, it appears to be greatest among those who meet screening criteria for a mental disorder. One of such barriers stems from presumption that individual would be seen weak by other unit members. The psychiatric consultation service therefore consults on all returning soldiers to help normalize interaction with behavioral healthcare, eliminate misconceptions, address mental health needs during the inpatient stay, as well as identify those who require outpatient behavioral health follow-up. The implementations of current policies specifically targeted towards these barriers have the potential to effectively expand mental healthcare to this patient population.

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NR01-11

VIDEOGAME ADDICTION: A REVIEW OF THE LITERATURE

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SUMMARY:
OBJECTIVE: As videogames have become the leading entertainment industry in recent years, there has been a growing concern about the negative consequences related to excessive use. An increasing number of studies have investigated "video game addiction" although there is controversy about whether or not these behaviors represent true addictions. The objective of this study is to systematically review the available literature on videogame addiction in the general population. We intend to evaluate the progression of these concepts over the last decade, as well as to better understand this condition including its prevalence, proposed diagnostic criteria, comorbidity, practice guidelines, and gaps in the existing literature.METHOD: A systematic literature review was conducted with Pubmed, PsycINFO, and Google Scholar using the following search terms: "video game addiction", "pathological video game use", "video game abuse", "computer games addiction" and "electronic games addiction." The search was limited to articles published between January 2000 and August 2010. We identified 414 articles, 72 of which are included in the present review. RESULTS: Epidemiological studies report widely varying prevalence rates of

videogame addiction across countries and samples, ranging from 2.7 to 37.5%. This appears to be due largely to the absence of consensus in the definition/ diagnostic criteria used by researchers. Two of the most widely studied diagnostic criteria are adaptations of the DSM IV Substance Dependence (Brown, 1993) and Pathological Gambling criteria (Young, 1996). Videogame addiction appears more often in male children and adults than in females. The limited research on co-occurring conditions indicates high rates of comorbid pathological gambling as well as a positive correlation with symptoms of anxiety, ADHD, and depression. Neuroimaging studies demonstrate changes in brain activity among excessive videogame players similar to those occurring in other addictive and impulse control disorders. The extant literature on the treatment of videogame addiction is limited and consists largely of case reports. The few existing controlled treatment studies focus on pharmacological interventions and show promising results for reducing problematic videogame use. CONCLUSIONS: There is a growing concern internationally about videogame addiction with a number of case reports describing the devastating consequences related to videogame addiction. There are several limitations to the existing literature, including a lack of consensus on diagnostic criteria and ongoing controversy about how to characterize problematic videogame playing. There is a critical need for further research on effective interventions and practice guidelines for addressing this growing problem.

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NR01-12

DEPRESSION AND ANXIETY IN PATIENTS WITH IMPLANTABLE CARDIOVERTER DEFIBRILLATORS (AICDS) – A COMPARISON WITH NON- AICD CARDIOVASCULAR PATIENTS

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SUMMARY:
AICDs have significantly reduced mortality in patients who have survived Sudden Cardiac Death. With increasing implantation rates, the psychological impacts of this form of therapy are becoming more apparent. Eighteen to Eighty years old outpatients who had not been admitted to the hospital within 3 months of participation nor had their AICDs implanted within 3 months of participation were included in this study. The participants had not been diagnosed previously for either depression or anxiety. Standardized screening questionnaires for depression (CESD-10) and anxiety (Spielberger's State Anxiety Inventory) were mailed to 175 AICD (study) and 178 non-AICD (control) patients. 85 (48%) study patients and 66 (37%) control patients answered the questionnaires. The two groups were matched for their cardiac diagnoses and non cardiac co-morbidities. NYHA class was ascertained for each patient at the time of completion of the questionnaires. For the continuous variables, distributions and descriptive statistics were examined for evidence of skew ness, outliers, and non-normality to ensure that the use of parametric statistical tests was appropriate. To compare the study group with the control group, we used t-tests or chi-squared analyses depending on the type of variable.28% of the AICD patients screened positive for depression compared to 15% of non-AICD patients (RR 1.86). 21 (32%) males with AICDs screened positive for depression as compared to 4 (9%) males in the control group ($p<0.01$). 8 (53%) of AICD patients who had received at least one episode of shock screened positive for depression when compared to 16 (22%)AICD patients who had never received a shock ($p<0.05$). Prevalence of depression increased with worsening NYHA class. State anxiety levels increased in both groups with worsening NYHA class. NYHA classification together with self-report questionnaires could be a useful tool in identifying patients needing early referral for management of depression and anxiety in the outpatient setting.

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NR01-13

ADVANCE CARE PLANNING IN PATIENTS WITH SEVERE CHRONIC MENTAL ILLNESS AND END STAGE DISEASE

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SUMMARY:
Background:Psychiatric illness can complicate end of life care by altering a patient's decision-making capacity, insight into illness, and adherence to medical advice. It is important to advocate for patients in these situations. Psychosocial interventions can improve adherence and outcomes (1).Case description:54 year old Spanish-speaking uninsured male with new diagnosis of metastatic prostate cancer presented from home with complaints of increased back and leg pain following a fall 3 days prior. The primary medicine team consulted palliative care. During the interview the patient reported that he did not trust his doctors, he felt his family was trying to steal money from him, and people in Puerto Rico were after him for millions of dollars. The primary team's initial plan was to discharge the patient with outpatient follow-up for possible treatment, but we encouraged the team to consult psychiatry for paranoia without known psychiatric illness, and rehabilitation, oncology, and radiation oncology to help with the plan of care. We asked the team to arrange a family meeting with the patient's brother to discuss goals of care. Throughout the hospitalization, the patient continued to talk about the CIA and the government, and reported that people were stealing his cars and taking them to California. He told us that in Puerto Rico, he was seen by psychiatry and the result was that he was forced to have surgery.

He pointed to his lower abdomen, which contained no surgical scars. He said he was telling us as a warning, so the same thing would not happen to us. On a subsequent follow-up visit, we found that psychiatry determined that the patient did not have capacity for decision-making as a result of chronic psychotic disorder; he had also been evaluated by rehabilitation and radiation oncology. On our next follow-up visit we found that the patient's pain was controlled, but he was still paranoid, home physical therapy was dependent on establishing charity care, a family meeting had not been arranged. He was discharged home that day and followed-up with oncology and radiation oncology as an outpatient without advance care planning. Conclusions:In end of life care psychiatric illness can affect insight, recall of medical information given, adherence, assessment of pain, and decision-making capacity (1). Assessment of capacity is important; for example a patient may not have capacity to make decisions about treatments but may be able to designate a health care proxy and communicate preferences and concerns (1). Recent evidence suggests that patients with mental illness are interested in advanced care planning and can communicate preferences (2). Future directions should address effective ways to advocate for patients with severe mental illness and end stage disease by providing resources for advance care planning and opportunity to communicate preferences.

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NR01-14

A PERSONAL GOAL-SETTING APPROACH TO ADDRESSING MALADAPTIVE ADOLESCENT BEHAVIORS AND NEGATIVE AFFECT

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SUMMARY:
Goal-setting theory, originally developed by Edwin A. Locke in 1968, attempts to explain behavior in industrial settings. It suggests that goals are cognitive and willful, that they serve to modulate behavior, and that they are mediated by personal values. Personal goal setting can generate higher levels of achievement. Recently, Morisano et al. (2010) adapted a personal goal-setting exercise for use with academically struggling college students. The results showed that personal goal setting was associated with higher grades and lower negative affect. The authors speculated that this intervention might also be beneficial for a younger, less goal-directed population, such as adolescents. Teenagers have unique neurocognitive, social, and emotional challenges that should be considered prior to goal identification, however. For many, the turmoil of daily life due to psychosocial factors (e.g., school performance, pressure to use substances, peers), puberty, conflicts surrounding identity development, etc., is overwhelming enough that an intervention that aims to help them to develop and define short- and long-term personal goals might help them to achieve more positive outcomes. We propose this intervention as an adjunct to current therapies to enhance patient outcomes.Many adolescents, particularly those with symptoms of depression and maladaptive behaviors, fail to set personal goals for a variety of reasons; what is most concerning is that many are never explicitly prompted to develop or articulate life goals. The personal goal-setting intervention developed by Morisano and colleagues, when adapted for use with a younger psychiatric population, promises to help teach patients to 1) think freely about the future, 2) define and summarize short- and long-term goals, 3) organize and evaluate these goals, 4) consider the potential impact of their goals, 5) plan steps towards goal attainment, 6) identify obstacles, 7) develop benchmarks for success, and 8) solidify goal commitment. The strength of this process is that it highlights the disconnect between a patient's future goals and current mood state and behaviors; this disconnect is the central theme of most motivational interviewing techniques. For adolescents, clinicians can help to guide the goal-setting process so that goals (and subgoals) remain appropriately challenging and achievable whilst affirming the patient's formulation of the goals. Our poster will present a clear and step-wise

clinical and patient-oriented adaptation of personal goal-setting processes for use in working with adolescents in outpatient settings. The proposed intervention, which has already been shown to reduce negative affect in college students, should work in conjunction with an adolescent's process of individuation to help us to engage the patient and provide a much needed conduit for behavior change.

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NR01-15

EXTRAPYRAMIDAL SYNDROME AND TARDIVE DYSKINESIA RATES WITH TYPICAL AND ATYPICAL ANTIPSYCHOTICS IN PSYCHIATRIC OUTPATIENTS

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SUMMARY:
Objective: Most previous studies of the prevalence of movement disorders induced by antipsychotic use have not compared the atypicals with the combination of atypical and conventional antipsychotics. The current study aimed to compare the prevalence of tardive dyskinesia and extrapyramidal symptoms with atypical vs combination of conventional and atypical antipsychotics in the psyciatric outpatients. Method: Seventy four patients with the diagnosis of schizophrenia or schizoaffective disorder (diagnosed at baseline using the DSM-IV classification) were evaluated for tardive dyskinesia (using the Abnormal Involuntary Movement Scale) and extra pyramidal syndrome (using Simpson- Angus Scale) at a community mental health clinic. Evaluations has been performed by psychiatrists in training under supervision of an expert psychiatrist in movement disorder and documented in the patient charts. The results from this study has been derived from the patients' charts. Subjects were receiving conventional antipsychotics only (%0.4), atypicals only (70.2%), or both (25.6%). Evaluations were conducted from October 2009 through May 2010. Results: Prevalence rate of tardive dyskinesia and extrayramidal syndrome for the subjects treated with combination of conventional and atypical antipsychotics, was respectively %42.1 (95% CI:39.9-44.3) and %
36.8, (%95 CI: 34.6- 39.0)) while for the subjects treated with atypical antipsychotics alone these rates were respectively(%21.1, %95 CI :20.0-22.2 and %13.4, %95 CI:11.6-15.2). Conclusions: The prevalence of tardive dyskinesia and extrapyramidal syndrome was less with exposure to atypical antipsychotics alone compared to that for combination of conventional and atypical antipsychotics. These findings conform with most previous studies. Despite increased use of atypical antipsychotics, the combination of typical and conventional antipsychotics are still being used. Moreover, this group seems to be more prone to developing tardive dyskinesia and extra pyramidal syndrome. However, more research is needed to investigate movement disorders in this group. Clinicians should continue to monitor for tardive dyskinesia and extra pyramidal syndrome in patients who use antipsychotics.

NR01-16

EFFICACY AND COST-EFFECTIVENESS OF RIVASTIGMINE TRANSDERMAL PATCH AND DONEPEZIL IN ALZHEIMER'S DISEASE: AN INDIAN EXPERIENCE

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SUMMARY:
Objective: In most developing countries including India, the home based care for dementia patients imposes economic strain on families. By assessing the efficacy and cost-effectiveness of rivastigmine transdermal patch in Alzheimer's disease (AD) when compared to oral donepezil using cognitive and functional outcomes, the conclusions can assist physicians in prescribing pharmacotherapy. Methods: The prospective analysis of 115 real life patients from a memory clinic at Varanasi, India

was done on completion of 6 months and then, at 12 months. The Alzheimer's Disease Cooperative Study-Clinical Global Impression of Change (ADCS-CGIC) scale was used as a measure of efficacy. It assesses cognition, activities of daily living (ADLs), behavior and global functioning. Incremental costs and Quality Adjusted Life Years (QALYs) associated with rivastigmine patch versus donepezil were calculated using economic model based solely on Mini-Mental State Examination (MMSE) scores. Base case costing variables included consultations, drugs, clinical care and hospitalization. Results: At 6 months, significant treatment effects were seen on the ADCS-CGIC cognitive domain with rivastigmine 9.5 mg/24 h patch ($p < 0.05$) and donepezil 10mg/day ($p < 0.05$); similarly on the ADCS-CGIC ADL domain. At 12 months, rivastigmine patch was superior to donepezil in both domains ($p<0.05$). At 6 months, the MMSE model estimated incremental costs per QALY were Rs. 86,500 for rivastigmine patch and Rs. 61, 400 for donepezil. At 12 months, the costs were Rs. 84,800 and Rs. 82,600 respectively. The main differences between two groups were fewer days of hospitalization and fewer adverse events associated with use of rivastigmine patch when compared to placebo. Conclusions: The rivastigmine patch is apparently more costly than donepezil treatment and cost is a limiting factor for its use in developing countries like India where patient himself pay for their treatment. Our observation suggests that with long term use of rivastigmine patch, the efficacy is superior to oral donepezil treatment and there is no significant difference in total treatment costs. We suggest larger study to validate its cost effectiveness.

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NR01-17

SEARCH FOR A CAUSE FOR FAILED APPOINTMENTS IN A UNIVERSITY PSYCHIATRY HOSPITAL SETTING

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SUMMARY:

Purpose The purpose of this study was to analyze potential reasons for the high failed appointment rate in an Academic Psychiatry Clinic with the hope of developing quality improvement projects. The outpatient clinic had a 43% failed appointment rate in August, 2010, prompting this analysis. Reasons for failed appointments were (1) patient cancellations (Can) (52.3%), (2) patient rescheduling requests (Rsc) (1%), (3) rescheduling request by the provider (Bump = Bmp) (13.5%), (4) No shows (21.2%), and (5) Unschedulable Pen (pending) (1.2%). Content: The poster will analyze failed appointments in a major outpatient Academic Center. It compares failures by level of training of provider, payer source (as a proxy for SES), age, gender, and latency before being seen. Totals and causal analysis were conducted on the data and will be presented in the poster. Methodology and Results Between Nov 2009 and Nov 2010, 10,450 scheduled appointments were analyzed for 6 faculty and 11 residents who were the primary outpatient providers. The failed appointment rate overall was 37.3% of all appointments. Patient cancellations or rescheduling requests accounted for ~66% of this total, provider rescheduling requests (Bumps) was 8%. No shows were 25%. An IRB exemption was approved for use of the existing IDX data set and to perform the questionnaire for no-shows. Importance The problem of no-shows is a worldwide problem. In the National Health Service in the UK, the country-wide rate of no-shows was 19.1% of psychiatry outpatient appointments from 2002 to 2003 (Mitchell, et.al. 2007). The cost of no-shows to the UK was estimated at L360 ($100 billion per year US). In a psychiatry clinic with very low profit margins, the cost burden of no shows is more sensitive. Any improvement in capture rates of appointments may make the difference between financial success or failure of the clinic. Specific findings 1. Failed appointments were highest among the least experienced providers (residents). 2. The major cause of no shows was forgetting the appointment. 3. Low SES is a proxy for many embedded factors about poor compliance, including fear of non-affordability, locus of control (nothing one does can change things), low self-esteem. 4. Administrative issues also strongly impact care. Long-waiting times, long latency before being scheduled, confusion over responsibility for

schedules. Concluding **SUMMARY:** 1. Failed appointments speak to a need to better train residents about patient retention factors and the therapeutic alliance. 2. Patient indifference speaks to a need to engage the patient before their first appointment by using various interactive tools. 3. Low SES of patients speaks to training residents and all providers to be more sensitive to unique problems the poor or poorly educated and compensate for them. 5. Administrative inefficiencies played an important role in failed appointments.

NR01-18

TIME LEFT FOR INTERVENTION IN THE SUICIDAL PROCESS IN BORDERLINE PERSONALITY DISORDER (BPD)

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SUMMARY:
Introduction: The suicidal process is defined as the time span between the first current thought of suicide and the accomplishment of the suicidal act. The length of the suicidal process, and thus the time available for intervention has a major impact on the success of suicide prevention strategies. Suicidal threats, gestures, and attempts are very common among patients with Borderline Personality Disorder (BPD). Previous reports showed that 60 – 70% of the patients with BPD make a suicidal attempt and that 8%–10% commit suicide. Therefore, to know more about the nature of the suicidal process in BPD poses high relevance for clinicians. Objective: To assess the duration of the suicidal process in BPD. Method: Data were obtained on consecutive patients with BPD referred to the Braulio A. Moyano Hospital from July to November 2010 after suicide attempt. The study was approved by the Ethics Committee of Braulio A. Moyano Hospital. Written informed consent was obtained. Patients were approached within 3 days after the act in order to minimize the recall bias. Assessment tools included a list of demographic and clinical variables, the Barratt Impulsiveness Scale (BIS), the Montgomery-Asberg Depression Rating Scale (MADRS) item 10 and a semi structured interview focusing on the duration of the suicidal process. Results: Twenty seven female patients with BPD were screened. Sixty three percentage of the patients reported that the time between the first occurrence of a thought of suicide and suicide attempt had lasted 10 minutes or less. There was a second, group of patients who reported that the time was more than 6 hours. Patients in which the suicidal process developed rapidly showed higher rates in the BIS (77.8 ± 10.3 vs. 60.70 ± 10.3, $p<0.005$). Conclusion: Based on the duration of the suicidal process we can divide patients with BPD in two groups, one in which suicidal process takes less than 10 minutes and have high degree of impulsivity and another in which the duration of the suicidal process is more than 6 hours. The first group (which represents nearly two thirds of patients) leave us little time to intervene and rapid intervention strategies should be incorporated into suicide prevention (e.g. telephone protocols for suicide intervention).

NR01-19

LATE ONSET DELIRIUM TREMENS

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SUMMARY:
Introduction:Delirium tremens is a severe form of alcohol withdrawal that involves sudden and severe mental or neurological changes. Hospital admissions for ethanol detoxification encompass approximately 32% of all admissions, whereas roughly 52% of admissions involve ethanol and an illicit drug. [1] Delirium tremens is a serious complication of ethanol withdrawal, affecting 5% to 10% of patients admitted to the hospital. Mortality rates for DT have been estimated to range from 5% to 15%; however, few studies accurately define DT or adequately control for co-morbid conditions such as trauma, surgery, or infection.[2] Delirium tremens most times appear within 48–72 h of abstinence and persist for about 5–10 days, with 62% resolving in 5 days or less[3]. Very rarely does delirium tremens may manifest beyond one week after admission. Case presentation: We present a 62-year-old white male with history of vasculopathy and multiple medical problems who presented for severe left leg pain secondary to cellulitis. He underwent an

angioplasty of his lower limb on day 8 of admission. He started developing alcohol withdrawal signs on day 8 of admission. He developed symptoms of delirium tremens characterized by autonomic hyperactivity, hallucinations, cognitive impairment and tremors by day 10. Other medical causes for this clinical presentation were ruled out. He was treated with lorazepam based on severity assessments from day 10 to day 13 to which he responded well. The symptoms of delirium tremens subsided 3 days after onset and had no recurrence. His labs were unchanged from his baseline during this period. Conclusion: Delirium tremens is a serious consequence of alcohol dependence, which if missed, may have high mortality. Though it is common to occur within 48-72 hours after last drink, awareness of the rarely occurring late onset DT is important among providers to ensure early recognition and appropriate treatment.

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NR01-20

MUNCHAUSEN SYNDROME BY PROXY WITH AN ADULT VICTIM: A CASE SERIES

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SUMMARY:
BACKGROUND: Munchausen syndrome by proxy (MSBP) is a form of abuse in which a caregiver deliberately produces or feigns illness in a person under their care in order to persuade medical providers the victim is ill. Although well-documented in the pediatric literature, few cases in the literature describe MSBP with adult proxies. We reviewed Mayo Clinic medical records and report the first case series of MSBP with adult proxies. METHOD: A search of Mayo Clinic Rochester electronic medical records from 1994-2009 was performed using the search terms "Munchausen syndrome by proxy", "factitious disorder by proxy", "Munchausen syndrome", and "factitious disorder". Cases were selected if they met DSM-IV-TR criteria for the disorder and victim age was greater than 18 years. RESULTS: Record review revealed 6 adult patients -- five of them female – with MSBP. Victims ranged in age from 18-24 years. Perpetrators were either a parent or both parents. Mothers were involved in all 6 cases and both mother and father in 2 cases. Three victims did not realize they were being abused; three were aware of the perpetrator's actions. Victim outcomes were identified in 5 cases: 1 death, 1 removal by protective services, 2 developmentally delayed victims remaining under the perpetrator's care, and 1 continuing to seek care at area hospitals. DISCUSSION: Our findings suggest that MSBP -- while rare -- may be under recognized or underreported, that perpetrators are typically parents, and that adult victims are more likely to be female. Physicians should become aware that MSBP can involve adult patients, and realize that adult proxies may suffer from "Stockholm syndrome", holding perpetrators in high regard despite the danger.CONCLUSION: We report the first case series of MSBP with an adult proxy. If discrepancies in history and observed clinical manifestations exist, the differential diagnosis should include MSBP. Warning signs include a complex symptom constellation without a unifying etiology and an overly involved caretaker/parent with suspected psychological gain. Further research is needed to better characterize this disorder so that both perpetrator and victim are identified early before healthcare providers unknowingly perpetuate harm through treatments that satisfy the perpetrator's psychological needs at the expense of the proxy. When recognized, appropriate medical, psychiatric, and legal strategies must be taken to ensure safety of the victim and avoid deadly consequences.

NR01-21

DEPRESSION IN FIRST AND SECOND YEAR UNDERGRADUATE STUDENTS IN AN ACADEMICALLY RIGOROUS UNIVERSITY SETTING

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SUMMARY:
Objective: Epidemiological data are needed to help guide the design of programs and policies to help meet the growing need for mental health services in the undergraduate community. The goal of this study was to determine prevalence of and risk factors for depression among undergraduate students in an academically rigorous mid-sized private university. Methods: A self-administered survey of lower classmen outside of cafeterias serving predominantly first and second year undergraduate students in a University with 4,000 Undergraduates. The Patient Health Questionnaire-9 (PHQ-9) diagnostic scale was utilized. A binary logistic regression model formulated for clinical depression, which was defined as PHQ-9>10. Study variables included gender, race, sexual orientation, and participation in Greek life. Results: Among a convenience sample of 178 first and second year students, 53.3% were male, 70.4% were Caucasian, 92.3% were heterosexual, 30.0% reported membership in either a fraternity or sorority. The prevalence of clinical depression was 24.7%, 1.7% treated, 23.0% untreated. Clinical depression was associated with non-heterosexual sexual orientation (OR=7.39, 95% CI=2.09-26.04), non-Caucasian race (OR=2.89, 95% CI= 1.32-6.33), male gender (OR=2.39, 95% CI=1.11-5.15). Conclusions: Clinical depression was found to be associated with non-heterosexual sexual orientation, non-Caucasian race and male gender. Untreated clinical depression may be highly prevalent among first and second year undergraduate students in an academically rigorous mid-sized private university. Future studies in this population are warranted to further explore risk factors for depression.

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NR01-22

DIFFERENTIATING BETWEEN BIPOLAR DISORDERS TYPE I AND II

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SUMMARY:
Objective: Bipolar Disorder I (BDI) and Bipolar Disorder II (BDII) vary considerably, with differences in symptomatology, management and prognosis. For patients with depression, the distinction between BDI and BDII is not always apparent, and hinges on the differentiation between manic/mixed and hypomanic episodes. Other putative differences between patients with BDI and II exist and may assist in distinguishing between these two conditions. Methods: Data were obtained from the National Epidemiological Survey on Alcohol and Related Conditions. A total of 1,429 subjects were included in our analysis, 935 with BDI and 494 with BDII. We examined for differences in a number of variables including demographics, clinical features, depressive symptoms, and co-morbid conditions. Results: Key differences between BD I and II were identified in all categories in our comparison of means. For instance, subjects with BDI were more likely to be disabled and on governmental assistance, and had twice as many depressive episodes, lasting 1.5 times longer. They were also twice as likely to have attempted suicide. Subjects with BDII were less likely to have received medication or have been hospitalized for depression. All depressive symptoms were more frequently reported in BDI, and co-morbid conditions like anxiety and personality disorders, and drug abuse/dependence were more highly prevalent in BDI. In our regression analysis, a number of variables emerged as predictors of BDI, including unemployment (OR=0.6), taking medications for depression (OR=1.7), a history of a suicide attempt (OR=1.8), weight gain (OR=1.7), depressive symptoms such as fidgeting (OR=1.5), feelings of worthlessness (OR=1.6) and difficulties with responsibilities (OR=2.2), and the presence of specific phobias (OR=1.8) and cluster C traits (OR=1.4). Conclusions: Our results indicate that in addition to the differences between manic/mixed and hypomanic episodes, other significant differences exist that may be used to help differentiate BDI from BDII.

NR01-23

VIDEO GAMES, TV, PHYSICAL ACTIVITY AND TEEN SLEEP: RESULTS FROM THE

2009 YOUTH RISK BEHAVIOR SURVEY

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SUMMARY:
Objective: To quantify the association between media exposure, vigorous physical activity, and self-reported sleep time in teens. Method: Data from the 2009 Youth Risk Behavioral Survey (YRBS) was analyzed. The YRBS is maintained by the Center for Disease Control (CDC) to monitor behavior that influences health and uses a three-stage cluster sample design to produce a nationally representative sample of 9th through 12th grade students (total sample N=16,410, average age 16 years). Weights were applied to adjust for non-response and oversampling (information on the YRBS methodology is available in the CDC website). Descriptive statistics are presented for each variable, by outcome. Exposure variables included physical activity as well as light (considered to be 1hr or less/day) or heavy (considered to be 3hrs or more/day) media usage. Media usage rates were obtained by analyzing data from the following two questions: "On an average school day, how many hours of TV do you watch?" and "On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work?" Physical activity was assessed with the question "On how many of the past 7 days did you exercise or participate in physical activity for at least 20 minutes that made you sweat and breathe hard, such as basketball, soccer, running, swimming laps, fast bicycling, fast dancing, or similar aerobic activities?" The outcome variable assessed was self-reported sleep duration measured by the following question: "On an average school night, how many hour of sleep do you get?" Logistic regression models were used to adjust for age, gender, race/ethnicity, presence of sadness, and substance abuse. Results: Teens sleeping less than 7hrs/night were more likely to report heavy videogame/Internet use (adjusted odds ratio 1.6 (95% C.I. 1.4-1.8)) while being less likely to meet recommended physical activity levels (adjusted odds ratios 0.7 (95% C.I. 0.7-0.8)). TV exposure did not display statistical association with self-reported sleep duration in this sample. Conclusions: The type of impact different media exposures have on sleep may vary according to the source. Gaming/Internet is negatively correlated to self-reported sleep duration, while TV shows no association, and vigorous physical activity carries a positive correlation. Together these data indicate that physical activity may play a protective role in obtaining an adequate total sleep time and elude to a fundamental difference between exposure to TV and gaming/Internet in regard to sleep. As TV and gaming/internet both appear to impact circadian as well as homeostatic drives for sleep, perhaps it is the level of adrenergic stimulation seen with gaming that could explain such a difference. Future studies will be helpful in advancing our knowledge in this area.

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NR01-24

SPIRONOLACTONE IN THE TREATMENT OF HYPERSEXUALITY IN A FEMALE SEX OFFENDER

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SUMMARY:
The literature on female sex-offenders, and the possible treatments, is very limited to date. It is compromised mostly of case-reports or case series. Further, much of the literature details the use of psychotherapy in the treatment of female

sex-offenders. The following outlines the case of a female sex-offender already in prison and undergoing a comprehensive cognitive based sex offender treatment program who had been on multiple psychiatric medications including mood stabilizers, anti-psychotic, anti-depressant, anxiolytic, as well as other adjunctive medications, who despite these various treatments, requested treatment for hypersexuality that was resulting in frequent disciplinary action while incarcerated, including multiple months in segregation from the general population.The use of cyproterone acetate, a synthetic anti-androgen that has been used in hypersexuality, particularly in some female patients. However, cyproterone acetate is unavailable in the United States, so spironolactone was used for its similar effect and low side effect profile. The patient was started on 100mg PO BID. Consistent with her course with most psychiatric medications, the efficacy of hormonal treatment with this patient was inconsistent and her reported subjective hypersexuality did not vary despite her reports whether she felt she was benefiting from the medication or not and whether the medication was present or absent. It is difficult to say what, if any, effect medication had in her behavior pattern. Given the scant data and poor understanding of hypersexuality and female sex-offenders, this case highlights that there is benefit in determining the potential etiology, or at least apparent pattern, to the sexual acting out behavior. Pharmacological treatment is not benign, often with significant risk and side-effects, particularly with hormonal therapy. If a pattern of poor response to medication, frequent pattern of medication changes, or a lack of evidence for a biological component to the hypersexuality, attempting to treat with medications may not outweigh the risk of treatment. Patients with a pattern of using sexuality in predatory or manipulative way may be less likely to respond to pharmacotherapy as well.

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NR01-25

RESILIENCY IN VETERANS WITH POST TRAUMATIC STRESS DISORDER

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SUMMARY:

Objective: Lifetime trauma exposure is prevalent in the general population. However, adult post-traumatic stress disorder (PTSD) prevalence rates are only 6-8%(1,2). Amongst traumas, combat exposure in the Veteran population is associated with an increased incidence of PTSD as well as the development of chronic PTSD symptoms, functional impairment and a decrease in quality of life(1). While numerous factors contribute to how any given individual copes with a traumatic event, recent research has shown that greater resiliency is not only protective against the development of PTSD, but also predictive of symptom remission and improved quality of life in those who develop PTSD(3). It is therefore of great importance to understand the

relationship between resiliency and therapeutic response in Veterans receiving treatment for PTSD. Specific aims: (1) to quantify the degree of treatment engagement in subjects receiving residential care for PTSD and chronic PTSD symptoms; (2) to measure resiliency and quality of life scores in subjects during early and late phases of residential PTSD treatment; (3) to analyze the relationship between resiliency, QOL and treatment engagement obtained as above. Methods: This study is being conducted at the Miami VAMC PTSD Residential Rehabilitation Treatment Program (PTSD-RRTP), a program designed specifically to address military-related PTSD. Twenty-one subjects have been voluntarily enrolled to date, following elective admission to the program for a planned 14-week stay. The Connor-Davidson Resiliency Scale (CD-RISC) (4) and Quality of Life Inventory (QOLI)(5) were administered within 2-weeks of admission to the program and within 2-weeks of program completion. During the last week in the program, subjects were evaluated in regard to their degree of engagement in the therapeutic process using a 5-point Likert scale. This study was approved by the Miami VAMC IRB. Results: Thirteen of the subjects graduated from the program, four were lost to follow-up and eight are still enrolled. Patient demographics included age = 55 +/- 11.88 SD (range 28-69); 20 male, 1 female; 33% Caucasian, 38% African American, 29% Hispanic; 50% married; 20% employed. Preliminary results show that an increase in CD-RISC over the course of treatment was positively correlated with an increase in QOLI, Pearson of 0.78, p=0.012. Data quantifying treatment engagement have not yet been compiled; analysis of the relationship between treatment engagement, CD-RISC and QOLI are forthcoming.Conclusion: In this study of Veterans receiving residential care for chronic PTSD symptoms, preliminary analyses show that improvement in resilience over the course of treatment was significantly correlated with improvement in quality of life. Determination of a relationship between these factors and treatment engagement is pending. Future studies will assess these parameters at time points further out from treatment.

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NR01-26

A CASE OF PSYCHOSIS IN A PATIENT WITH RIGHT FRONTOPARIETAL STROKE: DIAGNOSTIC CHALLENGES AND TREATMENT

Chp.:Gabrielli Gorospe M.D., 26 Hackett Blvd, Albany, NY 12208, Co-Author(s): Oksana Kershteyn, MD, Victoria Balkoski, MD

SUMMARY:
We present a case of 59 year old male with history of right frontoparietal stroke who was followed by Psychiatry Consultation Liason team in a span of 18 months. We are describing evolution of symptoms, diagnostic challenges and treatment options. At 6 months after the stroke the patient is depressed and highly anxious and after a year the patient presents suicidal and homicidal with paranoia. He develops somatic delusions in the following months despite continued antidepressant medication. Short term trials of low dose Haldol while inpatient was effective in reducing anxiety as well as bringing improvement in thinking. This case examines the diagnostic challenges of managing a patient after right sided frontoparietal stroke and provides treatment recommendations with low dose Haldol and Quetiapine.

NR01-27

BURNOUT AMONGST STAFF WHO SUPPORT INDIVIDUALS WITH DEVELOPMENTAL DISABILITIES: THE ROLE OF CLIENT AGGRESSION AND WORK SETTING

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SUMMARY:
Background: The staff who support individuals with developmental disabilities are at risk of job burnout given the daily workplace stressors they are potentially exposed to. One such stressor is client aggression, which may at times be difficult to predict and manage. There have been few studies however, particularly in North America, exploring the relationship between aggression and staff burnout. Methods: A cross-sectional survey was developed and disseminated to community direct care staff who primarily support adults with developmental disabilities in the province of Ontario, Canada. Participation was voluntary and anonymous. The survey collected demographic information and rate of exposure to client aggression. Burnout was assessed using the Maslach Burnout Inventory – Human Services Survey (MBI-HSS). Descriptive statistics were used to analyze the data. Results: 926 staff completed the survey. Most staff reported being exposed to client aggression and 25% reported it almost daily. Although it appears that most staff are coping well (overall MBI-HSS scores below comparative standard values), between 7-24% are either burnt out or could be considered at high risk based on MBI-HSS dimensional scores in the high ranges. Both the frequency and perceived severity of aggression were associated with MBI-HSS scores, most notably in emotional exhaustion (EE) (Chi-sqared=55.52, p<0.001 and Chi-squared=70.39, p<0.001 respectively) and depersonalization (DP) (Chi-squared=21.63, p<0.01 and Chi-sqaured=27.08, p<0.001 respectively). The majority of staff worked in residential or respite settings and experienced high levels of aggression but had lower burnout scores than staff in day programs who experienced equal amounts of aggression. Conclusions: Staff who directly care for adults with developmental disabilities are commonly exposed to client aggression and it appears to have an emotional impact on them. Work setting may mediate the risk of burnout to some degree. These results provide additional evidence that there is a need for more attention to this issue among these important health service workers. Future research should aim to further explore the relationship between client aggression and staff burnout and determine what aspects of particular work settings are protective.

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NR01-28
DESCRIPTIVE OUTPATIENT CLINIC MODEL DEVELOPMENT FOR DUALLY-DIAGNOSED PATIENTS ON BUPRENORPHINE MAINTENANCE THERAPY

Chp.:Jessica Herrera M.D., 707 Forest Glen Road, Silver Spring, MD 20901

SUMMARY:
Descriptive Outpatient Clinic Model Development for Dually-Diagnosed Patients on Buprenorphine Maintenance Therapy Introduction:Buprenorphine, a partial opioid agonist, was approved for opiate dependency in 2002. Given its efficacy and safety profile, Buprenorphine has emerged as an alternative and preferred treatment for the management of opiate dependency in an outpatient setting. Despite its gained approval, compliance with buprenorphine maintenance treatment (BMT) continues to be of concern, as is constructing an optimal clinic design for patients who are dually-diagnosed. Although there have been studies evaluating adherence and optimal clinic design in medical and psychiatric outpatient settings, no studies have examined these two factors in underserved, African American patient populations with co-occurring mental disorders. The objective of this study was to investigate the effects a modification in psychiatric outpatient clinic infrastructure would have on adherence rates of underserved African American dually-diagnosed patients receiving buprenorphine treatment for opiate dependency. Methods:This retrospective observational study included African American male and female patients who were dually-diagnosed presenting to the Howard University Adult Mental Health Clinic August 2009 to July 2010 for buprenorphine maintenance treatment (BMT) (N=14). Specific modifications of the outpatient clinic management of BMT were implemented, resulting in a pre-modification period and post-modification period. Clinic modifications

included changes in structure of group therapy, frequency of prescription distribution and random urine toxicologies. Ranges for the pre-modification period were 2-21 scheduled visits with an average of 11. Ranges for the post-modification period were 17-28 visits with an average being 26. Adherence to treatment was defined as percentage of attendance to the dual-diagnosis weekly therapy. Results:Key findings were that modification of the psychiatric outpatient clinic infrastructure improved rates of adherence to buprenorphine maintenance treatment (BMT). In addition it was found that patients with serious co-morbid medical illness were more adherent to treatment than those with no serious co-morbid medical illness. Both findings were found to be statistically significant.Conclusions: The efficacy of buprenorphine in the outpatient setting has been well-supported in the literature. The goal as with any substance abuse treatment is to improve adherence and remission rates. From our preliminary findings, it appears that in addition to an increase in patient contact on a weekly basis for dually-diagnosed patients, a smaller quantity of dispensed buprenorphine and random urine toxicologies may improve rates of adherence. These findings may be useful in the future development of clinical outpatient models for improved adherence to buprenorphine treatment in dually-diagnosed African American patients.

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NR01-29

THE EFFECT OF ELECTROCONVULSIVE THERAPY ON REFRACTORY NEUROPATHIC PAIN AND DEPRESSION: A CASE REPORT

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SUMMARY:

Objective: We present a 54-year old man with intractable diabetic neuropathic pain comorbid with depression and anxiety, who showed improvement of cognitive and somatic symptoms after electroconvulsive therapy (ECT). With this case we intend to increase the understanding of the complex experience of pain in association with

depression and anxiety and generate hypothesis on how ECT can impact this frequent clinical situation. Method: We reviewed the patient's case at our institution focusing on the factors that affected his pain and mood symptoms. Then, we reviewed the literature on pain physiology in association with depression and anxiety and the role of ECT.Results: We describe a 54-year old man with intractable diabetic neuropathic pain comorbid with depression and anxiety, who was treated with ECT after failed trials of conventional pharmacological management. He was hospitalized due to disabling bilateral foot pain and severe depression, causing decline in daily function and making the patient bed bound. Conventional pharmacological treatments failed to relieve his symptoms. He then received a series of 10 bilateral ECT treatments over the course of 3 weeks with good response evidenced by brighter mood, absence of pain, ambulation and engagement in group activities. He remained stable for 6 months but relapsed afterwards. A second trial of ECT was partially effective without achieving full remission of pain. The duration before relapse in this case was significantly longer than previously reported cases. Conclusions: Although the second trial of ECT was not as effective as the first course, our case demonstrated that ECT could have a role in the treatment of complex pain syndrome with comorbid depression and anxiety.

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NR01-30

NARCOHYPNOTIC INTERVIEW USING INTRAVENOUS LORAZEPAM IN A PATIENT WITH SUSPECTED CONVERSION DISORDER.

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SUMMARY:

Background: Narcohypnotic interviews are a type of psychiatric interview involving administration of a drug to induce narcosis. In a drug-induced state of relaxation repressed material may emerge that can facilitate diagnosis and treatment. Suppression of consciousness is believed to occur through the reduction of cellular respiration in the brain via metabolic interference of glucose, lactic acid, and pyruvic acid oxidation. The diagnostic utility of narcohypnotic interviews has been documented in cases of catatonia, mutism, conversion disorder, and dissociative fugue. Direct therapeutic efficacy has been shown in some, but not all, cases. Indirect therapeutic effect of the narcohypnotic interview is anecdotally greater when utilized in combination with post-procedure psychotherapy and through impact on treatment decisions. Barbiturates, such as sodium amobarbital and sodium pentothal, historically are used in the narcohypnosis. As a class, barbiturates have been replaced by benzodiazepines due to their narrow therapeutic index, danger in overdose, and addictive potential. Benzodiazepines have a potential role in the narcohypnotic interview. Case: A 31 year old female with a 1 year history of unexplained "seizures" and 6 month history of right arm and bilateral leg paresis was admitted for evaluation of worsening paresis over a 3 week period. During the first few days of her hospital stay she had multiple episodes of non-epileptic seizures. Psychiatric consultation was requested for assessment of seizure-like behavior with negative continuous video EEG monitoring, and later for management of her paresis. After initial evaluation it was a decided that a narcohypnotic interview using intravenous lorazepam could be diagnostically useful to obtain history of possible psychological precipitants of her symptoms, and therapeutically useful to determine whether paresis could improve during the interview. A total of 5.5mg IV lorazepam was administered over 60 minutes, given as 0.5mg pushes over 10 seconds. Under narcohypnotic induction the patient demonstrated full function of the entirety of her left arm and movement of bilateral toes and feet. These movements were independent of guided imagery and suggestion, where she was actually resistant to movements of her limbs. Additional history was gathered that revealed an ongoing, tumultuous, 3-year divorce proceeding. Divorce proceedings were slowed by the custody battle of a daughter, who the patient reported had been sexually abused by father just 6 months ago. The patient expressed sentiments of frustration regarding not being a good enough mother and by being unable to adequately protect her child.Conclusion: Use of intravenous lorazepam narcohypnotic interview in this case contributed to

the diagnosis of conversion disorder, non-epileptic seizures and hysterical paresis, and indirectly assisted in the therapeutic management of this complex case.

NR01-31

NEUROLEPTIC MALIGNANT SYNDROME (NMS) IN HIV PATIENTS IN THE EMERGENCY ROOM: THERAPEUTIC ANC DIAGNOSTIC CONSIDERATIONS

Chp.:Danijela Ivelja-Hill M.D., 260 Hoover Avenue, Edison, NJ 08837, Co-Author(s): Eileen Zhivago, MD, PGY3; Gupreet S. Sandhu, MD, PGY2; Tara S. McKinney, MD; Deborah L. Ocasio, MD

SUMMARY:
Objective: Development of NMS in patients with HIV and history of mental illness in the emergency room setting Method: We describe cases of two female patients with known history of HIV/AIDS. One patient was a 51year old with history of schizophrenia and on methadone maintenance therapy, noncompliant with her psychiatric medication and HAART. The second patient was a 35 year old with history of bipolar disorder and was brought from jail where she did not receive any treatment. Both patients presented in the emergency room acutely psychotic. The first patient was medicated with 3 mg of risperidone and 5 mg of haloperidol, along with 50 mg of diphenhydramine, 2 mg of benztropine and 2 mg of lorazepam by mouth over the course of 6 hours. The second patient was medicated with 5 mg of haloperidol, 2 mg of lorazepam and 50 mg of diphenhydramine intramuscularly. Both patients subsequently developed change in mental status, fever, autonomic instability, muscular rigidity, increased creatinine kinase, BUN and creatinine levels within 24-72 hours. Results: Both were admitted to medical unit and both were, after extensive work-up that excluded infectious causes, eventually diagnosed with and treated for NMS and required prolonged hospitalization.
Conclusions: NMS is rarely seen in the emergency room and is unanticipated by psychiatrists and the emergency room doctors. Patients with HIV appear to be very susceptible to NMS, potentially fatal condition, even after small and/or single doses of antipsychotic medications. It can develop in a very short period of time, while the patients are still managed in the emergency room. Risk factors appear to be: high potency antipsychotic medication such as haloperidol or risperidone, rapid neuroleptization and/or IM administration, concomitant administration of anticholinergic medication, suboptimal electrolyte/hydration status, history of drug abuse and possible withdrawal, low CD4 count and low CD4/CD8 ratio. These patients should be medicated cautiously, with low doses and slow dosage increases, and closely monitored for development of any change in mental status, rigidity, fever, autonomic instability and laboratory abnormalities in which case NMS should be strongly considered.

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NR01-32

HALLUCINATIONS AMONG OLDER ADULTS WITH SCHIZOPHRENIA

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SUMMARY:
Background: We examined the prevalence of hallucinations and associated factors among older adults with schizophrenia living in the community. Methods: We looked at 198 patients aged above 55years living in the community who had developed schizophrenia before age 45years. We examined the presence, form, type, identity and causes of the various types of hallucinations, including auditory, visual and olfactory. We excluded patients with substantial cognitive impairment. Using George's social antecedent model of psychopathology, we examined 18 predictor variables of any form of hallucinations.Results: 32% of sample reported any hallucinations in the past 6 months; 58%, 30% and 13% reported one, two, or three types of hallucinations respectively. In bivariate analysis, we found 6 variables associated with the presence of auditory hallucination including

depressive symptoms, higher PANSS anxiety score, higher PANSS delusion score, higher PANSS disorganization score, higher lifetime trauma and lower cognitive coping style score. In logistic regression analysis, we found 3 associated variables including depressive symptoms, PANSS delusion score and lower cognitive coping style score. Conclusion: Auditory hallucinations are usually not benign. Although most had clear good and pleasant voices, almost three-quarters of hallucinators had depression.

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NR01-33

SOCIAL NETWORK CHARACTERISTICS AND EFFECT ON SEVERITY OF PSYCHOSIS IN A COMMUNITY SAMPLE WITH HIGH PREVALENCE OF STIMULANT USE

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SUMMARY:
BACKGROUND: Urban environments include neighbourhoods with high prevalence of serious and persistent mental illness, substance abuse and communicable infectious disease. As little is known about the social network composition in these settings, one objective of this study was to collect descriptive information with the goal of identifying strategies for more effective health care intervention. A second objective was to determine if social network size had a buffering effect on the severity of psychotic symptoms.METHODS: Participants were recruited from four single room occupancy hotels in Vancouver from November 2008 until September 2010. Participants completed structured interviews to provide information on demographics, substance use, mental health and social network characteristics. The specific components of the interview that were used in this study included: a socio-demographic survey, the Maudsley Addiction Profile, Substance time-line follow back, urine drug screen, Positive and Negative Symptoms Scale (PANSS), Beck Depression Inventory (BDI), and the Arizona Social Support Interview Schedule. Regression analysis was used to determine whether there was a correlation between network size and symptoms of psychosis. RESULTS:The study population (n=146) had the following characteristics: 24% female, 76% male and 0.4% transgendered. The average age of subjects was 45 years old (range 23-68 years). The substance use characteristics of the population within the month preceding interview are as follows: 95% stimulant use, 54% opiate use, 52% cannabis use, 53% reported use of both stimulants and opiates, 13% consumed alcohol at least weekly, and 51% reported current intravenous drug use. The mean total PANSS score was 73 (SD 24), with positive subscale mean 16 (SD 6) and negative subscale mean 18 (SD 10). Using a categorical approach and PANSS items related to delusions, hallucinations and thought disorder, 53% of subjects were determined to be psychotic at the baseline interview. The mean BDI score was 13 (SD 10). Using a threshold of =21 on the BDI as indicating clinical depression in a substance-using sample, 23% of subjects were depressed at baseline. The mean available network membership (ANWM) was 4.66 (range 0-18) people. Regression models were used to predict PANSS

score, with predictors ANWM score, gender, and an ANWM by gender interaction. Statistically significant results were obtained for ANWM and the negative symptom PANSS score (p=0.01). In contrast to the effects of a larger network membership on severity of psychotic symptoms, no such relationships were observed for severity of depression. DISCUSSION:The social network size of participants was similar to those reported in other samples with high prevalence of psychotic illness or of intravenous drug abuse. Studies of schizophrenia have showed relationships between network size and negative symptom severity, which is consistent with our findings. In an environment where exposure to stimulant drugs increases the risk of psychosis, social network size may be a protective factor that could be a target for future development of interventions.

NR01-34

ELECTROCONVULSIVE THERAPY AND THE MEDIA: A REVIEW OF YOUTUBE VIDEOS

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SUMMARY:
In recent years, electroconvulsive therapy (ECT) has again come under scrutiny by the Food and Drug Administration due to a debate about the classification of ECT devices in the medical device classification and the requirement for PreMarket Approval process. Since movies like The Snake Pit and One Flew Over the Cuckoo's Nest, ECT's negative portrayal in the media has been controversial, with a number of researchers suggesting a link between these depictions and patients' reluctance to undergo the treatment. Social media sites such as YouTube, the world's largest and most frequently visited video media website site, have been found to be influential in patients' healthcare decisions. Currently there is a deficit of literature describing how ECT is portrayed in social media sites. This preliminary study looked at the first eighty videos on a YouTube search and categorized the videos as educational, documentary, advocacy (including antipsychiatry groups), and entertainment. Videos were further analyzed for their portrayal of overall benefit from ECT ("negative," "positive," or "neutral/last resort"), degree of memory impairment suggested by ECT treatments ("rare/transient," "often/permanent," "moderate," or "no comment"), and attainment of informed consent ("attained," "not attained," or "no comment"). In addition, videos were classified by the number of "likes" and "dislikes" and the inclusion of patient stories in their message. The majority of YouTube videos examined were documentaries or news features, followed by advocacy videos, primarily done by antipsychiatry groups. Videos that portrayed ECT in a negative or dangerous light outnumbered videos with neutral or positive/beneficial content. The majority of videos did not comment on the risk of memory impairment with ECT, although the number of videos that described memory loss as "often" or "permanent" outnumbered those that described cognitive impairment as "rare," "transient," or limited to memory surrounding the procedure. A minority of videos used patient vignettes to highlight their message about ECT. Finally, despite concern among the general public regarding informed consent for ECT, only a very small number of videos discussed issues regarding consent for this procedure. Despite growing evidence of the benefits of ECT for severe depressive states, among a number of indications, the procedure remains highly stigmatized among the general public. This preliminary analysis of ECT's portrayal in the world's largest social media site, YouTube, found that educational and scientifically-accurate media content is lacking.

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NR01-35

REACT –PCS:RACIAL AND ETHNIC ASSOCIATIONS TO CONSULT AND TREATMENT – PSYCHIATRY CONSULTATION SERVICE

Chp.:Yukari Kawamoto M.D., 570 W Brown Rd, Mesa, AZ 85005, Co-Author(s): Aida Hadziahmetovic, M.D., Maria Jesus Bailon, M.D., Christina Gesmundo, M.D., Gilbert Ramos, M.A., David Drachman, Ph.D.

SUMMARY:
Objective: Diverse patient populations can transform the treatment encounter in various ways; this study examined the impact of race/ethnicity, gender, and age on psychiatric consults. Our hypothesis was that the rate and reasons for consults would differ between minority and Caucasian populations because of cultural misperceptions and biases. We also anticipated a disproportionate rate of psychotic diagnoses in minorities as opposed to mood and anxiety diagnoses in Caucasians, based on prior study findings. Methods: We conducted a retrospective chart review of 539 psychiatric consults requested in 2006 at Maricopa Medical Center in Phoenix, Arizona, a 718-bed county hospital. Data gathered included: gender, age, ethnicity, department requesting the consult, reason for consult, consult psychiatric diagnosis, length of time from admit to consult, total length of stay, and psychiatric discharge diagnosis. Chi-squared tests, F-tests, Mann-Whitney U tests, and Kruskal-Wallis tests were performed to find correlations between these variables. Results: Of 539 consults, 312 were male (58%) and 227 female (42%) with a racial/ethnic breakdown of Caucasian (N=267, 50%), African-American (N=58, 11%), Hispanic (N=134, 25%), Native American (N=24, 4%), Asian (N=3, 1%), and Other/Unknown (N=53, 10%). Consult ages totaled 41 (8%) aged 0-17, 166 (31%) aged 18-34, 291 (54%) aged 35-64, and 40 (7%) aged 65 and above. Psychiatric consults were requested by the burn unit (N=31, 6%), emergency department (N=37, 7%), internal medicine/family medicine (N=337, 62%), obstetrics/gynecology (N=25, 5%), pediatrics/PICU (N=33, 6%), and surgery/trauma/SICU (N=75, 14%) teams. The time to a psychiatric consult request did not differ significantly based on race/ethnicity, age, gender, or requesting department. No statistically significant differences were found when comparing race/ethnicity and gender with consult reasons. However, differences were noted on the reasons for consult by requesting department and age of the patient. Length of stay also differed by requesting department and patient age but not by gender or race/ethnicity. Conclusion: Although race/ethnicity did not have a statistical impact on reason for psychiatric consults, length of stay, or time to consults, it is important to recognize the subtle roles that ethnicity, race, and gender play in expression and interpretation of patients receiving psychiatric consults. Some observed differences in psychiatric diagnoses between ethnic groups correspond to the literature, however these are not pronounced enough to be significant. We did not account for medical staff ethnic diversity which may moderate bias in treatment encounters. Additionally, overall lower SES among all racial/ethnic groups that was not accounted for may play a role in neutralizing differences. Future investigation should consider caregiver as well as patient characteristics in assessing service delivery of the psychiatric consult.

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NR01-36

ALTERED COLOR PERCEPTION AS SIDE EFFECT OF SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIS): TWO CASE REPORTS AND LITERATURE REVIEW

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SUMMARY:
Selective serotonin reuptake inhibitors (SSRIs) are widely used in the treatment of depression and anxiety disorders. In general they are considered to have readily recognizable common side effects such as nausea, headache, loose stools, sleep and sexual dysfunction. Visual disturbances directly related to SSRI use are not commonly reported or expected. This report focuses on two cases where patients were being treated with an SSRI (sertraline) and experienced significant alterations of visual functioning. Thorough evaluation including ophthalmological evaluation confirmed the absence of identifiable organic pathology of

the visual system, to explain those visual changes, with the conclusions that the experiences were related to the SSRI use.The results of a subsequent literature review of visual anomalies secondary to these commonly used psychotropic agents are presented along with the cases. It is posited that this information is of importance to prescribers of these agents.

NR01-37

IS THERE AN APPROPRIATE AGE TO SCREEN FOR DELIRIUM FOLLOWING CARDIAC SURGERY?

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SUMMARY:
Background: Delirium is a serious postoperative complication. It is associated with high mortality and morbidity and increased length of hospital stay. (1-6) The presence of delirium specifically after cardiac surgery has been associated with increase in: (i) ICU stay, (ii) length of stay, (iii) sternal wound stability, (iv) sternal wound correction and (v) increased incidence of intubation. Incidence rates for delirium following cardiac surgery vary from 2-73%. (7-11) Aim: To identify the post-operative incidence of delirium in patients undergoing cardiac bypass and/or valvular surgery. Identify potential age cut offs in screening for post operative delirium. Methods: We evaluated patients post operatively for evidence of delirium using the Confusion Assessment Method-Intensive Care Unit (CAM-ICU). (12) We included patients of all ages who underwent cardiac bypass and/or valvular surgery and followed patients for up to five days following surgery. Results: We evaluated 50 patients (35 males, 15 females; mean age = 70.66 yrs +/- 1.86 yrs) over a 4 week period. Post operative incidence of delirium was 20% for all patients (N=10/50) and delirium incidence increased with age. In our population no patients under 70 years old developed delirium, where as 38 % of those >70 years old and 43% of patients = 80 years old developed post-operative delirium. After correcting for age, patients that developed delirium were significantly more likely to have receiving intra-operative blood transfusions or have a pacemaker. Patients who developed delirium had an increased length of post operative stay (9.3 days v 6.9 days) and were less likely to be discharged home. Conclusion: Post-operative delirium following cardiac surgery appears to be a significant event. There is a rationale in targeting patients for delirium screening and/or prospective studies based on their age.

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NR01-38

MENTAL HEALTH IN PRIMARY CARE FOR ADOLESCENT PARENTS

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SUMMARY:
Seeking mental health services may be challenging for teens, particularly when the teens are also parents. Offering mental health care in a safe, attractive and easily accessible manner, such as in a primary care setting, increases the chances that teen parents will receive help. Comprehensive care models need to be established to address the many needs that at-risk young mothers and their children face. Using a model program (The Mom Power Parenting Skills Program) developed through a University-Community partnership in Michigan, USA, we elaborate on core elements and key features of a treatment engagement intervention for teen mothers. The Mom Power Program is a group intervention designed to engage young mothers into tor mental health services, provide developmental and parenting guidance, teach self-care skills, and provide hands-on parenting practice and social support. Comprehensive models like the Mom Power Program are vital in reaching out to the needs of young moms and their babies and to provide sustained enrollment in the health care system

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NR01-39

CASE REPORT OF ATRIAL FIBRILLATION IMMEDIATELY FOLLOWING RIGHT UNILATERAL ULTRA BRIEF PULSE ELECTROCONVULSIVE THERAPY IN A HEALTHY 46 YEAR OLD MALE

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SUMMARY:
OBJECTIVE Electroconvulsive Therapy(ECT) is a safe treatment with morbidity primarily due to cardiovascular complications.Most are minor and transient in nature. The most commonly reported arrhythmias associated with ECT are supraventricular tachycardia and ventricular extra systoles. Atrial fibrillation(AFib)induced by ECT is rare, with only three reported cases. None is of a young, healthy male described below.METHOD:C is a 46 y/o male with Recurrent Major Depressive Disorder and Chronic PTSD. He had no comorbid medical problems. An index course of Right Unilateral(RUL) ultra-brief pulse ECT was begun with good response,followed by weekly continuation therapy. RESULTS: Immediately following the end of the electrical seizure at session #25, C was noted to be in Afib, confirmed by manual tracing. Electrolytes and Arterial Blood Gas were normal. When C awoke from anesthesia he was fully oriented denying any cardio-respiratory symptoms. C was given Diltiazem IV and started on a daily oral course. He was monitored closely for several hours then sent home in stable Afib. Two days later C had a follow up EKG which revealed normal sinus rhythm and a normal echocardiogram. He has resumed weekly maintenance ECT with no further arrhythmias. CONCLUSION ECT is a widely used and safe treatment modality. Afib following ECT is a rare but serious complication. We found only three reported cases: all were over the age of 55,received bilateral ECT, and required cardioversion or cessation of ECT. C's case is remarkable as it appears to be the first report of a patient under the age of 50 with no prior cardiac history who developed an acute onset of Afib during the maintenance phase of unilateral ECT immediately following one of his induced seizures. He converted with anti-arrythymic medication and has been able to resume and continue ECT without further recurrence of Afib. This case provides a successful method of treatment and raises important questions concerning the physiology ECT.

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NR01-40

THE PREVALENCE OF HOARDING IN AN OUTPATIENT GEROPSYCHIATRY CLINIC

Chp.:Nidhi Goel M.B.B.S, 353 E 17TH ST, APT 15B, NEW YORK, NY 10003, Co-Author(s): DAVID M. ROANE, M.D.

SUMMARY:
THE PREVALENCE OF HOARDING IN AN OUTPATIENT GEROPSYCHIATRY CLINIC. Presenter: Nidhi Goel,MD ; David M Roane, MD. OBJECTIVE: Hoarding is a behavioral abnormity characterized by the excessive collection of poorly usable objects. It is described mainly in association with obsessive–compulsive disorder (OCD) and in the elderly. This study looks at the prevalence of hoarding behavior in a geropsychiatry outpatient clinic and examines the rate of co-occurrence of hoarding with other mental illnesses including OCD. METHOD: This is an exploratory study designed to examine 50 patients over age 65.

The sample size is based on a power analysis. All participants are assessed during their initial intake appointment in the geropsychiatry clinic at Beth Israel Medical Center, New York. Exclusion criteria includes: Inability to follow instructions or provide consent and lack of fluency in English. The Clutter Hoarding Rating Scale (SI-R) is used to determine the presence of a compulsive hoarding syndrome. Other scales include: SCID- I OCD section; The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) interview; The BECK Depression Inventory (BDI-II) and Folstein Mini Mental Scale. We will describe the patient population, estimate the prevalence of hoarding and report it with its 95% confidence interval. We will examine possible factors associated with hoarding including obsessive compulsive behaviors, depression and dementia. Categorical variables will be analyzed with the chi-Square statistic. Continuous variables whose distribution meets normality assumptions will be analyzed using a t-test. RESULT: Of the first 10 subjects evaluated, 2 exceeded the cutoff scores on the Clutter Hoarding Rating Scale (SI-R), specifically in the Clutter sub-scale and the Difficulty in Discarding sub-scale. Out of these 2 subjects, 1 demonstrated mild cognitive impairment on MMSE and the other had mild depression on the BDI-II. Neither had significant symptoms of OCD CONCLUSION: Our discussion will focus on the association between hoarding and other psychiatric symptoms. In particular we hope to determine if hoarding correlates with OCD symptoms or with symptoms of depression and/or cognitive impairment that commonly co-occur with aging.

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NR01-41

SERUM ESTRADIOL LEVELS AND MOOD AND HEALTH-RELATED QUALITY OF LIFE IN CANADIAN POSTMENOPAUSAL WOMEN: A CROSS-SECTIONAL STUDY

Chp.:Joanna Mansfield M.D., Toronto General Hospital, 200 Elizabeth Street, 8EN, 238B, Toronto, M5G2C4 Canada, Co-Author(s): Sidney Kennedy, M.D., MBBS, FRCP(C), George Tomlinson, M.Sc., Ph.D., Sophie Grigoriadis, M.D., Ph.D., FRCP(C), Angela Cheung, M.D., Ph.D, FRCP(C)

SUMMARY:

Serum estradiol levels and mood and health-related quality of life in Canadian postmenopausal women: A cross-sectional study Joanna Mansfield, M.D., Sidney Kennedy, M.D., MBBS, FRCP(C), George Tomlinson, M.Sc., Ph.D., Sophie Grigoriadis, M.D., Ph.D., FRCP(C), Angela Cheung, M.D., Ph.D., FRCP(C) Toronto General Hospital, University Health Network, University of Toronto Background: Biochemical effects of estrogen on the brain and its influence on mood regulation and health-related quality of life are controversial. After menopause, serum estradiol declines to low levels, however, the effect of the decrease in estradiol levels on mood and health-related quality of life remains unclear. Objective: To determine if there is an association between serum estradiol levels and mood and health-related quality of life in healthy postmenopausal women. Methods: This is a cross-sectional study using baseline data from the MAP.3 trial (a Phase III Randomized Study of Exemestane vs Placebo in Healthy Postmenopausal Women at Increased Risk of Breast Cancer) across Canada. Serum estradiol, estrone, and testosterone is measured using the gold standard technique of liquid chromatography-tandem mass spectrometry (LC-MS/MS). Sex hormone-binding globulin (SHBG), dihydroepiandrosterone sulphate (DHEAS), and cortisol is measured using a two-step enzymatic immunoassay. These analyses are conducted in the Department of Laboratory Medicine and Pathology, Mayo Clinic, Rochester, MN. Mood and health-related quality of life is measured using the Short Form Health Survey (SF-36) from the Medical Outcomes Study and the Menopause-Specific Quality of Life Questionnaire (MENQOL). The primary outcome measure is to determine if there is an association between serum estradiol and mental health-related quality of life as measured by the SF-36 Mental Composite Score and Mental Health Inventory-5 Score. Secondary outcome measures will investigate for an association between serum estradiol and the MENQOL psychosocial domain. Associations between serum estradiol, estrone, testosterone, and DHEAS and

health-related quality of life will also be explored. With a sample of 480 women and a two-sided alpha of 0.025, there is 90% power to detect an R2 to explain as low as 2.6% of the variance in mental health-related quality of life attributed to estradiol, using multiple linear regression to control for covariates. Results: Hormone levels and outcomes (SF-36 and MENQOL scores) have been collected and are currently being analyzed. Conclusions: Determining an association between serum estradiol levels and mood and health-related quality of life could lead to a better understanding of estrogen-mediated antidepressant mechanisms and the development of new forms of treatment for mood disorders in postmenopausal women. Funding Source: Department of Psychiatry Research Award Competition, University Health Network, University of Toronto.

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NR01-42

RISK OF POSTTRAUMATIC STRESS DISORDER ASSOCIATED WITH SHOOTING DURING COMBAT IN IRAQ AND AFGHANISTAN

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SUMMARY:

Background: Posttraumatic Stress Disorder (PTSD) is commonly being seen post-deployment from Iraq and Afghanistan. Shooting at others

and being shot at are risk factors for PTSD. Few comparisons have been done to those who have returned from combat who shot at the enemy to those who were shot at. Our study objective was to examine the rates of PTSD in military service members who reported being shot at, shooting at the enemy, both shooting at the enemy and being shot at, and neither shooting at the enemy or being shot at. Methods: A retrospective record review was conducted among service members who completed the Post-Deployment Health Assessment Tool (PDHAT) at the Naval Medical Center San Diego. The PDHAT included the PTSD Checklist – Military Version (PCL-M) and the Patient Health Questionnaire (PHQ-9). Mean score of the PCL-M and PHQ-9 were compared by analysis of variance. Rates of PTSD based on loose criteria on the PCL-M were compared. Results: Of the 1,998 records reviewed, 1,361 contained completed information. 118 military service members reported being shot at and had a mean score on the PCL-M of 26.2 and PHQ-9 of 3.9. 25 military service members reported shooting at the enemy and had a mean score on the PCL-M of 31.5 and PHQ-9 of 5.3. 210 military service members reported to both shoot at the enemy and being shot at and had a mean score on the PCL-M of 30.6 and PHQ-9 of 4.8. 1,008 military service members reported neither shooting at the enemy nor being shot at and had a mean score on the PCL-M of 24.0 and PHQ-9 of 1.7.Conclusion: Shooting at an enemy who does not return fire may be a particular traumatic experience.

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NR01-43

RECHALLENGE WITH CLOZAPINE AFTER NEUTROPENIA; A CASE PRESENTATION DEMONSTRATING THE ROLE OF GENETIC TESTING

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SUMMARY:
Objective Although clozapine is the most effective antipsychotic for treatment resistant schizophrenia, it is underprescribed. 1 This is due to many factors, including the risk of clozapine induced agranulocytosis (CIA) and neutropenia. 2 CIA is a potentially fatal adverse drug reaction that is defined as an absolute neutrophil count drop to below 500cells/mm3. An association between CIA and specific major histocompatibility complex (MHC) genes has found between CIA and MHC class II, DQ beta 1 (HLA-DBQ1). 3 Genetic testing can assess a patient's HLA-DQB1 genotype; however, the role or utility of this test in clozapine rechallenge has not been defined. This case presentation will address the question: what is the role of genetic testing for patients with a history of CIA or neutropenia prior to rechallenge? Method The evaluation and care of a female patient treated in an inpatient university psychiatric hospital is presented. Over 18 months prior to admission, the patient had sustained dramatic benefit from clozapine. Clozapine was discontinued when the patient developed neutropenia and subsequently the patient decompensated requiring hospitalization. Over the next five months, the patient had inadequate response to various pharmacologic treatments and electroconvulsive therapy (ECT). She also required multiple hospitalizations throughout this time. Due to the patient's previous positive response to clozapine, the decision was made to pursue clozapine rechallenge. With the patient's consent, genetic testing was performed to assess for the absence of a high risk genotype. A blood sample was submitted to PGxHealth and the PGxPredict:CLOZAPINE 4 test was done to determine the genotype of a single nucleotide polymorphism in the HLA-DQB1 gene. Upon rechallenging clozapine, the main outcomes measured would become an adequate response to therapy and a continued lack of CIA or neutropenia. Results Genetic testing showed the patient's HLA-DBQ1 gene to be G/G genotype which confers a lower risk of agranulocytosis. This absence of a high-risk genotype in the gene HLA-DQB1 is reported to have an estimated risk of CIA of 0.32% 3,5 The patient had a positive clinical response to clozapine and has not required hospitalization since rechallenge. There has been no agranulocytosis or reoccurrence of neutropenia over 13 months. Conclusions This case report is another example of how genetic testing may become the cornerstone of personalized care. Since clozapine rechallenge

after CIA is often associated with a rapid and severe reoccurrence of agranulocytosis, 6 genetic testing may provide an important opportunity to minimize risk. PGxPredict:CLOZAPINE needs to be further evaluated for its potential in minimizing risk of neutropenia or agranulocytosis prior to clozapine rechallenge, but if this test is found to be beneficial, it could serve to increase the number of patients identified as candidates for rechallenge with clozapine.

NR01-44

THE INFORMED CONSENT NOT TO BE INFORMED: A CROSS SECTIONAL SURVEY ON THE USE OF PLACEBO IN CLINICAL PRACTICE

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SUMMARY:
objective: to investigate whether subjects suffering from medical conditions in general and depression in particular would consent to receive placebo, and whether receiving placebo will negatively affect their autonomy or doctor-patient relationship.Design: a cross-sectional questionnaire survey. setting: five academic institutes in Israel.Participants: 344 students from the social sciences, medical school and law school.method: subjects were provided a thorough explanation about the placebo effect and its efficacy and limitations in the treatment of depression. Understanding was verified. they then completed a-32 item self-report questionnaire assessing their attitudes towards placebo treatments and the physicians who prescribe them.results: 70 % (N=243) of subjects expressed consent to receive placebo as a first line treatment were they to suffer from depression in the future (99% confidence interval 66% to 78%), and 73% (N=248) consented to receive placebo treatment for other medical conditions (99% confidence interval 68% to 80%). 88% (N=297) did not consider a physician administering a placebo deceitful, nor the act of prescribing it a deceit. conclusions: despite the declared disapproval of placebo treatments by the medical establishment, the majority of our study population was willing to use placebo medication in general, and as first line treatment for depression in particular. this study questions the validity and ethical justification of an essential principle of current clinical practice and invites physicians to rethink and discuss the legitimacy of administering placebos in clinical practice.

NR01-45

FALLING THROUGH THE CRACKS: HOW TO EVALUATE WOMEN WITH MIDRANGE EDINBURGH POSTPARTUM DEPRESSION SCALE SCORES IN A LARGE, URBAN, COMMUNITY HOSPITAL

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SUMMARY:
Objectives: Research shows that the Edinburgh Postnatal Depression Scale (EPDS) can diagnose risk for postpartum depression; it has been validated at different cutoff scores (from 10 to 16), prompting researchers to investigate other demographic factors that may predispose for postpartum depression risk. Our goal is to determine clinical and demographic factors in postpartum women who initially score 10 to 14 on EPDS that could predict lack of improvement at 3 weeks postpartum. Methods: Medical record review 47 women with EPDS scores of 10-14 within 24-hours of delivery who attended a 3-week postpartum psychiatric evaluation (3WPPE). Age, past psychiatric history, conflict with baby's father, closeness of patient with her own mother, and whether the woman was from Philadelphia were ascertained. Paired T-tests were performed to compare women who improved with those who had persistent depression.Results:From 10/2009 to 6/2010, 2169 women delivered and 184 (8.4%) women scored 10 to 14. Of 184 scheduled for 3WPPE, 47 (26%) returned. 33 women were included in analysis of all the factors, and an additional 7 patients had data for analysis of age and past psychiatric history. 27 of 40 (67%) women scored <10 on their 3WPPE EPDS, indicating improvement in symptoms of depression. 13 (33%), either remained the same or worsened as indicated by a score > 10.Preexisting psychiatric history was the factor most strongly associated with lack of clinical improvement. Only 5 of 13 (38%) women with a past psychiatric history improved as opposed

to 22 of 27 (82%) with no past psychiatric history (p-value 0.011).Although analyses did not reach statistical significance, there were two factors that appeared to affect high 3WPPE EPDS. Maternal support appeared protective with 75% improving at 3 weeks. Women who were from Philadelphia, a loose correlate to family support, appeared protected with 80% improving the 3WPPE EPDS.Conflict with the baby's father did not predict persistence of depressive symptoms.No significant association between age and the 3WPPE EPDS score was found. No EPDS cutoff score between 10 and 14 was predictive of persistence of depression at 3 weeks postpartum. Conclusions: Our small sample size precludes drawing definitive conclusions regarding depression risk or protective factors for women who scored 10 to 14 upon screening. Past psychiatric history was the clearest predictor of persistence of depressive symptoms. Maternal age and stress with the baby's father were not associated with negative outcomes. A larger sample size is needed to determine whether maternal support or being native to the area protect against ongoing depressive symptoms. Methods to improve treatment adherence in this vulnerable population are an additional area for further study.

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NR01-46

PREDICTORS OF BIPOLAR PROGRESSION IN UNIPOLAR PSYCHOTIC DEPRESSION

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SUMMARY:
Introduction: Patients initially diagnosed with severe unipolar depression with psychotic features (unipolar psychotic depression) are at increased risk of developing bipolar disorder. The early detection of an underlying bipolar disorder in these patients is important due to the different treatment regimens for the two disorders. This study aims to identify predictors of diagnostic progression to bipolar disorder in patients with unipolar psychotic depression. Hypothesis: Early onset of mental disorder, many depressive episodes and the use of antidepressants predict progression towards bipolar disorder in unipolar psychotic depression.Methods: Population-based, prospective cohort-study merging data from the national Danish registers. Patients assigned with an ICD-10 main-diagnosis of unipolar psychotic depression (ICD-10: F32.3+F33.3) between 1995 and 2005 were identified in the Danish Central Psychiatric Research Register (DCPRR). Later diagnoses of bipolar disorder were also detected through the DPCRR. A number of possible explanatory variables for the progression from unipolar psychotic depression to bipolar disorder were defined via access to a number of public registers including the DPCRR. Predictors for the development of bipolar disorder were identified through survival analyses using multivariate Cox regression with risk expressed as hazard ratios (HR).Results: We

identified 7740 patients diagnosed with unipolar psychotic depression in the study period. Of these 665 (8.6%) developed bipolar disorder in the follow-up period. The following characteristics predicted the development of bipolar disorder: young age at first psychiatric contact (HR=1.05 (pr. year), p<0.001), the number of previous depressive episodes (HR=1.02 (per episode), p<0.001) and a lifetime diagnosis of substance abuse (HR=1.73, p<0.001) or organic psychiatric disorder (HR=2.21, p<0.001). Use of various antidepressants was also associated with bipolar progression: SNRI (HR=1.75, p<0.001), TCA (HR=2.17, p<0,001), SSRI (HR=2.42, p<0.001) and MAO-I (HR=2.96, p=0.016).Conclusions/discussion: Progression to bipolar disorder is prevalent in patients with unipolar psychotic depression. Patients who are young at their first psychiatric contact, have multiple depressive episodes and have been assigned with a lifetime diagnosis of organic psychiatric disorder or substance abuse are more likely to be diagnosed with bipolar disorder. The use of antidepressants in unipolar psychotic depression may also contribute to progression towards bipolar disorder.

NR01-47

HIGH SUICIDAL MORTALITY OF PSYCHIATRIC PATIENTS – SUICIDAL ATTEMPTERS, EMERGENCY ROOM VISITORS AND PSYCHIATRIC INPATIENTS

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SUMMARY:
Objectives: We examined the suicidal mortality of previous suicide attempters, Emergency Room (ER) visitors for psychiatric problems other than suicide attempt, and psychiatric inpatients among the clinical population of Korea. We also investigated risk factors of suicide completion in these high risk populations.Methods: The subjects consisted of 3,498 patients who visited ER for suicide attempt or psychiatric problem or admitted for psychiatric disorder in a general hospital located in Seoul, Korea from July 2003 to December 2006. Suicide attempt was defined as an intentional self-harm [X60-X84, Y87.0, international classification of diseases, tenth revision (ICD-10)], and psychiatric disorder was defined as 'F' code in the ICD-10. Patients who meet these diagnostic criteria were identified from electronic medical records, and included in the study. Using the data on suicide completers collected from the National Statistical Office (NSO), we identified patients who completed suicide during July 2003 to December 2006. The NSO data and hospital records were matched using the unique national identification number assigned to all Korean citizens. Suicidal mortality risk of the suicidal attempters, ER visitors for psychiatric problem, and psychiatric inpatient was compared with that of the general population by calculating suicide specific SMRs. The Cox proportional hazards regression models were used to analyze risk factors for death by suicide in these psychiatric patients. Results: Forty three of the 3,498 subjects died by suicide during the observation period of 2.5 years, of which six patients were previous suicide attempters (3.5%, 6/171), eight were ER visitors for psychiatric problems other than suicide attempt (0.8%, 8/975), and twenty nine were psychiatric inpatients (1.2%, 29/2,352). Compared to the general population, suicide mortality rates were about 70-fold higher for suicide attempters, about 25-fold higher for psychiatric patients with psychiatric hospitalization, and about 15-fold higher for ER visitors for psychiatric problems other than suicide attempt. Independent predictors of suicide in a multivariate Cox model were depression and history of suicide attempt (hazard ratio=3.20 ; 95% CI=1.03-9.95, and hazard ratio=2.80; 95% CI=1.36-5.76, respectively). Conclusion: These results highlight the importance in a suicide prevention strategy of early intervention after an ER visit for psychiatric problems and psychiatric hospitalization as well as ER visit for suicide attempt. Attention to patients with depression and history of suicide attempt are especially needed.

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NR01-48

RETURNING TO PRE-KATRINA HOMES DURING EPISODES OF PSYCHOSIS, A CASE REPORT

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SUMMARY:

Hurricane Katrina was a devastating event to New Orleans. There was a mandatory evacuation of the city, in which victims in affected areas were not allowed to return for months. Many residents were unable to return to their previous residence due to the destruction of their home or change in ownership. Some homes were simply gone. Following Katrina, over the course of one year of working at LSU Interim Hospital Behavioral Unit at DePaul Campus, there was noted a number of cases of psychiatric patients returning to their pre-Katrina home during episodes of acute psychosis, as could be likened to an almost fugue-like state. Our patient was a 54 year old man with a history of schizophrenia was brought in by police after attempting to break into a home in which he used to live. Upon admission to Depaul the patient reported that the home in which he was trying to enter was his own. The patient's sister with whom he had been living in Georgia since evacuating for Katrina reported that the patient no longer owned the home, and he had traveled from Georgia in his psychotic state in order to obtain his social security card. The patient also endorsed multiple delusions, such as being Stevie Wonder's son, and the presence of a little black box located in the back of his head from which his auditory hallucinations originated. On admission exam he displayed loose associations, concrete thought processes, grandiose delusions and hyperverbal speech. He complained that he was not sleeping and had been noncompliant with his home medications of Prolixin and Elavil. The patient remained at Depaul for approximately two weeks, and was treated with Prolixin and Depakote. At the time of discharge, his association with his pre-Katrina home as that of his current home was no longer present. According to the DSM-IV-TR, a dissociative disorder is one in which there is a disruption of consciousness, memory, identity, or perception, usually in response to a traumatic event1. Dissociative fugue involves sudden unexpected travel with the inability to recall some or all of one's past, and involving amnesia for the fugue period(1). However, for dissociative fugue as according to Kaplan and Saddock, our patient did not meet actual criteria given that his loss of memory and wandering are due to psychosis(2). It is not necessarily a new but prior identity that may be assumed, and which could be considered a parallel with our patient returning to his previous home(3). Dissociative disorder and its relation to PTSD has also been studied extensively, and linked to dissociative symptoms such as avoidance, detachment, and numbing traits(4), premorbid dissociation(5), female sex, proximity to disasters, and previous stressful life events(6). Schizophrenia in and of itself is associated with detachment and negative symptoms, and it could be postulated that this makes this population more likely to dissociate as did our patient.

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NR01-49

REPEATED USE OF PHYSICAL RESTRAINTS ON ACUTE INPATIENT PSYCHIATRIC UNITS

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SUMMARY:
Objective: The use of physical restraints on inpatient psychiatric units is generally considered a last intervention in ensuring patient and staff safety. The aim of our study is to identify clinical and demographic variables that place patients at greater risk of being repeatedly restrained on acute inpatient psychiatric units. We compared the characteristics of patients who were placed in restraints more than twice in a single hospitalization to the characteristics of patients placed in restraints only once during hospitalization. Methods: We performed a retrospective chart review of patients admitted to Temple University Hospital's Episcopal Campus acute inpatient psychiatric units between September 1, 2004, and September 30, 2010. Patients were categorized by age and gender. They were analyzed by ethnicity, length of hospitalization, Axis I and Axis II discharge diagnoses, reason for restraint, length of restraint time and the total number of restraint episodes. Reasons for restraint included "physical aggression against property", "physical aggression against self", "physical aggression against others" and "disruption of milieu". Results: We identified 70 patients who were placed into physical restraints on more than two occasions during a single hospitalization. We matched 70 cases of repeated restraints by age and gender to 70 cases of single restraint episodes. Patients who were restrained multiple times averaged 4.9 restraint episodes during their stay. We found the length of stay for patients who were repeatedly restrained to be 2.5 times longer than for those restrained only once. Patients with multiple restraints also remained 1.5 times longer in restraints per episode. Axis I disorders did not affect the number of restraint episodes, but patients with mental retardation were more likely to be restrained multiple times. The single restraint group was more likely to have only one reason for restraint, whereas patients with multiple restraints were more likely to have all four reasons documented throughout their hospitalization. The most common reason for restraint was "physical aggression against others". Conclusions: Several factors contribute to the use of repeated physical restraints. The correlation with longer lengths of stay raises the possibility that patients who are restrained more frequently tend to have more severe pathology. However, the extended time per restraint episode and the fact that mentally retarded patients are more likely to be restrained multiple times raises the concern of unchecked countertransference and the possible underutilization of other interventions such as behavioral treatment plans which could decrease the frequency and duration of physical restraint. Given the significant morbidity associated with the use of restraints, educational programs which address these factors are essential.

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NR01-50

THE PSYCHOPHARMACOLOGY ALGORITHM PROJECT AT THE HARVARD SOUTH SHORE PROGRAM: MANAGING PSYCHOTROPICS FOR PREGNANT WOMEN WITH MOOD DISORDERS

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SUMMARY:
Objective: This first version of managing psychotropics for pregnant woman with mood disorders algorithm of the Psychopharmacology Algorithm Project at the Harvard South Shore Program aims to provide an organized, sequential, and evidence-supported approach for the treatment of pregnant women with these disorders. Methods: The Psychopharmacology Algorithm Project at the Harvard South Shore Program (PAPHSS) is a publicly available, Internet-based, interactive site for clinic consultation on evidence-based psychopharmacology. The Website is accessible at www.mhc/Algorithms/. It began online in 1996 with the Algorithm for the Pharmacotherapy for Depression and has since expanded. For this specific population, abstracts were reviewed and all relevant articles were obtained. Reference lists from identified articles were consulted. Original studies, meta-analyses, and review articles were analyzed to assess the conclusions made from these studies. Only studies published in English were examined. Results: The first decision point in the algorithm is to decide whether the pregnant woman may possibly relapse if she is switched to a safer drug. Women with a high risk of relapse after discontinuation of their psychotropic medications should be continued on their current medications. Women with acute mania should be treated with an antipsychotic and if ineffective, ECT should be considered. Women with bipolar depression should be treated with CBT for moderate depression and SSRIs for severe depression. Conclusions: First line medications for depression in pregnant women are nortriptyline, amitriptyline, imipramine, and SSRIs. All SSRIs are equally recommended with the exception of paroxetine which may be less safe for the fetus or infant (pregnancy category D). First line medications for bipolar disorder in pregnant women are chlorpromazine, haloperidol, and trifluoperazine. There has been no clear evidence that any antipsychotic is a major teratogen.

NR01-51

PSYCHIATRIC IMPLICATIONS OF BEDBUGS

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SUMMARY:
Objective: To describe the psychiatric sequelae of bedbug (cimex lectularius) infestations. Methods: We reviewed the medical literature on the psychiatric sequelae of bedbugs as well as the popular media's coverage of the current epidemic in New York City. We also present several exemplary clinical vignettes. Results: The psychiatric sequelae of bedbug infestations have not been addressed in the medical literature. Manifestations depend on patients' psychopathology and level of functioning prior to infestation, but include delusional disorders and hypochondriasis in patients with psychotic diatheses and acute stress disorders in neurotic populations. Bedbug infestations and associated fear can lead to significant decreases in productivity.Conclusions: The psychiatric implications of bedbugs are important to consider and treat when attempting to control and contain infestations. It is unclear why certain individuals develop psychotic sequelae in response to real or perceived infestations. This area requires further exploration.

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NR01-52

OXIDATIVE STRESS PARAMETERS IN ALZHEIMER'S DISEASE: POTENTIAL BIOMARKERS OF THE NEURODEGENERATIVE PROCESS

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SUMMARY:
Background: Increasing prevalence of Alzheimer's disease, corresponding with increasing aging populations, further complicated by a lack of definitive diagnostic procedures, make diagnosis of Alzheimer's disease a major medical concern

of the beginning of 21st century. Early detection of Alzheimer's disease is a demanding problem requiring the consideration of multi-dimensional experiments and data. Potentially, many features could be used to discern between people without AD and those at different stages of the disease. Such features include results from cognitive and memory tests, imaging results, cerebrospinal fluid data, blood markers, and others. Our experiments, strongly suggested that. Free radicals and oxidative stress appear to both directly or indirectly play a major role in cellular processes implicated in neurodegeneration of Alzheimer's disease (AD). Thus, oxidative damage to a range of biomolecules is of particular interest to AD researchers and potential biomarkers of the meurodegenerative process in AD Aim: In this study the level of oxidative stress in a group of AD patients from a population-based sample was measured. Patients: 52 AD subjects recruited from a population-based study as well as 27 age and gender matched control patients were examined. Methods: Plasma malondialdehyde (MDA), a marker of lipid peroxidation was chosen to reflect the level of pathology. In parallel, the level of the tripeptide glutathione (GSH), which scavenges free radical species, was measured as an indicator of the antioxidant protection. Serum total antioxidant status (TAS) was determined as a quantitative assessment of in vivo oxidative status.Results: GSH levels were significantly reduced in AD compared to AD (0.68 vs. 1.39 mM, P<0.001). Consistent with this, MDA levels were elevated in AD patients compared to controls (3.28 vs 1.43 mM, P <0.001). The level of MDA did not correlate with age (CC =(-) 0.275, P > 0.05). The newly diagnosed patients were younger than the rest of the group. The time from the diagnosis, however, did correlate with age (CC =0.56, P < 0.05). The most pronounced differences in the oxidative stress parameters were found in the newly diagnosed AD group. The level of MDA was higher in both the newly diagnosed AD patients and in those with longer lasting neurodegenerative process in comparison with controls. Both sets of data were statistically significant. GSH was significantly lower in newly diagnosed AD patients when compared to controls. Serum total antioxidant status was calculated for samples from each study group. TAS levels were significantly decreased in AD subjects as compared to control (0.6 vs 1.39 mmol/L, P <0.001). The most pronounced differences in TAS levels were apparent in the AD group with the shortest history of the disease (the time from diagnosis). TAS was significantly lower in newly diagnosed AD patients when compared to controls. Conclusion: Overall, these data support the idea that an altered oxidative profile is both an early and prominent feature of AD. Further studies into the disease specific affected parameters of increased lipid peroxidation and decreased antioxidant capacity may direct future therapeutic options for targeting the disease at the earliest time after diagnosis.

NR1-53

DO PEER SUPPORTED AND PROFESSIONALLY FACILITATED EDUCATIONAL RESOURCES ON INPATIENT PSYCHIATRIC UNITS IMPROVE PATIENTS' EXPERIENCE OF MENTAL ILLNESS?

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SUMMARY:
Objective: We attempted to determine if peer supported and professionally facilitated resources aimed at increasing an educational dialogue about mental illness could improve subjective experiences of the treatment process and patient understanding of diagnosis, symptoms, and the need for treatment in an inpatient psychiatric unit. Method: We instituted three interventions in a 22 bed, inpatient psychiatric unit at Grady Memorial Hospital. These included: 1. a process group co-facilitated by a former patient on the unit where patients were invited to share their experiences with mental illness 2. a psycho-educational library of illness narratives and self-help books related to schizophrenia, major depression, and bipolar disorder 3. a twice weekly viewing of psycho-educational movies. We used a 5 point Likert scale questionnaire before and after these interventions were started to measure patient understanding of mental health diagnosis, symptoms, and treatment. We also randomly sampled free responses from patients regarding how they experienced the process group, library, and movies. Results: Though results of the questionnaire showed no significant difference in patient understanding of diagnosis, symptoms, and treatment before and after the interventions, the free response component of our evaluation showed that patients did indeed find these interventions meaningful. These results may be related to poor construction of our questionnaire. Conclusions: From these results, it is evident that peer supported and professionally facilitated resources, particularly those emphasizing support and discussion of the illness experience, may be helpful in increasing subjective experiences of the treatment process and patient understanding of diagnosis, symptoms, and the need for treatment.

NR01-54

PREVALENCE OF METABOLIC SYNDROME (MS) IN VETERANS WITH ALCOHOL RELATED DISORDERS ALONE AND ALCOHOL AND MARIJUANA RELATED DISORDERS COMBINED

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SUMMARY:
Background: ATP III criteria define metabolic syndrome (MS) as the presence of any 3 of the following 5 traits: 1) Abdominal obesity, i.e. waist circumference in men >102 cm (40 in) and in women >88 cm (35 in); 2) Serum triglycerides =150 mg/dL (1.7 mmol/L) or drug treatment for high triglycerides; 3) Serum HDL cholesterol <40 mg/dL (1 mmol/L) in men and <50 mg/dL (1.3 mmol/L) in women or drug treatment for low HDL-C; 4) Blood pressure =130/85 mmHg or drug treatment for high blood pressure; 5) Fasting plasma glucose (FPG) =100 mg/dL (5.6 mmol/L) or drug treatment for high blood glucose. Various studies have been performed analyzing the relationship between alcohol consumption and MS but studies comparing the prevalence of MS in alcohol related disorders alone to combined alcohol and marijuana related disorders are scant. Methods: 270 male veterans admitted to the SATP program in Salem VAMC, with an admission diagnosis of alcohol related disorders alone or alcohol and marijuana related disorders combined were included in the study. Diagnoses and related information were obtained from retrospective chart analysis. We obtained information on serum triglycerides, HDL cholesterol, blood pressure and fasting plasma glucose values at admission. As there was no waist circumference, documented in the charts, this ATP variable was not included. Those veterans who met 3 out of the 4 ATP III criteria were considered positive for MS. Lab values were obtained within 3 months of admission to the program. Results: Prevalence of MS in alcohol related disorders alone was 48.9% (confidence interval was 0.41-0.56) and the prevalence in alcohol and marijuana related disorders combined was 56.72 % (CI was 0.440-0.687). There was not enough evidence to show that the 2 groups differed in proportion of patients with MS (p=0.319). Hypertension, hyperlipidemia and diabetes mellitus were risk factors for MS (p<0.001) for both alcohol related disorders alone and alcohol and marijuana combined. There was a significant difference in mean of ages (p=0.0082) for those having MS (53.82 yrs.) vs. those not having MS (49.9 yrs.) of approximately 4 years. Total alcohol years and intake as well as marijuana intake were not related to the prevalence of MS. In alcohol related disorders, the proportion of patients with MS (48.9%) was significantly different (p<0.001) than the general male population (36.1%). In alcohol and marijuana related disorders proportion of patients with MS (56.7%) was significantly different (p<0.001) than the estimate for the general male population (36.1%). Conclusions: Prevalence of MS is higher in veterans with alcohol related disorders alone and alcohol and marijuana related disorders combined as compared to the general male population. Hypertension, hyperlipidemia and diabetes mellitus were variables most closely associated with MS which is consistent with what is generally reported.

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NR01-55

AN EVIDENCE-BASED APPROACH FOR THE CLINICIAN IN THE MEDICAL EVALUATION OF THE PATIENT UNDERGOING ELECTROCONVULSIVE THERAPY

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SUMMARY:
Background: Electroconvulsive therapy (ECT) has been widely used for treatment of various psychiatric disorders, including major depression. At our institution, hospitalists are often asked to perform a medical assessment of inpatient psychiatry patients who require ECT. There are few guidelines to aid clinicians in evaluating these patients. Objective: To summarize the literature of medical assessment

of patients undergoing ECT, and provide an evidence-based approach in risk stratification of such patients. Method: We reviewed medical literature regarding medical comorbidity and use of ECT. Results: According to the 2007 American Heart Association guidelines for peri-operative management of patients, ECT is analogous to a low-risk procedure.(1) There are no absolute contraindications to perform ECT.(2) However, there are a number of medical conditions that need to be optimized prior to patients undergoing ECT. A thorough past cardiovascular and cerebrovascular history should be obtained on all patients. ECT can be safely administered to patients > 75 years. (3) A baseline electrocardiogram is generally recommended in patients >50 years.(2) Since there is no clear data in the literature to estimate a threshold blood pressure that is safe for ECT, recommendations from Joint National Committee VII are generally followed. In patients with recent myocardial infarction, delaying ECT 3 months after the acute event is generally recommended. In patients with aortic stenosis who undergo ECT, no major complications were reported.(4) In patients on chronic anticoagulation with warfarin who undergo ECT, no major adverse events occurred. (5) In patients with pacemakers/defibrillators, only 1 episode of supraventricular tachycardia was noted.(6) There were no adverse events reported in patients with unrepaired abdominal aortic aneurysm.(7) In patients with a history of stroke, no neurologic or cardiac complications occurred. However, delaying ECT for at least one month in patients with an acute stroke (<30 days) is suggested.(8,9) No adverse events were noted in patients who had an intracranial mass(10) or aneurysm.(11) However, risk assessment by neurology and neurosurgeon is generally recommended. ECT has been safely performed in patients with medical conditions like diabetes mellitus, hyperthyroidism,(12) chronic obstructive pulmonary disease(13) and renal failure, as long as these are at baseline.(2) In patients on chronic steroids, administration of stress dose steroids is unnecessary.(14) Conclusion: While there is limited data, our review of literature can provide a framework for clinicians who evaluate patients requiring ECT. Although ECT is safe and effective therapy, clinicians should be cognizant of potential peri-procedural complications. A flow chart for care can be constructed based on our search results, but more rigorous prospective studies need to be done to better inform psychiatrists and clinicians who participate in the care of their patients.

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treatment? J. ECT. 2008 Jun;24(2):128-30.

NR01-56

INTERNET ADDICTION OF A 13 YEAR OLD GIRL

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SUMMARY:
Maladaptive internet use has increased dramatically in recent years. The concept of internet addiction is still evolving; some empirical studies have been done in recent years using different diagnostic criteria. Prevalence estimates for internet addiction vary from 0.3-0.7% in the general US population to 1.5-8.2% from surveys in US and Europe. Online gaming is an important part of internet addiction. Gaming has been shown to have the strongest association with compulsive internet use. A study in the Netherlands estimated the prevalence of addicted online gamers among adolescents aged 13-16 years to be around 1.5%. The case reported here is of a 13 year old Chinese American girl suffering from the effects of online gaming addiction. She was admitted with depressive symptoms (irritability, sad mood, markedly diminished interest in almost all activities most of the day, decreased appetite, disturbed sleep). A diagnosis of Major Depressive Disorder, severe without psychotic features was given. On further inquiry, her presentation was better understood in the context of online gaming addiction. She met Young's criteria for internet addiction. Diagnostic dilemmas associated with the case are discussed.

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NR01-57

FORENSIC IMPLICATIONS IN NEURODEGENERATIVE DISEASE: A CASE STUDY ILLUSTRATING THE NEED FOR COMPREHENSIVE STATEWIDE ADAPTION OF JAIL DIVERSION PROGRAMS

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SUMMARY:
Objective: This pilot study begins with a case report describing rapid deterioration, from unrecognized delirium during a month long incarceration, in a 54 year old Middle Eastern patient with frontotemporal dementia (FTD), to illuminate inherent difficulties in recognizing and treating acquired antisocial behavior stemming from neurodegenerative disease; and then broadens to proffer a solution: a jail diversion template for state-wide adaption. Background: A central tenet of jail diversion programs is expansion of the current framework on criminal recidivism risk factors in general populations to encompass disparate risk factors of the mentally ill(1). While antisocial personality disorder is a significant risk factor in general populations, the leading cause of criminal recidivism in the mentally ill is fragmented treatment; therefore prevention is contingent upon increasing access to psychiatric services(2). While the framework addresses general psychiatric disorders, its efficacy in successfully diverting patients with FTD remains unknown. Mario Mendez, when discussing moral

issues surrounding criminal intent in the FTD population, suggests antisocial behaviors may be acquired through anatomical brain damage, and cites studies that suggest brain dysfunction in 61% percent of habitually aggressive persons(3). Thus, it is important to differentiate acquired sociopathy from antisocial personality disorder when creating jail diversion programs. Methods: The study design compared the 3 New Jersey county (Atlantic, Essex, Union) pilot diversion programs to determine both the current system limitations and also the most efficient extant post-booking county program. Data was amassed and grouped into the following categories: number of persons assessed, pre-adjudicated, enrolled into post-booking program, successfully linked to mental health programs, and linked to housing. Structural similarities and differences in NJ programs were compared against state diversion programs in Connecticut, Tennessee and Texas. Results: Successful adjudication was predicated on immediate linkage to psychiatric care. Union county used a centralized review process through their public defender's office to evaluate detainees for diversion which led to an 8-fold increase in successful adjudications prior to prosecution when compared to the other counties. The template derived from the funneling system of the Sequential Intercept Model(4) and balanced the Union county post-booking prototype with a prebooking proposition, inspired by the success of the Memphis, Tennesse police crisis intervention team (CIT), for implementation of state-mandated police corps training to differentiate intentional misconduct from neurodegenerative aggression. An educational protocol guideline to foster this implementation was also created and presented to the state jail diversion task force. Conclusion: Increasing awareness of neuropsychiatric behavioral changes to better differentiate such pathological processes from criminal recidivism at the earliest possible juncture of the forensic process remains a formidable goal, one integral to improving clinical outcomes and salvaging dignity even amidst neurocognitive decline.

NR01-58

SURVIVING AORTIC DISSECTION: DOES LIFE GO ON?

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SUMMARY:

Mood influences physical health and physical problems influence the mental health of patients. In the intersection between cardiology and psychiatry, research has shown that depression predicts mortality after acute coronary events such as myocardial infarction (1, 2). In the intersection between oncology and psychiatry, multiple papers discuss how patients cope with the mental health consequences of a cancer diagnosis (5,6,7). Most data are based on middle-aged and elderly individuals. Very little is known about how acute cardiovascular events psychologically affect younger adults in their twenties or thirties (based on personal Pubmed review). This report describes the complex issues faced by a man in his mid thirties, with no previous psychiatric history, who is faced with an aortic dissection. The psychiatrist, primary care provider, and cardiologist, communicate and collaborate effectively together to treat the patient's difficult medical psychosocial problems. This case exemplifies the interconnection between medical and psychiatric problems making it clear that providers must work together to provide optimal care. Of interest would be to ascertain whether treatment of depression, known to decrease risk for ACS recurrence, can be applied to hypertensive management as secondary prevention (8).

NR01-59

WITHDRAWN

NR01-60

ATTRIBUTION OF PSYCHIATRIC SYMPTOMS TO MILITARY STRESS

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SUMMARY:

OBJECTIVE: It has been well documented that troops returning from combat operations in Iraq and Afghanistan exhibit elevated levels of mental health disorders. Less attention has been directed at sea going troops (Navy and Coast Guard). Furthermore, while the impact of war and deployment has been noted to affect family members of active duty

(AD) service members, the extent to which mental health problems in such family members may be attributable to deployment had not been well studied. We sought to investigate the characteristics of military service members and their family members that sought mental health treatment and to examine whether or not they believed that their symptoms were due to deployment. METHOD: We performed a retrospective record review at Naval Medical Center San Diego with available records from January 1, 2007 through August 31, 2007 for all AD, dependants of AD, and retirees. The standard intake paperwork included the question "do you believe the problem for which you are being seen today is related to a deployment of any type?" Information including gender, age, military status, branch of service, deployment to a combat area of either self or sponsor, deployment geography, and if the subject believed that the problem for which he or she was presenting to mental health was related to deployment was also obtained. RESULTS: Data were gathered from 582 records including 442 AD members, 18 reservists, 99 family members, and 23 retirees. The sample consisted of AD members (including AD reservists) (n=460, 82.3%), males (n=328, 58.7%) and affiliated with the Navy (n=389, 69.6%). However, women, family members, and members from all military branches except the Air Force were represented. Subject ages ranged from 18 to 71 years old with a mean age of 29.1 (SD=8.75). Examining subjects who had been deployed (or had a sponsor deployed), 49% had a deployment-related (DR) problem (n=123); 51% did not have a DR problem (n=128). In the sample of participants who were deployed (n=193), the majority reported that they were coming to mental health for DR reasons. Family members were approximately split for sponsors who were deployed to combat areas (n=53, 53.5%) and for those who were not (n=46, 46.5%). 20.2% of family members presented to mental health services for DR problems, compared to 31.1% of AD members. However, 30.2% of family members of sponsors who were deployed to a combat area sought help for a problem related to their sponsor's deployment. CONCLUSION: This study examined self-attributions of psychiatric difficulties to deployments. We found that members from ground troops were more likely to have been combat-deployed, were more likely to have been deployed to Iraq, and were more likely to attribute their mental health conditions to deployment than members from sea going troops. The majority of our sample had not been deployed to a combat area. Nor did the majority of our sample attribute their mental health concerns to deployment. While service members who have been deployed have received the majority of attention from previous studies, our data indicate attention should be directed towards those who have not been deployed as well. Another finding of our study is that an increasing number of family members are seeking mental health treatment for DR issues as well. While one-fifth of all family members were being seen for a DR issue, nearly a third of the sample family members

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NR01-61

RACIAL DISPARITY IN THE USE OF NEUROMODULATION FOR AFFECTIVE DISORDERS: A GROWING PHENOMENON

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SUMMARY:

Introduction: Major Depressive Disorder (MDD) remains one of the leading contributors to disability globally. Unfortunately, racial disparities exist in the psychiatric management of MDD. Disparities exist in myriad forms, including differences in diagnosis, treatment, and access to care. African Americans, specifically, are less likely to be treated according to consensus guidelines, and are much less likely to be prescribed ECT for severe MDD than Caucasians. Given the potentially refractory nature of MDD, it is estimated that 20 to 40% patients fail

to respond adequately to conventional treatments such as antidepressant medications, psychotherapy and ECT. Emerging neuromodulation treatment options include repetitive transcranial magnetic stimulation (rTMS) and vagus nerve stimuation (VNS). rTMS is an FDA approved treatment for refractory MDD. Its efficacy is supported by studies including ECT controlled trials and meta-analytic studies. VNS is an implantable device approved by the FDA as an adjunctive treatment of treatment resistant unipolar and bipolar depression. Its effectiveness is supported by response rates of 30-43% at 1-year. As new interventions emerge, it is important to ensure that disparities are reduced, not widened, and this is a main tenet of the Public Health Service's Healthy People 2020 initiative. As new treatments are often not covered by insurance, as is the case for rTMS and VNS, it is very probable that disparities, driven by socioeconomic forces, will unfortunately be reinforced. We know of no studies that have quantified this serious issue. Objective: We hypothesized that the racial disparity in the use of ECT is also present in the use of new and effective neuromodulation techniques such as rTMS and VNS. We addressed this question by using demographic data from patients of our TMS and VNS clinical programs. Methods: A sample of 97 patients with treatment resistant depression was studied. The sample was comprised of 80 patients that received rTMS and 17 whom underwent VNS. The patients were treated at our center located in Philadephia, PA. We analyzed and described the sample in terms of race in a retrospective fashion. Results:Out of a total of 97 patients, 97.9% (n=95) were Caucasian,1.03% were Latino, 1.03% were Asian, and 0% were African American. African Americans and other non-Caucasian individuals are significantly less likely to be treated with rTMS or VNS. Discussion: In our center, Caucasians have a significantly greater likelihood of receiving neuromodulatory treatments for mood disorders. African Americans and other non-Caucasian patients were underrepresented in both the rTMS and VNS groups. The observed racial differences in our rTMS and VNS sample are likely generalizable and are in line with disparities described in ECT. Further studies on disparities in neuromodulation treatments for affective disorders are needed to better understand and effectively address this alarming phenomenon.

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NR01-62

CHARACTERISTICS AND PREDICTORS OF LONG-TERM INSTITUTIONALIZATION IN PATIENTS WITH SCHIZOPHRENIA

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SUMMARY:
Introduction: Patients with schizophrenia requiring long-term institutionalization represent patients with the worse outcome, leading to personal costs for patients and relatives and constituting a large economical burden for the society. We aimed to compare institutionalized vs. non-institutionalized schizophrenia patients in order to characterize the two groups and identify predictors of long-term institutionalization. Hypothesis: We hypothesized that male sex, early onset schizophrenia and lower educational level were more common in the institutionalized group. Methods: One year follow-up cohort study of institutionalized and non-institutionalized patients with schizophrenia. Utilizing the Danish National Registry, patients with ICD-10-diagnosed schizophrenia (F20.0-F20.9) before January 1st 2006 were included (total number 22,395). Results: Compared with non-institutionalized patients, institutionalized patients with schizophrenia had earlier onset of schizophrenia and lower scholastic achievements, were more often diagnosed with a hebephrenic subtype (OR, 2.34; 95% confidence interval (CI), 1.95-2.80; p<0.001), received higher dosages of antipsychotics and more concomitant medications, had more substance misuse and early retirement pension. In a logistic regression model adjusted for sex and age, institutionalized patients with schizophrenia had an increased risk of type II diabetes (AOR, 1.22; CI, 1.01-1.42; p<0.001), but the mean age of onset of type II diabetes did not differ. Institutionalized schizophrenia was not a risk factor for ischemic heart disease, stroke or chronic obstructive lung disease. The mean age of life span was higher in the institutionalized group (62.7 vs. 58.7 years; p=0.027), which was driven by absence of death from suicide. Conclusions: Institutionalized patients with schizophrenia had worse outcome of the disorder, except for less suicide, illustrated by receiving higher dosages of antipsychotic medications, more concomitant medications and more bed-days. Predictors of institutionalization were hebephrenic subtype, a diagnosis of epilepsy, early retirement pension, male sex, lower educational level and substance misuse. Institutionalized patients with schizophrenia had an increased risk of type II diabetes.

NR01-63

CASE STUDY: BUPROPION ELEVATES DULOXETINE LEVELS

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SUMMARY:
The co-administration of duloxetine and bupropion could pose undesirable effects. Duloxetine is metabolized by both CYP1A2 and CYP2D6 and has a dosage dependent inhibition of CYP2D6. Bupropion is an inhibitor of CYP2D6. The co-administration of duloxetine and bupropion could increase duloxetine levels to intolerable amounts via inhibition of its metabolism. We present a case of a patient with multiple physical symptoms possibly stemming from interactions between medications. A 37 y/o Caucasian female with history of major depressive disorder presented to the inpatient psychiatric unit with suicidal ideations. She had been taking duloxetine 120mg daily and bupropion hydrochloride 300mg daily for the past two years and quetiapine 50mg at bedtime. The patient complained of hot flashes, for which she was taking prempro, migraine headaches, for which she was taking topiramate, blurry vision and amenorrhea. She had a history human growth hormone deficiency and was taking supplementation. She had gained 70 pounds within one year. She was being treated for hypothyroidism with levothyroxine and also had a cholesterol granuloma. Her MRI showed significant cerebral atrophy disproportionate for her age, which was suspected to occur from hypertension. Upon admission she was tachycardic and did not fully correct with an intravenous fluid. She had a normal blood pressure. A serum duloxetine level was drawn and was 280 ng/ml, which was higher than expected. Quest diagnostics reported that duloxetine dosages of 40mg BID should amount to 12-60ng/ml. Saliva genotype testing was performed to see if she had a deficiency in CYP2D6, which could lead to a high duloxetine level. Her CYP2D6 genotype was normal. Our patient was hospitalized for seven days while she was slowly tapered off of duloxetine, continued on bupropion and changed to fluoxetine, a medication which had been helpful in the past. Her heart rate normalized. Two days after being off duloxetine the patient complained of increased tearfulness, however she denied sweats and headaches. At 21 month follow up the patient continued taking fluoxetine 40mg daily and bupropion hydrochloride 300mg

daily. After she was completely off of the duloxetine her migraines, sweats and tachycardia stopped. She denied depression or suicidal ideations. She was no longer taking growth hormone supplementation, topiramate or prempro. It is possible that the increased level of duloxetine was due to bupropion inhibiting the metabolism of duloxetine, similar to how bupropion inhibits the metabolism of venlafaxine. In a study of venlafaxine and bupropion, elevated blood levels of venlafaxine were found as were the side effects of sweating and tachycardia1. The elevated duloxetine level could also be secondary to the dosage dependent inhibition that duloxetine has on its own metabolism. Only one study was found during a pubmed literature search which examined the co-administration of duloxetine and bupropion. In the study, nine out of ten patients showed improvements in depressive symptoms while taking duloxetine and bupropion with minimal side effects2. This case illustrates the potential side effects that can occur with simultaneous administration of duloxetine and bupropion. Although some data suggest a potential benefit from the combination, close monitoring of heart rate, blood pressure, headaches, and hot flashes should be performed to minimize polypharmacy in treating drug side effects with other medications.

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NR01-64

THE SAD PERSONS SCALE FOR SUICIDE RISK ASSESSMENT: A SYSTEMATIC REVIEW

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SUMMARY:

Context: According to the World Health Organization, suicide is among the top 20 leading causes of death globally for all ages. Suicide risk assessment therefore represents a major challenge for physicians and other healthcare professionals faced with evaluating and managing suicidal patients. The SAD PERSONS scale (SPS) is widely cited as a helpful suicide risk assessment tool, yet there has been no published review of its performance in suicide risk assessment. Objective: To systematically review the performance of the SPS in suicide risk assessment. Data source and extraction: A systematic literature search was performed using the following electronic databases: Pubmed, PsycInfo, Scopus, Dissertation Abstracts, Google Scholar, and ISI Web of Knowledge. Relevant descriptive, quality, and outcome data from included studies was extracted and reviewed. Study selection: Eligible studies included evaluations of the performance of the SPS [in its original or modified form (MSPS)] in suicide risk assessment. Results: Eleven studies met inclusion criteria. Of these, seven examined the performance of the SPS or MSPS in assessing suicidal behavior. The remainder evaluated the SPS as a training tool. Sensitivity and specificity values for the original SPS in identifying subsequent suicide and/or suicide attempts were 0.16 and 0.90 respectively in one study. Studies examining the MSPS in its original, unweighted form failed to provide clear support for its use in clinical decision-making. Two studies using the weighted version of the MSPS reported sensitivity values of 95% and 100%, and specificity values of 71% and 60%, respectively, in predicting the outcome of psychiatrist-determined need for hospital admission. Studies in specific populations, including Taiwanese (adults and elderly) and US veterans, failed to support the use of the SPS in these groups. In three studies examining the SPS as a training tool, trainees who were taught the SPS assigned lower risk and less aggressive clinical interventions to both low and high risk standardized patients than trainees who were not taught the SPS. Results were inconsistent as to whether SPS-trainee's assessments and recommendations differed significantly from those of experienced psychiatrists. In one study, clinical documentation regarding patients presenting with deliberate self harm was more likely to be judged "adequate" if it included the SAD PERSONS proforma. Conclusion: There are very few studies examining the performance of the SPS scale. Their mixed findings do not provide clear support for the widespread use of the SPS. At present, the weighted version of the MSPS seems to represent the most clinically useful form of the acronym.

NR01-65

BIPOLAR DISORDER IN ADOLESCENT MALE WITH MITOCHONDRIAL MYOPATHY; A CASE REPORT

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SUMMARY:

Introduction Mitochondrial diseases are a genetically and phenotypically heterogenous group of disorders caused by pathological dysfunction of the mitochondrial respiratory chain, that can present with a wide range of clinical expression. The disorders could clinically present as chronic progressive external ophthalmoplegia or an isolated myopathy or multi systemic disorder like Metabolic Encephalopathy, Lactic Acidosis and Stroke-like Episodes (MELAS). The disorders also vary with regard to the age of onset, progression and temporal order of symptoms. Cases of schizophrenia, schizophrenia-like psychosis, depression, mania and bipolar disorder have been reported with mitochondrial myopathies. We report a case of a 14 year old male diagnosed with MELAS who presented with a manic episode followed by a depressive episode. Case Report A 14 year old adolescent male presented with a history of sudden onset left sided hemiplegia, slurred speech, one episode of generalized tonic clonic movements and tremors 6 months ago. During hospitalization, serum lactate was found to be elevated to about twice the normal upper limit. The diagnosis of MELAS was confirmed on histologic and histochemical study of muscle biopsy, which revealed subsarcolemmal and myofibrillar accumulation of abnormal looking mitochondria, consistent with a diagnosis of mitochondrial disease. After 4 months of the onset of neurological symptoms, the patient developed an episode characterized by over talkativeness, overfamiliarity, overplanning, grandiose ideas, decreased need for sleep, increased appetite and increased libido causing significant socio occupational dysfunction. Treatment was initiated in the form of olanzapine gradually titrated to 15 mg after careful monitoring of side effects. There was a complete remission of manic symptoms within 4 months of onset of the episode. However the patient developed another episode in the form of persistent and pervasive sadness, anhedonia, decreased interaction, somatic symptoms, ideas of hopelessness, worthlessness, wish to die with no suicidal/homicidal ideations with significant socio occupational dysfunction. Treatment was initiated in the form of divalproex and sertraline and olanzapine was discontinued. Patient showed a gradual improvement in symptoms within 10-12 weeks with residual symptoms in the form of somatic symptoms, sleep disturbance, left sided hemiplegia and slurred speech. Conclusion It is important to consider a diagnosis of mitochondrial disorder in a patient presenting with neurological symptoms and psychiatric symptoms, especially with atypical features. Psychiatric symptoms may develop before, simultaneously or following the neurological symptoms. The diagnosis of the primary mitochondrial disorders can be challenging because of the dual genomic origins (nuclear and mitochondrial), multi system manifestations, and broad phenotypic heterogeneity encompassed by these conditions.

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NR01-66

EVALUATION AND MANAGEMENT OF LITHIUM-INDUCED DIABETES INSIPIDUS (LIDI)

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SUMMARY:

Nephrogenic diabetes insipidus (DI) is a potentially life threatening condition where an individual is unable to concentrate urine. Untreated, it can progress to coma and death. Nephrogenic DI reflects renal insensitivity to antidiuretic hormone and may be caused by drugs such as lithium, genetic factors, or specific disease processes. While polyuria and polydipsia are relatively common side effects of lithium therapy, lithium-induced diabetes insipidus (LIDI) is thought to be about 10%. With the first line usage of alternative mood stabilizing agents

in the management of bipolar spectrum disorders, LIDI is an increasingly uncommon presentation in the psychiatric teaching hospital. Given its potential to result in permanent renal damage and profound clinical morbidity, it is critical that early career psychiatrists learn to recognize the signs and symptoms of developing LIDI and its clinical management. We will present the clinical course of a 42 year old woman who developed classic LIDI soon after initiation of lithium carbonate for Bipolar II Disorder. We will review the differential diagnosis, outline the appropriate evaluation, discuss the underlying pathophysiology, and summarize the current thoughts on the clinical management of LIDI.

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NR01-67

DO CHILDREN WITH PSYCHIATRIC DISORDERS HAVE A HIGHER PREVALENCE OF HYPOVITAMINOSIS D?

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SUMMARY:

Objective: Hypovitaminosis D is associated with a range of adverse medical outcomes. Beyond its importance in endocrine function and bone health, there is a growing concern that low vitamin D levels may play a role in the development of psychiatric symptoms. The prevalence of hypovitaminosis D in youth with psychiatric disorders is unclear. This study aims to answer the question: Do children with psychiatric disorders have a higher prevalence of hypovitaminosis D? Method: A retrospective chart review was conducted at two Oregon residential psychiatric programs. Patients admitted between October 2009-2010 with symptoms of mood dysregulation were evaluated for serum 25 hydroxyvitamin D (25(OH)D) levels. Among a total of 67 patients, 29 were female and 38 were male, with an age range of 7 to 17 years. There were one to five psychiatric diagnoses documented per patient. Individual diagnoses were organized into 6 diagnostic categories for analysis. All diagnoses for each category were counted to calculate the percentage of diagnostic categories that met hypovitaminosis D cutoff values. Deficiency was defined as below 20 ng/mL using the American Academy of Pediatric (AAP) recommended minimal level, and insufficiency was defined as below 30 ng/mL as used by local laboratories in this study. The prevalences were calculated using both cutoff values. Gender differences were analyzed using a standard t-test. Differences regarding diagnostic groups were analyzed using an Analysis of Variance (ANOVA). Results: The overall mean 25(OH)D level in the study population was 28.91 ng/mL, and classified as insufficient. Vitamin D levels in 21% of patients were below 20 ng/mL, compared to 14% in general population. 61% of patients fell below the cutoff value of 30 ng/mL, similar to the data found in the National Health and Nutrition Examination Survey III(NHANES III). Males had a non-significant (p = 0.24) lower mean 25(OH)D levels than females at 27 versus 30 ng/mL. There's no statistical difference in mean 25(OH)D across genders (2-sided p=0.2385), or across diagnostic categories (p=0.9672). However, patients with psychotic disorders had the lowest mean level of 26.47 +/- 12.42 ng/mL (95% CI:14.98-37.96), and highest prevalence (43%) of 25(OH)D below 20ng/mL. Conclusions:

This study found that children with psychiatric disorders had lower mean vitamin D levels and a higher prevalence of deficiency than the general pediatric population. While no statistical conclusions regarding diagnoses can be made, there was a trend towards greater deficiency among psychotic disorders which is consistent with available literature reviews. Larger studies utilizing stringent diagnostic measures are required to characterize the extent of hypovitaminosis D among psychiatric patients, potential pathologic and treatment relationships, and guidelines for screening.

NR01-68

MUSIC THERAPY AND ITS EFFECTS IN PATIENTS WITH AFFECTIVE DISORDERS ON AN ACUTE INPATIENT PSYCHIATRIC UNIT

Chp.:Eileen Zhivago M.D., 155 E. 31st Street Apt. 5S, New York,, NY 10016, Co-Author(s): Deborah L.Ocasio, MD

SUMMARY:
Objective-To test the efficacy of music therapy in reducing anxiety, improving mood and decreasing the amount of supplementary anxiolytic medication in an acute inpatient unit. Methods- The 20 study participants were patients in an acute inpatient psychiatric unit. The patients were screened with a structured clinical interview and met the DSM-IV TR criteria for an affective disorder without psychosis. Self-assessments as well as the psychiatrists' assessments, including the HAM-A were assessed daily for 5 days during which time the participants received music therapy for 4-6 hours/day. Results-There would appear to be that there is a decrease in PRN anxiolytic medication use and an improvement in the HAM-A score from time of presentation as well as a self-reported improvement of stress and anxiety. Conclusion- A non-invasive intervention of music therapy in an acute inpatient setting is able to reduce the amount of PRN anxiolytic medication administered as well as efficaciously decreasing the patient's perceived feelings of stress and anxiety. We believe as this is a cost-effective and non-invasive intervention more research should be allocated towards music therapy in an inpatient psychiatric unit as this is a patient populations that is very susceptible to both stress and anxiety

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NEW RESEARCH RESIDENTS POSTER SESSION 02
May 14, 2011
1 – 3 PM
Hawaii Convention Center, Exhibit Hall, Level 1

NR02-01

PSYCHIATRY RESIDENCY INFORMATION DELIVERY EXPERIMENT (PRIDE)

Chp.:Jason Estok M.D., 350D Lafayette Rd. Apt. 1-C, Metuchen, NJ 08840, Co-Author(s): Dr. Barbara Palmeri, M.D., Clinical Associate Director of Psychiatry at University Behavioral Healthcare. Co-Investigators for this study are Drs. Dilek Avci M.D., Tania Barreras-Cruz M.D., Jasbir Virk M.D. , Anthony Tobia M.D, and Alejandro Interian, PhD.

SUMMARY:
Psychiatry Resident's Information Delivery Experiment (PRIDE) is intended to examine if the methods of information delivery will affect the frequency of reading academic journals. 20 general psychiatry residents will be randomized into two groups. Both groups will receive an article from a classic psychiatric journal selected by the Principal Investigator, with the request that residents will read and be prepared to discuss the content in an hour long discussion. One of the randomized groups will receive the traditional paper form of the article placed in their mailbox, while the other will receive a password protected .PDF digital file of the same article. A questionnaire will be distributed to assess compliance with reading the article and core competencies. After two trials, a cross-over design will be employed for control purposes with subsequent distribution of novel journal articles for discussion. The Principal Investigator for this study is Dr. Barbara Palmeri, M.D., Clinical Associate Director of Psychiatry at University Behavioral Healthcare. Co-Investigators for this study are Drs. Dilek Avci M.D., Tania

Barreras-Cruz M.D., Jason Estok M.D., Jasbir Virk M.D. , Anthony Tobia M.D, and Alejandro Interian, PhD. There are no conflicts of interest for the investigators. There is no outside funding for this study. The hypothesis under examination is that the method of information delivery will affect the frequency of reading academic journal articles and ultimately the resident's level of skill in core competencies including Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Professionalism, Interpersonal and Communication Skills, and System-Based Care. This project is intended as a pilot study to determine if there are differences in resident compliance with reading a journal article based upon method of distribution as well as individual preference. The participants' subjective improvement in six core competencies from participation in each trial will also be measured. With the results of this study, the effect size of information distribution method on resident compliance to assigned education activities may be determined with a plan for a larger subsequent power study involving other psychiatry residency programs to test for significance with each distribution method. It is also hoped that residents will become more proficient with the use of electronic media formats and their utilization to enhance one's knowledge base.

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NR02-02

CONNECTING TO THE FUTURE: TELEPSYCHIATRY INTEREST AND EXPOSURE IN POST-GRADUATE MEDICAL EDUCATION

Chp.:Juliet Glover M.D., 15 Medical Park, Ste 141, Columbia, SC 29203, Co-Author(s): Emily V. Williams, M.D., M.P.H., Linda J. Hazlett, Ph.D., M.P.H., Nioaka N. Campbell, M.D.

SUMMARY:
Introduction: Telepsychiatry has the potential to mitigate workforce shortages by enabling providers to care for patients in remote or underserved areas. Unfortunately, telepsychiatry remains underutilized in some areas of practice. One possible explanation for its limited utilization may be the lack of exposure during residency and fellowship training. Objective: This study aimed to examine factors influencing psychiatry residents' and fellows' future plans to utilize telepsychiatry upon completion of training as well as characterize their level of interest and exposure to telepsychiatry during residency. Method: A 17-item electronic survey was distributed to directors or administrators of 485 psychiatry residency and fellowship training programs in the United States who were then asked to voluntarily distribute the survey to their residents and fellows. Participants were given six weeks to complete the survey. Chi-square tests were performed to test differences in proportions. Step-wise multivariate logistic regression was used to model outcomes of interest. Results: A total of 283 respondents completed the survey. Of these, 72% reported being very interested or interested in telepsychiatry, while only 29% reported that they planned to utilize telepsychiatry in their practice after training. The majority of respondents (78%) agreed that exposure to telepsychiatry was an important aspect of training and over half of the respondents (51%) felt that it should be required. Of the 52 respondents (18%) who had clinical exposure to telepsychiatry, 36 (72%) reported that their experience increased their interest level and 33 (66%) reported having either a one-time encounter or five hours or less of direct patient care via telepsychiatry. Clinical exposure to telepsychiatry was significantly related to level of training (p=0.001) and program location (p=0.005). Residents in their Post-Graduate Year (PGY) four or fellowship were 2.6 times more likely to be exposed to clinical telepsychiatry than PGY 1-3 residents (95% C.I. 1.41-4.95). Residents and fellows in rural programs were 4.3 times more likely to be exposed than those in urban or suburban settings (95% CI 1.07-17.28). Factors affecting trainees' plans to include telepsychiatry in their future practice include program location (p=0.013) and interest level (p<0.001). Residents and fellows in rural locations were 9.3 times more likely to

report plans to utilize telepsychiatry after training (95% C.I. 1.88-45.71). The availability of didactic experiences, clinical exposure time, and exposure setting did not significantly influence future plans to use telepsychiatry. Conclusions: These results reveal a practice gap between resident interest and exposure to telepsychiatry. Training programs may want to consider incorporating a brief telepsychiatry experience early in training to fulfill both resident interest and the growing demand for psychiatric physicians.

NR02-03

TEACHING HOUSESTAFF TO ENHANCE STUDENT EDUCATION WITH THE USE OF FANTASY SPORTS (THESEUS)

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SUMMARY:
Background: As managed care has reduced the amount of time available for teaching, medical schools are emphasizing clinical experience over lectures. With this, the role of the resident as a teacher has increased. It is estimated that medical students obtain one-third of their knowledge from residents. It is also well-documented that an effective resident teacher can influence the future career choice of a medical student. Moreover, there is evidence that better resident teachers can help students become better learners, and that resident teaching can improve residents' clinical skills. Potential barriers to medical student education are divided into those that are systems-based and individual-based. With regard to the latter, residents' attitudes, skills, and knowledge impact their ability to teach and supervise medical students. THESEUS addresses the impact of residents' attitudes on the supervision of medical students during their third-year clerkship rotation in psychiatry. Objectives: This project aims to eliminate many of the barriers to resident teaching of medical students by providing role modeling, clear objectives, and recognition. It is hypothesized that the motivation of residents to teach will be increased through this intervention of friendly competition. Study Design: Each psychiatry clerkship block is set up as a fantasy football game. Teams of three to four residents led by a faculty member compete against each other to accumulate the most points over the six-week rotation. Each clerkship objective has an attached point total that is awarded to a "team" when that objective is taught or supervised by a resident. Awards may be two, three, or seven points depending on level of complexity. Results: Twenty-one residents participated by filling out surveys rating their attitudes towards teaching prior to and following the academic year. Likert scores were compared pre- and post-intervention to see if participation impacted residents' attitudes towards teaching. Results suggest that residents' teaching improved by participating in THESEUS. Overall Likert scores improved over the course of the study, with residents' confidence scores significantly impacting the outcomes. Change scores demonstrated sustained improvement in confidence scores over the course of three years. Conclusions: With increasing demands placed on academic medicine, novel approaches implemented into residency training are needed to ensure residents teach medical students. More data are needed to determine if participation in THESEUS results in a statistically significant increase in residents' perceptions of teaching.

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NR02-04

THE PSYCHIATRY RESIDENCY TRAINING IN UNITED STATES, CANADA, UNITED KINGDOM, INDIA AND NIGERIA: A TRANSCONTINENTAL COMPARISON

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SUMMARY:
Background: Psychiatric training has undergone major developments over the past decades. International Medical Graduates (IMGs) account for

a significant proportion of residents in psychiatric training in United States. Many of these IMGs may have previously completed psychiatry residency training in other countries. Their experience may add to the improvement of our system. The authors compare and contrast psychiatry residency training in the United States to that of Canada, United Kingdom, India and Nigeria. Method: Four individuals who are familiar with psychiatry residency training in the United States and who were previously trained in other countries, synthesized information available on websites, official documents, and prior literature, as well as their experiences with past training(s). Results: The psychiatry residencies vary considerably in all five countries in terms of the duration of training, curriculum, didactics, clinical experience, psychotherapy training, research experience, supervision, and evaluation process. The training in United States is more structured and has superior psychotherapy training. Canada and United Kingdom have longer training periods. The training in India and Nigeria has a higher quantity of clinical work with no duty hour regulations. Conclusions: While provision of services and training is substantially influenced by national mental health policies, culture, and local traditions, there has been an increasing move toward standardization of psychiatric training around the world. Despite some differences, there are numerous commonalities among psychiatry training in all five countries. Psychiatry residency programs also have much to learn from each other.

NR02-05

NEWSPAPER COVERAGE OF POST-TRAUMATIC STRESS DISORDER (PTSD) IN SOUTH KOREA

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SUMMARY:

Newspaper coverage of post-traumatic stress disorder (PTSD) in South Korea Yourhee Jeong,1,2 Daeho Kim,1,2 Jisang Byun,1,2 Youshup Shin,1 Yong Chon Park1 Department of Neuropsychiatry, Hanyang University Medical School, Seoul1 Traumatic Stress Clinic, Hanyang University Guri Hospital, Gyeonggi, South Korea2 Background Not surprisingly, the mass media is a main source of medical information. And hereby it influences the public awareness of mental health issue. After 9/11 terrorist attacks, PTSD has become one of popular mental health problems covered in the global media. However, the contents and the quality of articles has not been a subject of scientific investigation. Aims To investigate the contents and trends of newspaper reports covering PTSD in terms of the frequency, terminology, description of symptoms, diagnosis and treatment. Method We investigated top three South Korean newspapers by the number of circulation and searched newspaper articles including the word, “post-traumatic stress disorder” “post-traumatic stress” “psychological trauma”, or “traumatic stress” from the very first article available on-line search system to 2009. Results A total of 107 articles were initially identified and among these, 18 articles were excluded for having no relation to PTSD. The first article was presented in 1984 and in the 1980’s there were only two articles. The first half of 1990’s located 11 articles, and second half 15; the first half of 2000’s had 20 and the second half of 2000’s 41. Most of the articles were related international or national events. The most common traumatic event mentioned was accidents or man-made disaster (24%). Of 89 articles, 41(46%) mentioned symptoms of PTSD: reexperience (39%), avoidance or numbing (29%) and hyperarousal (23.6%). Treatment was mentioned in 72 articles (81%); however, mentioned specific psychological treatments or pharmacotherapy were a few (both 11%). Conclusion The number of articles on PTSD in South Korean newspapers were consistently increased during the last three decades. Most of the articles were related to national or international major events especially 9/11 or Iraq or Afghanistan wars and it is likely that these events raised public interest in PTSD. However, the quality of information on PTSD is questionable. Only a part of symptomatogy for diagnosis was described and information on treatment was inadequate and

nonspecific. Trauma professionals need to involve actively with the media for correct and accurate information on diagnosis and treatment of PTSD.

NR02-06

ASSESSING AND MANAGING ONLINE PRESENCE: LESSONS FROM THE GROUP FOR ADVANCEMENT OF PSYCHIATRY (GAP) 2010 FELLOWS PLENARY SESSION

Chp.:Aaron Krasner M.D., 790 Riverside Dr, New York, NY 10032, Co-Author(s): David Cochran, MD, PhD., Steve Koh, MD, MPH, MBA, Aaron Krasner MD

SUMMARY:
Blurring of professional and personal boundaries often occurs in the age of social media. Although the Internet holds the promise of greater patient data access and coordination of care with electronic communication technology, physicians need to keep in mind potential concerns regarding increased use of social networking in daily life. It is clear that the interaction of social networking with our professional identity is a complex issue (1, 2). In the era of increased and constant connectedness through internet technology, the practice of medicine is changing (3). The prevalence of personal social networking within the medical community should not be underestimated (1, 4). Psychiatrists should carefully monitor their online presences from medical school through residency and beyond to maintain a clear boundary between professional and personal identities. The public-trust bestowed on to the medical profession is sacred and the impact of private, Web accessible information is often difficult to measure. This is especially true as medicine is moving toward increased use of electronic medical records. There are several areas of potential ethical concern. Confidentiality and medical legal issues need to be carefully evaluated in electronic communication with patients (5, 6, 7). Increased use of technology in psychiatry obscures boundaries, patient-physician relationships and legal responsibility (8, 9), and with increased access to online presence of physicians and patients alike, there is real concern of online information searches that go both ways (10, 11). To explore the prevalence of social media use, personally and professionally, amongst established psychiatric leaders, the 2010 Fellows of the Group for the Advancement of Psychiatry (GAP) surveyed the GAP membership. The GAP organization is a group of committees that deliberate in a small group format by leaders of American psychiatry who convene twice yearly to collaborate, write, and innovate. Over 250 GAP members were surveyed. The members' online presence and electronic technology use pattern was evaluated. Over 6% of GAP members reported texting with patients, approximately 20% reported online posting of private information about themselves (with just 58% restricting information), 58% reported searching online for themselves and 6% reported searching for patient information online. Over 30% reported emailing with patients but only 7% of them get written consent for using email communication. The survey also showed the perceptions of GAP members towards social networking. Based on these data, we present a discussion of how the online presence impacts professional and personal identity, as well as the ethical issues that arise when practicing psychiatry in the age of the Internet and social networking. Finally, we present our profession's need for a comprehensive set of guidelines covering issues of treatment frame, patient privacy, medico-legal issues, and professional concerns.

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NR02-07

THREATS AND ASSAULTS BY PATIENTS TOWARDS RESIDENTS: A MODEL CURRICULUM

Chp.:Stephanie Kwok M.D., One Baylor Plaza, Houston, TX 77030, Co-Author(s): John Coverdale, M.D., Britta Ostermeyer, M.D

SUMMARY:
Objectives: The purpose of this study is to systematically review the current literature on the prevalence of threats and assaults experienced by residents across all specialties including psychiatry, and to identify the manner in which these issues are addressed. Methods: Pubmed and Scopus databases were searched using search terms including "curriculum," "patient aggression," "patient threats," and "residents."Results: Twelve studies were found incorporating residents from eight specialties. The prevalence of physical assaults on residents outside of psychiatry was between 9%-40%. The prevalence of physical assaults on psychiatry residents was between 40%-56%. The importance of threats and assaults was underscored by the psychological consequences including post traumatic stress symptoms, generalized anxiety, depression, anger, guilt, and embarrassment. Studies showed that few incidents were reported to clinical supervisors or training directors and no programs had a formal reporting process. Other than psychiatry, no residency programs provided formal didactic training on managing violence in the work place. Conclusions: Assaults and threats by patients are commonly experienced by residents in training. Currently, there is a paucity of information that pertains to reducing the prevalence of these incidents and addressing potential psychological consequences in specialties outside of psychiatry. Psychiatrists may be well placed to take the lead in developing a model curriculum to address assaults and threats towards residents in training across all clinical specialties.

NR02-08

ENHANCING PSYCHIATRIC TRAINING FOR NEUROLOGY RESIDENTS: CAN A NEW CURRICULUM IMPROVE RESIDENT KNOWLEDGE AND COMFORT WITH PSYCHIATRIC PATIENTS?

Chp.:Katy LaLone M.D., 446 E. Ontario St. Suite 600, Chicago, IL 60611

SUMMARY:
OBJECTIVE: This purpose of this study is to assess the extent to which neurology residents as a group can improve their clinical knowledge and level of comfort in treating patients with co-morbid psychiatric illness if they are taught a high-yield psychiatry curriculum designed specifically for neurology residents. METHOD: Eighteen neurology residents from Northwestern University's Neurology Residency Program in the second to fourth post graduate years will be given a high-yield psychiatry curriculum designed for neurology residents which includes four 60 min lectures given over a four week period. Before the first lecture, residents will be given a brief knowledge-based exam as well as a brief survey assessing each resident's level of comfort with psychiatric issues. The residents will then be given the 4 lectures over a period of 4 weeks. Lectures will be taught by senior (third or fourth year) psychiatric residents. After completing the final lecture, the neurology residents will be given a second brief knowledge-based exam as well as the same survey given prior to the curriculum. Residents will also be given a brief biographical survey at the conclusion of the study with questions regarding post graduate year, number of lectures attended, as well as evaluation of the material and presentation of the curriculum. The pre-curriculum scores will then be compared to the post-curriculum scores, with the residents acting as their own controls, to assess for improvement in knowledge base as well as improvement in level of comfort. The primary outcome measures for this study with be the difference in scores on both the knowledge-based exams as well as the survey measuring level of comfort. RESULTS: In this study, the residents will act as their own control and will be given both assessments at two separate time points. Time

point 1 will be prior to the curriculum being taught and time point 2 will be after the residents have completed the curriculum. The average scores from the two measures (knowledge-based exam and survey on level of comfort) will be compared and analyzed for statistical significance using t-tests (implied statistical significance $p<0.05$). Demographic data will be also examined for trends to see who benefitted most from the curriculum. CONCLUSION: If residents show improvement in knowledge base and/or level of comfort with psychiatric issues, it may suggest the utility of implementing the curriculum we have developed into neurology training programs elsewhere as a means to increase both resident knowledge base and level of comfort with psychiatric issues. It is our hope that this will lead to better psychiatric care for neurologic patients.

NR02-09

MINDFULNESS IN MEDICAL EDUCATION AND PRACTICE

Chp.:Nikhil Majumdar M.D., 1722 Shaffer - Suite 3, Kalamazoo, MI 49048, Co-Author(s): Janice Habarth, Ph.D.

SUMMARY:
Research on mindfulness has expanded steadily over the past several decades. It has grown especially within the field of mental health, but also in areas such as pain management and even infectious disease. The literature on its uses in physician wellness and medical education are also expanding, but few institutions are aware of the full extent to which they have developed. This poster will provide an overview of current mindfulness research, explore the benefits of mindfulness for physicians and psychiatric trainees and examine its uses as a treatment for patients. It will also include annotation by trainees after exposure to a mindfulness-based practice curriculum to pay particular attention to the novel experiential learning method used in mindfulness training as it applies to trainees learning a technique for self-care as well as for therapeutic uses.

NR02-10

THE ART OF PRESCRIBING PSYCHIATRIC MEDICATIONS: AN EDUCATIONAL APPROACH

Chp.:Jordan Matus M.D., 111 E. 210th Street, Bronx, NY 10467, Co-Author(s): Rebecca Fink, M.D., Santiago Rodriguez-Leon, M.D.

SUMMARY:
The Art of Prescribing Psychiatric Medications -- An Educational Approach Jordan Matus, M.D.; Rebecca Fink, M.D.; Santiago Rodriguez-Leon, M.D. Albert Einstein College of Medicine, Montefiore Medical Center, Bronx NY Objective: To demonstrate how therapeutic strategies to enhance the effectiveness and adherence of medication use by patients can be formally taught during residency training. While medical school and residency training programs excel at teaching what medications to use in a particular setting, residents are left with little guidance in how to shape the act of prescribing in a way most likely to maximize adherence and capture therapeutic placebo effects. Experienced psychopharmacologists have honed these skills for years, and their knowledge can be taught in a systematic way. Methods: The results of a prescribing practices questionnaire administered to experienced outpatient clinicians as well as third and fourth year residents in our program will be presented. Results: Primary outcome data will compare the results of the two groups, with an emphasis on prescribing practices utilized by veteran clinicians which can be formally taught. Conclusions: A template for ways in which this training can be integrated into a residency training curriculum will be provided. No aspect of this research was supported by commercial funding.

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NR02-11

INNOVATIVE RESIDENT-ORGANIZED AND RESIDENT-LED PRITE REVIEW PROGRAM - FEASIBILITY AND DISSEMINATION OF THE ELECTRONIC MODULE

Chp.:Weronika Micula-Gondek M.D., 3091 Chadbourne Rd, Shaker Heights, OH 44120, Co-Author(s): Parikshit Deshmukh MD

SUMMARY:

Objective: Limited literature suggests that resident-organized and resident-led knowledge base review module can be an effective tool in acquiring general knowledge in psychiatry, guided by the annual Psychiatry Resident-in-Training Examination (PRITE)[1]. However, model based on scheduled didactic sessions may not be suitable for all residency programs. Residents at distant and dispersed teaching sites may be unable to regularly attend additional didactic sessions, which pose problems of transportation and time commitment. As PRITE scores have been found to correspond with performance on the American Board of Psychiatry and Neurology (ABPN) Part 1 examination in psychiatry [2], there is a need for effective and easily accessible review program. This is a description of an innovative, electronic-based, resident organized and resident-led PRITE review module, implemented in our program for the PGY-1 through PGY-4 residents. Method: PRITE Review module was implemented over the course of 6 weeks before the exam and disseminated using online software 'dropbox'. Twice a week, a new series of Prite questions, answers and explanations based on suggested reference materials, was posted in 'dropbox' for the residents-participants to review and study. At the end of the module, one in-person meeting was scheduled to summarize and discuss most difficult concepts, and anonymous survey was conducted to assess the quality (Qu), accessibility (Ac), and self-reported effectiveness (Ef) of the module. The responses were scored on a scale from 1-5 (1= poor, 4= above average, 5= excellent) Results: Thirty PGY-1 through PGY-4 residents (80% of total residents) joined the review and 66% of those actively participated. Based on the data from conducted survey, overall quality and effectiveness of the module were assessed as above average (Qu= 3.91, Ef= 4.06) and accessibility was rated highest(Ac= 4.33). Conclusions: Innovative, electronic-based, resident-organized and resident-led PRITE review module was easily accessible and effective in preparation for the annual in-training exam among the residents. Further implementation of similar programs might help improve overall educational quality of the residency training and aid in acquiring medical knowledge, one of the core competencies, which can be further reflected on in-training and board examinations performance.

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NR02-12

THE IMPACT OF SUPERVISION ON INTERNAL MEDICINE RESIDENTS' ATTITUDES AND BEHAVIORS REGARDING MANAGING DEPRESSION IN THE PRIMARY CARE SETTING

Chp.:Jennifer Milone M.D., 2106 Hickory Lawn Drive, Houston, TX 77077, Co-Author(s): Kaki M. York, Ph.D., Christopher P. Ward, Ph.D., Aruna Gottumukkala, M.D.

SUMMARY:

Background: Depression is under recognized and inadequately treated in primary care. Mental health training has consistently been shown to affect primary care physicians' ability to recognize and manage depression. Despite the importance

of supervision in training, there is little research examining the effect of supervision on trainee management of depressed patients. Objectives: The goal of this study is to assess attitudes of internal medicine residents regarding depression and their self-reported screening and management practices and to evaluate the relationship between resident attitudes and behaviors and their perceptions of supervisor attitudes. Methods: Internal Medicine residents were asked to complete a self report battery during clinical case conferences. All residents in attendance were invited to participate. The battery included a published validated questionnaire, the Depression Attitude Questionnaire (DAQ), and items that were developed by the researchers for this study including a demographic questionnaire, a Depression Prevalence and Provider Behavior Questionnaire (DPPBQ), and a Supervising Attending Depression Attitude Questionnaire (SADAQ). Responses were indicated on a 100mm visual analogue scale, where 0mm=strongly disagree and 100mm=strongly agree. Results: 94% of the 54 residents in attendance agreed to participate. Resident responses indicated disagreement with statements asserting negative stereotypical views of depression and optimistic views of depression treatment and prognosis. Respondents reported they were uncomfortable dealing with a depressed patient's needs (M=48.1mm,SD=23.3mm) and felt unrewarded when caring for depressed patients (M=43.5mm,SD=23.8mm). Interestingly, length of training did not enhance comfort managing depression (r=0.04,p=0.78). Most (28/50) residents reported screening =20% of patients for depression. Residents agreed that they are more likely to screen for depression if it is a priority for their supervisor (M=63.7mm,SD=28.4mm) but were neutral as to whether supervisor attitudes affect their attitudes about treating depressed patients (M=49.9mm,SD=21.8mm). Component level analyses did not reveal a significant correlation between resident attitudes and perceptions of attending attitudes, however post hoc item analyses revealed moderate correlations for individual items assessing highly theoretically similar content. Residents expressed neutral views about adequacy of training program preparation for managing depression (M=49.5mm,SD=21.8mm). But a positive correlation between residents' perception of training adequacy and their professional ease in treating depressed patients was observed (r=0.36,p=0.011). Conclusion: These results underscore the importance of supervision during residency training in order to foster routine screening and professional ease in managing depression in the primary care setting.

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NR02-13

THE SYSTEMS' REVIEW OF SYSTEMS: A TOOL FOR LEARNING SYSTEMS-BASED PRACTICE

Chp.:Fumi Mitsuishi M.D., 401 Parnassus Ave, San Francisco, Ca 94143, Co-Author(S): John Q. Young, M.D., Mark Leary, M.D., James Dilley, M.D., Christina Mangurian, M.D.

SUMMARY:
Objectives: The American College of Graduate Medical Education (ACGME) defines systems-based practice as "awareness of and responsiveness to the larger context and system of healthcare" and "the ability to call effectively on other resources in the system to provide optimal healthcare." The ACGME considers systems-based practice to be one of its five core competencies, yet formalized curriculum or generalizable tools to provide residents with skills in this area are lacking. The residency training program at the University of California, San Francisco (UCSF), has been considering several ways to enhance the educational opportunities in this arena, by way of curriculum change and experiential learning, such as quality improvement projects. We believe that comprehension and deft navigation of systems are essential to psychiatric practice. San Francisco General Hospital (SFGH) is UCSF's large county-based teaching hospital with a patient population that is diverse, frequently indigent, and often suffers from severe mental illness. Like many community hospitals, we have experienced a dramatic decrease in bed count as a result of recent economic difficulties faced by our state and pressure from our local public health department to find dispositions for our patients rapidly. One of the most difficult challenges we face on our inpatient units is finding appropriate disposition for some of the "hard to place" patients who inevitably incur costly extended lengths of stay. PGY-1s at our program rotate for six months through the inpatient psychiatric unit at SFGH and thus become exposed early on to deeply formative experiences both from a clinical and systems standpoint. Our objective was to channel our systems challenges into an educational opportunity. This poster will describe this systems-based practice teaching tool in greater detail, present case studies of its application and the pragmatic solutions generated, and describe the educational potential of this approach. Method: We developed a tool to enhance systems-based practice in psychiatric training, which we called the "Systems' Review of Systems". It is structured around the general format of a clinical SOAP note, and combines subjective perspectives of multiple stakeholders involved in the placement process and objective clinical and systems-based data. We piloted this tool on a few of the most challenging cases on our units and tested various hypotheses regarding reasons for prolonged hospitalization through semi-structured interviews, a systematic review of patient records, and a timeline of the placement process. Results: In the pilot cases that we examined, we found four main characteristics of challenging placement cases: (1) Multi-Axial Problems (patients that do not fit the boxes of the system) (2) Environmental Iatrogenesis (patients with Axis II disorders whose psychopathologies are worsened by the conditions of inpatient hospitalization and lead to increased difficulty in finding placement), (3) Legal Issues (arsonists, registered sex-offenders), and (4) Neurodegenerative Disorders.
Conclusions: The tool encouraged trainees to develop a plan to improve patient care through both clinical and systems interventions. Residents were inspired by how simple solutions identified by our tool could address "complex" systems issues, and ultimately improved patient care.

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NR02-14

DEVELOPING CURRICULUM AND

TRAINING OPPORTUNITIES FOR PSYCHIATRY RESIDENTS IN GLOBAL MENTAL HEALTH

Chp.:Karen Mu M.D., 401 Parnassus Avenue, Box 0984, San Francisco, CA 94143-0984, Co-Author(s): Tierney Caselli, M.D.

SUMMARY:
Objective: The World Health Organization (WHO) global burden of disease statistics indicate that, with the exception of Sub-Saharan Africa, chronic diseases are emerging as the major cause for burden of disease. Among these, neuropsychiatric disease constitute 31.7% of all years lived with disability and 1.4% of all years of life lost [1]. As awareness of global mental health disparities has increased, we propose that cross-cultural psychiatric education should be an important part of these efforts. The primary objective of this pilot study is to assess University of California at San Francisco's psychiatry residents' attitudes and interests in Global Mental Health (GMH) training. This data will be used to develop core didactics in GMH for UCSF psychiatry residents, including an international training elective for fourth year residents. The broader objective is to use this data in conducting a needs assessment via a national survey study of psychiatry residency training programs on the existence of and need for training in GMH. Methods: Surveys were administered to 60 psychiatry residents at the University of California at San Francisco from 2008-2010. Results from 47 residents were collected in 2008 and 2010 and analyzed. Results: In total, 78% of residents responded to the survey. A majority of residents (89.7%) were interested in participating in a global mental health elective, with 74.5% of respondents specifically interested in participating in a one month GMH elective in East Africa (Uganda). The majority of participants expressed highest interest (70.5%) in clinical training, with 34.1% expressing high interest in research and 48.8% in education and teaching. Other identified clinical interests include emergent use of ECT, neuropsychiatric manifestations of HIV, substance abuse, and child and adolescent psychiatry. Conclusion: The majority of respondents expressed a high interest in participating in a global mental health elective. University of California at San Francisco's liaison with Makerere University in Uganda in programs such as general surgery, pediatrics, and internal medicine, is poised to be a potential important and mutually beneficial training site for global mental health for psychiatry residents. There is a disconnect between the desires of psychiatrists in-training to engage in global mental health training, the international clinical needs for better psychiatric care and awareness, and formal opportunities to bridge the two. We plan to broaden this pilot data to a national survey study of psychiatry residency training programs to assess the educational needs and opportunities for training in global mental health.

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NR02-15

BUILDING CAPACITY IN MENTAL HEALTH IN GUYANA: CREATING POSTGRADUATE TRAINING PROGRAMS IN PSYCHIATRY FOR GENERAL PHYSICIANS AND NURSES

Chp.:Sabina Nagpal M.D., 5234 Morris St unit 105, Halifax, B3J 0A3 Canada, Co-Author(s): Sonia Chehil, M.D., Matthew Morgan, M.D., Scott Theriault, M.D., Sandra Henigar, R.N., Arelene McDougall, M.D

SUMMARY:
Human resources in mental health is a significant barrier to care in many developing countries. Mental health human resources in Guyana are inadequate to meet the population needs. The majority of the care is provided by non-mental health professionals with minimal training and therefore limited knowledge, skills and competence in providing adequate care. The Ministry of Health of Guyana has identified a need build capacity in mental health. The collaborative efforts of Dalhousie University, Department of Psychiatry, the University of Guyana and the Ministry of Health of Guyana has culminated in a program to build capacity in mental health. The initiation of two post graduate programs to train specialists in mental health nursing and general medical officers with specialization in psychiatry will begin in 2011. Outcomes will include a dramatic increase in human resources to identify and manage mental illness, a shift of responsibility from specialists to generalists, competent professionals providing standards of

care approaching to the developed world, namely Canada. Guyanese sustainability of the training program will be a central focus throughout.Program development has been multifaceted. Initial steps included evaluation of local needs and exploration of international standards in post graduate psychiatric training of both general physicians and nurses. Curriculum creation included: the creation of appropriate objectives and novel content delivery and evaluation methods, integration of local cases to didactic curriculum, the creation of a sustainable structure of the program including an emphasis on interprofessional education for improved collaborative practice outcomes, and incorporation of research requirements for built in quality assurance of the program. As well, the project required efforts in lobbying to obtain funding for training, the creation of collaborative partnerships between Guyanese and Canadian partners as well as a novel educational partnership between the Departments of Psychiatry and Neurology at Dalhousie University Medical School. A thoughtful exit strategy to ensure continuation of the program by trained Guyanese trainers was incorporated throughout.

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NR02-16

IS WIKIPEDIA TAKING OVER TEXTBOOKS IN MEDICAL STUDENT EDUCATION?

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SUMMARY:

Objective: Educators and clerkship directors constantly struggle to recommend the best sources for medical students to obtain scholarly knowledge. In this era of smart phones and other technology at fingertips, it is easier than ever for learners to utilize internet resources. The authors investigate medical students' utilization of non peer-review websites, specifically Wikipedia, and compare its frequency of use to other more conventional study methods like textbooks, in preparation for their Psychiatry Subject Examination.Methods: 186 medical students who had recently completed their psychiatric clerkship were surveyed regarding the type of learning styles or modalities that work best for them when studying for the rotation and Psychiatry Subject Examination. Results: The most frequently used study modality was question books specifically designed for shelf preparation (87.63%). Wikipedia was used by 46.77% of students surveyed. Up-to-Date was used by 58.60% of students surveyed. Only 10.21% of students used traditional psychiatric textbooks. Most textbooks used were those made specifically for shelf-preparation (61.82%). All students who reported using Wikipedia also used other methods of studying. Of the students who used Wikipedia, 83.90% also used question books and 65.51% also used Up-to-Date. Conclusion: Students are likely to utilize several resources to acquire scholarly knowledge during their psychiatric clerkship in preparation for their Psychiatry Subject Examination. The most striking finding was the high percentage of students who used Wikipedia, and the low percentage of students who used traditional psychiatric textbooks. Educators should be aware of the increased use of online non peer-review sites in medical student education.

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NR02-17

THE EFFECT OF AN EXPERIENCE OF AUDITORY HALLUCINATIONS ON MEDICAL STUDENTS' PERCEPTIONS OF MENTAL ILLNESS.

Chp.:Indrani Naskar M.D., 3000 Arlington Ave, Toledo, OH 43614, Co-Author(s): Lance Feldman, MD, BSN,

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SUMMARY:
Objective: The objective of the study was to determine the effect of an experience of auditory hallucinations on medical students' perceptions of mental illness. Method: This study was conducted on all medical students at a large, Midwestern academic medical center completing their core psychiatric rotation. Students voluntarily attended the session, during which the Hearing Voices recording was utilized. Each student received headphones and a listening device (tape player, MP3 player) and was asked to complete a specific task (e.g. make a phone call, purchase food, etc.). Primary study outcome measures were determined through use of a questionnaire developed specifically for this study. Results were quantified based on gender and proposed residency program choice. Results: After participation in the auditory hallucination exercise, medical students noted that the session was helpful in their overall general medical practice as well as enabled them to better understand the challenges faced by people experiencing auditory hallucinations. Furthermore, through an analysis of the subjective response section of the questionnaire, medical student feedback provided insights into the training model and possible future opportunities for continued integration of experiential learning opportunities into the core psychiatric curriculum. Conclusions: This exercise, providing a patient-oriented approach to understanding mental illness, can easily be adapted to any core psychiatric rotation. Curriculum development focused on patient's experiences can provide a lasting positive impact on medical student education.

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NR02-18

THE AMERICAN SOCIETY FOR CLINICAL PSYCHOPHARMACOLOGY RESIDENT AND FELLOW COMMITTEES' DEPRESSION MODULE: A NOVEL PSYCHOPHARMACOLOGY CURRICULUM

Chp.:Deepak Prabhakar M.D., 22200 Green Hill Road #106, Farmington Hills, MI 48335, Co-Author(s): Emily Gastelum, M.D., Adam Lau, M.D., Amy K. Ricke, M.D., Carolyn Broudy, M.D., M.S., Kartic Rajput, M.D., Ph.D., Vinay Saranga, M.D., Joshua Kayman, M.D.

SUMMARY:
Background: The American Society for Clinical Psychopharmacology (ASCP) Resident and Fellow Committee (RFC) was tasked with the development of novel, multi-modal psychopharmacology curricula in major depression and bipolar disorder to support psychopharmacology education in U.S. Adult Psychiatry Residency Training Programs. In an effort to include adult learner input, Psychiatry Residency/Fellowship Training Program Directors were asked to each nominate one resident or fellow from their program to serve over a period of 12 months. Ten resident/fellows from the nominated group opted to serve on the Depression Module workgroup. Methods: The Depression Module workgroup conducted monthly conference calls to develop the curricula from September 2009 – March 2010. The workgroup performed a review of published American Board of Psychiatry and Neurology (ABPN), American Psychiatric Association (APA), American Association of Directors of Psychiatric Residency Training (AADPRT) and Accreditation Council for Graduate Medical Education (ACGME) core competencies and practice guidelines to delineate the scope of the psychopharmacology curriculum to be developed. Results:The Depression Module workgroup developed twelve mini-modules. The core of each mini-module was a PowerPoint Presentation which addressed the clinical characteristics, diagnosis or psychopharmacologic treatment of depression. A key feature of each mini-module is the corresponding problem and group-based learning and alternative teaching exercises that were developed to re-enforce didactic learning objectives and extend learning beyond the scope of the slide set. These modalities included: multiple choice question banks, Jeopardy®-style

psychopharmacology quizzes, clinical vignettes with interactive learning exercises and "sham" clinical scenarios designed to assess the ACGME core competencies. The PowerPoint Presentation addressed the clinical characteristics, diagnosis or psychopharmacologic treatment of depression. Furthermore, mini-modules on research findings from recent clinical trials and evidenced-based medicine in psychiatry were incorporated to strengthen critical scientific literature review skills. Conclusions: A psychiatry resident/fellow designed Depression Module was developed to flexibly suit the needs of individual Residency Programs and improve psychopharmacology teaching in residency programs by placing an emphasis on multi-modal learning activities. The Module will be available on the ASCP and AADPRT websites at no cost to Psychiatry Residency Programs.

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NR02-19

RESPONDING TO RESIDENT NEED FOR TRAUMA-INFORMED TRAINING ON CHILD SEXUAL ABUSE

Chp.:Leonie Prince M.D., 1090 Amsterdam Avenue, New York, NY 10025, Co-Author(s): Jacob Ham, Ph.D

SUMMARY:

Objective: This poster will review an educational project developed during the course of our institution's efforts to become fully trauma-informed. We will first report on the larger program and then present a resident-led project to create a portable child sexual abuse handbook developed in response to an expressed need for greater training in child sexual abuse. Methods: This section will briefly review the steps taken to become a fully trauma-informed organization and more fully review the development of the portable clinician handbook on child sexual abuse. Steps for trauma-informed change include: (1) setting the stage for change, (2) conducting and reviewing a self-assessment, (3) developing a strategic plan, (4) and implementing trauma-informed change. Steps for developing the handbook included: 1) A wide literature search on child sexual abuse(2)Focus groups with clinic families to engage consumers in collaboratively developing guidelines for asking about child sexual abuse informed by local cultural values and norms and (3) reviewing the handbook with residents.Results: The produced handbook provides basic facts about child sexual abuse, suggested ways to ask about child sexual abuse appropriate in both outpatient clinics and emergency departments, and links and references for further informationConclusions: The rates of trauma are quite high in most psychiatric service programs and the impact of trauma often produces numerous symptoms which can present as multiple psychiatric disorders (e.g., disorders of mood, anxiety, attention or behavior). Thus, creating a fully trauma-informed organization is paramount. Sexual abuse is an important form of trauma that is difficult to discuss for both patient and resident. The handbook we created provides essential information that can help guide new residents in learning about and asking about child sexual abuse. Furthermore, this handbook highlights the process of collaborating with the community we serve and thus represents an enactment of true cultural competence.

NR02-20

THE STUDENT-RUN CLINIC: A NEW OPPORTUNITY FOR PSYCHIATRIC EDUCATION

Chp.:Pernilla Schweitzer B.A., 630 West 168th Street, Suite 1-420c #168, New York City, NY 10032, Co-Author(s): Timothy R. Rice, MD

SUMMARY:

OBJECTIVE: Student-run community outreach clinics are increasingly common in medical schools across the United States. Medical educators already recognize these clinics as important contributors to primary care education, but they may also be developed to provide unique opportunities for psychiatric education. This article describes the adaptation of a behavioral health program to the student-run clinic model and investigates its impact on both student-provided patient care and medical student education. METHODS: The authors outline operational aspects of the student-run clinic's behavioral health program. Patient care and student learning are assessed through retrospective chart

review and self-report questionnaire, respectively. RESULTS: Student volunteers provided depressive disorder screening and treatment services at a level of quality comparable to other community clinics. Ninety-eight percent of student questionnaire completers during a six-month period (n=63) agreed that their experience in the new program was a valuable supplement to their formal medical school psychiatric curriculum, and 83% agreed that it taught them a skill or attitude their formal curriculum could not have. Reported benefits included greater awareness for psychiatric morbidity in the general community, recognition of behavioral health as an essential component of primary care, broadened views of mental illness, and deepened patient empathy. CONCLUSION: This study advances the growing literature on student-run clinics as venues for clinical experience and maturation of belief systems not often found within traditional medical school curricula by demonstrating benefits specific to psychiatric education.

NR02-21

"DO I REALLY HAVE TO GO TO LECTURES?" OR WHY DO WE NEED TO IMPLEMENT INNOVATIVE METHODS IN CLERKSHIP EDUCATION.

Chp.:Keila Sierra-Cintron M.D., 6635 McCallum Street Apt B-308, Philadelphia, PA 19119, Co-Author(s): Carolina Retamero M.D.

SUMMARY:
Methods: During orientation, at the beginning of each Block, students choose a topic to research and then present as a round table discussion at the end of their rotation. They are encouraged to use search databases and to apply principles of translational research. Cases are presented, primary literature is reviewed, and general discussion follows. The seminar is supervised by a senior resident and an attending with interest and/or expertise in women's mental health. Handouts and e-Blackboard postings are utilized. The activity content and presentation are evaluated anonymously by the students at the end of the clerkship by using a 5-point scale. Results: A majority of the students rated the presentation and content of the seminar as more than acceptable or excellent. Subjective feedback has been positive. Students are very interested, motivated and involved in research and literature search and they like the resident/attending moderator format and they consider the seminar format "a nice break from lectures".Conclusion: Educators need to adapt to the constantly changing needs of students including preference of self-directed, case oriented and active learning over conventional passive lectures. Learning about the complicated and challenging psychiatric care of women of child bearing age serves as a perfect opportunity to apply this model during the 3rd year clerkship. This model of education can be utilized in many clerkship and residency settings.

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NR02-22

AN INNOVATIVE APPROACH TO TEACHING GERIATRIC PSYCHIATRY TO THIRD-YEAR MEDICAL STUDENTS

Chp.:Barbara Sparacino M.D., 100 E. Lehigh Ave., Suite 105, Philadelphia, PA 19125, Co-Author(s): Olga Achildi, M.D., Ryan Salahi, M.D., Carolina Retamero, M.D.

SUMMARY:
Objective: To evaluate the educational yield of an innovative day-long Geriatric Psychiatry workshop. Noting the growing number of elderly patients and their disproportionate use of resources in primary care, commitment to didactic and clinical educational efforts in the domains of Geriatrics and Geriatric Psychiatry are needed to sensitize medical students to the biopsychosocial effects of aging processes, manifestations of conditions, and experiences frequently occurring in late life. The workshop consists of a pre-workshop survey, a pre-test, clinical interface where patients with delirium, dementia, depression and psychosis are interviewed and evaluated, followed with a round-table discussion which incorporates basic science information facilitated by senior Psychiatry residents followed by a post-test and a post-workshop survey. Ultimately, we aim to identify a novel education method for teaching 3rd year medical students Geriatric Psychiatry. Methods: With IRB approval, we collected results of pre- and post-tests on Geriatric Psychiatry from third-year medical students rotating in Psychiatry

who participated in the workshop, as well as pre- and post-workshop surveys. There is one workshop per block, with 10 blocks in an academic year. Data was collected in an electronic database (Microsoft Access) and analyzed using EpiInfo. Two-tailed t-test was used to assess significance levels. Results: All participants (n=50) completed pre- and post-tests, with a 17% improvement in test scores (pre- [57%] versus post-test [75%], df= 49, p=<0.0001). Participants also demonstrated a higher comfort level in interviewing and evaluating geriatric patients as measured by a subjective questionnaire. Conclusion: A day-long workshop in Geriatric Psychiatry may be an effective educational modality for imparting didactic and clinical education about Geriatric Psychiatry to medical clerks in Psychiatry training programs where targeted Geriatric Psychiatry exposure is not obtainable. This format may also be applied to other sub-specialties where targeted exposure may be limited such as Child & Adolescent or Forensic Psychiatry.

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NR02-23

SUICIDE "POST-VENTION": WHAT CAN WE DO WHEN A RESIDENT LOSES A PATIENT TO SUICIDE?

Chp.:Griffin Stout M.D., 556 S. Third St, Columbus, OH 43215, Co-Author(s): Susan J. Stagno, MD

SUMMARY:

Background: When a patient commits suicide, it can be one of the most traumatic events in a clinician's professional career. Especially when the clinician is in residency training, the suicide can provoke intense feelings of isolation, fear, grief and doubt. According to the literature, approximately one-third of psychiatry residents experience a patient suicide during their training (1). Despite this moderate prevalence, there has been little discussion in the literature about how best to support and educate residents during this potentially difficult time. Therefore it is very important that training programs address the possibility of patient suicide, focusing specifically on suicide risk factors, possible emotional reactions to the suicide, legal issues that may arise and how to obtain emotional support and mentorship. In addition, being able to use positive, altruistic coping mechanisms to help heal following a patient suicide is important and facilitated by education and preparation for this potential event. Method: Following the death by suicide of a resident colleague's patient during residency training, the first author of this poster carried out a thorough literature search and review of the websites for many US psychiatry residency programs to determine what programs or mechanisms have been put in place to address the aftermath of a patient suicide for psychiatry residents. This information was utilized in her residency program, in collaboration with a committee comprised of faculty, residents, hospital administrators and legal consultants to develop a suicide post-vention program. Results: This poster will outline the development of a suicide post-vention program that includes an educational curriculum that is presented regularly during the residency covering common emotional reactions to suicide, legal concerns that arise, and small group discussions with resident or faculty facilitators who have experienced a patient suicide. In addition, a Crisis Support Team comprised of clinicians with specific training was also a product of this post-vention program and will be described. Supplementary activities such as Morbidity and Mortality Conferences, Grand Rounds Case Presentations and Root Cause Analysis will also be discussed. Conclusion: In conclusion, patient suicide is a reality that faces all clinicians, from experienced practitioners to residents in training. Residents are just as, if not more (2), vulnerable to negative reactions and few training programs in the country have utilized a complete suicide post-vention program (3). It is recommended that all training programs assess their needs for a suicide post-vention plan and mindfully implement these changes to improve resident's education and training.

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NR02-24

ORGANIZING A DIDACTIC FOR RESIDENTS ON PSYCHIATRY'S HISTORICAL EVOLUTION UTILIZING A SCAVENGER HUNT FORMAT (ORPHEUS)

Chp.:Anthony Tobia M.D., 21 Harper Road, Monmouth Junction, NJ 8854, Co-Author(s): Tanya Gallagher, MD, Heather Grigo, MD, Barbara Palmeri, MD

SUMMARY:
Objective: Traditionally, goals of teaching the history of psychiatry are to a) educate the psychiatrist-in-training about the history of their profession, and b) provide sufficient background to achieve board-level competency. Since the history of psychiatry is such a vast topic, this is often an arduous task that leads to frustration on the part of the teacher and the residents. A scavenger hunt format serves to orient new interns to the school's campus while providing a fun, nontraditional way of teaching this challenging topic. Methods: Our novel approach involves organizing a scavenger hunt on the shared campus of Robert Wood Johnson Medical School and Rutgers University. Material from PowerPoint presentations used in past years was synthesized and rewritten on 12 "scrolls". Each scroll summarized an era of psychiatry encompassing B.C. (scroll 1) to present day (scroll 12). PGY-1 and -2 residents, organized into three groups, searched for scrolls that would provide them with

clues leading them on a tour of the campus. We provided a short, multiple choice quiz along with a survey (Likert scale) of the activity both before and after the scavenger hunt. The pre-scavenger hunt evaluation addressed participants' attitudes, skills and knowledge of new and traditional lecture formats in teaching course material. We applied two measures in assessing this novel program: a quiz on the history of psychiatry and a survey measuring residents' attitudes toward the model. Results: The average pre-test score (n=25) was 43%. Residents (n=17) achieved an average post-test score of 90%. Eleven residents (78%) scored 50% or lower on the pretest, compared to no residents scoring below that level on the post-test. While our low number did not allow for statistical analysis, there were positive trends in several domains including confidence, overall knowledge, and residents' preference for this non-traditional didactic. Conclusion: The model of teaching the history of psychiatry in a scavenger hunt format was found enjoyable and resulted in improved knowledge of the course material.

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NR02-25

THE EFFECT OF COMBINED FM PSYCH AND MED PSYCH PROGRAMS ON CATEGORICAL PSYCHIATRIC RESIDENT COMFORT AND PROFICIENCY IN GENERAL HEALTHCARE

Chp.:Erik Vanderlip M.D., 200 Hawkins Drive, Iowa City, IA 52242, Co-Author(s): Jennifer Miller-Meyer, MD, Alison Abreu, MD

SUMMARY:

As recent evidence has demonstrated, persons suffering from severe and persistent mental illness are dying from accelerated mortality due primarily to undertreated preventive illness (1), on average 25 years younger than their counterparts. Many patients with mental illness only rarely visit a primary care provider, and often receive their only care from a psychiatrist. When they do receive care from a primary care provider, it is often sub-optimal (2). While there are a number of challenges to addressing this disparity, it is clear that improving psychiatric practitioners' training in general preventive health and/or strategies for communication with primary care and other medical colleagues is an essential component of future efforts to improve the health of patients (2). While family medicine-psychiatry and medicine-psychiatry combined programs have been in existence for at least 15 years, little is known about their impact in potentially improving collaboration with primary care amongst categorical psychiatry residents. Combined residents are in a natural place to bridge the gap between behavioral health and preventive services, and anecdotally, these programs improve categorical residents' knowledge, comfort and ease in collaboration with primary care. Because of accreditation issues, there is a moratorium on the formation of new combined programs across the country, limiting expansion of this potential avenue for further collaborative growth. This poster will present results of a survey distributed to categorical psychiatric residents across the country that assesses attitudes at different levels of training towards integration and coordination of care with primary care disciplines. It will compare/contrast residents at psychiatry programs with or without an integrated med-psych or family-psych program present, and quantify the effect combined programs may have on the recognition, treatment, referral of or co-management of general medical conditions amongst categorical psychiatric residents.

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NR02-26

THE DEPARTMENT OF PSYCHIATRY MORNING (AM) INTERACTIVE NEUROLOGY EXERCISE (DOPAMINE)

Chp.:Faiza Zubair D.O., 671 Hoes Lane, Piscataway, NJ 08854, Co-Author(s): Anthony Tobia, MD, Marianne Gobrial, DO, Heather Grigo, MD, Barbara Palmeri, MD

SUMMARY:
Objective: The purpose of this study is to develop an effective method of teaching neurology within a general psychiatry residency curriculum. Methods: An interactive didactic was developed in Jeopardy-like format to promote understanding and retention of topics germane to neurology. Psychiatry residents (n=14) initially completed baseline questionnaires in which Likert scales measured residents' views on neurology across different variables including motivation, confidence, aptitude and faculty support. Residents were encouraged to review selected questions posted on a resident forum prior to the didactic session. A 7-item test was administered to assess residents' baseline knowledge of neurology prior to their participation in the didactic. Residents then took part in a 90-minute didactic during which neurology questions were posed in a game-show (Jeopardy) format. Following the didactic session, residents were asked to complete a) a post-Likert rating scale and b) a post-test consisting of 13 items. The 13-item post-test contained 6 additional questions not included in the pre-test to correct for any impact of test-retest bias. While residents' performance on "forum questions" was not captured on the pre- and post-tests, data were collected to look at how making the questions available to residents before the session influenced their performance. Results: All classes exhibited improved scores, with an increase in average score by 41%. This improvement does not appear to have been significantly influenced by re-test bias. Residents' performance on questions made available for review on a residents' forum was 70%. The greatest improvement in Likert scores was observed in "Aptitude" and "Likability". PGY level did appear to have an effect on residents' Likert ratings. Conclusions: Our Department of Psychiatry A.M. Interactive Neurology Exercise (DOPAMINE) is an innovative method used to promote enhanced learning of this challenging topic. Presenting neurology material in a Jeopardy-like format was effective and well-received by residents. The preferred learning styles of the residents as well as the effectiveness of teaching methods similar to DOPAMINE are topics for future research.

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NR02-27

COMING TO THE TABLE: RESEARCH ETHICS AND HUMAN AGENCY IN RESEARCH WITH INVOLUNTARY HOSPITALIZED PSYCHIATRIC PATIENTS

Chp.:Sami Ahad M.D., 570 West Brown Road, Mesa, AZ 85201, Co-Author(s): George Silvers, M.D., Nancy Van Der Veer, Psy.D., David Drachman, Ph.D., Gilbert Ramos, M.A.

SUMMARY:
Objective: Much discourse exists on the ethics of including the mentally ill in research and how to properly address informed consent. Involuntarily hospitalized psychiatric patients have the added experience of forced institutionalization that may ultimately compromise their ability to "just say no." Conventional belief is that institutionalization, with its overtures of coercion and undue influence, strongly encourages cooperation. This study compares the consent rate and clinical characteristics of both voluntary and involuntary psychiatric patients who were approached to participate in a minimal risk study. We hypothesized that involuntary patients would be more likely than voluntary patients to engage in research. Such an investigation provides empirical evidence to help evaluate the impact of involuntary hospitalization on aspects of informed consent. Methods: We examined recruitment records of a minimal risk PTSD screen validation study at a psychiatric acute inpatient hospital and selected 274 voluntary (151) and involuntary (123) patients as subjects for our retrospective chart review. Of these subjects, 135 refused and 139 consented to participate in the original validation study. Data collected include age, gender, major diagnosis, days from admission to consent, GAF, and criteria met for initial psychiatric admission, and compared those refusing to those consenting. Results: A lower percentage of involuntary patients (38.4%) agreed to participate than did voluntary patients (65.9%), with refusals corresponding at 61.6% and 34.1% respectively for involuntary and voluntary patients ($p<.0005$).

Overall sample characteristics include: 149 males (54.4%), 203 Caucasians (74%), and 32 Hispanics and 32 African Americans (11.7% each). Average age was 38.4 years, with average LOS 35 days. Primary diagnoses included 142 (51.8%) mood disorders, 99 (36.1%) psychotic disorders, and 11 (4%) substance related disorders. When examining by primary psychiatric diagnosis, 48 (33%) of the 142 mood disorder patients refused participation, whereas 94 (66.2%) agreed. Refusals to study participation were more pronounced among the 99 psychotic disorder patients in the sample at 72 (72.8%). Conclusion: Involuntary patients did not consent to research at a higher rate than voluntary patients in our sample; in fact, involuntary patients were more likely to refuse participation. Psychiatric illness on the other hand, specifically mood disorder and psychotic disorder appeared to have some association to tendency to refuse or consent to research. Further investigation of clinical characteristics and patient background may help elucidate the motivations leading to individual patient decisions to consent or not. Our research suggests that individuals may possess their own experience that may aid them in autonomous decision making from what we would otherwise predict.

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NR02-28

EARLY INTERVENTION IN SUICIDE PREVENTION FOCUSING ON PROTECTIVE FACTORS

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SUMMARY:

Suicide risk assessment has become increasingly refined and utilized in public and private medical and psychiatric facilities across the nation. This increase is particularly apparent within the Department of Veterans Affairs Medical Centers, where high suicide rates have been reported in the nation's most recent cohort of military veterans, as well as in our population of aging veterans. A detailed "Suicide Risk Assessment" (SRA) is routinely administered by VA service providers at critical times, e.g., during life and psychiatric crises, when a patient reports hopeless feelings and depression symptoms, and on a routine, yearly basis. Identifying and reinforcing a primary care patient's suicide protective factors, e.g., responsibilities toward children and family, optimism, hope, and positive coping skills, spiritual, moral, and religious factors, social supports and positive therapeutic relationships, etc., may allow clinical staff to lessen the impact of crises and depression, and reduce his/her risk for suicide. The current, ongoing study involves screening primary care patients for suicide risk, by way of the PHQ-2. Upon scoring positive on any two SRA items, the patient is invited to a 4 week peer-led therapy group aimed at providing social support and educating patient participants on the importance of these protective factors and ways to integrate the factors more fully into their lives and ongoing awareness. Prior to the entering the group, each participant is administered the "Reasons for Living Scale" and the Hamilton PHQ-9 scale, for risk assessment and to identify symptoms and current protective factors. The scales are re-administered after the participant's last session. Data collected thus far are encouraging and show that, by enlisting their participation in a low-intensive, peer-led therapy group, primary care patients can become less vulnerable for suicide.

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Objections to Suicide in the Assessment of Suicidal Patients. Journal Psychiatric Res. 42(10): 815-21, Aug. 2008.

NR02-29

THE ROLE OF CULTURE IN PERSON-CENTERED PSYCHIATRY

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SUMMARY:
Objective: Person-centered psychiatry aims to integrate patient and family perspectives in the diagnosis and management of clinical problems. The perspectives of patients, members of their families and communities, as well as those of psychiatrists and other health care professionals are shaped by cultural knowledge, values and practices. However, some authors have suggested that close attention to the individual should suffice to obtain the essential elements of culture relevant to diagnosis. This study aimed to critically examine the role of cultural issues in the theory and practice of person-centered psychiatry. Method: A systematic literature review including qualitative and quantitative studies was carried out. The review focussed on articles dealing with person-centered medicine and psychiatry, including the person-centred integrative diagnosis (PCID) model proposed by the World Psychiatry Association. This was supplemented by studies on cultural issues affecting diagnosis and management in psychiatry, with particular attention to the cultural formulation in DSM-IV and recent refinements under consideration for DSM-5. The final choice of publications for synthesis was based on recency of publication, quality and relevance. Results: Culture influences person-centered psychiatry in four critical ways:1) Developmental: Culture is inscribed on the nervous system developmentally, through culture-specific childrearing practices, which are entwined with language and cultural concepts of the person. 2) Social-ecological: Culture is institutionalized and expressed through embodied interactions within family, community and other social contexts. 3) Political-economic: culture shapes health care practices and international flows of knowledge in ways that govern the organization of health care systems and mental health practices; 4) Contextual: Aspects of illness experience reflect the cultural context or background knowledge and current social situation of the individual in relation to family, community, health care system, local and global social worlds. There is evidence that patients, physicians, and other health care providers tend to have limited awareness of these multiple levels of cultural embedding. Explicit questions can reveal conscious aspects of culture and context. Ethnographic observation is needed to identify dimensions of culture that are unconscious or implicit or else viewed as commonsensical or taken-for-granted aspects of the social environment. Conclusions: Systematic inquiry into culture and context can provide information that is not otherwise collected in conventional or person-centered psychiatric assessment. The development of a cultural formulation interview for DSM-5 provides an important opportunity to improve the integration of culture in clinical psychiatry. Further research is needed to identify the impact of this additional information on clinical outcomes.

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NR2-30

WITHDRAWN

NR02-31

URBAN MEDICAL STUDENTS' ATTITUDES TOWARD PSYCHIATRY

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SUMMARY:
Introduction The popularity of Psychiatry as a specialty of choice among fourth year medical students has increased consistently over the past ten years. The number of U.S. students entering a psychiatry residency increased from 564 in 2002 to

670 in 2010. This notable rise is perhaps secondary to advances in pharmacology and neuroscience. Few studies have formally attempted to account for the cause of such an increase in the growth of Psychiatry in recent years. Fewer yet have tried to assess medical students' opinions of psychiatry. We aimed at identifying urban medical students attitudes towards psychiatry in a new era of neuropsychiatric advances. Materials and Methods All of the students approached to participate in this study attend University of Medicine and Dentistry of New Jersey- New Jersey Medical School (NJMS). 171 1st year medical students participants were asked to complete an anonymous survey. Participation in the study was voluntary. The questionnaire used was previously designed by Balon and colleagues and was used with permission. The survey consists of 23 questions that assessed perceived merits of psychiatry, efficacy, role definition and functioning, career and personal reward, and specific medical school factors that contribute to attitudes toward psychiatry. Statistical analysis was then performed. Results Questionnaires were completed by 166 out of 171 (response rate 97%). Most students (94%) answered every question on the survey. Responses represent an overwhelmingly positive view of psychiatry. The sub categories of questions had a range of positive responses between 70% and 90%. Despite a largely positive response with regard to the merits, efficacy, role and rewards of psychiatry, several questions had a substantial percentage of negatively skewed responses. 29% of students reported feeling uncomfortable when interacting with mentally ill patients. Most notably, 28% of students acknowledged a poor perception of psychiatrists by others. Although this is a significant percentage, it is an improvement from the 1999 data published by Balon and colleagues who found that 40.3% of students believed psychiatrists to be viewed as "weird, peculiar, or neurotic." Discussion The increase in the popularity of psychiatry as a residency of choice in recent years may be due in part to improving attitudes towards psychiatry by U.S. Medical Students. Responses indicate that a mainly positive view of psychiatry exists with regard to scientific merit and advances in the neurosciences. However, societal negativism of psychiatry persists. Medical students continue to believe that psychiatry is not as well respected as certain other medical specialties. They also believe that stigma against psychiatrists, psychiatric patients, and the field of psychiatry persists. However, the fact that the percentage of students perceiving the stigma against the field has declined from 1999 to now bodes positively for the future.

NR02-32

"AS LONG AS THEY'RE NOT ON THE NEWS, I DON'T WORRY!": COMMUNICATION AND THE MODERN AMERICAN DEPLOYMENT

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SUMMARY:
In this research project, we seek to explore the complexities of communication during a servicemembers' deployments, to highlight current support resources available to the servicemember and their families, to stress the importance of communication to the service member, the families, and the mission, and to offer suggestions for future deployments. We hope to make the above information practicable to providers (military and civilian) and to the average soldier and his or her family. In researching information for the above article, the authors performed a thorough literature review which illustrated the obvious lack of research on this particular topic. The authors also utilized astute librarians who could locate only a handful of articles on the topic. In addition, there were difficulties in sorting through the abundance of information found online, many times the resources were inaccessible (i.e. broken links), and when information was obtained it was frequently too vague to be of utility, or was too long and detailed to be of practical use to our families. Furthermore the scarce information that was available was written by civilian providers, which while insightful and noteworthy, offers a different perspective than that offered by military researchers. Due to the disturbing trend of increasing marital discord, divorce, and infidelity among our soldiers, it is vital that we seek to better understand how servicemembers are communicating and offer guidance to strengthen those skills and in doing so strengthen relationships. Establishing

effective communication before, during, and after deployment is one step towards this.

NR02-33

BMI AND HIPPOCAMPAL NEURONAL INTEGRITY: A PROTON MAGNETIC RESONANCE SPECTROSCOPIC STUDY

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SUMMARY:
Background: BMI maintains a strong correlation with different psychiatric disorders as well as psychotropic medications. Recent MRSI studies have shown an inverse relationship between BMI and N-acetylaspartate (NAA), particularly in the frontal lobe, a brain region associated with higher cognitive functions and impulse control. NAA is the second most concentrated molecule in the brain after the amino acid glutamate. NAA has been identified as a marker of neuronal integrity. In this study, we evaluated whether a relationship exists between BMI and NAA concentration in the hippocampus, a brain region associated with memory and mood disorders. We also explored if there is any association between BMI and GAD. Methods: NAA concentrations were measured in the left and right hippocampi of 38 healthy volunteers and 45 medication-free generalized anxiety disorder patients using H MRSI. MRSI data were obtained from 3 previous studies. Data was z-scored and further analyzed with special attention to the effects of BMI. Results: BMI did not differ between GAD and healthy controls. An inverse correlation was noted in all subjects between right and left hippocampal NAA and BMI. Subjects with a BMI exceeding 25 exhibited reduced NAA in both hippocampi. Effects were not attributable to age, sex or diagnosis. Conclusion: Our data are the first to our knowledge indicating that relatively high BMI is associated with a relatively low marker of neuronal viability, NAA, in the human hippocampus. Given a role for hippocampus in reward behavior, it remains unclear if low NAA is a cause or effect of high BMI.

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NR02-34

CHILDHOOD ABUSE AND PSYCHIATRIC DISORDERS IN HISPANIC PATIENTS RECEIVING BARIATRIC SURGERY

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SUMMARY:
Objective: Obesity has become a public health epidemic in the United States. Approximately one-third of Americans are obese. Minority groups exhibit a higher rate of obesity. It is estimated that 44% of African American , 38% of Hispanics and 34% for Caucasians.(Flegal et al 2010) Several studies have linked severity of obesity to history of childhood abuse and adult psychopathology including mood, anxiety, and binge eating disorders. (Wildes et al 2008) Psychopathology rates range from 33% to 66% among obese Caucasian patients seeking weight loss surgery. (Norris et al, 2007) The relationship between pre-operative psychopathology and post-operative health outcome remains unclear. Despite the high rate of obesity among Hispanics, few studies have examined the prevalence of psychiatric disorders and eating behaviors among Hispanics seeking weight loss surgery. (Azarbad et al, Guarjardo-Salinas et al). The primary objective of this study is to systematically assess with standardized measures and structured interviews the disordered eating behaviors and lifetime prevalence of Axis I psychiatric co-morbidity among morbidly obese Hispanics seeking bariatric surgery. The secondary objective is to determine the relationship between pre-operative psychopathology, eating behaviors, severity of obesity, and post-operative health outcome at 3, 6 and 12 months follow up. Method: Patients seeking bariatric surgery at University-affiliated and

community hospitals were referred for psychiatric consultation for pre-operative psychiatric clearance. All patients completed a battery of self report scales including the Binge Eating Scale, Emotional Eating Questionnaire, Childhood Trauma Questionnaire, Quality of Life Scale, and Beck Depression Inventory. A structured interview included demographic information, weight history, eating behaviors, exercise routine, diet history, medical history, medications, laboratory data, family medical history, childhood trauma history, and family psychiatric history. Axis I diagnoses were assessed by Structured Clinical Interview for DSM-IV. Post-operative health outcome including weight loss, quality of life, and medical complications will be assessed at 3, 6, and 12 months. Results: To date, nineteen patients [8 males, 11 females, mean age 43 years, range (25-55), mean body mass index of 49kg/m2, range (35-66 kg/m2)] have been assessed. The sample consists of 10 Hispanic patients. Seventy percent of Hispanic patients and 50% of non-Hispanic patients had a lifetime prevalence of Axis I diagnoses including mood, anxiety, substance abuse, and eating disorders. Disordered eating behaviors such as grazing, night eating syndrome, and sweet eating were common and comparable between the Hispanic and non-Hispanic patients. Whereas all non-Hispanics denied a childhood abuse history, 40% of Hispanic patients experienced childhood abuse. To date, post-operative health outcome data is pending on all patients. Conclusions: Preliminary data suggests that mood, anxiety, substance abuse disorders, and disordered eating behaviors are common among morbidly obese Hispanics seeking bariatric surgery. Childhood abuse history was more common among Hispanic patients than non-Hispanic patients. Implications of this finding and the association of these variables with severity of obesity and post-operative outcome will be assessed.

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NR02-35

PSYCHIATRIC MANIFESTATIONS OF A 16P13.11 MICRODUPLICATION IN A MALE WITH PROFOUND INTELLECTUAL

DISABILITY

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SUMMARY:
A 24-year-old white male with profound intellectual disability (ID) was evaluated as an outpatient in our intellectual disability/mental illness (ID/MI) clinic due to increasing self-injurious behavior (SIB). During the previous four years, his family described him as progressively more aggressive.. Within the past year, he began biting and hitting himself. Numerous psychotropic medications targeting aggression were tried prior to initial evaluation by psychiatry, but none ameliorated the behavior. His profound intellectual disability and communication deficits made a primary psychiatric disorder difficult to diagnose. Given his age, an underlying mood disorder, psychotic disorder, and/or anxiety disorder were considered. Additionally, developmental issues including emerging sexuality (sexual aggression, desire to masturbate) issues were investigated. Other causes of aggression, including pain due to orthopedic pathology and underlying medical conditions, including irritable bowel syndrome and renal colic, were considered. A psychotic disorder was suspected and treated with olanzapine; however, the treatment was quickly discontinued due to questionable tongue dystonic movements reported by his mother. After his family noted several nights of sleeplessness, suggesting a possible hypomanic episode, he was started on quetiapine for mood stabilization. Several anticonvulsants had been tried previously without effectiveness. The family described more agitation and activation on quetiapine. At this point, a selective serotonin reuptake inhibitor (SSRI), paroxetine, was initiated to target a possible anxiety disorder. Due to paroxetine not fully reducing his SIB, aripiprazole was added for augmentation. The family reported mixed results with this pharmacologic regimen. Given the difficulty in controlling his self-injurious behavior (SIB) and aggression with medication, genetic testing was employed to aid in the diagnosis. It was hypothesized that he may suffer from a genetic disorder explaining his symptomatology and treatment resistance to medications. Genetic testing revealed a normal 46, XY karyotype, but chromosome microarray analysis revealed a microduplication of chromosome 16, band p13.11. A review of the literature reveals limited examples of behavioral disturbances being associated with this mutation. It should be considered that our patient's behavior and SIB may not be directly related to an underlying psychiatric condition, but possibly the clinical manifestation of this microduplication. This case is intended to encourage further investigation of a potential association between microduplication of chromosome 16, band p13.11 and behavioral disturbance in a profoundly ID male.

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NR02-36
WITHDRAWN

NR02-37
GENETIC RISK AND OBSTETRIC COMPLICATIONS AS MECHANISMS OF THE INTERGENERATIONAL TRANSMISSION OF MENTAL HEALTH PROBLEMS

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SUMMARY:
Objective: Prenatal maternal depression is associated with child mental health problems1. We used an adoption design to examine potential mechanisms of risk transmission from parent to child, including obstetric complications (OCs) and genetic influences, both of which have also been linked to child behavior problems1-4. The adoption design allowed us to disentangle effects of genetic influences and the prenatal environment from the rearing environment, as children were reared by genetically unrelated parents. Due to relations between stress and immune functioning5,6, including during pregnancy7, it is possible that prenatal depression is related to child behavior

problems because it heightens risk for conditions like infections or preeclampsia8, which in turn affect fetal development. We hypothesized that prenatal depressive symptoms (PDS) would be related to 27 month child behavior problems, and would be mediated by OCs (i.e. infections, preeclampsia) and genetic influences (i.e. lifetime diagnosis of a depressive disorder). Method: The sample consisted of 361 linked adoptive triads (birth parent, adopted child, adoptive parents) from the across the US. Adoptive parents completed the CBCL9 to assess 27 month child behavior problems. Birth parents completed the CIDI10 to determine depressive disorders; the BDI11 to retrospectively assess PDS; and a Pregnancy Screener to assess OCs. PDS and OCs were assessed with a Life History Calendar12 to improve recall. OCs were assigned levels of risk using the McNeil-Sjostrom Scale for Obstetric Complications13. OCs related to immune functioning (i.e. infection, preeclampsia) were used in this study. Results: Hypotheses were tested with a multiple mediation model using bootstrapping for indirect effects14. Birth mother age and education were entered as covariates. Child behavior problems were related to lifetime depressive disorder ($t=2.21$, $p < .05$) and OCs ($t=2.76$, $p < .01$). The direct effect of PDS on child behavior problems ($t=3.00$, $p < .01$) was no longer significant ($t=1.35$, $p=.18$) when indirect effects through lifetime depressive disorders/genetic risk (Sobel effect = .50, $p < .05$), and OCs (Sobel effect = .67, $p < .05$) were tested. Conclusions: The relation between prenatal depressive symptoms and child behavior problems operated through obstetric complications associated with decreased immune functioning and genetic risk. Due to the study's adoption design, we know that the effects of the prenatal environment and genetic risk were unique and not confounded by child rearing. These findings illuminate mechanisms of transition of mental health problems and can inform both psychiatric and obstetric practice. They underscore the importance of screening for prenatal depressive symptoms and suggest that physicians take extra care to bolster the immune functioning of pregnant women experiencing or at risk for depression in addition to treating symptoms.

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NR02-38

LEADERSHIP AND ADMINISTRATION IN ADDICTION PSYCHIATRY: UTILIZING THE EVIDENCE

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SUMMARY:
Background: Modern addiction psychiatry requires a unique set of leadership and administrative capabilities, given the distinct regulatory, financial, and practice pressures faced by the field. Despite this need, there is a paucity of evidence published within the medical literature addressing best practices for leadership and administration within the field of addiction psychiatry. Further, the majority of evidence available from other industry sectors is often incompletely applicable and frequently lacks an empirical basis. The aim of this poster is to introduce this literature and its implications to the practice of leadership and administration within addiction psychiatry. Methods: Medline records from 1996 to present were searched for subject headings, "Leadership" and "Substance-Related Disorders." The sixty resulting records were sorted by relevance and topic applicability. Business literature on leadership was examined and individual sources were selected and reviewed. Common themes from both medical and business literatures emerged and are summarized. Results: The limited evidence that currently exists within the medical literature suggests several leadership factors which impact the adoption of new technologies in modern addiction treatment programs. Further, there are specific factors that impact the leadership turnover in addiction treatment organizations. Existing medical and business evidence suggests that leadership is best examined within the framework of system praxis, rather than an individual character competency. The role and importance of apprenticeship – already well integrated into modern medical training – can be applied to leadership development within health care settings. Evidence suggests that leadership mentorship within health care systems ought to be emphasized. Further, current notions of emotional intelligence have implications on how managers can leverage mirroring behavior, utilize social resonance, and employ pattern recognition. There are well-recognized pathways that clinical managers tend to follow in their ascendancy to administrative roles, with common pitfalls accompanying these trends. Recognizing these trends can offer current and future clinician managers insight that is useful in preventing leadership failures. Conclusions and Implications: Beyond an emerging set of peer-reviewed articles, leadership and administration in addiction psychiatry remains relatively uncharacterized within the medical literature. A body of evidence published outside of the medical literature exists which empirically examines leadership and administrative processes relevant to health care settings. There are sets of definitions of leadership and management that can be functionally employed within health care settings. As with clinical development in medical training, evidence suggests that direct experience within an apprenticeship model has a critical role to play in leadership and administrative development. Because leadership and administration are rarely included topics within formal training curricula, new addiction psychiatrists must develop these necessary skills in alternative formats.

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NR02-39

SYNTHETIC CANNABIS INDUCED PSYCHOSIS: A CASE-SERIES

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SUMMARY:
Introduction: Recreational use of synthetic cannabinoids containing compounds, commonly known as "Spice," "K2," "Blaze," and "Red X Dawn", has become increasingly popular. They are plant material coated with varying combinations of synthetic cannabinoid agonists JWH-018, JWH-073, JWH-200, CP-47,497, and cannabicyclohexanol. Until recently, their sale and consumption was not regulated within the United States. Though use is prohibited in Active Duty

US Military personnel, the inability, until recently, to detect use of these substances in urine drug tests has resulted in significant consumption in this population. These compounds have not been approved by the FDA for human consumption and very little is known about their toxicology and safety profile. Objective: To our knowledge, only one case has been reported of a psychotic episode after use of a synthetic cannabinoid compound, and this patient had a past history of cannabis induced psychotic episodes. We report a case-series of ten patients with primary psychotic presentations following the use of synthetic cannabinoids. Methods: A retrospective case review was conducted among patients at Naval Medical Center San Diego who were admitted for substance "Spice" induced psychosis. Results: The sample was comprised of 10 otherwise healthy patients admitted to the psychiatry ward at Naval Medical Center San Diego from August to December 2010. Patients ranged in age from 21 to 25 years old. Presenting diagnoses included psychosis not otherwise specified and substance-induced psychotic disorder. Specific symptoms observed included: auditory and visual hallucinations, paranoid delusions, odd/flat affect, thought blocking, disorganized speech, alogia, suicidal ideation, insomnia, psychomotor retardation and agitation, and anxiety. The role of Spice in inducing these symptoms was determined by military command, friend, family member and/or patient report, as well as urine drug test. Average length of stay was 6-10 days with 70% of patients receiving antipsychotic medication. Psychotic symptoms generally resolved between 5 and 8 days after admission. However, a few patients experienced lingering paranoid delusions and dysthymia lasting approximately 3 months at the time of writing. Conclusion: Recreational use of synthetic cannabinoids appears to be increasing. We present a case-series of 10 otherwise healthy young patients presenting with psychosis shortly following use of these compounds. While pharmacology of many of these compounds remains little known, the protracted course of psychotic symptoms well beyond acute intoxication and sometimes extending into months beyond last consumption is concerning.

NR02-40

FRONTAL LOBE FUNCTION AS AN IMPORTANT PREDICTOR OF ACTIVITIES OF DAILY LIVING (ADL) IN AT-RISK AND EARLY DEMENTED ELDERLY

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SUMMARY:
The status of activities of daily living (ADL) is closely related with the quality of life of the patients with dementia and their caregivers, and is also a useful index of the functions, prognosis and death rate among the demented elderly. In this study, demographic factors, memory functions, depressive symptoms, and frontal lobe functions were measured in 214 subjects who met the criteria of Mild Cognitive Impairment (MCI) or early dementia. The variable of depressive symptoms was excluded from the analysis as it did not show significant correlation with either B(Barthel)-ADL or I(Instrumental)-ADL. Multiple regression analysis indicated an overall model of one predictor (frontal lobe functions) that significantly predicts B-ADL. This model accounted for 11.9% of variance of B-ADL after controlling for the educational years, age, and sex. When the variable of memory functions was additionally entered into the model, it explained only 2.1% of variance of B-ADL, which was insignificant. Similar results were found for I-ADL. Multiple regression analysis indicated an overall model of one and the same predictor of frontal lobe functions. ADL gradually declines in the demented patients, and this may increase the stress level of the patients and their caregivers as well as the healthcare cost and the need for institutionalization. The current study suggests the importance of considering frontal lobe functions, an important predictor of ADL, when developing treatment and rehabilitation programs for the elderly.

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NR02-41

A COMPARISON STUDY BETWEEN VISUAL INTERPRETATION AND STATISTICAL PARAMETRIC MAPPING (SPM) ANALYSIS OF SPECT IMAGES IN TRAUMATIC BRAIN INJURY PATIENTS

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SUMMARY:
Objectives The first objective of this study was to examine the extent to which the results of visual interpretation of brain single photon emission computed tomography (SPECT) images correspond with those of SPM analysis in patients with traumatic brain injury (TBI). The second objective was to explore the possibility of clinical application of SPM analysis for finding the brain lesions related to the neuropsychiatric symptoms of which the patients complained. Methods SPECT images from 10 TBI patients (all male, mean age 46.8 ± 12.32) and age- and sex-matched 10 control subjects were interpreted by an experienced radiologist. Their SPECT images were also analyzed by SPM2 software for comparing the individual images with the controls. Results Generally, the results of visual interpretation of SPECT images corresponded with those of SPM analysis in 5 of 10 TBI cases. In the remaining cases, brain lesions not identified from visual interpretation were found through SPM analysis. The location of these lesions included the anterior cingulate gyrus, caudate nucleus, thalamus, and subcallosal gyrus. SPM analysis also made it easy to find brain hypoperfusion areas associated with TBI patients' neuropsychiatric symptoms. Conclusion This study suggested the possibility of clinical applications of SPM analysis of SPECT data from patients with TBI. Its advantages and limitations were discussed.

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NR02-42

DIFFUSION TENSOR IMAGING IN UNAFFECTED SIBLINGS OF INDIVIDUALS WITH AUTISM: IMPLICATIONS FOR AN INTERMEDIATE NEUROENDOPHENOTYPE

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SUMMARY:
Background: Numerous studies have been published using diffusion tensor imaging (DTI) to demonstrate white matter abnormalities in autism spectrum disorders (ASD). However, only one study to date has used DTI to assess whether white matter abnormalities exist in unaffected siblings (US) of those with ASD, reporting similar aberrations in a group of children with ASD and their US. More specifically, the ASD and US groups did not differ significantly in white matter structure; however, both groups differed significantly from controls. While these results support the presence of an intermediate brain phenotype in US, they also suggest that this is skewed more towards the ASD phenotype. Objective: The present study

was conducted to confirm that an intermediate neuroendophenotype exists in US. Given that US participants show no autistic symptomatology (absence of the broad autism phenotype), it is hypothesized that this intermediate brain phenotype is not skewed towards to that of ASD participants. Methods: Participants included 15 boys with ASD (mean age = 10.9 ±3.7 years), 13 US (mean age = 10.4 ±2.9 years), and eight gender- and age-matched controls (mean age = 11.5 ±2.6 years). T1-weighted and diffusion-weighted MRI (directions = 30 and b0 = 5) were acquired using a 3-Tesla scanner. FMRIB Software Library (FSL) was used to process and analyze diffusion-weighted data. Fractional anisotropy (FA) was chosen as the primary measure of the structural integrity of fiber tracts. Voxel-wise analysis of multi-subject diffusion data was conducted using FSL's Tract Based Spatial Statistics (TBSS). Three comparisons were made: ASD versus control, ASD versus US, and US versus control. Areas of significant difference were computed using Threshold-Free Cluster Enhancement and displayed as p-value images, where $p < 0.0167$ corrected for multiple comparisons. Post-hoc correlation analyses were performed between FA of each affected fiber tract and scores on the Social Responsiveness Scale. Results: When compared to controls, the ASD group had significant bilateral reductions in FA involving association, commissural, and projection tracts. Affected association tracts included the superior longitudinal fasciculus, inferior fronto-occipital fasciculus, and cingulum. Commissural fibers included the forceps minor, and projection fibers included the anterior thalamic radiation. The tract with the greatest number of affected voxels was the forceps minor. There were no areas of increased FA in the ASD group. There were no significant group differences in FA for the ASD versus US and US versus control comparisons. There were no significant group differences in age and intracranial volume. All post-hoc correlation analyses became non-significant after controlling for multiple comparisons. Conclusions: This study supports the presence of an intermediate neuroendophenotype in US. The presence of significant differences only in the ASD and control comparison suggests that this intermediate brain phenotype is neither skewed towards that of ASD participants nor controls. Lack of significant differences in the US and control comparison does not preclude that aberrant white matter structure could represent a marker for increased risk for ASD.

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NR02-43

INTEGRATIVE PSYCHIATRY; USING ACUPUNCTURE TO TREAT THE SYMPTOMS OF ANXIETY, INSOMNIA AND PAIN CAUSED BY REACTIVE ARTHRITIS:SERONEGATIVE SPONDYLOARTHR

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SUMMARY:

Reactive arthritis (seronegative spondyloarthropathy) can lead to neuropsychiatric symptoms to include pain, insomnia, and anxiety. We present a case in which a 23-year-old Caucasian male was referred to the mental health clinic for evaluation and treatment. The patient's treatment began with psychodynamically-oriented psychotherapy, but evolved to include many integrative approaches including the use of Omega-3 essential fatty acids, monitoring of 25 (OH) vitamin D levels and exposure to sunlight, and the use of acupuncture. It was not until starting acupuncture that the patient's symptoms of pain, insomnia and anxiety were significantly improved. The patient's symptoms and quality of life deteriorated after stopping acupuncture, and have subsequently improved after resuming acupuncture.

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NR02-44

NEUROMETABOLITE CHANGES CORRELATE WITH CLINICAL RESPONSE TO ANTIPSYCHOTIC TREATMENT IN PATIENTS WITH SCHIZOPHRENIA – A 1H-MRSPECTROSCOPY STUDY

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SUMMARY:
Objective: Reduced levels of N-acetyl aspartate (NAA) in the anterior cingulate gyrus (ACC) and hippocampus (HIP) have been consistently reported in schizophrenia. In addition, preliminary reports indicating alterations in glutamate levels in both first episode and chronic schizophrenia are now emerging. The goal of this study was to investigate these neurometabolites in subjects with schizophrenia and their changes with antipsychotic treatment. Method: 12 subjects with a DSM-IV diagnosis of schizophrenia (SZ) and 12 matched healthy controls (HC) participated in this study. Prior to enrolment, all SZ had been off antipsychotic medication for at least two weeks. The Brief Psychiatric Rating Scale (BPRS) was used to monitor treatment response to a six week, open label, flexible dose treatment with risperidone. A 1H-MRS scan was obtained at baseline and after 6 weeks of treatment. To evaluate the stability of these measures over time, HC were scanned at the same time points. MRI data were acquired on a 3T Siemens Allegra head only magnet. A series of sagittal, coronal, and axial T1-weighted anatomic scans serving as MRS localizers were obtained for spectroscopic voxel placement. 1H-MRS data were collected from voxels in the bilateral ACC and left HIP. Spectra were acquired using the point-resolved spectroscopy sequence (PRESS), analyzed with jMRUI, and quantified in the time domain using the AMARES algorithm. Results: We did not find any significant differences in NAA/Cr and Glutamate + Glutamine (Glx)/Cr ratios between the SZ and HC or in SZ before and after treatment in the ACC (NAA/Cr: HC 1.35 +/-0.11; SZ off meds 1.34 +/-0.07; SZ on meds 1.34 +/-0.09; Glx/Cr: HC 0.70 +/-0.07; SZ off meds 0.67 +/-0.06; SZ on meds 0.70 +/-0.07) or HIP (NAA/Cr: HC 1.25 +/-0.10; SZ off meds 1.30 +/-0.15; SZ on meds 1.37 +/-0.13; Glx/Cr: HC 0.63 +/-0.08; SZ off meds 0.71 +/-0.07; SZ on meds 0.64 +/-0.17). However, clinical improvement as measured using the change in BPRS Psychosis subscale after six weeks of treatment with risperidone positively correlated with an increase in NAA/Cr in both the ACC (r= 0.78; p= .008) and HIP (r= 0.76; p= .011) as well as Glx/Cr in the HIP (r= 0.89; p= .001). Changes in NAA/Cr in the ACC were positively correlated with those in the HIP. A positive correlation was also seen between NAA/Cr changes in the ACC and HIP and Glx/Cr changes in the HIP. Conclusion: While we did not find any significant differences in NAA/Cr and Glx/Cr ratios between the SZ and HC or between SZ before and after treatment, our preliminary data suggest that an increase in NAA/Cr in the ACC and HIP and an increase in Glx/Cr in HIP correlates positively with clinical improvement. These data suggest that both NAA/Cr and Glx/Cr represent key pathophysiological factors that correlate with treatment response This study was supported by a R01 NIMH081014 grant to ACL. The medication, risperidone, was provided by Ortho-McNeil Janssen Scientific Affairs LLC.

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NR02-45

LACK OF ASSOCIATION BETWEEN SEROTONIN TRANSPORTER GENE PROMOTER POLYMORPHISMS (5HTTLPR) AND HISTORY OF ABUSE ON PHYSIOLOGICAL MEASURES

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SUMMARY:
Background: Serotonin transporter gene promoter polymorphisms (5HTTLPR) have been shown to modulate transcription and expression of the serotonin transporter gene (SLC6A4)(1). Variants of 5HTTLPR in combination with stressful life events have been associated with a likelihood of future depressive episodes and severity (2). However, it is unknown whether this interaction has an effect on objective physiological measures that may be affected by emotional distress or stress. Objective: To determine the relationship of 5HTTLPR genotype and history of abuse on resting heart rate, blood pressure, and body mass index (BMI). Method: Retrospective chart review of 159 Caucasian patients referred for psychiatric consultation at Mayo Clinic Rochester, Minnesota from 2007-2009. Inclusion required 5HTTLPR genotyping and record of heart rate, blood pressure, and BMI within 72 hrs of psychiatric consult. History of abuse (sexual, physical, or emotional) was obtained from clinical records. Depression symptoms were assessed using Patient Health Questionnaire-9 (PHQ-9). T-test was used to examine impact of abuse history on heart rate, blood pressure, and BMI in each of the genotypic subgroups. Results: Of 159 (30.2% female, mean age = 45.6) subjects, 68 (42.8%) reported a history of abuse (sexual, physical, or emotional). 49 had the long/long 5HTTLPR polymorphism, 84 had long/short, and 26 had short/short. There was no significant association between heart rate, blood pressure, BMI, or PHQ-9 score. Regardless of abuse history, there was no discernable significant variation in heart rate, blood pressure, BMI, or depression symptoms among genotype subgroups. Conclusion: There was no observable gene environment interaction of 5HTTLPR and history of abuse on resting heart rate, blood pressure, and body mass index.

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NR02-46

ANTIOXIDANT DYSREGULATION IN DEPRESSION

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SUMMARY:
Preclinical environmental and genetic models of depression exhibit alterations in gene expression. Some evidence suggests that antioxidant-related genes may be differentially regulated in these animal models. In clinically depressed humans, effective pharmacotherapies have been shown to reduce measures of oxidative stress (OS). Glutathione (GSH) is a major intracellular

antioxidant that protects cells from OS and may serve a neuroprotective function, thereby mediating cognitive and affective symptoms in conditions such as major depressive disorder (MDD). Potential therapeutic relevance of GSH for mood disorders was emphasized by a recent study showing that the GSH precursor N-acetyl cysteine results in a clinical improvement for depressive symptoms in bipolar disorder. Understanding OS may help identify clinical characteristics such as chronicity and lifestyle factors including diet, exercise, and smoking that contribute to disease development and progression. This information about OS patterns in specific brain regions may in turn guide the development of more targeted therapies. We have investigated changes in antioxidant status that occur in animal models of depression and clinical populations. We have identified changes in expression of genes involved with regulating antioxidant status in the rodent chronic unpredictable stress model. Further, we have extended our preclinical findings to humans, and have found significant reductions of cortical GSH in medication-free patients with MDD compared to age- and sex-matched healthy volunteers. These data add to our understanding of a role for OS in depression, while providing potential biomarkers and suggesting new treatment targets.

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NR02-47

ASSOCIATION BETWEEN THE -1438A/G SEROTONIN 2A RECEPTOR POLYMORPHISM AND LONG-TERM ANTIDEPRESSANT TREATMENT OUTCOME IN KOREAN PATIENTS WITH DEPRESSION

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SUMMARY:
Objectives: The aim of this study was to investigate the association between the -1438A/G serotonin 2A receptor polymorphism and long-term outcomes of antidepressant treatment in depressed patients. Methods: Two hundred forty-eight patients with major depressive disorder (DSM-IV) were enrolled in this study. All patients were genotyped for the -1438A/G serotonin 2A receptor using the polymerase chain reaction. The Clinical Global Impression (CGI) score was assessed at the first visit (baseline) and at 2 months, 4 months, and 12 months after treatment with antidepressants. Associations between CGI-I (improvement) and CGI-S (severity) scores according to the various genotype and allele groups were evaluated. We also evaluated the association between responders/non-responders and remitters/non-remitters according to genotype and allele frequencies for the -1438A/G polymorphism of the serotonin 2A receptor. Results: No significant differences in age, illness onset age, family history of depression, number of hospitalizations before treatment, education, or CGI-S score at the first visit were observed among genotype groups. However, subjects with the GG genotype had significantly better CGI-I scores than subjects with the AA or AG genotypes when compared by the CGI-I scores and responders (Rp)/non-responders. (non-Rp) Conclusion: Depressed patients with the 5HT2A -1438A/G genotype of GG showed superior clinical response to antidepressants than patients with the AA or AG genotypes.

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NR02-48

ASSOCIATION BETWEEN BIPOLAR DISORDER AND GLYCOGEN SYNTHASE KINASE-3ß GENE (-1727A/T AND -50C/T) POLYMORPHISMS

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SUMMARY:
Abstract Objective: This study primarily investigated the correlation between GSK-3ß and bipolar disorder among Koreans and secondarily determined the relation of GSK-3ß with existence of psychotic symptoms, clinical characteristics such as age of onset and haplotype. Methods: Patients with bipolar disorder (n=118) and control group(n=158) were assessed by genotype for GSK-3ß -1727A/T and -50C/T. We divided patients into two groups according to the presence of psychotic symptoms. The severity of their symptoms was measured using the Young Mania Rating Scale(YMRS) and the Brief Psychiatric Rating Scale(BPRS). Results: There were no significant differences in the genotype distributions or allelic frequencies in GSK-3ß gene polymorphisms and gender between patients with bipolar disorder and normal control group. In haplotype analysis, there was no association between two groups. However, analysis associated with age of onset in bipolar disorder revealed significant differences in genotype and allele distributions among the patients. The patients with homozygotes for the wild variant (TT) had an older age of onset than carriers of the mutant allele. (A/A: 27.4±9.1; A/T: 30.1±11.8; T/T: 42.3±19.9; p= 0.034) We found differences in allele frequencies of the GSK-3ß-1727A/T polymorphism between the psychotic mania group and the non-psychotic mania group(genotype: ?2=12.191, p=0.0023; allele: ?2=7.721, p=0.0055) Conclusion: The study suggests that the GSK-3ß gene polymorphisms are not associated with bipolar disorder. However, the GSK-3ß gene SNP-1727A/T is associated with age of onset and psychotic symptoms in bipolar disorder.

NR02-49

DEVELOPMENT OF KOREAN VERSION OF BRIEF MEASURE OF WORRY SEVERITY(BMWS)

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SUMMARY:
bjective: Worry is known to be a distinct concept from anxiety or depression and associated with many psychiatric disorders. This manuscript presents the results of two studies evaluating the psychometric properties of Korean version of Brief Measure of Worry Severity (BMWS) in non-clinical population and the evaluation on tendency to engage in excessive or pathological worry in patients with depressive disorder using BMWS. Methods: The first study included the translation procedures of BMWS into Korean version and assessment of reliability, factor structure, and convergent validity of the scale among non-clinical population aged 18-65 years old. BMWS, Beck Depression Inventory (BDI), Patient Health questionnaire-2 (PHQ-2), and State-Trait Anxiety Inventory (STAI) were administered to volunteers from local community. Cronbach's coefficient a was calculated as a reliability and the correlation tests with other scales were performed for convergent validity. In the second study, patients treating for depressive disorder in psychiatric outpatient department of Korea University Medical Center Guro Hospital completed BMWS and other scales, and the scores were compared with those of non-clinical population by independent t-test. We also examined whether the scale provided optimal cutoff value for depressive disorder or not using receiver operating characteristic curve (ROC curve) analysis. Results: The Korean version was translated by a group of psychiatrists and clinical psychologist who were fluent in both Korean and English and back translation was conducted. 175 of non-clinical subjects completed the scale, and the Cronbach's coefficient a was 0.91 with statistical significance (P=0.000). Factor analysis showed that the scale had unifactorial construct, and the correlations with other scales were statistically significant and supported the scale's convergent validity (with BDI r=0.61, PHQ-2 r=0.47, SAI r=0.53, TAI r=0.66, P< 0.05, each). Patients with depressive disorder (N=203) reported greater tendency of severe or pathological worry than non-clinical population

(t=15.574, P=0.000). The score of 8 was estimated to be optimal cutoff value for depressive disorder. Conclusion: The results show Korean version of BMWS is a reliable and valid scale for assessing severe worry as a trait. This study suggests that severe worry tendency is associated with depressive disorder and BMWS provides optimal cutoff values for depressive disorder.

NR02-50

A CONTENT ANALYSIS OF NEWSPAPER ARTICLES DESCRIBING POSTTRAUMATIC STRESS DISORDER IN THE UNITED STATES AND UNITED KINGDOM

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SUMMARY:
Objective: After the recognition of Posttraumatic Stress Disorder (PTSD) as a discrete entity in 1980 in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, it has been reported in the media related to both combat and non-combat traumatic situations. News media has been acknowledged as one of the most important sources of mental health information for the general public1. Mental health reporting by the news media influences the willingness of the wider society to accept and integrate people with mental health problems2. It may also impact on health seeking behavior and prognosis in people with mental health problems. Content analysis of newspaper articles has been performed for many mental health conditions including schizophrenia, but information about PTSD is scarce and represents a significant research gap. Currently, articles related to PTSD appear in newspapers across the country at least monthly, and occasionally daily. The goal of this study was to first understand how PTSD is described in newspapers in the United States of America (US) and to second compare the relative reporting on PTSD in newspapers based in the US versus United Kingdom (UK). Methods: A search was performed for the keywords "post traumatic stress" over a 12 month period in 4 major newspapers in both the US and UK. Articles were divided into combat and non-combat PTSD, as well as incidental findings. The frequency of several themes, such as suicide and violence, were identified and t-test for proportions was used to determine significance. Additionally, the frequencies of different methods of treatments were assessed. Results: 289 articles from the US and 211 from the UK were retrieved. 29% and 36% of these were incidental findings, while 64% and 59% of those about PTSD were related to combat. The UK articles described PTSD and issues related to diagnosis or substance use significantly more frequently than US articles. The US articles contained more educational information about the disorder. The US articles were less likely to describe treatment options, although when present they reported a wider array of possible treatments. Conclusions: There are significant differences in the reporting styles of the US and UK in regards to how they portray PTSD. About 60% of these are combat-related articles, which is congruent with the ongoing conflicts in the Middle East and about one third of the articles include personal accounts of trauma. It is interesting that less than 10% discuss stigma related to a PTSD diagnosis. Though around 30% of the articles are about treatments, very few of these discuss evidence-based treatments in the US compared to the UK.

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NR02-51

OUTCOMES OF VA PATIENTS RECEIVING LONG-ACTING INJECTABLE NALTREXONE VERSUS ORAL NALTREXONE MAINTENANCE THERAPY

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SUMMARY:
The aim of this project, concurrently being conducted and expected to be concluded by May 2011, is to measure outcomes of VA patients prescribed long-acting injectable naltrexone maintenance therapy for treatment of alcohol dependence as compared to those recieving oral naltrexone. One outcome being measured is efficacy, which will be measured as time in treatment, GGT, and %dCDT. Also, subjects will be assesed

for adverse outcomes, including change in liver enzymes and hospital admissions among others. Naltrexone is a mu-opioid receptor antagonist that is FDA approved for the treatment of alcohol dependence and has been shown in several studies to reduce cravings for alcohol and thus reduce drinking. In 2006, the FDA approved a long-acting injectable form of naltrexone marketed under the name Vivitrol for alcohol dependence. Given that alcohol-dependent patients are poorly compliant, the once-monthly long-acting form has the goal of increasing compliance over the daily oral form and also reducing plasma peaks and troughs, reducing side effects and increasing efficacy. While numerous studies have demonstrated both oral and injectable naltrexone are superior to placebo, few have compared the long-acting injectable form versus the short-acting oral form. This study will compare patients at the Ralph H. Johnson VA Medical Center who received injectable naltrexone with a cohort who received oral naltrexone for alcohol dependence. The subjects' records are being reviewed to retrospectively observe outcomes of adverse events and efficacy. Given that the study is retrospective, use of results for clinical practice will be limited. However, if the study demonstrates greater efficacy of long-acting injectable over short-acting oral naltrexone, then it would suggest that long-acting injectable naltrexone be given greater weight in clinical decision-making. Also, it would suggest the need for a prospective study.

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NR02-52

THE EFFECT OF AGE AND SEVERITY OF SLEEP APNEA ON HEART RATE VARIABILITY INDEX IN OBSTRUCTIVE SLEEP APNEA SYNDROME (OSAS)

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SUMMARY:

Objective It is widely known that the severity of sleep apnea and age both influence HRV (heart rate variability) in OSAS (obstructive sleep apnea syndrome) patients. Various indexes are calculated according to HRV analysis methods, and this study aims to analyze how such HRV indexes discriminatively respond according to severity of OSAS and age. Methods 176 patients confirmed as OSAS was classified into a total of four groups according to age and AHI (apnea-hypopnea index) through polysomnography. Age was classified into young group and middle-aged group with age, and AHI was classified into mild to moderate level group and severe level group with 30 as a dividing point. [Group 1: young and mild to moderate group (N=45, mean age=31.29±3.35 years, mean AHI=15.62±7.00), Group 2: young and severe group (N=40, mean age=32.75±5.50 years, mean AHI=58.38±21.00), Group 3: old and mild to moderate group (N=45, mean age=48.51±4.69 years, mean AHI=16.42±6.66), Group 4: old and severe group (N=46, mean age=49.00±4.75 years, mean AHI=54.70±16.70)]. Comparative analysis of the four groups regarding various indexes of HRV was achieved through ANOVA. Multiple regression analysis was executed through age, AHI, sleep parameters, and BMI regarding NN50 count and low frequency/high frequency (LF/HF) ratio with statistically higher significance,.Results NN50 showed average value of 6279.2±4505.2 in group 1, 5555.8±3717.4 in group 2, 3649.5±3066.0 in group 3, and 3001.0±2518.5 in group 4, presenting

significant difference of NN50 between groups (p<0.001), and presented tendency to reduce with higher age and AHI. According to Games-Howell post-hoc analysis, significant difference was shown in group 1 and group 3(p=0.009), group 1 and group 4 (p<0.0001), group 2 and group 4(p=0.003). Through stepwise multiple regression analysis on the effect of age, AHI, BMI, stage1 sleep (S1), stage2 sleep (S2), and wake time (%) on NN50, it was shown that age was the only significant variable that influenced NN50 count (R2=0.144, F=29.359, p<0.001). LF/HF ratio showed average value of 2.05±1.63 in group 1, 3.33±3.00 in group 2, 2.86±2.08 in group 3, and 4.25±3.03 in group 4, presenting significant difference of LF/HF ratio between groups (p=0.001), and showed the tendency to increase with higher age and AHI. According to Games-Howell post-hoc analysis, significant difference was shown in group 1 and 4 (p<0.001). Through stepwise multiple regression analysis on the effect of age, AHI, BMI, S1, S2, and wake time on LF/HF ratio, it was shown that AHI provided the highest influencing factor (R2=0.208, F=46.981, p<0.001), with age being the next influencing factor (R2 = 0.033, F=28.744, p<0.001). Conclusion The change of NN50 count responded more sensitively to age difference than AHI, but the change of LF/HF ratio responded more sensitively to AHI difference than age. As accelerated activity of sympathetic system is assumed through increased awakenings due to sleep apneas in OSAS, we can suggest that LF/HF ratio, which reflects sympathetic tone, better reflects change in severity of sleep apnea, rather than NN50 count, which mainly reflects parasympathetic system.

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NR02-53

WITHDRAWN

NR02-54

MEASURING DEPRESSION IN MULTIPLE SCLEROSIS WITH THE PATIENT HEALTH QUESTIONNAIRE 9 (PHQ-9): A RETROSPECTIVE ANALYSIS

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SUMMARY:

Background: The Patient Health Questionnaire (PHQ-9) is a well-validated, brief screening instrument in primary care which has allowed for better recognition, treatment and management of major depression in primary care1. The PHQ-9 has been validated in a variety of patient sub-populations 2-5 but not among patients with multiple sclerosis (MS). The objectives of this study were to retrospectively assess 1) PHQ-9 scores among MS patients presenting with depressive symptoms compared to primary care patients and 2) to examine the mean PHQ-9 scores of MS patients who were formally diagnosed with DSM-IV criteria for a depressive disorder compared to mean PHQ-9 scores found in other patient populations with depression. Method: All patients who underwent a new MS evaluation during 2009 were routinely screened for depression using the PHQ-9 as part of the Cleveland Clinic's hospital wide outcomes project. In addition to patients needing mental health (psychiatry or psychology) evaluations based on clinical judgment, all patients scoring a PHQ-9 >10 are routinely referred for further mental health evaluation. We compared the mean PHQ-9 scores of those patients who met formal criteria for DSM-IV depressive disorders to the well established mean PHQ-9 cutoff score for major depression (>10) in primary care settings. We also compared mean PHQ-9 scores of MS patients overall to established average scores found in other patient populations (i.e. coronary artery disease and diabetes mellitus type II). Results: Of the 166 patients with MS available for this study, baseline PHQ-9 scores were available for 134 patients. The overall mean PHQ-9 score for this clinical sample was 9.0 which is consistent with variability of mean PHQ-9 scores among patients with other conditions such as coronary artery disease (PHQ-9 =10.15)6 and diabetes mellitus type II (PHQ-9=7.95)7. Of those MS patients flagged for further evaluation (n=28), the mean PHQ-9 score was 12.7. However, only 25% (7/28) of these patients met formal DSM-IV

criteria for depressive disorders based on a formal clinical evaluation by a mental health professional with a mean PHQ-9 score of 14.6. Conclusion: We found that the morbidity associated with depressive symptoms is high among MS patients overall and similar to other patient populations. In addition, our preliminary findings suggest the possibility of a higher cut off score for major depression on the PHQ-9 compared to primary care settings (14.6 vs. 101), suggesting that MS patients are likely scoring high on both the scale's 4 somatic items in addition to the 5 mood items. Further prospective validation studies are needed in this population to identify the items on the scale that are most sensitive in identifying patients with DSM-IV major depression.

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NR02-55

EMPATHY AND ALEXITHYMIA IN BORDERLINE PERSONALITY DISORDER: CLINICAL AND LABORATORY MEASURES

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SUMMARY:
Objective: To explore the association between alexithymia, empathy, and subjective responses to emotional pictures in patients with Borderline Personality Disorder (BPD). We hypothesized that: 1) BPD patients would have higher alexithymia than healthy controls (HC) and lower empathic capacity; 2) BPD patients would be blunted compared to HCs in their subjective rating of emotional pictures; 3) This blunting would be most pronounced in BPD ratings of their own emotional experiences.Method: Subjects were 37 HCs and 40 BPD patients, aged 18-65. All subjects completed the Toronto Alexithymia Scale ,TAS-20 and Interpersonal Reactivity Index, IRI. A subset (29HCs and 30BPDs) viewed the Social Affective Response Task, which involves viewing positive, neutral and negative emotional pictures with interpersonal content on two separate occasions: 1) Participants were instructed to rate what they believed the people in each picture were feeling (the "Other" condition) on a scale from 1 to 9 (1=most pain, 9=most pleasure); 2) Participants were instructed to imagine themselves in the situation that they were viewing and rate what they would feel (the "Self" condition) on the same scale. Results: BPD subjects (TAS total scores mean [M])=52.0, SD=12.6) had significantly higher rates of alexithymia than HCs (M=34.8, SD=8.1) ($F=50.0$, $p<0.001$) across all subscales, but the effect was most robust in identifying feeling and least robust in external oriented thinking. On the IRI, BPD patients had poorer scores in perspective taking ($p<0.01$) and more personal distress ($p<0.0001$). Unlike a previous report, however, BPD patients did not show lower levels of empathic concern than HCs. A Diagnosis (HC, BPD)*Condition (Self, Other) interaction was significant for the Negative ($F=7.25$, $p=0.0102$) and Neutral ($F=7.52$, $p=0.009$) pictures, but not for Positive pictures. For both Neutral and

Negative Valence pictures, BPD subjects' ratings were less negative in the Self condition relative to HC subjects, whereas ratings were similar between the groups in the Other condition. For Negative pictures in the Self condition, post-hoc tests revealed a trend for BPD subjects' ratings to be less negative relative to HC subjects ($p<0.06$). Conclusions: 1) BPDs scored significantly higher in alexithymia than HCs. Unlike in previous reports, however, BPDs did not differ in empathic concern from HCs. The only IRI subscale in which BPD patients differed from HCs was personal distress; 2) and 3) BPD patients showed blunted subjective ratings of emotional pictures compared to HCs only for Negative pictures in the Self condition (ratings of imagined pain for oneself). We confirm higher alexithymia in BPDs compared to HCs in a larger sample than has previously been reported. The blunted response to negative experiences for themselves more than for others is interesting, since BPD patients report themselves to be in constant intrapsychic pain, unrelated to the real significance of external events.

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NR02-56

LEVETIRACETAM INDUCED PSYCHIATRIC SEQUELAE

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SUMMARY:

Levetiracetam is an anti-epileptic drug approved for partial onset seizures, adjunctive treatment for juvenile myoclonic epilepsy, and adjunctive treatment for primary generalized tonic clonic seizures. Its mechanism of action is currently unknown. There have been a number of case reports associated with levetriacetam-induced psychosis (1,2). Studies have shown a prevalence of psychiatric side effects ranging from 1% to 15.7% (3,4,5,6,7), and psychosis from < 1%8 to 1.4% (3,8). Risk factors associated with the development of psychosis appear to be antiepileptic polypharmacy (2,5), history of status epilepticus (3), history of febrile convulsions (3,9), preceding mental illness (1,3,9), prior history of behavior problems (10), and a family psychiatric history (9). This is a retrospective observational study of patients who presented to Dr Jeffrey Nicholl's epilepsy clinic and were either placed on levetiracetam or had a history of taking levetiracetam. We identified 48 patients who had a negative reaction to levetiracetam in the form of psychiatric phenomenon, and examined the psychiatric precursors leading to such events. Twenty-one (43%) had a negative psychiatric reaction to the drug. Of these patients, 38% developed irritability, 38% depression, 14% anxiety, 4% suicidal ideation, 4% homicidal ideation, 4% psychosis, 14% behavior change, and 19% personality change. Forty-three had a history of depression, 3% anxiety, 9% behavioral abnormalities, and 4% irritability. None had a history of PTSD, schizophrenia, or auditory/visual hallucinations. Sixty two percent were on multiple antiepileptic drugs, in contrast to 77.7% in the group that did not develop psychiatric side effects related to levetiracetam. Of the patients that had a negative psychiatric reaction to levetiracetam, 9% had psychogenic seizures, versus 19% in the group without psychiatric side effects. In the group that did not have a psychiatric side effect, 30% had a past medical history of depression, 14% of anxiety, 11% behavioral problems, and 4% with bipolar disorder. Overall, 52% of non-reaction patients

had psychiatric illness versus 62% in the patients who developed a psychiatric side effect after taking the drug. There was a small difference in the patients that developed psychiatric sequelae versus the group that did not. The group that did not develop psychiatric side effects were more likely to ultimately receive a diagnosis of psychogenic seizure. The majority of the psychiatric side effects were irritability, depression, and personality or behavioral change, although most concerning issues of homicidal ideation, suicidal ideation, and psychosis did develop in a small portion of this group. Further studies with a larger sample size are needed to further distinguish the differences between the two groups.

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NR02-57

BRAIN-IMAGING FINDINGS CONVERGE ON DYSFUNCTIONAL SELF-REFERENTIAL PROCESSING IN SCHIZOPHRENIA

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SUMMARY:
Psychotic disorders are characterized by reality distortions that manifest as delusions, hallucinations, and poor insight. All these symptoms relate to failure of self-referential processing, i.e. conscious or subconscious processing of information that refers to self. In this framework it is interesting that findings on brain abnormalities in subjects with schizophrenia converge to cortical midline structures (CMS) that form the core neuronal substrate for self-referential processing in healthy subjects. A direct link between CMS dysfunction and reality-distortion symptoms has remained, however, missing. We recently found that the less CMS is activated during auditory verbal hallucinations, the more difficult it is for the subjects to recognize that the "voices" originate from their own minds. In the present functional-magnetic-resonance-imaging (fMRI) study, 21 subjects with schizophrenia evaluated statements from common insight questionnaires, such as "I have sometimes symptoms of schizophrenia". The degree subjects agreed with these statements correlated strongly and specifically with evaluation-related CMS activation ($r = 0.7$, $p = 0.00002$, uncorrected). These findings provide a novel framework that may explain variety of reality-distortion symptoms better than previous frameworks. Failure of self-referential processing in CMS could be related to the inability to recognize verbal impulses as one's own (auditory verbal hallucinations) and to an inability to recognize disease-related statements as self-referential (poor insight). By extension, fears could become evidence of persecution, and wishes turn to conviction of involvement in events of universal importance. CMS dysfunction need not to be restricted to schizophrenia, as reality-distortion symptoms can be seen as a dimension that cuts through various psychotic disorders. Therefore, dysfunctional CMS is a potential core network not only in schizophrenia, but in all psychotic disorders.

NR02-58

RELATIONSHIP BETWEEN SEVERITY OF MOST RECENT TRAUMATIC BRAIN INJURY AND POSTCONCUSSIVE SYMPTOMS MODERATED BY NUMBER OF PREVIOUS BRAIN INJURIES

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SUMMARY:
Objective: To better characterize the relationship between severity of traumatic brain injury (TBI), number of previous TBIs, and severity of postconcussive symptoms. Background: TBI is a considerable threat to public health, with annual rates estimated at 1.7 million annually (CDC, 2010). Currently, TBIs are classified by severity level, based on patient status and observable characteristics at the time of injury including duration or presence of loss of consciousness (LOC), as well as duration or presence of post-traumatic amnesia (PTA). However, this classification of TBI severity does not consistently predict the intensity or duration of post-concussive symptoms experienced by patients. Similarly, it remains unclear whether post-concussive symptoms may be affected by the cumulative impact of multiple TBIs. Improved understanding of these relationships is needed in order to identify risk factors for poor outcome after injury. Method: 3046 university students completed an online survey of injury history and post-concussive symptoms. Of these individuals, 451 participants reporting at least one TBI were included in this analysis. A MANOVA was performed to examine the relationships of most recent TBI severity and number of prior TBIs to severity of post-concussive symptoms, controlling for the effects of age, gender, time since injury, and lifetime diagnosis of mood and anxiety disorders. Results: Main effects indicated that number of prior TBIs was related to severity of post-concussive symptoms, whereas severity of the most recent TBI was not. Additionally, a significant interaction was found between severity of most recent TBI and prior number of TBIs on post-concussive symptoms. Among those with a history of two or more prior TBIs, increased severity of the most recent TBI was associated with increased severity of post-concussive symptoms. Conclusions: These preliminary findings suggest that a history of prior TBI may interact with severity of the current TBI to better predict severity of several postconcussive symptoms. Implications of results for improved diagnosis and treatment will be discussed. Institutional support for this research was provided by the Uniformed Services University of the Health Sciences

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NR02-59

WITHDRAWN

NR02-60

ELECTRONIC PATIENT RECORD AND DATA MINING: A NEW APPROACH FOR IDENTIFYING BIOLOGICAL CAUSALITY

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SUMMARY:
Objective: The Danish Health Registers have with great success been used to study co-morbidity, cause of illness, family predisposition etc. However they only contain principal diagnoses, and thus lack in detail. An alternative and much richer source of data on a multitude of clinical conditions springs from the Electronic Patient Record (EPR) that may be used to complement the register-bases studies. The scope of the study is to discover biological causes of disease, and the specific aim is to find biological causes of co-morbid conditions identified in the records by means of data mining. Method: The study uses data mining to construct the phenotypic space for each individual patient based both on formally assigned diagnoses and the clinical conditions mentioned in the EPR notes. This phenotypic space is used to identify overrepresented and unexpected co-morbidities, the basis of which is subsequently studied using a Systems Biology

approach. Co-morbidity (defined as two or more diagnoses in same patient) is taken to indicate that diagnoses that occur frequently together may have a shared biology. A two step model ensures that noise and spurious findings in EPR are eliminated by an independent Systems Biology replication procedure. We performed data mining, in the form of text mining, on 10 years of EPR covering 3290 patients many with multiple admissions from the Mental Health Centre Sct. Hans. First, we created the phenotypic space for each patient, and used it to list all occurrences of co-morbidity. We then divided the overrepresented co-morbidities in three categories: (1) Trivial co-morbidity reflecting similar or identical diagnoses (2) Cause-effect co-morbidity representing two linked clinical conditions (3) Unexpected co-morbidity with no known relation All the unexpected co-morbidity (i.e. category 3) was further analyzed, searching for biological causality by means of a system biological approach, to examine whether the co-morbidity could be explained by shared genes, gene-complex or biological pathways. Results: The 3290 patients have in average 2,7 assigned ICD 10 diagnoses, and text mining added 9,6 diagnoses. 80 % of the assigned diagnoses were from chapter 5 "Mental and behavioural disorders", by adding text mining this number dropped to 24 %. There were 674 different diagnoses, and more than 200.000 possible co-morbidities, 802 of which were overrepresented more than two-fold and about 270 co-morbidities were rated in category 3. For one category-3 comorbidity, we discovered a hitherto unrecognized shared biology underlying the corresponding two clinical conditions. The clinical conditions sharing a common biological basis can be interpreted as a shared genetic predisposition to side effects or to an autoimmune condition. Conclusion: We have provided proof of concept that data mining of electronic patient record is a new method to find biological causes for medical conditions otherwise hidden to the eye.

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NR02-61

REDUCED BRAIN FUNCTIONAL CONNECTIVITY IN MIDDLE-AGED,APOE4 GENE CARRIERS, CHILDREN OF ALZHEIMER'S PATIENTS(CAPS): A RESTING STATE F-MRI STUDY

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SUMMARY:

Objective: Apolipoprotein e-4 (APOe-4) has been proven to be a major genetic risk for Alzheimer's disease (AD). In APOe-4 carriers, cerebral glucose metabolic decline in the posterior cingulate cortex (PCC) was detected with positron emission tomography (PET)1; and reduced hippocampus activation was found with task activated f-MRI2. In the present study, we examine the resting state functional connectivity between the hippocampus and the rest of the brain in the group of APOe-4 carriers and non APOe-4 carriers. Methodology: A total of 46 (20 Apoe4 carriers, 26 non Apoe4 carriers) neurologically normal 45- to 65-year-old subjects participated in this study. The two groups showed no significant difference in age, education level, and neuropsychological performances. All subjects received fMRI scans at a GE 3T scanner. For each subject, functional connectivity (FC) between the hippocampus and PCC was obtained .Group analysis was then performed using student t-test to determine the difference in the FC between the two groups. All the behavior data were analyzed

with SPSS 16.0 software .Demographic and clinical characteristics were documented by using counts for categorical variables, means ± SD for continuous variables. The pattern of Hippocampal FC map was generated by applying a voxelwise one-sample t-test within a group of subjects against a null hypothesis of no connectivity with a cluster-corrected analysis (AlphaSim, cluster size > 490 mm3, p<0.001). For between group comparison, a two-sample voxelwise t-test was performed with a cluster-corrected analysis (AlphaSim, cluster size > 4048 mm3, p<0.05).Results: Demographic and cognitive testing was similar in the two groups. The regional FC between the hippocampus and PCC was significantly lower in the APOe4 carriers than non-APOe4carriers.The first analysis with a one sample t-test showed the Enthorinal cortex and the PCC areas to have a positive correlation with the hippocampus while the frontal premotor areas showed a negative correlation in carriers. With a second analysis to measure a difference between the carriers and non carriers of the APOe4 allele showed the APOe4 carrier group to have a significant decrease in bilateral caudate, lenticular nuclei and thalamus .Conclusion: The reduced functional connectivity in AD-related brain networks in the middle-age APOe4 carriers may provide a neural mechanism for the increased risk for AD. Among subjects with a family history of AD, APOe4 carriers have an increased risk for development of AD than non-carriers. The fMRI technology may be a useful and practical marker for pre-symptomatic AD.

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NR02-62

DISPARITIES IN THE PREVALENCE OF SERIOUS PSYCHOLOGICAL DISTRESS BY REGION OF BIRTH: RESULTS FROM THE 2000-2008 NATIONAL HEALTH INTERVIEW SURVEY

Chp.:Tracy Snell D.O., 5323 Harry Hines Blvd., Suite NC 5.804, Dallas, TX 75390-9070, Co-Author(s): Florence J. Dallo, PhD MPH

SUMMARY:

Objective: In 2007, 10.9% of US adults experienced serious psychological distress (SPD) in the past year, a nonspecific indicator of mental health. While SPD prevalence estimates are available for Hispanics, African Americans and non-Hispanic whites, an investigation has not been undertaken of adult immigrants, their country of origin, and SPD. The purpose of this study is to: 1) Estimate the age and sex-adjusted prevalence of SPD among individuals (> 18) by region of birth and 2) Examine the association between SPD and region of birth while controlling for sociodemographic and acculturation characteristics. Methods: We use 2000-2008 data from the National Health Interview Survey (NHIS). The NHIS is a face-to-face household survey of non-institutionalized individuals that covers a wide variety of health topics. The outcome in this study is psychological distress measured using Kessler and colleagues' widely used K6 scale. The K6 asks how often the participant felt: sad; nervous; restless; hopeless; that everything was an effort; or worthless during the past 30 DAYS. Participants were instructed to choose from the following 5-point Likert scale: 1) ALL; 2) MOST; 3) SOME; 4) A LITTLE; and 5) NONE of the time. Item scores are summed to generate a total symptoms score ranging from 0 to 24. A cut-off > 13 is considered having SPD and can identify DSM-IV disorders. The independent variable is region of birth (see results section). The covariates include various sociodemographic and acculturation characteristics. We present weighted prevalence estimates and odds ratios (95% confidence intervals) among the sample of 259,799 participants. Results: In our sample, the prevalence of SPD is 3.0% (±0.05). Immigrants from the Middle East report the highest estimate [5.3% (±1.1)] of SPD. Intermediate estimates (ranging from 3.1% to 1.9%) are observed for individuals born in the US, Mexico/Central America/Caribbean Islands, Russia, South America, Europe, Africa, and SE Asia. The Indian Subcontinent and Asia report the lowest estimates [~1.0% (±0.02)]. In the unadjusted regression model, and compared to non-Hispanic whites, individuals from the Middle East were 2 times more likely, while all other immigrants, were less likely to report having SPD. When controlling for confounders, the effects were attenuated, but still statistically significant. Conclusions: This information is pivotal in understanding the necessity of education and allocation of mental health services.

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NR02-63

COMPARISON OF CLINICAL JUDGMENT AND STRUCTURED TOOLS FOR ASSESSING ACUTE RISK OF VIOLENCE

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SUMMARY:
Objective: Violence by patients toward staff on psychiatric inpatient units is a common problem with serious repercussions for victims' physical and psychological well-being (Flannery, et al., 2007). Several structured tools have been developed to assist evidence-based assessment of risk of inpatient violence by prompting the clinician to consider variables supported by research as risk markers for violence. However, most hospitals continue to rely on unaided clinical judgment to evaluate violence potential. There is little research on the relative contributions of these methods of assessing risk of violence in the acute inpatient setting. This study compared the accuracy of unaided clinical judgment with structured tools for evaluating the risk of patients' violence at the time of hospital admission. Methods: The study used a retrospective case control design. Subjects were 172 patients who had physically attacked staff on the acute inpatient units at a county hospital between 2003 and 2008 and 173 randomly selected nonviolent patients admitted during the same interval. Trained research clinicians, blinded to whether subjects were violent during hospitalization, rated medical charts based on information available at the time of admission including: 1) the admitting physician's unaided clinical assessment of violence risk, and 2) brief structured risk assessment tools. Tools used included the Broset Violence Checklist (BVC; Almik et al., 2000), the Historical, Clinical Risk Management-20, Clinical subscale (HCR-20-C; Webster et al., 1997), and the Dynamic Appraisal of Situational Aggression (DASA; Ogloff & Daffern, 2006). Interrater reliability of ratings on the risk assessment tools, based on the intraclass correlation coefficient (ICC), was > 0.80. Results: Receiver operating characteristic (ROC) analysis showed that, when considered individually, the various risk assessment methods were significantly associated with violence and had similar levels of predictive accuracy. The area under the curve (AUC) was .65 for unaided clinical judgment. AUCs for the risk assessment tools were .68 (95%CI=.59-.71) for the HCR-20-C, .63 (95%CI=.57-.69) for the DASA, and .61 (95%CI=.55-.67) for the BVC. AUCs in this range typically are considered to represent a moderate level of predictive accuracy. Multivariate logistic regression analyses showed that, when considered concurrently with unaided clinical judgment, the HCR-20-C and the DASA each significantly improved predictive validity over that of unaided clinical judgment alone. Conclusions: In a sample of acute psychiatric inpatients , risk assessments based on unaided clinical judgment and brief structured risk assessment tools each had a moderate level of predictive accuracy. Clinical decisions about risk of inpatient violence may be improved by considering information from structured risk assessment tools.

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NR02-64

TREATMENT ADHERENCE IN PATIENTS OF SCHIZOPHRENIA ON SECOND-GENERATION ANTIPSYCHOTIC MEDICATIONS

Chp.:Nisha Warikoo M.B.B.S, 60 Presidential Plaza Apt 1210, Syracuse, NY 13202

SUMMARY:

Background: Schizophrenia is among the top 10 causes of long-term disability in the world (1). A major determinant of outcome is treatment adherence. Reported rates of non-adherence to antipsychotics range from 20%–89%, with an average rate of approximately 50% (2). The first generation antipsychotic medications (FGAMs) have been largely replaced by second-generation antipsychotic medications (SGAMs), which promise a similar efficacy along with a better side effect profile. This has led researchers to speculate that patients receiving SGAMs will have greater adherence. Hence, it is important to evaluate treatment adherence with SGAMs and compare the same with FGAMs. Moreover, the influence of factors such as side effects, tolerability, attitude towards medication and quality of life on treatment adherence with first- or second-generation antipsychotics has not been investigated fully. Objective: This study attempted to examine treatment adherence in patients of schizophrenia on second-generation antipsychotic medications in a developing setting (India), to compare this with adherence of a group of patients on first-generation antipsychotic medications and to assess the influence of certain factors on treatment adherence, including side effects, subjective well-being, attitude towards medications and quality of life. Method: Treatment adherence was assessed in 40 patients with schizophrenia on second-generation antipsychotic medications (SGAMs), over a 6 month period together with structured assessments of side-effects, subjective well-being, attitude towards medication and quality of life, and compared with 30 patients with schizophrenia on first generation antipsychotic medications (FGAMs). Results: Treatment adherence was significantly better in patients on SGAMs compared to those on FGAMs. Patients on SGAMs had significantly better attitude towards medication, subjective well-being on medication and quality of life, compared to those on FGAMs. Patients in the FGAMs group had significantly higher scores on facial and global movement subscales of AIMS and neurological and autonomic subscales of UKU side-effect rating scale, compared to those in the SGAMs group. Treatment adherence showed a strong positive correlation with total family income, total supervision of medication and percentage visits with attendants in the whole sample. No significant correlation emerged between treatment adherence and attitude towards medication, severity of illness, side-effects, quality of life and subjective well-being for the whole sample. Conclusion: This study demonstrated that treatment adherence is better in patients on SGAMs compared to FGAMs. Additionally, patients on SGAMs had more favorable attitudes to medications, less EPS and autonomic side effects, better subjective well-being and enhanced QOL. However, these variables did not show any association with adherence and thus were unable to account for the significantly better adherence among patients on SGAMs.

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NR02-65

TRAUMATIC BRAIN INJURY, PTSD AND SLEEP DISTURBANCE

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SUMMARY:
Objective: There is high prevalence of and comorbidity between TBI and PTSD among veterans of Operation Enduring Freedom and Operation Iraqi Freedom. This study examined the effect of traumatic brain injury and PTSD on subjective ratings of sleep disturbance as measured by the Pittsburgh Sleep Quality Index (PSQI) and pre- and post-military deployment sleep quantity. Design: 82 questionnaires were completed by outpatients at an outpatient Traumatic Brain Injury clinic. The questionnaire included the Pittsburgh Sleep Quality Index (PSQI) as well as demographic data, time since TBI, medications and change in sleep pre- and post- deployment injury. Results: Self-reported change in sleep length from baseline to post-deployment baseline was predictive of the diagnosis of PTSD (OR 1.39). Additionally, specific questions regarding sleep latency within the PSQI were found to be sensitive in predicting the diagnosis of PTSD. Presence of TBI or severity level did not prove to contribute to sleep change pre- and post-deployment in a statistically significant way. Multiple subjects failed to record answers to or entered written answers, particularly within the PSQI subscales of sleep latency, sleep duration and sleep efficiency. Due to this missing data, analysis of PSQI global score was limited due to lack of power. Conclusions: Our preliminary results showed that sleep disturbance has a high prevalence within the population of military veterans surveyed. Sleep latency was identified as sensitive in predicting PTSD within this demographic. Additionally. reports of significant change in sleep from baseline were predictive of PTSD. Presence of TBI or severity level did not prove to significantly contribute to sleep change pre- and post-deployment in a statistically significant way. Key Words: Sleep, Pain, Post Traumatic Stress Disorder, Traumatic Brain Injury, PSQI

NR02-66

PRELIMINARY VALIDATION OF CLOSED-LOOP NEUROSTIMULATION IN RAT MODELS OF PSYCHIATRIC ILLNESS

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SUMMARY:
One high-level model of psychiatric illness conceptualizes disorders, particularly mood and anxiety disorders, as an insufficiency of "top-down" control from prefrontal cortex over limbic brain structures. Recent deep brain stimulation studies have shown that electrical stimulation can be used to alter limbic tone, effectively reasserting that control. However, all existing psychiatric neuromodulation is "open loop", with stimuli applied at pre-programmed parameters regardless of the brain's state. In part, this is due to a lack of sufficiently reliable neurophysiologic correlates to electrically sense whether a patient's symptoms are worsening or improving. Recent developments in neural prosthetics offer a possible solution to this problem. Prior work shows that rats, monkeys, and humans can all learn to remap arbitrary neural and muscular signals to control electronic devices. Humans have successfully controlled prosthetic limbs with EMG, monkeys have controlled implanted neurostimulators, and rats have modulated single-unit activity to receive pellet rewards. Taken together, these studies indicate that a "closed loop" controller can be created using arbitrary neurons, without the need for an endogenous symptom-correlated signal. Furthermore, creating that artificial contingency can strengthen synaptic connections between the independent and dependent cells in a Hebbian fashion. We hypothesize that the same neuroplastic mechanisms can be used to strengthen voluntary cortical inhibition of pathologic emotional responses, by pairing prefrontal activity to inhibitory stimulation. We present here the first steps toward testing that hypothesis, namely determining whether rats can volitionally control neural signals in prefrontal cortex to obtain a reward (either externally delivered or through intracranial self-stimulation).

NR02-67

DIFFERENTIAL ACTIVATION OF CORTICO-STRIATO-THALAMIC CIRCUITRY BY DEPRESSION AND INSECURE ATTACHMENT

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SUMMARY:
Objective: Insecure attachment has been linked to depression and to outcome in psychotherapy. The neural mechanisms subserving the relationship between attachment security and depression are not well understood. We address this question by examining activity in response to early and late attachment figures in healthy and depressed women. Methods: Twenty-eight women, fourteen depressed and fourteen without history of psychiatric disorder, viewed images of their mother (early attachment), a female friend (late attachment) and female strangers during fMRI scanning. The effects of depression and attachment security were determined with whole-brain multiple linear regression analysis of blood-oxygen-level-dependent (BOLD) response against the Beck Depression Inventory (BDI) and the Adult Attachment Interview (AAI) coherence of mind score, respectively. Interaction effects between AAI and BDI were analyzed with ANOVA. Results: For early attachment (Mother-Friend contrast), depression scores correlated with activation of cortical and sub-cortical components of cortico-striato-thalamic circuits implicated in the modulation of affect, while attachment insecurity correlated with subcortical activity in the same circuitry. Depression and attachment insecurity both correlated positively with neural activity in cortical and subcortical regions in the Mother-Stranger contrast. For late attachment (Friend-Stranger contrast), only cortical effects were found for depression, attachment security, and their interaction. Conclusion: Depression and attachment security may be subserved by similar but distinct components of cortico-striato-thalamic circuits related to affect regulation. Differential subcortical vs. cortical encoding of early versus late attachment suggests a bottom-up model of early attachment and a top-down model of later, adult attachments, which may be relevant to psychotherapeutic outcome.

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NR02-68

EFFECT OF KOREAN RED GINSENG ON SLEEP AND COGNITION :A RANDOMIZED, PLACEBO-CONTROLLED TRIAL

Chp.:HYE BIN YEO M.D., anamdong, seoul, 136705 South Korea, Co-Author(s): Leen Kim,Psy.D.,1Department of Psychiatry, Korea University College of Medicine, Seoul, Korea

SUMMARY:
Objectives: Ginseng has a long history of being used in insomnia treatment and there is some evidence from animal studies of its sleep-enhancing property. Ginseng also has been shown to have effects on cognitive performance. The purpose of this study was to investigate the effect of Korean red ginseng on change of sleep architecture and cognitive performance in humans. Methods: A total of 20 healthy young males with regular sleep and wake habits and without neither psychiatric nor cognitive problems were selected based on review of sleep questionnaires and sleep diaries they completed followed by an interview with a board-certified psychiatrist. The subjects were randomly assigned to red ginseng or placebo for 2 weeks of trial. The total daily dose of ginseng was 4500mg. The polysomnographic recordings and computerized cognitive function test using Vienna Test System were made at baseline and at 2 weeks after. The effects of red ginseng and placebo on sleep and cognitive performance were assessed by comparing the changes in polysomnographic variables and Vienna test results between the two groups. Results: A total of 15 subjects, 8 from red ginseng group and 7 from placebo group, were included to undergo polysomnography and Vienna test procedures. The red ginseng group showed tendencies to increase stage 3 sleep (p=0.087) and to decrease stage 2 sleep (p=0.071) from the baseline compared with the placebo group. As for Vienna test, the red ginseng group showed improved median reaction time and median decision time after 2 weeks compared to the placebo group but these were not statistically significant.

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NR02-69

EXCESSIVE ACTIVATION OF THE LOOP BETWEEN THE NR2B SUBUNIT OF NMDA RECEPTORS AND GSK-3ß IN THE HIPPOCAMPI OF PATIENTS WITH MAJOR DEPRESSIVE DISORDER: A

Chp.:Shin Youshup M.D., seongdonggu, seoul, 82 North Korea, Co-Author(s): Youshup Shin, M.D.,Yourhee Jeong, M.D, Jisang Byun, M.D., Dong Hoon Oh, Ph.D., Yong Chon Park, Ph.D

SUMMARY:
Background Our previous study showed that glycogen synthase kinase-3ß (GSK-3ß) levels are significantly elevated in the hippocampi of patients with major depressive disorder (MDD). However, the exact mechanism of elevated GSK-3ß expression and its function in the hippocampi of patients with MDD remain unknown. Recent animal studies have suggested a potential mechanism involving the N-methyl-D-aspartate (NMDA) NR2B-GSK-3ß loop that may explain elevated GSK-3ß expression and its function in the hippocampi of patients with MDD. Methods To investigate the existence of an NR2B-GSK-3ß loop in the hippocampi of patients with MDD, we explored a specific marker (i.e., NR2B). We also attempted to identify the markers that correlate with NR2B levels in the hippocampus, using the Stanley Neuropathology Consortium Integrative Database (SNCID). The SNCID is a web-based tool used to integrate Stanley Medical Research Institute (SMRI) data sets. Results We found that the levels of NR2B and DLGAP1 mRNA expression in the hippocampus were significantly higher in the MDD group (n=8) than those of the unaffected controls (n=12) ($p<0.05$). NR2B expression levels were significantly correlated with the expression levels of NR2A, NR1, DLGAP1, GSK-3ß and NOS1, as well as the number of calretinin-positive neurons in the hippocampi of all subjects in the SNC (n=42, $p<0.001$). Conclusions The results of our study confirm that excessive activation of the NR2B-GSK-3ß loop induces overexpression of GSK-3ß in the hippocampi of patients with MDD. These results also suggest that GSK-3ß-mediated neuronal apoptosis or suppressed neurogenesis in hippocampal calretinin-positive neurons could play a significant role in the pathophysiologic process of MDD.

NR2-70

DIPHENHYDRAMINE DEPENDENCE IN A MIDDLE EASTERN MAN WITH SCHIZOPHRENIA: A CASE REPORT OF A NOVEL DETOXIFICATION ACHIEVING SUSTAINED REMISSION

Chp.:Scott Simpson M.D., 1959 NE Pacific St, Box 356560, Seattle, WA 98121, Co-Author(s): James Basinski, MD

SUMMARY:
Patients with schizophrenia often suffer from co-morbid compulsive behaviors and substance dependence, particularly of anticholinergic medications which are available over-the-counter[1]. We present a case report of – and an original detoxification protocol for – diphenhydramine (DPH) dependence in a 43 year old Middle Eastern man with paranoid schizophrenia and pathological gambling. Six of seven case reports of diphenhydramine dependence are in schizophrenic patients[2-6]; patients may self-medicate antipsychotic-induced EPS and positive symptoms through a reduction in mesolimbic dopaminergic activity[7]. Our patient reported using up to 1000mg of DPH daily, in ritualistically divided doses (5-10 tablets at a time) for about a year. The patient described an initial euphoria followed several hours later by withdrawal symptoms including headache, anxiety, visual changes, and muscle cramping. He lost at least one job due to post-ingestion somnolence, spent almost his entire income on purchasing DPH, had a prolonged QTC, and was admitted for detoxification. Though prior reporters utilized a DPH taper, we scheduled thorazine with hydroxyzine, benzatropine, albuterol, and lorazepam given as needed in conjunction with an original nurse-administered withdrawal scale to gauge improvement. Our use of as needed medications prompted further compulsive, medication-seeking behavior that the patient found distressing and shameful owing a cultural aversion to medication addiction. Ultimately the patient was discharged with intensive case management to help provide

stable housing and better life structure alongside ongoing treatment for the patient's relapse triggers, notably anxiety and psychosis. Antipsychotic medications including thorazine helped control symptoms of schizophrenia and reduce anticholinergic cravings. The patient has achieved nearly a year of sobriety from diphenhydramine and works in a vocational rehabilitation program.

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NEW RESEARCH AND YOUNG INVESTIGATORS' POSTER SESSION 03
May 15, 2011
7 – 8 AM
Hawaii Convention Center, Exhibit Hall, Level 1

NR03-01

IS THE SEXUAL DYSFUNCTION AS A RESULT OR A REASON IN SUBSTANCE USE DISORDER IN MALE PATIENTS?

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SUMMARY:
INTRODUCTION: Sexual function disorders have been considered as one of the possible risk factors for males causing substance abuse and addiction as well as the result of the long term substance use. AIM: 1.To evaluate the prevalence of sexual dysfunction prior to first drug use and after using substances. 2.To assess how many subjects stated that sexual function disorders influence them to take decision to start substance use to improve sexual performance. METHOD: Patients aged between 18-65 years with the diagnose of substance use disorder according to DSM-IV-TR in Ankara Numune Training and Research Hospital Alcohol and Substance Treatment Department during March 2008 – August 2008 were enrolled in the study. Sexual functioning was evaluated using International Index of Erectile Function Questionnaire (IIEF) for male patients. The questions also pertained to the period before the subjects were substance users. Whereas the questions on original IIEF questionaire began "in the last 4 weeks" our version substituted with language referring to before the subjects' substance use began. Age and sex matched healthy volunteers without any mental and physical disorder were included as the control group. RESULTS: 111 patients who met the study criteria (91% male) and 43 healthy control group were included in the study. . 26 % of participants have alcohol (n=40), 19.5 % opioid (n=30), 13 % mixed substance (n=20) and 13.6 % cannabis use disorder (n:21). Median age of the patients was 32. Total median scores of IIEF were found as; in alcohol users 55.0 (min=10, max=74) , in opioid users 21.0 (min=5, max=62), in mixed substance users 35.0 (min=5, max=63), in cannabis users 48.50 (min=11, max=70) and 58.0 (min=31, max=71) in control group. According to IIEF total median scores in all substances including alcohol, opioid, mixt and cannabis, there was a significant difference between the period before the subjects were substance users and the last 4 week ($P<0.005$). In all subscale scores the difference was also significant ($P<0.005$). Before first drug use none of subjects reported having sexual dysfunction. In alcohol users 7,5 % (n:3), in opioid users 3,3 % (n:1), in mixt substance users 25 % (n: 5) and in cannabis users 4,8 % (n:1) of them stated that to improve sexual performance influenced their decision to start taking drugs. CONCLUSION: In our study substance users report a high prevalence of sexual disorders. Sexual dysfunction is releated with substance use and after starting substances the severity of sexual dysfunction is prone to increase.

La pera et al demonstrated that sexual disorders lead to first drug use (1). La pera et al also indicated in another study that; the higher the severity of the sexual disorders, the higher the percentage of those claiming that sexual dysfunction had influenced their decision (2). Our findings do not support the literature. Sexual dysfunction seems to have a result of substance use in our study.
There is still need for research in male sexual dysfunction.among drug users.

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NR3-02
INFLUENCE OF AN EDUCATIONAL ENCOUNTER AT A REHABILITATION RESIDENCE ON MEDICAL STUDENTS' ATTITUDES TOWARD SUBSTANCE-ABUSING PREGNANT WOMEN.

Chp: Brittany B. Albright, B.S, Co-Author(s): William F Rayburn, M.D., M.B.A., Shawne Riley,B.A., Patrick Abbott, M.D., Betty Skipper, Ph.D.

SUMMARY:
Objective: We previously reported that medical student attendance at a specialized prenatal clinic for women with substance use disorders positively impacted students' comfort levels in caring for this underserved population. The objective of this study was to determine whether medical students' attendance at a rehabilitation residence for pregnant substance abusers would yield changes in their attitudes and comfort levels in providing care to this population. Method: This randomized educational trial involved 70 consecutive medical students rotating during their third-year clerkship. In addition to attending a half-day prenatal clinic designed for women with substance use disorders, each student was randomly assigned either to attend (study group) or not attend (control group) a rehabilitation residence for pregnant substance abusers. The main outcome measure was differences in responses to a confidential 12-question survey (using a 5-point scale from "strongly disagree" to "strongly agree") dealing with comfort levels and attitudes, at the beginning and end of the 8-week rotation. Two-tailed t tests were used for comparison between average pre-post change scores. Results: Experience at the clinic allowed students to feel more comfortable interviewing patients about substance use during pregnancy ($p < .001$). Students who also attended the residence reported becoming more comfortable talking with patients about adverse effects from substance abuse ($p = .03$) and in understanding terms used on the "street" about drugs ($p = .006$). Speaking privately at the residence prompted students to disagree more with the attitude that pregnant women are inclined to not disclose their substance use to health care providers ($p < .001$). Written student comments about the residence related to their positive emotional reactions to the experience. Comments pertained to patient fears about being judged, barriers patients face, and parenting skills patients acquire through the residence. Conclusions: Medical students became more comfortable and better informed about pregnant women with substance use disorders after attending a rehabilitation residence in addition to a prenatal clinic dedicated toward this population's special needs.

NR03-03
THE ROLE OF CANNABIS USE IN SCHIZOPHRENIA, SANTA MARTA 2009

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SUMMARY:
The United Nations Office Drugs and Crime informed that in 2007, between 172 million and 250 million persons had consumed illicit drugs at least once during previous years, and about 143 millions to 190 millions consumed cannabis in 2007. Marijuana, also known as cannabis, the most illicit drug used in the world, including countries developed as UK and USA. Between 18 and 38 million consumers of cannabis are in ages between 15 and 64 years old. This umber represents a problem to society because there is an increase in the use of cannabis, particularly in adolescent users. In first ages, the development of the brain can be specially influenced by the environment. That is why the medical field is interested in the use of drugs such as cannabis and the influence in young people, to study the effects in this group and if the frequent use can cause schizophrenia. Recent studies demonstrate that the risk to develop schizophrenia is 2 to 25 times higher in persons who have consumed cannabis, in the general population (Odds ratio, 24.17; IC 95 %). In Santa

Marta (Colombia) we started an investigation; our main goal was, to find out if there is a relationship between drug abuse and schizophrenic patients. In our study, the prevalence of consumption of cannabis in schizophrenic patients was 19%, this maintains a strong relation compared with findings done by international studies that demonstrated the rate of consumption of drugs of abuse, specially cannabis in the psychiatric population is 17-80.3 % and in the rest of the population of 5.8 - 16.4 %; similar output. The reiterated use of cannabis from very young, above all in subject genetically vulnerable, cause schizophrenias whose first episode is presented after a year of THC consumption, generally before 18 years, with more positive symptoms and less negative than schizophrenics not users, with worse response to the antipsychotic and more relapses in the following 15 years. This seems be due to the fact that in the schizophrenics is produced an similar alteration of the endogenous cannabinoid system at the originated by the cannabis-related poisoning in healthly subjects. In our country, there are no data about the magnitude of this problem. The review of world literature and isolated epidemiological data of our country, suggest that dual diagnosis might represent a serious problem in the course, prognosis and treatment of these patients, and that consumption of cannabis as "negative symptoms modulator", innocuous it is not at all justifiable
It exist evidence of the interactions between the use of cannabis and the neurobiology bases of the schizophrenia they reaffirm genetic - environmental hypothesis of the effects of cannabis in the physiopathology of this disease. Nevertheless there's still unclear, and many questions appear such as if the abuse of marijuana constitutes a risk factor, or it can cause by itself schizophrenia. Or if in fact is just a precipitant it in individuals who are genetically vulnerable. Apparently the genetic factors that they contribute to the schizophrenia might be the same that contribute to the addictive behaviors.

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NR03-04

THE TREATMENT OF THE ADOLESCENTS WITH INTERNET ADDICTION PROBLEMS USING THE THERAPEUTIC PHOTOGRAPHY

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SUMMARY:
Objectives : Internet addiction is a highly comorbid, and significantly impairing disorder. The prevalence of internet addiction is 6~21% in the U.S.1) Although many psychotherapeutic approaches and psychotropic medications have been recommended and some of the psychotherapeutic approaches and a few pharmacotherapy strategies have been studied, the treatment of Internet addiction is generally in its early stages. The Therapeutic photography is a method used by expert psychiatrists photo taking, film developing and photo printing, which can relieve psychiatric problems and can change therapeutic intervention via psychiatric patients.2) The aim of this study is to examine the effectiveness of the Therapeutic photography for adolescents who suffer from Internet addiction. Methods : 14 adolescents with internet addiction were assigned to receive Therapeutic photography for a period of 4 weeks. The Child Depression Inventory (CDI), the Barratt Impulsiveness Scale (BIS) were used at 0 weeks, 4 weeks to assess the results. Results : After the treatment, the scores of depression and impulsivity subscales had improved. However, It was not statistically significant. (CDI score : t=0.447, p=0.663, BIS score : t=0.562, p=0.584).Conclusion : The Therapeutic photography may be effective for relieving depression and impulsivity in adolescents with internet addiction. However, further well-designed controlled trials are needed to assess the value of the Therapeutic photography.

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NR03-05

VACCINATION FOR SUBSTANCE DEPENDENCE: AN UNCONQUERED FRONTIER?

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SUMMARY:
Substance dependence involving a wide variety of agents such as nicotine, alcohol, inhalants, prescription drugs and illicit drugs such as cocaine, heroin and methamphetamine, presents significant physical and psychological consequences for the affected individuals and their families. This leads to academic, social and occupational impairment with frequent legal problems along with substantial economic burden. While psychosocial interventions along with certain pharmacological interventions constitute the majority of available treatment approaches, efforts are underway to develop newer approaches to improve treatment outcomes. One such recent approach involves the use of immune-modulating vaccines. Vaccines for substance dependence are thus being developed to complement the rehabilitation process either by actively stimulating the formation of specific anti-drug antibodies or by passively supplying ready-made antibodies and hence preventing the drug from crossing the blood-brain barrier. While initial trials began in the early 1970s with research on anti-heroin vaccine, they were sidelined due to a variety of issues. More recently, research has again focused on the use of vaccines, especially for nicotine

and cocaine dependence. Apart from uncertainty in improvement of clinical outcomes, vaccination further provides another ethical dilemma. In this poster, we review the recent literature on the subject and provide a clear and succinct description of the basic science involved in the development of these vaccines. The findings from pre-clinical and clinical trials involving vaccines for nicotine and cocaine along with the ethical dilemmas will also be discussed. An update on vaccines for opiate and methamphetamine dependence will also be provided.

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NR03-06

ALCOHOL WITHDRAWAL SYNDROME IN GENERAL MEDICINE WARDS: HIGHER MORBIDITY WITH MULTIPLE ADMISSIONS

Chp.:Zachary Hugo, M.D. Co-Author(s): Maria Lapid, M.D., Stephen Cha, M.S., Donna Lawson, B.S., Caroline Burton, M.D., Scott Larson, M.D.

SUMMARY:

Background: Alcohol Withdrawal Syndrome (AWS) is associated with high morbidity and mortality. Multi-symptom-triggered alcohol withdrawal protocols such as the Clinical Institute Withdrawal Assessment (CIWA) are commonly used to treat AWS. Previous studies have found the CIWA protocol inadequate for the medically ill. Given the heterogeneous presentations of AWS and multitude of medical and psychiatric comorbidities encountered on general medicine wards, a "one size fits all" protocol type treatment strategy such as the CIWA may not be optimal. We retrospectively examined records for demographic and clinical characteristics of patients admitted for AWS on general medicine wards, and describe our results. This is part of a larger QI study to investigate CIWA treatment efficacy in the medically ill. Methods: A retrospective chart review was conducted on general medical inpatients between January 2006 and January 2009. Those admitted for AWS and placed on CIWA protocol were identified and included in the study, and grouped into single versus multiple admissions. Demographic and clinical information were collected, including medical and psychiatric comorbidities, pertinent lab results, and CIWA scores. Standard descriptive statistics were used for patient characteristics and demographics. To test the null hypothesis that there is no difference in co-morbidities in the multiple admissions group when compared to the single admission group, categorical variables were evaluated using the Fisher exact test or Pearson Chi-Square test. Continuous variables were evaluated using 2 sample t-test. A P value of <0.05 was considered statistically significant. Results: Included are the 322 subjects of 788 AWS admissions. There were 180 (56%) subjects with single admission and 142 (44%) with multiple admissions (mean admission 4). Characteristics of the multiple admissions group were significantly different from the single admission group. There were more medical and psychiatric comorbidities, including type 2 diabetes (p=0.005), cardiovascular disease (p=0.009), cerebrovascular disease (p=0.05), and psychiatric conditions (p=0.001). Adjustment (p=0.011), depressive (0.008), bipolar (p=0.047), anxiety (p=0.028), and eating (p=0.023) disorders were more frequent, as well as amphetamine (p=0.017) and barbiturate (p=0.002) use. Admission labs showed higher levels of blood alcohol (p=0.001), ALT (p=0.05), and ammonia (p=0.006). AWS was more severe based on higher overall (p=0.001) and component (p=0.001) scores while on the CIWA protocol. Conclusions: Patients with multiple hospitalizations for AWS demonstrated higher rates of medical and psychiatric comorbidities, alcohol consumption, illicit drug use, liver dysfunction, and more severe withdrawal symptoms. These characteristics may be important indicators of increased risk for severe withdrawal and recidivism. Further studies are needed to develop AWS treatment tailored for high risk groups to prevent morbidity.

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NR03-07

THE RELATIONSHIPS AMONG THE SEVERITY OF ALCOHOL USE, ANXIETY & DEPRESSION IN PATIENTS WITH ALCOHOL USE DISORDERS

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SUMMARY:
Objectives: The purposes of this study are to examine the relationships among the severity of alcohol use, anxiety and depression, and to estimate the rate of co-morbid anxiety or depressive disorders in patients with alcohol use disorders. Methods: A total of 52 patients with alcohol use disorders (4 patients with alcohol abuse and 48 patients with alcohol dependence) were enrolled in this study. The severity of alcohol use was measured by self-report of the Korean version of alcohol use disorders identification test(AUDIT-K), and anxiety or depressive symptoms were measured by using the Beck Anxiety Inventory(BAI) or the Beck Depression Inventory(BDI), respectively. Pearson's correlation test was applied to correlate among the severity of alcohol use, anxiety and depressive symptoms. Also, we estimate the rate(%) of co-morbid anxiety or depressive disorders in patients with alcohol use disorders. Results: The mean score of AUDIT-K was 22.81(±7.19). Pearson's correlation test showed that between the score of AUDIT-K and BAI or BDI, there were positively significant correlations(r=.319, p<.05; r=.442, p<.01), respectively. And in cases of =26 score of AUDIT-K, there were much more positive correlations with BAI(r=.608, p<.01). 43(81.1%) patients had co-morbid anxiety disorders, the most common was panic disorder(n=17, 32.7%). And 16(30.2%) patients had co-morbid depressive disorders, the most common was depressive disorder, NOS(n=6 , 11.5%). Conclusion: The results of this study demonstrate that patients with alcohol use disorders have high co-morbid anxiety and depressive disorders. Moreover, it is suggested that in the patients with severe alcohol use, they will have the much more anxiety symptoms than depressive symptoms. In conclusion, it would be needed that in the meet of patients with alcohol use disorders, the potential co-morbid anxiety or depressive disorders are evaluated and treated at the same time.

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NR03-08

EFFECTS OF 6-SUCCINYLMORPHINE CONJUGATED KEYHOLE LIMPET HEMOCYANIN VACCINE INDUCED ANTIBODIES ON ANALGESIC RESPONSE TO MORPHINE IN RATS

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SUMMARY:
ug abuse and addiction afflicts over 20 million Americans and has significant detrimental effects on society. A current immunotheraputic approach to this problem involves the development of vaccines that produce drug specific antibodies to bind the drug in circulation, thus preventing its diffusion through the blood-brain barrier and inhibiting its effects on the brain. With promising advances in the development of cocaine and nicotine vaccines, attention is now turning towards other addictive substances of abuse such as morphine. The purpose of this study was to examine the immunological and functional effects of a morphine-6-succinyl-KLH conjugate vaccine in rats. An ELISA assay was used to determine antibody levels in vaccinated rats at two week intervals post morphine vaccination with a booster dose at 3 weeks. Hot plate and tail flick assays were used to analyze the analgesic effects of morphine in vaccinated versus control rats at 7, 9, and 11 weeks post morphine vaccination. Morphine specific antibodies were detected via ELISA assay starting at 4 weeks and lasting up to 12 weeks. The hot plate assay showed a decrease in morphine analgesia of vaccinated rats with significant reductions in maximal possible effect (MPE) at 7 weeks (%MPE=7.3%), 9 weeks (%MPE=18.5%), and 11 weeks (%MPE=23.5%). Tail flick assay results demonstrated similar decreases in morphine analgesia of vaccinated rats as reflected by significant reductions in MPE of morphine at both 7 weeks (%MPE=40.1%) and 9 weeks (%MPE=44.1%). These results demonstrate the effectiveness of the vaccine in producing drug specific antibodies and altering the analgesic effects of the drug in rats, whereby showing promise for the development of a human vaccine to treat morphine addiction.

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NR3-09

WITHDRAWN

NR03-10

INTERNET ADDICTION, BODY IMAGE AND DISORDERED EATING

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SUMMARY: Objective: Pathological internet use is an increasing concern among young adults. Although self-presentational theory posits that the internet offers a context in which individuals are able to better control the image they convey, little is known about body image and eating concerns among pathological internet users. The aim of this study was therefore to explore the association between pathological internet use and body image esteem, body image avoidance and disordered eating. Methods: A sample of 392 French young adults (68% female) completed an online questionnaire assessing time spent online, preferred types of websites, pathological internet use, disordered eating, body satisfaction, and body image avoidance. Mean age (SD) was 25.20 (4.25). Results: Fourteen males (10%) and twenty-six females (9.2%) of females reported occasional to serious problems with internet use. Body image avoidance and disordered eating scores correlated with the proportion of time spent on communication websites ($p<.05$). Hierarchical regressions revealed that, in males and female, controlling for time spent online, body image avoidance was a unique predictors of pathological internet use (ß=.24, $p<.01$; ß=.20, $p<.05$ respectively). Conclusions: Our findings provide support for the self-presentational theory of internet

addiction and suggest that body image avoidance is an important factor in pathological internet use. Further research is necessary in order to confirm these results and increase the understanding of the temporal relationships between these concerns.

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NR03-11

PREDICTIVE ABILITY OF THE TREATMENT MOTIVATION QUESTIONNAIRE (TMQ) IN SUBSTANCE ABUSE TREATMENT

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SUMMARY:

Background: Motivation is thought to be a powerful predictor of success and prevention of relapse among patients who have gone through the substance abuse treatment. There have been numerous studies relating types of motivation to different problems, but studies of the effects of types of motivation on addiction treatment are scant. The Treatment Motivation Questionnaire (TMQ) was developed to assess four domains of motivation in seeking treatment and abstinence from substance abuse: external motivation, internal motivation, interpersonal help seeking, and confidence in treatment. Methods:Seventy-five male and female veterans in the Salem Veterans Affairs Medical Center completing the 28 day residential substance abuse treatment program, completed the TMQ in the final week before graduation from the program. We followed these participants for one year and measured how frequently they attended outpatient aftercare group and individual therapy. Substance use was assessed at 3-, 6- and 12-months using the Form-90 interview, collateral report and substance use screens. We evaluated the predictive ability of the TMQ by dividing participants into high, medium and low groups on each of the TMQ scales. Finally, we compared these groups on measures of aftercare attendance and substance use. We hypothesized that veterans scoring higher on the TMQ scale would have better outcomes than those scoring low on these scales. Results: We found no effects for level of internal motivation, external motivation and confidence in treatment on treatment attendance or substance use following residential treatment. However for interpersonal help seeking we found an effect on aftercare attendance ($p = .029$). Those participants with a high level of motivation for help seeking were more likely to attend aftercare treatment in the first month following residential treatment than those with a low level of this motivation. However, those with initially low motivation for help seeking were more likely to attend aftercare during the fifth and sixth month following residential care than those with a high level of this motivation. Conclusions: In general, the results did not support the ability of the internal motivation, external motivation, help-seeking motivation, or confidence in treatment scales of the TMQ to predict treatment adherence or outcome. However future research should examine whether administering the TMQ earlier in treatment may successfully predict treatment outcome. In the current study, those with low levels of motivation may have been less likely to complete residential treatment and would not have been eligible to enroll in this study. Similarly, it is possible that those completing residential treatment had significantly improved their motivation level as a result of being in treatment for three weeks prior to enrollment. This would have diminished the ability of the TMQ to predict treatment outcome in this sample.

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NR03-12

GABAPENTIN AS AN ADJUNCTIVE TREATMENT FOR CONTROL OF ALCOHOL AND SUBSTANCE WITHDRAWAL SYMPTOMS AND CRAVINGS

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SUMMARY:
Background: There has been increasing interest in the use of anticonvulsant medications in the treatment of alcoholism. In the United States, benzodiazepines such as diazepam and chlordiazepoxide are the preferred class of drugs for the treatment of alcohol withdrawal and cravings due to their low cost and high margin of safety. In Europe, different medications have been used for the treatment of alcohol withdrawal, such as clomethiazole, carbamazepine, valproic acid, and phenobarbitol. Gabapentin, an anticonvulsant drug that has been approved by the FDA for adjunct therapy for partial seizures, may offer a valuable alternative. Gabapentin is structurally related to gamma-amino butyric acid (GABA), crosses the blood-brain barrier readily, and is distributed to the central nervous system, promoting GABA amplification. The drug is not metabolized in humans, does not bind to plasma proteins or induce hepatic enzymes, and is eliminated unchanged through renal excretion. Gabapentin has no known abuse potential, few side effects, does not require blood monitoring, and does not affect liver metabolism or the excretion of other medications and no known significant drug-drug interactions. Interest in gabapentin increased after it was shown to have a selective action in decreasing both convulsive and anxiety-related aspects of withdrawal behavior in mice after chronic ethanol treatment. It was also shown to decrease the signs of alcohol withdrawal hyper excitability in mouse hippocampal slices. Objective: To determine the treatment value of gabapentin as an adjunct for alcohol and substance withdrawal and cravings. Methods: A retrospective chart review of 180 patients diagnosed with alcohol dependence or abuse was conducted at Bergen Regional Medical Center. Data was collected and analyzed for age, gender, length of stay in the hospital, and patients' medications. Patients having co morbid diagnoses of substance abuse, anxiety disorders were excluded. Results: Out of the total 180 patients, 12[7%] patients were gabapentin only, 115[64%] were chlordiazepoxide only, 9[5%] lorazepam only, 17[9%] combined gabapentin and chlordiazepoxide, 9[5%] gabapentin and lorazepam, 10[6%] chlordiazepoxide and lorazepam, 4[2%] all three medications and 4[2%] none of the above. Average length of stay in hospital for each of these groups: gabapentin 11 days, chlordiazepoxide 3 days, lorazepam 5 days, gabapentin and chlordiazepoxide 5 days, gabapentin and lorazepam 6days, chlordiazepoxide and lorazepam 4 days, three medications 5 days and none 17 days. Conclusion: These findings support the hypothesis of gabapentin having a treatment value as an adjunct to the standard protocol medications like chlordiazepoxide and lorazepam and also the need for additional prospective randomized controlled studies regarding usage of gabapentin as an adjunct in the treatment of alcohol withdrawal.

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NR03-13

CLONIDINE TREATMENT OF NIGHTMARES AMONG PATIENTS WITH CO- MORBID PTSD AND TRAUMATIC BRAIN INJURY

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SUMMARY:
Introduction: Exposure to any event that poses actual or imagined death or injury with production of intense fear, helplessness, or horror can lead to Post traumatic stress disorder (PTSD). National Co morbidity Survey Replication estimated the life time prevalence of PTSD among adult Americans to be Gulf war veterans to be about 6.8 per cent and 13.8% among Veterans of Operation Enduring Freedom/Operation Iraqi Freedom Autonomic dysregulation is thought to explain many of the physiologic changes seen in patients with PTSD.

Medications that decrease adrenergic activity may reduce anxious arousal in patients with PTSD. Since 2-adrenergic receptor agonists such as clonidine act at the noradrenergic autoreceptors to inhibit the firing of cells in the locus ceruleus, they may also be responsible for reducing the release of norepinephrine in the brain and may help in reducing the symptoms of PTSD, Case reports Mr. F, a 48 years old man of Bosnian origin developed PTSD symptoms after fighting in the Bosnian war for 15 months. He reported witnessing the loss of his mother, two brothers and a nephew along with friends, neighbors and other relatives He presented with symptoms of depression, flashbacks, exaggerated startled response as well as nightmares of the war events. He was treated with venlafaxine XR 225mg po q daily and olanzapine 10mg po q daily without any relieve of his nightmares. He was later started on clonidine 0.1 mg po qhs. Within 2 weeks of starting clonidine, he reported improvement in the severity and duration of his nightmares and improved quality of his sleep After one month of initiation of clonidine, his dose was increased to 0.1 mg twice daily and patient's olanzapine was slowly discontinued. The patient continues to maintain remission one year after initiation of treatment. Case 2 Mr. H is a 33 year old Iraq and Afghanistan wars active military soldier who was involved in several combat scenarios in which lives were lost. He presented with symptoms of PTSD and TBI including short term memory loss, nightmares, flashbacks, hypervigilance and avoidant behavior. He was treated with cognitive processing therapy, citalopram 20mg po q daily, clonazepam 1mg po bid as well as prazosin 4 mg po qhs. However, his nightmares did not respond significantly until prazosin was replaced with clonidine. He was initially started on clonidine 0.1 mg po qhs which was gradually titrated up to 0.3mg. The patient's nightmares symptoms resolved about 2 weeks after initiation of treatment and the patient remains in remission on a combination of citalopram and clonidine. Discussion SSRIs are regarded as first-line pharmacological treatment for PTSD. However, nightmares are often unrelieved by SSRIs. The lack of effectiveness may be due to the fact that alterations in noradrenergic system in the CNS and sleep dream cycle are the two key processes implicated in the path physiology of PTSD and are not relieved by SSRIs. Clonidine is a centrally acting alpha-agonist agent that is used to treat hypertension stimulates alpha-adrenoreceptors in the brain stem. This action results in reduced sympathetic outflow from the central nervous system. We hypothesize that this central mechanism of action is why clonidine is effective in treating nightmares among patients with PTSD. Conclusion Clonidine will continue to be increasingly valuable in treatment of nightmares. However, more controlled clinical studies are needed

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NR03-14

DISORDERED EATING AMONGST PATIENTS WITH OBSESSIVE-COMPULSIVE DISORDERS AND OTHER ANXIETY DISORDERS

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SUMMARY:

The link between Anorexia Nervosa (AN) and Obsessive-compulsive disorder (OCD) has been recognised for over fifty years (Dubois, 1949; Palmer and Jones, 1939). This comorbidity of OCD and Eating Disorders (ED) has also been more recently reported (Fahy, Osacar and Marks, 1993; Kaye et al., 2004). A study examining OCD sufferers found a high lifetime prevalence of anorexia nervosa and bulimia nervosa (Thiel et al 1995). Conversely, using standardised rating instruments, these workers showed that 37% of a cohort of 93 anorexic or bulimic females concurrently fulfilled DSM criteria for OCD (Thiel et al 1995). Comorbidity correlated positively with the severity of the eating disorder. Studies such as these have lead to the suggestion that both OCD and anorexia nervosa may have a common psychopathology (Hsu, Kaye and Weltzin, 1993). However, although there have been many studies in eating disordered patients reporting high levels of OCD or obsessive-compulsive personality disorder, the studies on OCD populations are more scanty. Fahy, Osacar and Marks(1993) found

that, in a retrospective case note study of 105 female OCD sufferers, 11% had a history of AN. A retrospective study in South West London and St George's Mental Health NHS Trust, examining patients treated as inpatients for severe, chronic resistant OCD failed to demonstrate an unduly high prevalence of eating disorder (Raswany et al, 2006). There may be a number of explanations for this finding. This could be due to the age and sex mix of the patients treated and a lack of reporting of past ED. Alternatively it could be that when OCD and ED coexist in the same patient, there is a tendency for healthcare professionals to pay more attention to the ED as the diagnosis more likely to lead to death or deterioration of physical health. The current study looked at the data for 255 patients from same geographical area (south west london) to test some of these assumptions. Method All patients referred to the specialised Trustwide Community Treatment for OCD/BDD and other severe neurotic disorders together with patients referred to the National Service for severe OCD/BDD were included in the study. Routine data were collected from all patients including measures of OCD and depressive symptomatology as well as screening for eating disorders using the SCOFF scale (Hill et al., 2009). To assess OCD, the Yale Brown Obsessive Compulsive Scale (YBOCS) was used which is an observer reported scale with a maximum score of 40. Depression was assessed using the 21-item Beck Depression Inventory (BDI) with a maximum score of 63. The presence of eating disorder was suspected in those patients who had a SCOFF score >2.

NR03-15

PSYCHIATRIC OUTPATIENTS WITH OBSESSIVE COMPULSIVE DISORDER: DOES GENDER MATTER?

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SUMMARY:
Objective: To examine the impact of gender on the psychosocial, clinical and treatment histories of psychiatric outpatients with Obsessive-Compulsive disorder (OCD). Method: Among a group of 1,458 consecutive psychiatric outpatients who were administered a structured diagnostic interview, 198 (14%) met inclusive DSM-III diagnostic criteria for OCD. Almost two-thirds of these were females (N=123; 62%). Most also completed a social, medical and family history questionnaire and the Symptom Checklist-90-R. Results: No gender differences were found for age (Average=34.4 years), race, marital status, education, employment, ratings of childhood experiences or level of psychosocial functioning when first seen in the clinic. The number of familial psychiatric disorders among first degree relatives did not distinguish male and female OCD patients: somatization disorder, panic attack and suicide attempts were reported more frequently in biological relatives of female OCD patients. Overall rates of psychiatric comorbidity also did not differ by gender. However, comorbid Anorexia Nervosa and Somatization Disorder were more frequent among females; comorbid Antisocial Personality Disorder was most frequent among males. Such gender-associated differences are commonly found. Age of onset of OCD symptoms was similar across the two genders: obsessions were reported more frequently than compulsions by both groups. No gender differences were found on the SCL-90. Very few treatment differences were found across gender; OCD males were more likely to be prescribed Lithium than OCD females, although no differences in the lifetime rate of mania were found. Conclusion: Gender appears to play a minimal role in clinical histories of patients with Obsessive-Compulsive Disorder.

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NR03-16

IN VIVO 1H-MAGNETIC RESONANCE SPECTROSCOPY STUDY OF THE ATTENTIONAL NETWORKS IN AUTISM

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SUMMARY:
The purpose of this study was to investigate cellular neurochemistry with proton magnetic resonance spectroscopy imaging (1H-MRS) in brain regions associated with networks subserving alerting, orienting, and executive control of attention in individuals with autism spectrum disorders (ASD) including Autistic Disorder, Asperger's Disorder, and Pervasive Developmental Disorder Not Otherwise Specified. Concentrations of cerebral N-acetyl-aspartate (NAA), creatinine + phosphocreatinine, choline-containing compounds, myo-inositol (Ins) and glutamate + glutamine (Glx) in the anterior cingulate cortex (ACC), thalamus, temporoparietal junction (TPJ) and areas near or along the intraparietal sulcus (IPS) were determined by 3 T 1H-MRS examinations in 14 high-functioning medication-free adults with ASD diagnosis and 14 age- and IQ-matched healthy controls (HC). The ASD group showed significantly lower Glx concentrations in right ACC (ASD vs. HC-33.5%; $p < 0.006$). Furthermore, subjects with ASD showed reduced Ins in left TPJ (ASD vs. HC -38.3%; $p < 0.030$), with a significant effect of IQ on the model when compared to HC. Reduced Glx concentration in the ACC and Ins in TPJ in individuals with ASD may suggest abnormalities in neurotransmission involved in attention, specifically regarding the network subserving executive control and alerting functions, which has been previously implicated in ASD pathogenesis.

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NR03-17

DOES METHYLPHENIDATE HAVE A SIGNIFICANT CLINICAL IMPACT ON WORKING MEMORY IN CHILDREN WITH ADHD?

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SUMMARY:
Background: To determine if the change on both (a) auditory-verbal (AV) and visual-spatial (VS) modalities and (b) storage and manipulation processing components of WM from pre treatment to post treatment is clinically meaningful. We predicted that MPH would show clinically improved performance on both visual-spatial storage and manipulation tasks, based on the data. Method: Participants were a clinical sample of 50 children and adolescents with ADHD, aged 6 to 16 years old, who participated in an acute randomized, double-blind, placebo-controlled, crossover trial with single challenges of three MPH doses. Children weighing less than 25 kg (n =?26) received placebo, 5 mg, 10 mg, and 15 mg of MPH; and children weighing 25 kg and above (n =104) received placebo, 10mg, 15 mg, and 20 mg of MPH. These fixed doses worked out to the following doses in mg/kg: low, 0.28 (0.07); medium, 0.45 (0.09); high, 0.61 (0.13). Four components of WM were investigated, which varied in processing demands (storage versus manipulation of information) and modality (auditory-verbal; visual-spatial), each of which was Statistical Analyses: the reliable change index (Jacobson and Truax 1991), was used to assess clinical significance of change in individuals' pre- to post-treatment difference scores. A 95% confidence interval level (RCI ±1.95; $p < .05$ two-tailed) cutoff criterion was adopted to ascertain change. Results: Major findings showed that relatively few individuals gained clinically significant gains on the modality (AV, VS) and processing (storage, manipulation) components of WM in individuals with ADHD. On VS storage measures, 93% showed no change, 3% showed clinically significant improvements, 2% showed detrimental effects; on VM manipulation measures, 93% showed no change, 6% showed clinically significant improvements, 2% showed detrimental effects; on AV storage measures, 91% showed no change, 6% showed clinically significant improvements, 2% showed detrimental

effects; and on AV manipulation measures, 88% showed no change, 6% showed clinically significant improvements, 2% showed detrimental effects when controlling for improvements across multiple doses. Conclusion: We investigated clinically significant effects of MPH on the modality and processing components of WM in ADHD patients. MPH had beneficial effects for some individuals to store VS information; and the ability to manipulate both VS and AV information. However, collectively, these findings indicate that stimulant medication enhances WM processes in relatively few individuals compared to group based analyses.

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NR03-18

SLEEP IN ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) OF THE PREDOMINANTLY INATTENTIVE AND COMBINED SUBTYPES

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SUMMARY:
Attention-deficit/hyperactivity disorder (ADHD) is a condition characterized by inattention and/or impulsivity that starts in early childhood and persists into adulthood in 60% of the cases. Over 30% of children and 60-80% of adults with ADHD report sleep problems. Sleep disturbances and/or disorders can give rise to or exacerbate core symptoms of ADHD. Also, the similarity of symptoms in sleep disorders and in ADHD may be a reflection of common affected mechanisms in the two conditions. The aim of this study is to investigate the nature and frequency of sleep disturbances in adult ADHD. In the first phase of the study, subjective sleep data on daytime sleepiness, sleep quality, daytime alertness, circadian preference, and fatigue were collected from ADHD-diagnosed patients referred to our clinic. Patients with significant daytime sleepiness and/or poor sleep quality were assumed to have sleep disturbances and are invited to participate in the second phase of our study, in which sleep-wake cycle and sleep architecture were objectively assessed by means of polysomnography and a dim light

melatonin onset test. Up to date, subjective sleep data have been collected from 102 patients with ADHD. An analysis of the collected data revealed that approximately 90% of patients with ADHD report either excessive daytime sleepiness and/or poor sleep quality, suggesting that a very large percentage of ADHD patients suffer from sleep disturbances. Interestingly, while correlation studies revealed no relationship between daytime sleepiness and sleep quality, there appears to be a correlation between sleep quality and fatigue. This suggests that while sleep quality may not result in daytime sleepiness, it may give rise to the experience of fatigue. This is clinically important, as it implies that fatigue, rather than daytime sleepiness, is a marker of poor sleep quality. It also raises the question of whether sleepiness is a pathological condition rather than a symptom of poor sleep quality. Regarding objective data, 36 consents have been obtained from patients, and data have been collected from 28 out of these 36 patients. The available data, although preliminary, indicate that a large percentage of patients with reported daytime sleepiness and poor sleep quality suffer from either sleep apnea, initial and middle insomnia not associated with a circadian sleep disorder, reduced total sleep time, and increased REM sleep. Given the high incidence of sleep problems in ADHD, we believe that understanding sleep in ADHD will lead to better understanding of the complexities of ADHD and, consequently, to the development of alternative and effective treatment options. Although the data presented here represent the results of an interim analysis at the halfway mark, this is one of the largest objective studies of sleep in adult ADHD conducted to date, and the results of this study are expected to open new avenues of investigation for the understanding of ADHD.

NR03-19

CHARACTERISTICS OF NEUROCOGNITIVE FUNCTION BY PSYCHIATRIC SYMPTOM PROFILE IN PATIENTS WITH MILD TRAUMATIC BRAIN INJURY

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SUMMARY:
Objectives: The purpose of this study was to find out how neuropsychological performance of patients with mild traumatic brain injury and psychopathological characteristics are interrelated. Methods: 219 disability evaluation participants with mild brain injury (GCS score 13-15) were selected for this study. Psychological tests were administered using Korea Wechsler adult intelligence scale (K-WAIS), Korean Memory Assessment Scale(K-MAS), Symptom checklist 90 revised (SCL-90-R) and Minnesota multiphasic personality inventory(MMPI). Categorizing participants based on psychopathological characteristics, we classified participants into group 1, group 2, and group 3, via two-step cluster analysis using validity and clinical scales in MMPI and SCL-90-R. 59 patients (26.9%) in group 1 have highest score in MMPI and SCL-90-R, 65 patients (29.7%) in group 3 have lowest score, 95 patients (43.4%) in group 2 have lower score than group 1, but higher score than group 3 in MMPI and SCL-90-R. Results: To compare the intelligence and cognitive function between groups, the participants were tested by using K-WAIS and K-MAS. On K-WAIS, there were significant differences between three groups on Digit span and comprehension among Verbal intelligence subscale. On performance intelligence subscale, there were significant differences between three groups only Digit symbol. Among intelligence quotient, there were significant differences between the groups on Performance Intelligence only. In K-MAS summary scores, there were significant difference between the groups in the immediate memory, visual memory and global memory. Conclusion: Patients with severe psychopathological symptoms did not showed intelligence decrement but global memory abilities are severely impaired. So psychopathological symptoms are related to global memory functions, mainly.

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NR03-20

RELATIONSHIP BETWEEN MENTAL ACTIVITY AND COGNITIVE FUNCTION IN THE ELDERLY

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SUMMARY:
Back ground: While physical activity, social activity, and mental activity have been known to be important for the modifiable factors of dementia, there are not many studies on mental activity compared to those on physical and social activities. Since mental activity is closely related with emotion, factors like depression and anxiety should also be considered. However, currently there is no study on mental activity where depression and anxiety have been considered. Therefore we tried to examine the relationship between mental activity and cognitive function after adjusting depression and anxiety in the elderly. Method: This study was based on the baseline data derived from a large prospective study called the Suwon Project, which was a cohort comprising of nonrandom convenience samples of ethnic Koreans aged 60 years and above. All the subjects completed the study questionnaire including their demographic characteristics, history of current and past illnesses, drug history, Korean version-Mini Mental State Examination (K-MMSE), SGDS-K (Korean version of the Geriatric Depression Scale-Short Form), BAI (Beck Anxiety Inventory), PA(physical activity), MA(mental activity) and SA(social activity). We checked how many hours per day are used for each types of 11 MA through the checklist. We excluded the cognitively-impaired elderly with a K-MMSE score less than or equal to 17. Finally, we had a confirmed number of 1,940 participants. We conducted the multiple regression analysis and the analysis of covariance (ANCOVA) to demonstrate the relationship between mental activity and K-MMSE. Result: Men were 512(26.4%), while women were 1428(73.6%). Average age was 76.7±6.0, and average years of schooling were 6.5±4.6 (Men 9.1, Women 5.6, p<0.001). Mean K-MMSE score was 24.8±3.5 (Men 26.4, Women 24.2, p<0.001). Mean SGDS-K and BAI scores was 3.3±3.3(Men 2.9, Women 3.4, p<0.002), 5.3±6.3(Men 3.7, Women 5.9, p<0.001). Total time spent in MA was 4.0±2.6 hours per day. Among the 11 MA, watching television had the longest average time of 2.6±2.0 hours spent per day. Average time of 0.8±1.3, 0.3±0.6, 0.1±0.5 hours were spent per day on playing card game, reading book and newspaper, and listening to the radio, respectively. Activities that had an average time less than 0.1 hours spent per day were learning a computer program, playing Korean chess, writing, attending a lecture, calligraphy and painting, learning a foreign language and making a presentation, in decreasing order. When age, sex, education, depression, anxiety was adjusted for the evaluation of the relationship between the K-MMSE score and the 11 MA, only three of them had significant results: watching television(ß=0.069, p<0.001), listening to the radio(ß=0.039, p=0.044), reading book and newspaper(ß=0.092, p<0.001). Conclusion: Our result suggested that watching television, listening to the radio, reading book and newspaper may be associated with cognitive function in not cognitive impaired elderly in the community after adjusting age, sex, educational level, depression and anxiety. But, it was a cross-sectional study; thus, the results of the study must be interpreted with caution. In the future, this may be further clarified by prospective cohort studies.

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NR03-21

EXPERIENCE AND OUTCOME IN ORGANIZING A DAY HOSPITAL FOR EATING DISORDER PATIENTS

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SUMMARY:
Objectives.The purpose of this study is to present the therapeutic programs carrying out in the Móstoles University Hospital day unit for eating disorders and their outcomes.Materials and Methods. We studied all the patients referred to our unit retrospectively from its opening in February 2008 to November 2010. Investigators collected clinical, diagnostic and therapeutic data from the patients' clinical history. A database was designed using PASW 18.2 for Mac. Results Of the 161 patients referred: 95.7% of patients were female, their mean age was 28.36 years old. 42.9% were diagnosed of anorexia nervosa, 27.3 % bulimia nervosa, 15.5% eating disorder not otherwise specified, 0.5% binge-eating disorder and 13.7% did not have a diagosis at referral. 68.3% of patients were admitted, 14.3% did not show up to the first interview, 8.1% did not satisfy criteria, 9.3% were been evaluated at the time of the study. Of those admitted (n=110), all of them received individual treatment with psychologist, psychiatrist and endocrinologist, 43,63% received also some kind of group therapy (psychotherapy, psychoeducation and relaxation group) and 37,27% supervised meal. 22,7% had been discharged at the time of this study. Conclusion The rise in the number of patients referred since its opening, proves the need and acceptance of the day therapy in the area of influence. The use of a multidisciplinary staff, reliance on group treatment as the primary means of therapy, inclusion of more advanced patients in the administration of treatment to newer patients, and the inclusion of the day program within a larger treatment model. The provision of day hospitalization for the treatment of eating disorders is an area deserving of more research. Although initial results appear encouraging, the ever-changing structure of the programs and the mobility of patients within the different levels of care often complicate data collection.

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NR03-22

ADULT-ONSET PICA LEADING TO ACUTE INTESTINAL OBSTRUCTION

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SUMMARY:
Objective: To describe a unique case of adult onset pica leading to intestinal obstruction Methods: Ms. A is a 39-year-old Jamaican-American woman with no past medical history. Ms. A. presented herself to the emergency room of the Kingsbrook Jewish Medical Center in Brooklyn, New York, with abdominal pain, constipation and vomiting over two days. The abdomen was distended with normal bowel sounds; mild guarding without rebound tenderness was appreciated. Computed tomography (CT) demonstrated bowel obstruction with excessive fecal material. Conservative management failed to improve her symptoms. Her hemodynamic instability worsened. An exploratory laparotomy revealed a cohesive foreign body of gauze-like material, 13 x 12 x 8cm in measurement, isolated to the sigmoid colon. The object was removed and she recovered under supportive management. The postoperative interview revealed the ingestion of cloth throughout the prior year. She described consuming fragments of towels in periods of stress as a means of "feeling better." She reported increased consumption in recent days secondary to elevated

levels of stress. The onset of pica started around age 20 when she consumed sand as a means of stress reduction. She later consumed sponges and progressed to cloth over the last year. Conclusion: Currently, pica is categorized under "Feeding and Eating Disorders of Infancy or Early Childhood." Some medical professionals have contended that pica is best categorized under the obsessive-compulsive spectrum and have reported impressive responses to serotonin reuptake inhibitors. Compelled, excessive ingestion may also suggest an impulse control disorder. As more and more cases of adult onset pica are reported, the classification may warrant reconsideration.

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NR03-23

CASE REPORT OF LATE-ONSET MALE ANOREXIA NERVOSA WITH INITIAL PRESENTATION OF A CARDIAC ARREST

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SUMMARY:

Background: Males account for 5-10% of patients diagnosed with anorexia nervosa (AN). Male eating disorder risk factors include alcoholism, homosexuality, and history of obesity, teasing, and physical abuse [1-3]. Men are more susceptible to excessive exercise to deal with body image concerns [4]. Objectives: We present a case of a 36 year old man with late onset AN Methods: Case Report Results: This is a 5'8" 36 year-old white male who was well until 2008 when social and financial stressors resulted in the patient exercising extensively and restricting his diet. From his highest weight of 270lbs (BMI of 41.0), the patient's behaviors resulted in a 100lb weight loss over ~2 years. While exercising in August 2008, he was found down in his gym. After intubation in the field, he was admitted to an OSH where it was determined he suffered a cardiac arrest and had a prolonged QT interval. His weight was 170lbs (BMI of 25.8), but he continued to loose weight during a one month hospital stay. His weight at discharge was 125lbs (BMI of 19.0). During this admission he was diagnosed with AN, malnutrition, and bradyarrhythmia. The patient returned to a weight of 160 lbs over a 12-month period although he refused outpatient treatment. In December 2009, recurrent marital stressors triggered a relapse of decreased caloric intake and excessive exercise. In June 2010, he was admitted to Tufts Medical Center's (TMC) weighing 120lbs for profound cachexia and necrotizing community-acquired pneumonia. The patient was stabilized medically, but continued to loose weight during admission, and was discharged home at a weight of 110lbs. The patient was non-compliant with outpatient care and returned to TMC in September 2010 at a weight in low 100's (BMI ~ 15) with continued minimal caloric intake, as well as hypoglycemia (as low as 20), hypokalemia, coagulopathy due to vitamin K deficiency, transaminitis, and thrombocytopenia. Once stabilized on hospital day (HD) 4, he was transferred to inpatient psychiatry, but returned to the medical service on HD 8 for persistent hypoglycemia. On HD 16, the patient returned to the psychiatric unit. By HD 43, his weight was 116 lbs and his Eating Attitude Test (EAT-26) score was 26. He continues to be treated on an inpatient basis and is working compliantly toward his goals. Conclusions: The presenting symptom of a male with late onset AN may include cardiac arrest. Severe hypoglycemia with concurrent signs of liver damage may be present due to enhanced oxidative stress, hepatocyte apoptosis, and autophagy that could trigger acute liver inflammation and moderate functional liver failure[5]. Insufficient gluconeogenesis in acute liver injury may be involved in severe hypoglycemia and, although uncommon, can lead to a hypoglycemic coma[6].

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NR03-24

PREVALENCE OF ALTERED EATING BEHAVIORS AND EATING DISORDERS IN ELITE PROFESSIONAL FEMALE BALLET DANCERS IN BRAZIL DURING SEASON AND OFF-SEASON PERIODS

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SUMMARY:
Background: Some populational groups, whose professions are related to a slim figure such as ballet dancers, have been described as vulnerable to the development of eating disorders. Several studies have shown that the prevalence of eating disorders is higher among ballet dancers than in the general population, as well as the prevalence of altered eating behaviors, body image dissatisfaction and menstrual disturbances. Although some studies have shown recovery of menstrual disturbances in ballet dancers during off season periods, the variations on eating disorder symptoms are yet to be described. Objective: to evaluate the prevalence and clinical characteristics of ED in a group of elite professional ballet dancers during off-season period and compare to results obtained during ballet season period. Method: The dancers of a elite professional ballet company have been evaluated using the Mini International Neuropsychiatric Interview (MINI), Structured Clinical Interview for DSM Disorders (Patient Version) (SCID/P), Eating Attitudes Test (EAT-26), Three Factors Eating Questionnaire (TFEQ), Bulimic Investigatory Test – Edinburgh (BITE), Body Shape Questionnaire (BSQ) and Figure Rating Scale (FRS) in order to assess their eating behavior, body image perception and psychiatric comorbidity. BITE and EAT-26 have been used to evaluate variations in eating disorder symptoms in season and off season periods. Results: A diagnostic evaluation with the MINI and SCID/P revealed that 15.8% of ballet dancers had a lifetime history of anorexia nervosa, but during the off season period, no ballet dancer presented any active ED. While 30,8% of the ballet dancers presented risk behaviors for eating disorders during season period as evaluated with BITE and EAT-26 scales, only 10,26% presented such risk behaviors during off season period. Even during off-season period, dancers presented high scores in the restriction scale of TEFQ (11,11 ± 3,33) and the FRS indicated that 30,76% of the ballet dancers overestimated their body size. Body dysmorphic disorder (including dissatisfaction with body image aspects which could not be better accounted for as symptoms of eating disorders, such as the shape of the head and skin), depression, dysthymia, panic disorder, substance abuse and generalized anxiety disorder were the most frequent mental disorders in this population. Conclusion: Eating disorders are more prevalent in ballet dancers than in the general population. Risk eating behaviors are also more frequent in ballet dancers during season periods than in the general population, but the prevalence of these behaviors decreases during off season periods. Further studies are necessary to evaluate the severity of these disorders in this population and importance of risk factors, such as coach pressure during rehearsals, for the development and maintenance of eating disorders in ballet dancers.

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NR03-25

PATIENT WITH INTELLECTUAL DISABILITY WOULD NOT MOVE, TALK OR EAT AND SSRI THERAPY IS CONTRAINDICATED. WHAT TO DO?:

CASE REPORT AND RECOMMENDATIONS

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SUMMARY:
Objective: Articles are available about the occurrence of psychiatric disorders in patients with intellectual disability including those with epilepsy but the evidenced based guidelines for its treatment are lacking. Depression in patients with intellectual disability can present with varied symptoms but symptoms such as mutism and decreased spontaneous movements are rarely reported. SSRI's have been found to be effective for treatment of depression in this patient population. However, the literature on treatment of psychotic depression in context of contraindication to SSRI therapy is scarce. Methods: 53 year old male with a history of paraplegia secondary to spinal cord injury, seizure disorder, mild mental retardation and depression presented with decreased level of alertness, refusal of food and medications, mutism and decreased spontaneous movement. His neurological and endocrine workups were non-contributory. He had chronic urinary tract infection, however his symptoms persisted despite adequate antibiotic therapy. Lorazepam challenge for catatonia test provided some relief of symptoms and patient endorsed depressed mood and psychosis. SSRI was contraindicated in the context of ongoing treatment with Linezolid. Results: Risperidone was started and mood and psychotic symptoms responded in the absence of adjunctive SSRI therapy. Conclusions: Psychotic depression in patients with mild intellectual disability can present with mutism and decreased spontaneous movements. If SSRI therapy is contraindicated, Risperidone monotherapy may be an effective treatment.

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NR03-26

CLINICAL CHARACTERISTICS OF SUICIDE ATTEMPTERS AMONG BIPOLAR DISORDER PATIENTS – RESULTS FROM THE BRAZILIAN RESEARCH CONSORTIUM FOR BIPOLAR DISORDERS

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SUMMARY:
Objective: To compare clinical characteristics between suicide attempters and non-attempters in a sample from the Brazilian Research Consortium for Bipolar Disorders. Methods: Five-hundred twenty-eight DSM-IV bipolar disorder (BD) patients from three university centers participating in the Brazilian Research Consortium for Bipolar Disorders were included. Participants were divided in two groups: suicide attempters (N=227) and non-attempters (N=301) according to the presence or absence of at least one lifetime suicide attempt. We compared these two groups regarding demographic and clinical variables and performed a logistic regression to identify which variables are associated with a history of suicide attempts. Results: Attempters are predominantly female (46.6%; p=0.009), had less years of education (p=0.038), had earlier age of onset of BD (p=0.001), more rapid cycling (p< 0.001), more alcohol abuse (p=0.013), more drug use disorders (p=0.001), higher number of hospitalizations (p<0.001), more family history of complete suicide and suicide attempts (p= 0.001 and p=0.01 respectively), more lifetime psychotic symptoms(p=0.03), more OCD (p<0.001), panic disorder (p=0.019), agoraphobia (p=0.002), social phobia (p=0.04), specific phobia (p=0.023) and PTSD (p=0.023). Stepwise logistic regression showed that the following variables were associated with suicide attempts: female gender, less years of education, early age of onset, rapid cycling, presence of hospitalizations, family history of complete suicide, OCD and social phobia. This model predicts 70.2% of suicide attempt status. Conclusion: Our results are consistent with literature suggesting that female gender, rapid cycling, less years of education, early age of onset, family history of complete suicide, OCD and social phobia might indicate an increased risk for suicidal behavior in a large sample of Brazilian patients with BD

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NR03-27
MORGELLONS DISEASE

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SUMMARY:
Introduction:Delusional disorders are rare with an estimated annual incidence of 0.7-3.0 per 100,000 general population. Delusional parasitosis also known as Morgellons disease is most common delusional dermatological disorder with increasing incidence. Case: A female in her 5th decade of her life with medical history of ESRD on hemodialysis, HTN, DM II, CHF, sarcoidosis, CAD, hepatitis C and anxiety presented with approximately a year long history of intractable pruritis. Patient has followed up closely with dermatology as an outpatient and was treated with multiple topical treatments including permethrin, calamine lotion, hydrocortisone cream, oral agents including hydroxyzine, benadryl and including narrow band ultra-violet radiation therapy at 300 mJ/m2. Patient reported feeling of bugs crawling all over her skin and 'particles' falling off of her clothing, sloughing off of her skin after daily showers. She also has noted 'white fairy fur' on her nose and is able to shave the 'fur' off of her face. She is constantly itching to the point that she was unable to sleep and sometimes awake for more than 48 hours at a stretch. Patient cited her diagnosis of Morgellons and has been actively researching about the disease from the internet. Patient expressed suicidal ideation, lacked insight with poor judjement, not distractable and with delusional thinking of somatic nature, mostly pronounced symptoms of pruritus. Patient seemed depressed with multiple psychosocial stresses including recent death of her father, whom she was very connected to and her financially dependent son. Patient was admitted to inpatient psychiatry floor and started on an antidepressant, sertraline 50 mg daily, a second generation antipsychotic aripiprazole 5 mg twice daily along with an anxiolytics alprazolam. She tolerated medications without side effects and with significant improvement of her depression, anxiety and parasitosis symptoms and is currently being followed up as an outpatient. Discussion: Delusional parasitosis is a condition

where a patient is convinced that they are infested by a pathogen, parasite or small organism. Morgellons disease is where the patients believe the disorder is caused by inorganic particles. Diagnosis is based on negative evidence of true infestation in dermatological and parasitological investigations. About 26% of patients have "matchbox sign", a diagnostic characteristic where patients present "evidence" in a small box. A growing number of patients have reported unproven infestation of skin with small fibers in recent times in United States. Media and internet plays a major role in spreading delusion that Morgellons is a disease. It has been aptly called "socially transmitted disease over the internet" or "cyberchondria". Delusions are often a manifestation of another underlying psychiatric disorder and are associated with paranoid disorders (20%) and depressive disorders (50%). Treatment is multimodal (psychiatric and dermatogical). Choice of pharmacological agent depends on underlying comorbid psychiatric disorder. Use of first and second generation antipsychotics use in delusional parasitosis has been reported. However, complete remission of delusional belief is achieved only in 33.5-51.9 % of patients. We report our successful treatment experience using an antidepressant, antipsychotic and anxiolytic.

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NR03-28

RISK OF DEPRESSION IN DIABETES IS HIGHEST FOR YOUNG PERSONS USING ORAL ANTIDIABETICS

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SUMMARY:
Introduction: Patients suffering from diabetes have an increased prevalence of depression. We aimed to investigate the risk of depression in different types of treatment for diabetes, and in subgroups of age and sex. Methods: We studied the complete Norwegian population using data from the National Register of Prescriptions (NorPd), including persons being prescribed antidepressants (n=247.119) and antidiabetics (n=124.649) during 2006. Persons were included irrespective of other medications used. Results: Individuals using insulin in monotherapy (n=32.715) had an age and sex adjusted OR of 1.47 (95% CI=1.42,1.53) for receiving antidepressants. Corresponding ORs for individuals receiving oral antidiabetics in monotherapy (n=76.526) and for those who received both insulin and oral antidiabetics (n=15.408) were 1.35 (1.32,1.38) and 1.78 (1.71,1.87) respectively. No major differences in risk according to age were found for persons receiving insulin in monotherapy, while a marked and inverse association between age and risk of receiving antidepressants was found found for persons using oral antidiabetics from 30-39 years of age. Highest risk of antidepressant treatment was found for patients receiving both oral antidiabetics and insulin at 30-39 years with an OR of approximately 4. No major differences in risk according to sex were found. Conclusions: The risk of depression among patients with diabetes varies strongly according to age and type of diabetes. The results suggests a shared etiology between diabetes type 2 and depression.

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NR03-29

ASSOCIATION BETWEEN THE BDNF VAL66MET POLYMORPHISM AND THE COURSE OF DEPRESSION

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SUMMARY:
Both clinical and biological factors influence the course of depressive disorders. This study tested for associations between the brain-derived neurotrophic factor (BDNF) gene at the Val66Met locus and the course of major depressive disorder (MDD). 310 Korean subjects (209 patients, 101 controls) were genotyped for rs6265 at nucleotide 196 (G/A), which produces an amino acid substitution at codon 66 (Val66Met). Course of illness was evaluated both by chronicity of current episode and by the lifetime history of recurrences. Patients with the Met/Met BDNF genotype had a significantly higher rate of chronic depression than all others. Lifetime history of recurrent episodes was not related to BDNF genotypes but was significantly associated with a history of depression in first degree relatives.

NR03-30

POSSIBLE ASSOCIATION OF GSK3ß GENE WITH CLINICAL PHENOTYPE, BUT NOT MAJOR DEPRESSIVE DISORDER

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SUMMARY:
Objective: Growing evidence suggests that glycogen synthase kinase-3ß (GSK3B) plays an important role in the brain of patients with major depressive disorders (MDD). The purpose of this study was to determine whether the GSK3B gene is involved in the etiology of MDD and whether it affects some endophenotypes in MDD. Methods: Three single nucleotide polymorphisms (SNPs) (rs6438552, rs7633279 and rs334558) were genotyped in 559 MDD patients (DSM-IV criteria) and 486 healthy controls. To explore the quantitative traits of MDD, we analyzed the association of the gene polymorphisms and the total factor and subfactors of HAMD-17 and HAMA in MDD patients. We also determined the effects of the polymorphisms on the development of P300 event-related potential components induced by an auditory odd-ball task. Results: Although no significant association between GSK3B SNPs and MDD was found in our sample, some genotypes and haplotype groups are associated with anxiety symptoms in MDD. The three GSK3B SNPs are associated with HAMA total score, the anxiety and somatization subfactor score of HAMD ($P<0.05$).Of the three-locus haplotype analysis, the C-T-G carriers showed a strong association with HAMA total score ($P=0.002488$, adjusted $P=0.0315$). Moreover, the P300 latency and amplitude was also associated with GSK3B genotypes. The individuals with the allele T genotype both in rs6438552 and rs7633279 have a longer P300 latency than those carrying the C/C ($P=0.04$) and A/A genotype ($P=0.013$). The individuals with G/G genotype in rs334558 have a lower amplitude than those carrying the allele A genotype ($P=0.007$). Conclusion: Our findings show, for the first time, that GSK3ß polymorphisms may play an important role in anxiety symptoms and P300 wave of MDD.

NR03-31

THE GRIA3 GENE POLYMORPHISMS IS ASSOCIATED WITH GUILTY FEELING IN DEPRESSIVE PATIENTS

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SUMMARY:
The heritability of guilty feeling has been well established. However, the causal genes related to guilty and genetic effects on the courses of guilty feeling in depression are still unclear. The study sample consisted of 241 patients who met the DSM-IV-TR criteria for depression. Patients entered a 12-week clinical trial with antidepressants. A total of 1,399 single-nucleotide polymorphisms (SNPs) of 79 candidate genes were assessed in a

case-control association design. The rs557762 (P = 6.78×10–6) and the TT haplotype allele in the 11th haplotype block (P = 1.68×10–3) of the GRIA3 gene were associated with feelings of guilt in female patients. Moreover, the effect of the rs557762 on feeling of guilty (P = 1.14×10–3) significantly varied across times. Our results indicate that there are associations between GRIA3 gene polymorphisms and guilty feeling in depression, and that these gene polymorphisms impact the courses of the symptom during treatment. These results could help to reveal the biological mechanisms of guilty in depression.

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NR03-32

SEASONALITY OF MOOD IN THE GREATER ORDER AMISH

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SUMMARY:

Introduction: Seasonal changes in mood have been described in many populations. To our knowledge there is no published study of seasonal affective disorder (SAD) in the Amish. Hypotheses: As the Old Order Amish do not use bright electric light and do not have air conditioners in their homes, and are thus more exposed to natural environmental factors that trigger winter (light) and summer (heat) SAD in vulnerable individuals, we hypothesized that a) seasonality scores will be higher in the Amish than previously reported in other populations living at similar latitudes), and b) seasonality in the Amish will also will be higher in women than in men and negatively correlated with age, as previously reported in other populations. Methods: Seasonal Pattern Assessment Questionnaires (SPAQ) were mailed to participants of three ongoing studies in the Old Order Amish living in the Lancaster County, Pennsylvania. 877 questionnaires were received to date. SPAQ was used to calculate a global seasonality score (GSS) and to estimate the prevalence of winter- and summer-type SAD. We included syndromal and subsyndromal SAD within "total SAD". We compared the GSS in men vs. women using ANCOVA adjusting for age and the frequency of winter vs. summer patterns using chi squares. Results The average GSS score was 4.511 (SD 3.5). The frequency of winter SAD was 0.9 % and of total (syndromal and subsyndromal) winter SAD was 2.1%. The rate of summer SAD was of 0.45% and of total (syndromal and subsyndromal) summer SAD of 1.05%. These values are much lower than previously reported in non-Amish populations at similar latitudes. Men and women did not significantly differ in GSS, and in rate of SAD. Age had no effect. Feeling worst in fall/winter was more frequent than feeling worst in spring/summer ($p<0.01$). Conclusion: This is the first report on seasonal changes in mood and behavior in the Amish. Surprisingly, despite the greater exposure of the Amish to the natural seasonal changes in temperature and light, their seasonality score and rate of winter and summer SAD are lower than in other populations. Discussion: Genetic or environmental factors may convey relative resilience to the Amish with regard to seasonality of mood. The next steps will be to increase the sample size and to evaluate heritability and genetic associations of GSS and seasonal patterns.

NR03-33

MEASURING DEPRESSION IN MULTIPLE SCLEROSIS WITH THE PATIENT HEALTH QUESTIONNAIRE 9 (PHQ-9): A RETROSPECTIVE ANALYSIS

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SUMMARY:

Background: The Patient Health Questionnaire (PHQ-9) is a well-validated, brief screening instrument in primary care which has allowed for better recognition, treatment and management

of major depression in primary care1. The PHQ-9 has been validated in a variety of patient sub-populations 2-5 but not among patients with multiple sclerosis (MS). The objectives of this study were to retrospectively assess 1) PHQ-9 scores among MS patients presenting with depressive symptoms compared to primary care patients and 2) to examine the mean PHQ-9 scores of MS patients who were formally diagnosed with DSM-IV criteria for a depressive disorder compared to mean PHQ-9 scores found in other patient populations with depression. Method: All patients who underwent a new MS evaluation during 2009 were routinely screened for depression using the PHQ-9 as part of the Cleveland Clinic's hospital wide outcomes project. In addition to patients needing mental health (psychiatry or psychology) evaluations based on clinical judgment, all patients scoring a PHQ-9 >10 are routinely referred for further mental health evaluation. We compared the mean PHQ-9 scores of those patients who met formal criteria for DSM-IV depressive disorders to the well established mean PHQ-9 cutoff score for major depression (>10) in primary care settings. We also compared mean PHQ-9 scores of MS patients overall to established average scores found in other patient populations (i.e. coronary artery disease and diabetes mellitus type II). Results: Of the 166 patients with MS available for this study, baseline PHQ-9 scores were available for 134 patients. The overall mean PHQ-9 score for this clinical sample was 9.0 which is consistent with variability of mean PHQ-9 scores among patients with other conditions such as coronary artery disease (PHQ-9 =10.15)6 and diabetes mellitus type II (PHQ-9=7.95)7. Of those MS patients flagged for further evaluation (n=28), the mean PHQ-9 score was 12.7. However, only 25% (7/28) of these patients met formal DSM-IV criteria for depressive disorders based on a formal clinical evaluation by a mental health professional with a mean PHQ-9 score of 14.6. Conclusion: We found that the morbidity associated with depressive symptoms is high among MS patients overall and similar to other patient populations. In addition, our preliminary findings suggest the possibility of a higher cut off score for major depression on the PHQ-9 compared to primary care settings (14.6 vs. 101), suggesting that MS patients are likely scoring high on both the scale's 4 somatic items in addition to the 5 mood items. Further prospective validation studies are needed in this population to identify the items on the scale that are most sensitive in identifying patients with DSM-IV major depression.

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NR03-34

EFFICACY OF HORMONAL REPLACEMENT THERAPY (HRT) AS AN ADJUNCT TO ANTIDEPRESSANT IN TREATMENT OF DEPRESSION IN PREMENOPAUSAL WOMEN

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SUMMARY:

Introduction: Treatment recurrent depression in menopausal women is a challenge in clinical practice. Several reports suggest possible beneficial effects of adding oral HRT (containing both

estrogen and progestin) to antidepressant for the treatment of depression in women. The aim of the study was to compare the therapeutic efficacy of complex HRT and SSRI treatment and only SSRI treatment in premenopausal women with recurrent depression. Methods: In the study we included 60 women with major depressive episode with disease onset after 38 year of age (mean age 43y). Subjects were divided into two subgroups depending on received treatment. In the first group (n=30) were women treated with: fluoxetine (20-40mg) + hormonal replacement therapy HRT (containg both estrogen and progestin). In the second group (n=30) were patients treated with fluoxetine (20-40 mg) monotherapy. The Hamilton Rating Scale (HAMD-17) and the Beck Depression Inventory (BDI) were used for the assessment of the severity of depressive symptoms. The presence of menopausal symptoms was assessed by means of Kupperman Menopause Index (KMI). The activity of gonadal axis was measured by estimated estradiol and follicle-stimulating hormone (FSH) levels. For the assessment of central serotonergic activity, the d-fenfluramine test was used. All women had regular menstrual cycles and were somatic healthy. The decision of implementation of hormone HRT therapy was consulted with the patient's gynecolologist. Clinical improvement of depressive symptoms was assessed at base line (day 0) and after 2-4-6 weeks and 2 years of therapy. Statistical analysis was performed using Statistica 5.0 program. Results: The clinical antidepressant effect was better in complex HRT + fluoxetine therapy than in fluoxetine therapy alone. The significant improvement of depressive symptoms was observed after 2 weeks of treatment in the HRT+fluoxetine group of patients (p=0.05). We observed a relapse of depressive episode in 17 patients in the group of fluoxetine monotherapy, compared to only 5 patients from the HRT+ fluoxetine group. Depressed women in both groups had similar intensity of menopausal symptoms as assessed by KMI, significantly lower concentration of estradiol, and increased level of FSH. The intensity of depression correlated both with the intensity of menopausal symptoms and concentration of FSH.Conclusions: The addition of HRT may not only enhance the antidepressant's efficacy by reducing response time but also decrease the risk of recurrence depression in premenopausal women. The main finding of the study reveals in premenopausal women a high degree of interconnections between symptoms of depression and symptoms of menopause, on both clinical and physiological level. Our study suggests possible beneficial effect of supplementation oral HRT to antidepressants for the treatment of premenopausal women with depression.

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NR03-35

THE PROPOSED USE OF LIGHT THERAPY AS AN ADJUNCT WITH SSRIS IN THE TREATMENT OF DEPRESSION AND TUMOR GROWTH RETARDATION IN CANCER PATIENTS

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SUMMARY:

A proposed use of light therapy as an adjunct with SSRIs has the potential to produce a synergistic effect in the treatment of depression in cancer patients. In addition, light therapy may help to slow the progression of cancer cell growth. In a study by Massie, the prevalence of depression associated with oropharyngeal, pancreatic, breast, and lung cancer ranged from 0-58%. Other cancers such as colon, gynecological and lymphoma have a lower prevalence of depression. According to the monoamine theory, depression is caused by alterations in the noradrenergic and serotonergic systems. Both serotonin and malignant cancer have a common tryptophan pool from which their substrates are derived and thus, competition for tryptophan arises. Tryptophan is an essential amino acid which enters the catabolic pathway and is broken down by two enzymes, indoleamine 2,3-dioxygenase and tryptophan dioxygenase (TDO). TDO is highly expressed in hepatic tissues and regulates homeostatic tryptophan concentrations. The tryptophan end products are used to build other products, particularly nicotinamide adenine dinucleotide, which is then used to create DNA bases, as well as serotonin and

other proteins. The rapidly growing malignant cells in cancer patients require a large source of DNA bases such as adenosine, which are derived from the same tryptophan pool used to make serotonin. By increasing the demand for DNA bases there is less tryptophan available as a substrate for the production of serotonin. This shift in the tryptophan pool towards the production of malignant cancer cells depletes the essential substrate used to produce serotonin which then leads to the depressive symptoms observed in cancer patients. By stimulating the supra chiasmatic nucleus in hypothalamus with light therapy, serotonin production will be increased through the stimulation of the raphe nucleus. Elevation in the serotonin level from the raphe nucleus will subsequently improve the patient's mood symptoms and decrease the available substrate for malignant cell replication due to lack of adenosine available for DNA bases to be made. The efficacy of light therapy in the treatment of seasonal affective depression has been studied extensively. It is proposed that using light therapy in conjunction with SSRIs would lower the dosages of chemotherapy needed to induce a similar retardation in malignant cell proliferation by decreasing the substrates required for replication of the cancerous DNA. Moreover, symptoms of depression will diminish with the increased availability of tryptophan for the production of serotonin. Further Research is needed to evaluate the efficacy and safety of light therapy as a treatment for depression and a reduction in tumor cell growth in cancer patients.

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NR03-36

AN EXAMINATION OF THE IMPACT OF WEIGHT LOSS ON DECLARATIVE MEMORY AND EXECUTIVE FUNCTIONING IN BIPOLAR AND MAJOR DEPRESSIVE DISORDERS

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SUMMARY:

Background: Although effects are variable, major depressive disorder (MDD) and bipolar disorder (BD) can cause impairment in cognitive functioning across multiple domains. There is emerging evidence for an association between subtle cognitive dysfunction and the endocrine disturbances associated with metabolic syndrome and its constituent features. Given that patients with MDD and BD experience higher rates of obesity and metabolic syndrome than the general population, this metabolic derangement may play a role in the cognitive dysfunction seen in mood disorder patients. A challenge in assessing this is the fact that most weight loss interventions do not result in a significant weight loss and subsequent improvement in metabolic parameters. This is not true of bariatric (weight loss) surgery which results in weight loss in excess of 75 pounds in one year, providing an effective intervention with which to assess cognitive change. Objective: The goal of this study is to examine the impact of weight on cognition in patients with MDD and BD by looking at changes in cognitive performance after significant weight loss. Methods: This study will compare cognitive functioning in 20 obese individuals (BMI > 35 kg/m2) with BD, 20 with MDD, and 20 obese & 20 non-obese controls prior to surgical intervention at St. Joseph's Healthcare (Hamilton) bariatric surgery program. Cognitive performance will be assessed one month prior to surgical intervention and one year post-intervention in order to quantify cognitive decline and subsequent improvement after surgical intervention. A standarized battery of neuropsychological tests aimed at establishing pre- and post-intervention performance on tests of declarative memory and executive functioning (cognitive domains most commonly affected by neuroendocrine dysfunction) will be administered. A functional magnetic resonance imaging (fMRI) investigation that allows assessment of neuroanatomical change associated with weight change will also occur at each time point. In addition, two tasks tapping declarative memory function and executive function will be performed in counterbalanced order via fMRI at each time point to determine whether changes in cognition and neuroanatomy are associated with specific patterns of brain activation, pre- and post-intervention.

Results: The interactions between obesity, mood disorders and cognition will be discussed. Study recruitment is ongoing. Conclusions: Obesity may have a negative impact on cognition that is exacerbated in the presence of a mood disorder. Given that different psychiatric drugs confer different risks of weight gain, this study will impact treatment in this vulnerable population. This study is supported by funding from Bristol Myers Squibb.

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NR03-37

IMPROVEMENT WITHIN 2 WEEKS AND LATER TREATMENT OUTCOMES IN PATIENTS WITH DEPRESSIVE DISORDERS: THE CRESCEND STUDY

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SUMMARY:

Background: Although antidepressants are conventionally given for 4-6 weeks before deciding on response, several reports suggest that early improvement predicts later outcomes. In a naturalistic national cohort study, we sought to investigate the predictive value of early improvement on Hamilton Depression Rating Scale (HAMD) score for later outcomes (depression (HAMD), anxiety (HAMA), global severity (CGI-s) and functioning (SOFAS)), as well as socio-demographic and clinical correlates of early improvement. Methods: Participants were recruited from 18 hospitals across South Korea. All met DSM-IV criteria for depressive disorders, scored =14 on the HAMD and received antidepressant treatment for up to 12 weeks. Treatment was naturalistic in that each clinician freely decided the types, doses, and regimes of antidepressant and concomitant medications. Early improvement was defined as a reduction in HAMD score of =20% compared with baseline within 2 weeks of treatment. Later treatment outcomes were measured at 4,8,and 12 weeks. Results: In a recruited sample of 568 patients, early improvement predicted 12 week treatment outcomes with high sensitivity and high negative predictive values. The predictive values for HAMD and HAMA12-week responses were higher compared to CGI-s and SOFAS responses. Early improvement was associated with higher monthly income, baseline lower anxiety and higher functioning levels. Patients with early improvement more frequently received antidepressant monotherapy. Limitations: The study was observational, and the treatment modality was naturalistic. Conclusions: Early antidepressant improvement strongly predicted later outcomes, and was associated with higher income, lower anxiety, and higher function.

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NR03-38

THE RELATION OF IMPAIRED MIND READING AND ANTISOCIAL PERSONALITY DISORDER

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SUMMARY:
Objective: Antisocial personality disorder is characterized by lack of respect for social norms, violent and aggressive behavior, and lack of empathy. Hare Psychopathy Checklist-Revised (PCL-R) is a validated tool for assessment of antisocial personality traits. Theory of Mind (ToM) is defined as the ability to infer others' mental states and emotions. It has been suggested that persons who have impaired ToM might develop antisocial acts. "Reading the Mind in the Eyes Test" (RMET) is an advanced and most widely used ToM task for examining theory of mind. The aim of this study is to explore the relationship between antisocial personality traits and ToM task performance. Method: Young male participants admitted the outpatient clinic were clinically assessed for antisocial personality disorder using DSM-IV-TR diagnostic criteria for Antisocial Personality Disorder. There were 30 subjects diagnosed with antisocial personality disorder and 32 control subjects recruited as the control group. Participants have been assessed with PCL-R, Buss-Perry Aggression Scale, and RMET. Results: The two groups were statistically not different according to their age and intellectual capacity. Antisocial subjects and controls were compared by the RMET performance and the difference between the two groups was statistically significant ($p<0.05$). As hypothesized, the antisocial group performed worse than the control group ($p=0.001$) in the RMET. Discussion: These results suggest that antisocial personality traits negatively correlated with social cognition; the ability to perceive others' mental states and emotions.

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NR03-39
DIMENSIONS OF SEVERITY: CORE DOMAINS OF PERSONALITY PATHOLOGY AND THE MALADAPTIVE FUNCTIONING ASSOCIATED WITH EMOTIONAL ABUSE IN CHILDHOOD

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SUMMARY:
OBJECTIVE: The relationship between maltreatment in childhood and personality pathology in adulthood has been supported by a robust literature. There is little data, however, exploring personality pathology as a dimensional construct. The current study aims to explore the differential impact of childhood maltreatment on personality pathology by examining the relative effects of childhood maltreatment subtypes on 5 core domains of personality functioning. METHODS: Personality pathology and childhood maltreatment was assessed in 58 non-psychotic psychiatric patients (age 18-65) in treatment at Beth Israel Medical Center. Severity of personality pathology was measured with the Severity Indices of Personality Problems (SIPP-118), a 118- item, self-report, dimensional, measure of core adaptive functioning. Referring to the past three months, the participant is asked to rate to what extent they agree with a particular statement, each tapping 1 of 16 facets of adaptive functioning. The individual facets comprise 5 core domains of personality functioning, i.e. self-control, identity integration, responsibility, relational functioning, and social concordance. The Childhood Trauma Questionnaire (CTQ), a 28-items, self- report measure, was used to assess childhood maltreatment. The CTQ contains items eliciting retrospective reports of emotional, physical, and sexual abuse and neglect in childhood. RESULTS: Correlations were computed between all CTQ maltreatment types and SIPP-118 personality domains. Of these only emotional abuse significantly correlated with all 5 domains. Linear regression analyses were then performed to determine which individual facets accounted for the correlations of each personality domain with emotional abuse. Although the overall models for all 5personality domains were statistically significant, only three facets were significantly associated with emotional abuse. Within the relational functioning domain, only the capacity for enduring relationships was significantly associated: ß=-.359, SE=1.34, t=-2.44, p=.08. Within the responsibility domain, only trustworthiness was significantly associated: ß=-.413, SE=1.8, t=-2.22, p=.031. Finally, Within the social

concordance domain, only aggression regulation was significantly associated: ß=-.506, SE=1.3, t=-3.39, p=.001. In sum, self-reported deficits in the capacity for enduring relationships, trustworthiness, and aggression regulation uniquely predicted to a self-reported history of emotional abuse when other facets in their respective domains were controlled for. CONCLUSIONS: This finding, pinpointing specific areas of weakness for some individuals, may aid in more precise case conceptualization and better treatment. Specifically, treatment targeting deficits in the capacity to love and be loved, to regulate aggression, and to utilize social norms of collaboration, may be warranted for patients who experienced emotional abuse as children.

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NR03-40

A CLINICAL COMPARISON BETWEEN MALE AND FEMALE PSYCHIATRIC OUTPATIENTS WITH ANTISOCIAL PERSONALITY DISORDER

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SUMMARY:
OBJECTIVE: To examine gender differences in psychiatric outpatients with antisocial personality disorder (ASPD) and to contrast patterns of psychiatric illness between males and females with and without ASPD. METHODS: A total of 1458 new patients were seen between 1981-1986 in the psychiatric outpatient clinic at a large Midwestern medical center. Of the total, nine percent (N=127) met criteria for ASPD; 61% were male and 39% were female. Of the remaining 1331 outpatients, 34% were male and 69% were female. These patients completed the Psychiatric Diagnostic Interview (PDI), a personal data form, and the Symptom Checklist 90-R (SC-90-R), and received treatment if indicated. Gender differences were examined in the categories of sociodemographic characteristics, psychiatric comorbidity, family history, utilization of mental health services, pharmacological treatment, childhood ratings, and endorsement of ASPD symptoms. RESULTS: Psychiatric patients with ASPD reported significantly more psychiatric comorbidities than non-ASPD outpatients (3.2 vs 1.8 average positive symptoms, p=.0001). Among ASPD patients, females met criteria more often for phobia and somatization disorder. More importantly, expected gender differences in psychiatric comorbidities (ETOH and drug abuse) disappear in ASPD outpatients. Females with ASPD were significantly younger than males at intake. These females were also significantly less educated and more likely to be divorced. Significantly more positive syndromes among family members were reported by females with ASPD and more females reported phobias in relatives. Females were significantly younger when first hospitalized for psychiatric problems. No difference in number of lifetime hospitalizations or treatments between males and females were found. Also, no gender differences were found in past treatment medications, type of medication, or efficacy. No gender differences were found in childhood ratings. ASPD females reported more stress and tension than ASPD males. CONCLUSION: Outpatients with ASPD appeared to suffer from a greater range of psychiatric illnesses than those without ASPD; gender differences commonly found in large psychiatric samples tended to disappear in patients with ASPD. Both male and female ASPD patients should be evaluated for the presence of additional psychiatric comorbidities in order to optimize treatment.

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NR03-41

ATTACHMENT, COGNITION, AND BORDERLINE PERSONALITY DISORDER

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SUMMARY:
BPD is a prevalent and chronically disabling mental illness characterized by disturbances in affective regulation, behavioral control, and interpersonal functioning. Previous empirical and theoretical research studies have correlated BPD with preoccupied and fearful insecure attachment styles. One theoretical model proposed by Fonagy, et al. explains a mechanism by which insecure attachment develops into BPD, namely that insecure attachment contributes to a disturbance in mentalization, a social cognitive skill that allows one to understand the mental states in oneself and others. This research study investigates the associations among BPD, attachment, and deficits in cognition, using a neuropsychological battery of tests and the Adult Attachment Interview. Subjects were recruited from the larger Family Study of Personality Traits and Their Relationship to Psychiatric Disorders and had completed the following diagnostic measures: Structured Clinical Interview for DSM-IV (SCID-I), the Revised Diagnostic Interview for Borderlines (DIB-R), and the Diagnostic Interview for DSM-IV Personality Disorders. Based on these diagnostic measures, the subjects were assigned to either BPD or non-BPD comparison groups. Preliminary findings show that the BPD group tends to 1) demonstrate preoccupied, fearful, and disorganized forms of attachment; 2) exhibit deficits in social cognitive skills; and 3) have poor planning and conceptualization, as demonstrated on the Rey-Osterrieth complex figure test, but have similar estimated IQs compared to the non-BPD group.

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NR03-42

ADVANCED PATERNAL AGE AND SCHIZOPHRENIA

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SUMMARY:
Background: Schizophrenia is a chronic devastating psychiatric disorder striking just under one percent of world population. The annual incidence of schizophrenia averages 15 per 100,000 and the risk of developing the illness over one's life time averages 0.7%.[1]There are several factors associated with the incidence of schizophrenia such as urbanicity, male gender, history of migration, environmental factors, genetic factors and many others. The correlation between advancing paternal age (APA) and schizophrenia has been the focus of numerous studies. Increased risk for schizophrenia in children of older fathers is a well-replicated finding regardless of culture and nationality. The focus of studies on this topic has now shifted toward searching for the etiology of this disorder. Literature shows that schizophrenia is affected by multiple genes and environmental factors and that APA is associated with accumulated environmental insults over time suffered by spermatozoa. Four

causal mechanisms which have been postulated include: point mutations, chromosome breakage, copy number variants and dysregulation of epigenetics. Etiological heterogeneity, complex patterns of gene-gene and gene-environment interaction and schizophrenia pathophysiology are among the explanations invoked to explain of the etio-pathogenesis of schizophrenia. Objective: Our objective is to summarize the published information regarding the relationship between APA and schizophrenia as well as to stimulate a discussion concerning the theories of its genetic etiology Methods: We reviewed literature on the topic of APA and the risk of the offspring developing schizophrenia by performing a comprehensive search using Pubmed and other journal databases. We analyzed the journals from 2001-2010 on the topic and highlighted the relevant information. This led us to develop a thorough investigation on the current theories and known associations between APA and schizophrenia. Conclusion: Many studies have shown a significant link between APA and the incidence of schizophrenia in the offspring. Several of these studies have corrected for the effects of confounding factors, yet the link between advanced paternal age and schizophrenia remains significant. It has been suggested that each decade of paternal age increases the relative risk of developing schizophrenia by 1.4 in male and 1.26 in female offspring. It is well known that APA is associated with de novo mutations is spermatogonia which could be attributed in large part to the fact that by age 50, male spermatogonia have undergone over 800 cell divisions, in comparison to the oocyte which will have undergone 22 cell divisions. Four distinct mechanisms have been proposed to explain the association between APA and schizophrenia; (1) De novo point mutations (2) Aberrant epigenetic regulation (3) Copy number variants (4) Chromosomal abnormalities. All of these processes occur at higher rates as paternal age increases. Evidence suggests that the first three mechanisms may specifically be related to the biogenesis of schizophrenia. If the association between APA and schizophrenia is related to one of these four mechanisms, one would expect that sporadic cases of schizophrenia should show a stronger association with APA compared with individuals who have a family history of schizophrenia. This finding has been confirmed in a population based cohort study by Sipos et al. which showed that over one quarter of schizophrenia cases c

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NR03-43

CLINICAL OUTCOME OF COPY NUMBER VARIATION IN THE DOPAMINE TRANSPORTER GENE IN 2 PATIENTS WITH SCHIZOPHRENIA: A CASE REPORT

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SUMMARY:
Clinical outcome of Copy Number Variation in the dopamine transporter gene in 2 patients with Schizophrenia: A case-report Schizophrenia is a heterogeneous severe mental disorder consisting of several etiological subsets. Some of these subsets have been linked with rare high-penetrant copy number variations. Using qPCR we conducted a screening for copy number variation (CNV) of the gene encoding the dopamine transporter (SLC6A3) and found 2 patients in 439 patients with schizophrenia with a duplication and a deletion respectively. The SLC6A3 duplication was not observed on examination of patients with bipolar disorder and patients with major depression. Neither was it found in healthy blood donors. The patients were psychopathological characterized with the Schedules of Clinical Assessment in Neuropsychiatry (SCAN 2.1) to convey the gene dosage effect of diametrically opposite copy number variation of the duplication and the deletion, respectively. The Poster will in depth present the clinical, epidemiological and psychopathological profile of the 2 cases.
At present the impact of the CNV in the Dopamine transporter gene is still elusive to the phenotypic manifestations, however other examinations from other laboratories have revealed large deletions affecting the dopamine transporter gene in families with schizophrenia. These findings and the present case-report raise the question whether deletions and duplications in the dopamine transporter gene

represent new and rare genetic subtypes conferring risk of schizophrenia.

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NR03-44

ASSOCIATION ANALYSIS OF NEUREGULIN 1 GENE POLYMORPHISMS WITH SCHIZOPHRENIA IN POLISH POPULATION

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SUMMARY:

Purpose: Recent progress in psychiatric genetics has revealed several promising genetic susceptibility factors for schizophrenia, including neuregulin-1 (NRG1), a gene located in chromosome 8p12–21. Neuregulin-1 (NRG1) may be an important factor in pathogenesis of schizophrenia due to its role in neurodevelopmental processes, myelination, neurotransmitter receptor expression and synaptic plasticity. The study was carried out to investigate the association of two polymorphisms of the NRG1 gene (rs62510682 and rs10503929) with schizophrenia in the Polish population. Material and methods: 288 patients diagnosed with schizophrenia according to ICD-10 criteria and 484 controls were included in the study. The patients were evaluated for lifetime psychotic symptomatology using the Operational Criteria for Psychotic Illness (OPCRIT) checklist. Results: The polymorphisms were in HWE both in the patient and control' groups. In a single marker analysis, we did not find an association for the SNPs tested. Additionally no gender effect on allele and genotype frequencies was observed. Conclusion: There was no significant difference in distribution of alleles or genotypes in the polymorphisms rs62510682 and rs10503929 of NRG1 gene in patients and controls. Our data do not support the role of these NRG1 gene polymorphisms in the predisposition to schizophrenia in the Polish population.

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NR03-45

DIGIT SYMBOL CODING TASK WITH RESPECT TO IMMUNE ACTIVATION IN SCHIZOPHRENIA

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SUMMARY:

Background: Genetic factors that modulate the immune response have been implicated as risk factors both for schizophrenia as well as for cognitive impairments, which are considered to be endophenotypes of schizophrenia, i.e. subclinical, heritable and independent of clinical state traits associated with genetic susceptibility. Surprisingly, a recent meta-analysis (Dickinson, 2007) demonstrated that reliable and easy to administer Digit Symbol Coding Task (DSCT) discriminate people with schizophrenia from comparison individuals better than the more widely

studied neuropsychological instruments. The cytotoxic T lymphocyte antigen-4 (CTLA-4) is involved in establishing and maintaining peripheral T-cell tolerance, which controls T-cell activation and reactivity. Several researchers have reported the association of common SNPs in CTLA-4 with schizophrenia or major depressive disorder. Aim: The study was carried out to investigate the relationship between polymorphisms of the CTLA-4 gene (49A/G, -319C/T, CT60 A/G, +642 3'UTR (AT)n) and the performance on Digit Symbol Coding Task. Methods: 118 patients diagnosed with schizophrenia according to ICD-10 criteria and 352 controls were included in the study. The participants were evaluated for lifetime symptomatology using the Operational Criteria for Psychotic Illness Checklist (OPCRIT). Digit Symbol Coding Task was administered to the patients. Results: There was no significant difference in distribution of genotypes in the polymorphisms of CTLA-4 gene between patients and controls. Patients performed below the norms for general population on Digit Symbol Task. There were no significant differences between patients with respect to the following CTLA-4 gene polymorphisms: 49A/G, CT60 A/G, +642 3'UTR (AT)n. However, with respect to -319C/T CTLA-4 gene polymorphism there was a significant difference: C allel carriers (CC and/or CT genotype) performed better that T allel carriers (TT genotype) (p=0,018), suggesting stronger cognitive processing efficiency. Conclusions: Our data support a role of CTLA-4 gene polymorphisms for the predisposition to schizophrenia according to ICD-10 criteria. -319C/T CTLA-4 gene polymorphism might be considered as a risk factor for cognitive impairment in schizophrenia.

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NR03-46

ASSOCIATION OF T-CELL REGULATORY GENE POLYMORPHISMS WITH SCHIZOPHRENIA

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SUMMARY:
Purpose: Several reports indicate a possible role of the activation of the immune system in the pathogenesis of schizophrenia. Two related receptors: CTLA-4 and CD28 mediate differentially regulation of T-cell activity. CD28 is a major co-stimulator whereas CTLA-4 performs negative regulatory functions. The polymorphisms of these genes have been implied as conferring the susceptibility to many autoimmunological and neoplastic disorders. This study was carried out to investigate the association of two polymorphisms of the CTLA-4 gene (49A/G, -319C/T, CT60 A/G, +642 3'UTR (AT)n) and a polymorphism of the CD28 gene (+17C/T) with schizophrenia in the Polish population. Material and methods: 118 patients diagnosed with schizophrenia according to ICD-10 criteria and 352 controls were included in the study. The patients were evaluated for lifetime psychotic symptomatology using the Operational Criteria for Psychotic Illness (OPCRIT) checklist. Results: There was no significant difference in distribution of genotypes in the polymorphisms of CTLA-4 gene. However, there were significant differences (p=0,0007) in distribution of genotypes of CD28 gene between group of patients and controls (CC: 2% vs. 1%, CT:41% vs 23%, TT: 58% vs. 76% respectively). Conclusion: Our data support a role of CD28 +17 C/T gene polymorphisms for the predisposition to schizophrenia according to ICD-10 criteria. Moreover, in the group of patients the distribution of genotypes of CD28 gene polymorphism are similar that found in patients with autoimmune disorders such as: early onset type 1 diabetes and Behçet's disease.

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NR03-47

THE EFFECT OF UNUSUAL VOICES ON VIRTUAL ACTIVITIES OF DAILY LIVING IN SCHIZOPHRENIC PATIENTS WITH AUDITORY HALLUCINATIONS

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SUMMARY:
Introduction - Auditory hallucinations are one of the cardinal symptoms in schizophrenia that has usually been reported as one or more talking voices and influences patients in many aspects. Objective - This study evaluated the effect of enduring auditory hallucinations on daily activities through objective measures about how patients perceive and are influenced by unusual voices resembling auditory hallucinations. Methods - We developed the virtual activities of daily living (ADL) task, in which experimental conditions were composed of 'without unusual voices & without avatars', 'with unusual voices & without avatars' and 'with unusual voices & with avatars' condition. Three groups of eighteen patients with auditory hallucinations, 18 patients without auditory hallucinations and 20 healthy volunteers performed the task, and the task completion time and the target list checking number were measured. Results - When the patients with auditory hallucinations were exposed to unusual voices without avatars, they showed increased task completion time as overall symptom severity increases. Discussion - Because the patients could easily attribute unusual voices to avatars in 'with unusual voices & with avatars' condition, but without avatars patients could not attribute unusual voices to external cause and would be confused by uncertainties. Therefore, the more patients' symptom severity increases, the more ADL of patients is likely to be affected by unusual voices. Conclusion - In conclusion, this finding provides preliminary evidence that the influence of auditory stimuli on ADL in schizophrenic patients with auditory hallucinations would be altered according to social situations.

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NR03-48

VARIATION IN SUCCINIC SEMIALDEHYDE DEHYDROGENASE (ALDH5A1) GENE IS ASSOCIATED WITH EYE TRACKING AND EARLY VISUAL PROCESSING DEFICITS IN

SCHIZOPHRENIA

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SUMMARY:
Background: Several investigators have argued that endophenotypes (i.e., neurophysiological deficits that are stable, heritable and mark disease liability) can play an important role in identifying vulnerability genes and help drug development. Abnormality in smooth pursuit eye movements (SPEM) is a well-established endophenotype that has a significant linkage to chromosome 6p24-21 locus. Methods: We examined the association between SPEM and several single nucleotide polymorphisms (SNP) covering 5 candidate genes mapping on to chromosome 6p24-21 locus (DTNBP1, TTRAP, KIAA0319, DCDC2 and ALDH5A1). The sample consisted of 351 subjects (177 with schizophrenia) on whom we had SPEM data. In a smaller sample we examined phenotypic overlap in reading ability and eye tracking phenotype. Results: Analyses showed significant ALDH5A1 rs2328824 and rs3765310 genotype by diagnosis interaction on closed-loop gain (findings with rs2328824 survived FDR corrections). Minor genotype was associated with poor closed-loop gain compared with the other genotypes. The ALDH5A1gene codes for succinic semialdehyde dehydrogenase (SSADH) enzyme that degrades GABA. The rs3765310 SNP is a missense mutation that decreases SSADH activity by about 46%. The SSADH deficiency results in an increase in GABA and ?-hydroxybutyrate (GHB) levels, and a decrease in cortical GABA-A binding. Based on findings that SSADH deficiency impairs early visual processing, we examined visual evoked potential in a subgroup of our subjects (n=34) and found a significant effect of ALDH5A1 rs2328824 genotype on P1 amplitude ($p<0.05$). Since the gene is implicated in dyslexia, we examined reading disability in a small subgroup of the sample and found a significant correlation between Nelson reading speed and predictive pursuit gain ($r=0.57$, $p<0.05$, $n = 32$). In a pilot study in 6 subjects, we examined the effects of tiagabine, a GABA transaminase inhibitor, on SPEM and found an improvement in predictive pursuit with tiagabine but not with placebo. However, this effect was statistically not significant ($p<0.15$). Conclusion: Our data implicates ALDH5A1 gene in the etiology of schizophrenia, particularly visuomotor abnormality. Based on this we suggest that GABA agonist may have a treatment role at least in patients with such deficits. Visuo-motor deficits and associated impairment (e.g.,working memory), may benefit from such treatment. Variation in ALDH5A1 gene may predict the pharmacological response.

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NR03-49

INCREASED GLIADIN ANTIBODY TITERS IN PATIENTS WITH SCHIZOPHRENIA

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SUMMARY:
Introduction: Associations between gliadin antibodies and schizophrenia have been previously reported. Hypothesis: We hypothesized that IgG antigliadin antibodies and the odds of being positive for these antibodies will be elevated in schizophrenia patients relative to controls. Methods: 974 patients with schizophrenia (613 men, 361 women, mean age 38) and 1000 healthy controls (490 men, 510 women, mean age 53.5) were recruited from the Munich area of Germany.

All participants underwent the Structured Clinical Interview for DSM-IV Disorders (SCID). IgG antigliadin antibody levels were measured by solid phase immunoassays. Subjects with antibody levels at the 90th percentile or higher of the control subjects were categorized as antigliadin IgG positive. Comparisons (after a log-transformation of antibody levels) between groups were made using ANOVAs with Tukey posthoc tests, chi squared tests and logistic regression models. Results: After controlling for age and gender, IgG antigliadin antibody titres were significantly higher in the schizophrenia group compared with healthy controls ($p<0.0001$). Additionally, the antigliadin IgG positive individuals had elevated odds of having a diagnosis of schizophrenia (OR 2.2, CI 1.6 to 2.9). Conclusions: Our results are consistent with previous reports suggesting an elevated immune response to gliadin in schizophrenia. Discussion: clinical trials of interventions to reduce exposure to gluten or decreased immunological reactions to it are warranted for secondary and tertiary prevention and treatment of schizophrenia

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NR03-50

VARIABLES ASSOCIATED WITH 3-MONTH INCIDENCE OF READMISSION: PATIENTS WITH SCHIZOPHRENIA VERSUS SCHIZOAFFECTIVE DISORDER

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SUMMARY:

Objective: To determine the incidence of readmission in patients with schizophrenia (SZ) versus schizoaffective disorder (SA) and to identify variables associated with readmission. Methods: The sample was all patients between the ages of 18 and 64 years who were hospitalized between 2000 to 2009 with a diagnosis of SZ or SA (n=2982) and treated with either atypical or first generation antipsychotics (FGA) but not both. Patients who were readmitted within 3 months (n=654, 21.9%) of discharge were compared to all other patients (n=2328, 78.1%). Diagnosis, demographics, length of stay (LOS), substance abuse, and antipsychotics prescribed were examined for associations with readmission. Data analyses included chi-square (?2) and binary logistic regression; statistical significance was assessed at a=0.05. Results: In unadjusted analyses, there was a significant difference in readmission rates in SZ (18.6%) compared to SA patients (24.6%) (?2=15.1, df=1, p<0.001). FGA use (versus atypical) was not significantly associated with increased risk of readmission (?2=2.1, df=1, p=0.144). In preliminary binary logistic regression, results were similar for the association of SZ versus SA with risk of readmission (odds ratio (OR) = 0.704, p<0.001); the risk was greater (marginally non-significantly) among patients taking FGA (OR=1.287, p=0.075) after controlling for confounders including demographics, LOS, and substance abuse. In these adjusted analyses substance abuse (p=0.545), demographic, and LOS were not associated with readmission. Conclusions: The study demonstrated that the risk of readmission within 3 months was greater among patients with SA compared to those with SZ. Further long-term comparative studies are needed to explore differences in the outcomes of characteristics of patients with SZ versus SA as well as the clinical and demographic variables associated with these differences. In the interim the current DSM distinction between SZ and SA should be retained.

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NR03-51

DELUSIONAL DISORDER, SOMATIC TYPE TREATED WITH ELECTROCONVULSIVE THERAPY AND AN ANTIPSYCHOTIC

WITH 5-HT1A AGONIST PROPERTIES

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SUMMARY:
Delusional disorder, somatic type (DDST) is also known as monosymptomatic hypochondriacal psychosis. Oral cenesthopathy is categorized as DDST by Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, with which he or she experience unusual and annoying sensations in the mouth such as pulling on the teeth, secreting mucus, tingling and pain, and so on, without a somatic base. Oral cenesthopathy specifically draws clinical attentions because patients usually visit dental service and often claim the treatment worsen the symptoms. It is more treatment-resistant to psychotropics than DDST in other somatic parts and tends to become chronic expanding to nasopharyngeal areas. Antidepressants or antipsychotics have been reported to alleviate the condition, but the treatment of this disease has not been established. We report a case of oral cenesthopathy, who was successfully treated with the electroconvulsive therapy and a subsequent administration of antipsychotic, perospirone, which has 5HT1A agonist properties. In several case studies, antipsychotics especially aripiprazole, which also has 5HT1A agonist properties, have been suggested to be beneficial for DDST. This suggests the involvement of serotonergic system in the pathophysiology of DDST, and the efficacy of the drugs through 5-HT1A receptor. Because this case demonstrated the unique pattern of cerebral blood perfusion detected by the single photon emission computed tomography (SPECT), we investigated other cases with oral cenesthopathy using SPECT and MRI. We discuss a possible pathophysiology of oral cenesthopathy based on findings with our cases.

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NR03-52

CHARACTERISTICS AND PREDICTORS OF LONG-TERM INSTITUTIONALIZATION IN PATIENTS WITH SCHIZOPHRENIA

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SUMMARY:
Introduction: Patients with schizophrenia requiring long-term institutionalization represent patients with the worse outcome, leading to personal costs

for patients and relatives and constituting a large economical burden for the society. We aimed to compare institutionalized vs. non-institutionalized schizophrenia patients in order to characterize the two groups and identify predictors of long-term institutionalization Hypothesis: We hypothesized that male sex, early onset schizophrenia and lower educational level were more common in the institutionalized group. Methods: One year follow-up cohort study of institutionalized and non-institutionalized patients with schizophrenia. Utilizing the Danish National Registry, patients with ICD-10-diagnosed schizophrenia (F20.0-F20.9) before January 1st 2006 were included (total number 22,395). Results: Compared with non-institutionalized patients, institutionalized patients with schizophrenia had earlier onset of schizophrenia and lower scholastic achievements, were more often diagnosed with a hebephrenic subtype (OR, 2.34; 95% confidence interval (CI), 1.95-2.80; p<0.001), received higher dosages of antipsychotics and more concomitant medications, had more substance misuse and early retirement pension. In a logistic regression model adjusted for sex and age, institutionalized patients with schizophrenia had an increased risk of type II diabetes (AOR, 1.22; CI, 1.01-1.42; p<0.001), but the mean age of onset of type II diabetes did not differ. Institutionalized schizophrenia was not a risk factor for ischemic heart disease, stroke or chronic obstructive lung disease. The mean age of life span was higher in the institutionalized group (62.7 vs. 58.7 years; p=0.027), which was driven by absence of death from suicide. Conclusions: Institutionalized patients with schizophrenia had worse outcome of the disorder, except for less suicide, illustrated by receiving higher dosages of antipsychotic medications, more concomitant medications and more bed-days. Predictors of institutionalization were hebephrenic subtype, a diagnosis of epilepsy, early retirement pension, male sex, lower educational level and substance misuse. Institutionalized patients with schizophrenia had an increased risk of type II diabetes.

NR03-53

CLINICAL CHARACTERISTICS OF SUICIDALITY IN PATIENTS WITH PSYCHOTIC SPECTRUM DISORDERS

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SUMMARY:
Objective: Suicide is a leading cause of death among patients with schizophrenia, bipolar disorder, and other psychotic illnesses. The ability to identify individuals at risk is a critical clinical issue. Past studies indicate that demographic factors are poor predictors of suicidal thoughts or attempts, and several researchers have suggested that specific illness symptoms may be better predictors of suicide risk. An ability to identify high-risk patients by recognizing a range of associated factors would aid clinicians in instituting risk-reduction measures to decrease suicidal behavior in this population. The aim of the current study was to examine the correlation between specific psychotic symptoms, in this first analysis, type of auditory hallucinations, and the presence of suicidal ideation and suicide attempts. Method: Subjects included 183 patients admitted to McLean Hospital's psychotic disorders inpatient unit between 2008 and 2010. As part of ongoing unit-based research, individuals included in this study participated in formal diagnostic assessment measures, based on the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). Additional study measures were obtained using risk assessment clinical data routinely collected on admission to the hospital. Results: For individuals with a DSM-IV diagnosed psychotic spectrum disorder, 42% (n=74) endorsed suicidal ideation at the time of admission and 23% (n=40) endorsed a recent suicide attempt prior to admission. The presence of command auditory hallucinations (CAH) correlated significantly with active suicidal ideation. Among individuals with suicidal ideation, 42.5% reported experiencing CAH, whereas only 15.8% of non-suicidal patients reported CAH ($p < 0.001$). A correlation was also found between the presence of CAH and the occurrence of a suicide attempt prior to admission. A larger proportion of patients endorsed CAH among those with a recent suicide attempt (50%) as compared to those with no recent attempt (20.7%, $p < 0.001$). These correlations with CAH are noteworthy, given that a large difference was not found in the prevalence of auditory hallucinations in general among those with and without suicidal ideation (49.3% and 47%). Conclusions: This study found that the presence of command auditory hallucinations,

in particular, but not auditory hallucinations, in general, was correlated with suicidal ideation and recent suicide attempts. These results indicate that command auditory hallucinations may identify or even place psychotic individuals at greater risk for acute, suicidal behavior and that these symptoms should be the target of immediate and aggressive characterization and treatment.

NR03-54

CHARACTERISTICS ON BASELINE PSG AND INITIAL CPAP TITRATION AS PREDICTORS OF CHANGE IN OPTIMAL PRESSURE ON CPAP RE-TITRATION IN OSA PATIENTS

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SUMMARY:
Introduction: Previous indications for CPAP retitration have been based on position papers, intuition , insurance guidelines or institutional requirements and include: significant weight loss or gain, patient's subjective feeling of pressure being too high or low, residual or recurrent excessive daytime sleepiness, postoperative evaluation after palliative UP3 and high risk occupations such as truck drivers and pilots. Only vindication of a nasal CPAP retitration procedure will be an actual change in the optimal CPAP pressure based on the results of that test. The purpose of this study was to identify any items in patient characteristics, clinical features, baseline PSG and initial CPAP titration as predictors of change in optimal pressure on CPAP retitration. Methods: 47 patients with OSA were divided in two groups: Group I (optimal pressure was changed on CPAP retitration; N=30.Group II (optimal pressure unchanged after CPAP retitration; N=17.These demographic and clinical data along with variables on baseline PSG) and initial CPAP titration (sleep efficiency, REM latency, wake before and after sleep onset, stage 1 and 2 percentage, delta and REM percentage, awakenings, AHI –total, REM and supine, SaO2 nadir, residual AHI and initial CPAP pressure) were compared between the two groups. The statistical analyses were performed using the Fisher's exact test and student's t test. A p value of <0.05 was considered significant. Results: There were no significant differences in patient demographics and clinical characteristics of the two groups (p >0.05). However, there were fewer awakenings in the baseline PSG and inadequate delta sleep rebound in the initial CPAP titration in group I as compared to the group II (p <0.05). Other variables on baseline PSG and initial CPAP titration did not differ significantly between the two groups. Conclusion: Infrequent awakenings in the baseline PSG and an inadequate delta sleep rebound in the initial CPAP titration may well be the predictor for the need for CPAP retitration in patients with OSA. These variables may well identify a subset of patients with obstructive sleep apnea in whom a blunted response to a respiratory event does not result in more frequent awakenings and perhaps impaired delta rebound as well.

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NR03-55

WITHDRAWN EMPATHIC ACCURACY AND SOCIAL COGNITION IN PERSONALITY DISORDERS

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SUMMARY:
Background: Distinct forms of interpersonal dysfunction are core, refractory features of borderline personality disorder (BPD) and schizotypal personality disorder (SPD). Theories converge around BPD as involving disturbed representations of self and other, and associated social cognitive deficits. We tested BPD patients' performance on a well-validated Empathic Accuracy (EA) task, identifying BPD patients' deficits in empathic understanding relative to healthy controls (HC) and SPD patients. Because BPD and SPD also involve distinct disturbances of self, we examined how subjects tracked their own emotions while perceiving others' emotional experiences. Methods: Subjects watched 20 videos of targets describing positive and negative emotional experiences,

and both subjects and targets continuously rated emotion in these videos with a 9-point scale. Targets' emotional expressivity was previously measured via self-report questionnaire. EA was defined by the degree to which subjects' continuous emotional ratings of the target correlated with targets' ratings of their own emotions (OTHER condition). We modified this task to also include a condition in which subjects rated their own emotions while viewing the video (SELF), similarly calculating the degree to which this correlated with targets' ratings. We compared the 3 groups' EA and mean ratings for each video. Results: Our preliminary sample included 10 BPD, 10 SPD, and 9 HC subjects. Collapsed across conditions, SPD subjects' EA was significantly lower than BPD and HC subjects, but no significant differences between BPD and HC subjects. A diagnosis by valence interaction was discovered, driven primarily by SPD subjects' lower accuracy for negatively valenced videos. Target expressivity positively correlated with EA in BPD and HC groups, but not in SPD subjects. A diagnosis by condition interaction was seen, in which EA in SELF conditions was greater than OTHER conditions for BPD subjects, relative to SPD and HC. A diagnosis by valence by condition interaction did not reach significance. No differences were found between groups in mean emotional ratings after controlling for valence. Conclusions: Differences between groups were not secondary to valence bias, as might be expected in depression. SPD involves difficulty in understanding emotions in self and other. Associated deficits in empathic understanding are likely related to an inability to read emotions, even when targets consider themselves particularly emotionally expressive. Although BPD patients performed similarly to controls while watching negative and positive videos, SPD subjects were less accurate, especially at empathic understanding of negative emotions. This may be related to the suspiciousness and social isolation seen in SPD. By contrast, BPD patients demonstrated tighter correlations between rating emotion in themselves and targets' rating of themselves, likely a manifestation of their susceptibility to emotional contagion.

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NR03-56

LONG-TERM FOLLOW-UP OF HYPOCHONDRIASIS AFTER SSRI TREATMENT

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SUMMARY:

Background: There is a paucity of knowledge on the long-term outcome of hypochondriasis, with even less known about the effect of treatment with a selective serotonin reuptake inhibitor (SSRI). Method: We conducted a prospective follow-up study of 58 patients with DSM-IV hypochondriasis after participation in a study of SSRI treatment 4 to 16 years earlier (mean=8.6±4.5 years). The follow-up measures were identical to those used at baseline; assessments of inter-current psychiatric treatment and medical care were added. Results: Information was obtained on 79.3% (N=46) of the original group. At follow-up, 40% of patients continued to meet full DSM-IV criteria for hypochondriasis. Persistence of hypochondriasis was individually predicted by

longer duration of prior hypochondriasis (p = 0.003), history of childhood physical punishment (p = 0.01), and less usage of SSRIs during the interval period (p = 0.02). Remission status was not significantly predicted by sociodemographic characteristics, baseline hypochondriasis severity, or psychiatric comorbidity. Patients without hypochondriasis at follow-up reported significantly less usage of medical services than hypochondriacal patients, were more likely to rate their own physical health favorably, and were more likely to be using SSRIs. Conclusions: A substantial proportion of patients with hypochondriasis who receive treatment with SSRIs achieve remission over the long term. Interim SSRI use may be a factor contributing to better prognosis.

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NR03-57

THE NATIONAL CARE (CARING ACTION IN RESPONSE TO EMERGENCIES) MANAGEMENT SYSTEM IN SINGAPORE

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SUMMARY:
In a national crisis or major civil disaster, there will be many physical and psychological casualties. The psychological trauma ensuing from such calamities could seriously retard the country's recovery from the event. The psychological and emotional well-being of the population as well as of the individual at every stage of the disaster is as important as treating the physically injured and saving lives. The National CARE (Caring Action in Response to Emergencies) Management

System (NCMS), incepted in 1994, is incorporated as a response element in both Civil and National Emergencies in Singapore. It is developed as a home-front system that provides psychological inputs in the management of a crisis and to offer immediate psychological and emotional support to cushion and mitigate the impact of trauma in a crisis. Its fundamental approach is to help victims cope psychologically and emotionally during emergencies so that they can return to normalcy as soon as possible. CARE Officers from various organisations are trained to provide this immediate psychological and emotional support. The management of the NCMS basically comprise planning, organisation and execution of CARE operations over three phases of operations: a. Pre-Disaster (Steady State). The NCMS develops and sustain CARE capabilities in preparation for emergencies. Apart from refining operational processes and training of CARE Officers, the NCMS reach out to the public and community-at-large to instill preparedness and resilience. b. Disaster (Emergency). The operational response of the NCMS entails the activation and deployment of CARE Officers to the various work locations, notably at the incident site, FAC and healthcare institutions. The NCMS manages the CARE functions at these locations throughout the emergency operations c. Post-Disaster (Recovery). In the recovery from an emergency, the NCMS sustains the provision of CARE services, albeit a scaled down deployment, to follow-up on cases, counter subsequent distress occurrences and facilitate recovery through various community networks. The poster will highlight the essential components of the National CARE Management System which also includes both the training and manpower frameworks.

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NR03-58

THE EFFECTS OF STRESS COPING STRATEGIES ON PSYCHOPATHOLOGY OF TALIBAN-HELD KOREAN HOSTAGES

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SUMMARY:

Background Twenty one Korean volunteers had been captured and held hostage by Taliban in 2007. After release, some of them did not develop any of psychiatric problems, others developed some psychiatric symptoms but got recovered in a month, and the rest developed multiple psychiatric symptoms and were diagnosed as PTSD at a month after release. Objective The aim of this study was to find out the effects of coping strategies on severity of psychopathology of the hostages held by terrorists. Method All of the 21 hostage survivors answered the coping checklist (by Lazarus and Folkman) at 1 week after release, and completed Symptom Checklist 90-Revised (SCL-90-R) and Impact of Event Scale-Revised (IES-R) four times at their immediate arrival at home, 1, 2, and 4 weeks later. Stepwise regression analyses, adjusted for time, were performed to find out the effect of coping strategies on general psychopathology and posttraumatic response of hostage survivors. Results Coping strategies such as wishful thinking and seeking social support were risk factors for general psychopathology and posttraumatic stress responses. And task-focused coping strategy was found as a resilience factor against psychological sequelae. Conclusion Task-focused coping, as active strategy, was a resilience factor, but wishful thinking and seeking social support, as passive strategy, were negative predictors of traumatic stress reactions. These findings are consistent with prior studies about the relationships between coping strategies and psychological adjustment.

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NR03-59

THE LONG-TERM IMPACT OF CHILDHOOD PHYSICAL ABUSE ON ROMANTIC RELATIONSHIPS: THE MEDIATING ROLE OF ANGER EXPRESSION

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SUMMARY:
Background: Prior studies of links between childhood physical abuse and adult intimate partner aggression have focused on individuals out of the context of couple relationships. The goal of this study was to incorporate data on both male and female partners into a model that examined childhood physical abuse as a predictor of violence in couples and to look at anger expression as a potential mediator of that relationship. Method: Individuals in 109 couples reported on histories of physical abuse in childhood and physical aggression towards adult partners during the previous year as well as their typical modes of anger expression. The Actor-Partner Interdependence Model (APIM) was used to examine at a dyadic level the links between victimization in childhood and revictimization and perpetration of violence in adult romantic relationships, with anger suppression as a potential mediator. Results: 27% of men and 38% of women reported physical abuse in childhood. 56% of men and 57% of women reported physically violent behavior towards partners. APIM analyses revealed that women who were physically abused as children reported more physically aggressive behaviors towards partners and were also the victims of more physical aggression from their partners. Men's physical abuse histories were associated at the trend level with being victims of more physical aggression by partners but were not linked with perpetration of violence toward partners. Anger suppression fully mediated the link between woman's childhood physical abuse and her use of intimate partner aggression as well as her revictimization. Conclusions: This is the first study to examine links between childhood physical abuse and intimate partner violence using analyses that account for the interdependence of these variables in couples. Findings suggest that women with childhood physical abuse histories are at greater risk than men for both revictimization and perpetration of aggression in adult intimate relationships and anger suppression is a mechanism that may explain this link.

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NR03-60

MISSION DIVERSION & RECOVERY FOR TRAUMATIZED VETERANS: EARLY FINDINGS AND LESSONS LEARNED

Chp.:Christopher Paul M.D., 52 Sylvan Rd, Rumford, RI 2916, Co-Author(s): Elizabeth Aaker, B.A., Amanda Lennox, B.A., William H. Fisher, Ph.D., Carl Fulwiler, M.D., Ph.D., Stephanie Hartwell, Ph.D., David A. Smelson, Psy.D., Debra A. Pinals, M.D.

SUMMARY:
Background: An estimated 17% of veterans returning from conflicts in Iraq and Afghanistan will develop PTSD, other mental illnesses and substance abuse problems. Left untreated these disorders may result in nonviolent or aggressive illegal behaviors and subsequent involvement with the criminal justice system, which is often less equipped to effectively treat or manage such problems and provide lasting, effective clinical interventions. Objectives: MISSION Diversion & Recovery for Traumatized Veterans (MISSION DIRECT VET) seeks to reduce criminal justice involvement among veterans with trauma-related symptoms and addictions and to provide training in trauma-informed care to mental health, substance abuse and criminal justice personnel. Intervention Design: MISSION DIRECT VET is a court based diversion program designed to identify veterans at the post-adjudication, pre-sentencing stage of justice involvement and divert them toward wraparound veteran-focused services that combine evidenced-based practices of mental health and substance abuse treatment, case management, trauma-informed care, and peer support. Evaluation

Design: The evaluation will assess mental health, substance abuse and criminal justice outcomes. An initial evaluation of the pilot phase in Worcester will provide data for appropriate modification of services. A subsequent large-scale evaluation of the model will be conducted across all 3 service sites. Results for Project Year 2: In November 2009, recruitment began in Worcester County District Courts. This poster describes participants' demographic, military, criminal justice, mental health, and substance use histories; treatment motivations; and perceptions of coercion during the first year. Clinical challenges and lessons learned thus far from providing services for these veterans are highlighted. Most participants had multiple tours of duty, participated in combat, and report significant trauma histories (military and pre-military). Participants reported high levels of PTSD symptoms and substance abuse. Most had criminal justice system involvement (a majority with a prior restraining order) before program enrollment. Reasons for participation include a desire to avoid incarceration, to reduce punishment, and to receive mental health and substance abuse treatment. Perceptions of coercion on entering the program were mixed, but suggest that defense attorneys' support was instrumental. Clinically, these clients are service and crisis intensive. Critical incidents included arrests, probation violations, hospitalizations, and suicide threats. The implications of these preliminary findings are discussed.

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NR03-61

LEGAL STATUTES FOR INVOLUNTARY SUBSTANCE ABUSE TREATMENT IN THE UNITED STATES

Chp.:Christopher Paul M.D., 52 Sylvan Rd, Rumford, RI 2916, Co-Author(s): Kelly Sanders, M.A., Lester Blumberg, J.D., Debra A. Pinals, M.D.

SUMMARY:
Background: Substance use disorders (SUDs) constitute a significant threat to both public health and public safety. Less than 10% of those in need of SUD treatment report having received it in the preceding year; of these only 5% believe they need treatment. Not surprisingly, individuals with SUDs frequently present for care because of external, coercive influences and are disproportionately represented in criminal justice system. Many states include statutory provisions for the involuntary treatment (often entailing confinement) of persons as a result of substance use. These statutes may be separate and distinct from those related to mental illness. Objectives: This study sought to characterize the statutory criteria used in the Unites States to permit different forms of involuntary treatment of individuals with SUDs. Methods: We reviewed the legal statutes for the fifty states and District of Columbia, paying particular attention to provisions that authorize involuntarily detention and hospitalization of individuals in emergency and non-emergency circumstances for primary SUDs-related conditions. For each jurisdiction, we record the different forms of involuntary treatment that are permitted, the criteria needed for each type of detention, the associated procedural steps, and the maximum permitted length of detention. Results: In general, three forms on involuntary treatment exist for individuals with SUDs: police pickup, emergency hospitalization, and civil commitment. All but four jurisdictions allow either police pickup or emergency hospitalization for individuals with SUDs-related conditions. Thirty-eight jurisdictions include provisions for civil commitment for SUDs, however statutory criteria for commitment vary widely. Criteria that would be considered sufficient to initiate each of the three forms of involuntary treatment range from intoxication, incapacitation, dangerousness to self or others, lack of decisional capacity, and substance dependence and/or abuse alone. Maximum periods of treatment similarly vary: from hours to days for police pickup, and days to months to years for civil commitment. Conclusions: The variability in statutory criteria regarding involuntary treatment for SUDs reflects a lack of consensus among lawmakers and society on how to best balance the government's responsibility to offer protection and honor individual freedoms with respect to persons with SUDs. Our findings

raise questions about the extent to which these statutes are used in real world settings and potential costs associated with extended and repeat periods of compulsory SUDs treatment, particularly when there is little evidence to support their long term effectiveness improving public health. Further research on this understudied topic is needed. In the meantime, clinicians who treat individuals with SUDs should to familiarize themselves with statutory provisions in the jurisdiction in which they practice.

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NR03-62

THE RELATIONSHIP BETWEEN PHYSICAL CONDITIONS AND SUICIDAL BEHAVIOR AMONG THOSE WITH MOOD DISORDERS

Chp.:Jayda MacLean M.D., 12 Kingswood Ave, Winnipeg, R2M 0R1 Canada, Co-Author(s): D. Jolene Kinley, M.A., Frank Jacobi, Ph.D., James M. Bolton, M.D., Jitender Sareen M.D.

SUMMARY:

Abstract Background: There has recently been increased interest in the relationship between physical illness, mental illness, and suicide. The present study utilizes a large community-based sample to investigate the association between certain physical conditions and suicidal behavior, among those with a history of a mood disorder.Methods: Data came from the nationally representative German Health Survey (N= 4181, age 18-65). Physical conditions were assessed by a general practice physician. DSM-IV mental disorders were assessed using a modified version of the Composite International Diagnostic Interview. Among those with a lifetime mood disorders, suicidal ideation, plans, and attempts were assessed by self-report. Multiple logistic regression analyses were used to examine the association between physical conditions and suicidal behavior among those with a history of mood disorder. Results: Anxiety and substance use disorders were significantly positively associated with suicidal behavior [OR 1.61, 95% CI 1.13 – 2.31 and 2.01, 95% 1.34 – 3.00, respectively]. After adjusting for anxiety and substance use disorders as well as sociodemographic variables, respiratory illness, hypertension, and number of physical disorders were significantly associated with suicidal behavior [AORs 1.72, 1.68, and 1.16, respectively]. Limitations: The findings of this study are limited to adults with a history of a mood disorder. Personality disorders were not assessed.Conclusion: The present study suggests that among people with mood disorder, respiratory illnesses, hypertension, and number of physical conditions are associated with suicidal behavior independent of the effects of comorbid mental illness. Clinicians should recognize the contributing risk of physical health problems to suicidal behavior.

NEW RESEARCH AND YOUNG INVESTIGATORS' POSTER SESSION 04
May 16, 2011
10 – 11:30 AM
Hawaii Convention Center, Exhibit Hall, Level 1

NR04-01

PREDOMINANT POLARITY IN PATIENTS WITH BIPOLAR DISORDER ATTENDING BY THE GROUP OF MOOD DISORDERS IN THE FUNDACION SAN VICENTE, MEDELLIN, COLOMBIA

Chp.:Angela Agudelo M.D., CRA 43 A No 1-50, Medellin, 050021 Colombia, Co-Author(s): López Carlos, M.D., Toro Antonio*, M.D., Guillermo Ramirez MD, Tamayo Alejandra*, M.D., Gallo Aurora*. *Grupo de Investigación en Psiquiatría (GIPSI), Universidad de Antioquia, Medellín Colombia*

SUMMARY:

INTRODUCTION In 1978 Angst suggested the

concept of Predominant Polarity (PP), wich have became important mainly this last decade because all the researchs about this subject. Nowadays the PP has at least two thirds of episodes of any polarity (maniac vs depresive) and many researchs have shown that between 45%- 70% of patients with bipolar disorder (BD) have predominantly manic polarity and the others have had uncertain polarity (PU). This patients with predominantly manic polarity, between 50% and 60% of patients have a predominantly polarity depressive (PD) and near of 40% have predominantly manic polarity (PM). If we take all the patients, even the PU, the polarity depressive will be between 25% and 35%. In the same way polarity depressive has been asociated with the beginning of depressive disorder and PM with the beginning of maniac polarity. PD is very common in patients with BD II and they have found that passed many years before this illness is diagnosed. BD is a chronic illness, so treatment choice should be based on the course of the disease,predominant polarity has several clinical and therapeutics implications and may be a valid parameter to help clinicians to take long-term relevant therapeutic decisions Some researches have support the idea about to included PP as a predictor in futures classifications, although they think should be more researchs about that. Objectives 1. Establish the dominant polarity in our patients 2. Determine how much influence the polarity of the first episode over the course of the disease 3. Describe the clinical characteristics of patients according to the prevailing polarity 4. Evaluation of the response to drugs according to the polarity Methodology This study included all patients with bipolar affective disorder attending by the mood disorders group at the University of Antioquia in the San Vicente Fundación in Medellin (Colombia) meeting the DSM-IV BD I or BD II. It is a highly complex group with approximately 180 patients since 1990. The diagnosis is confirmed with the Diagnostic Interview DIGS, validated to Spanish by our research group GIPSI. Based on clinical history and DIGS, we will establish the polarity predominant. Failure to meet these criteria were defined as indeterminate polarity. Expected Results Confirm whether our group of patients behaves similarly to previous studies demonstrated that these findings have clinical implications.

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NR04-02

A RANDOMISED, DOUBLE-BLIND, PLACEBO CONTROLLED, DULOXETINE-REFERENCED, FIXED DOSE STUDY OF THREE DOSAGES OF LU AA21004 IN ACUTE TREATMENT OF MDD

Chp.:David Baldwin M.B.B.S, Academic Cebtre, College Keep, Southampton, SO14 3DT United Kingdom, Co-Author(s): Henrik Loft, M.Sc., Marianne Dragheim, M.D.

SUMMARY:
Objective: To evaluate the efficacy, safety, and tolerability of Lu AA21004 vs placebo using duloxetine as active reference in patients with major depressive disorder (MDD) diagnosed according to DSM-IV-TR.
Method: In this 8-week multicenter trial, 766 adult patients with a baseline Montgomery-Åsberg Depression Rating Scale (MADRS) total score ?26 were randomly assigned (1:1:1:1:1) to 2.5, 5 or 10mg Lu AA21004, placebo or 60mg duloxetine. The primary efficacy endpoint was the change from baseline in MADRS total score at Week 8 (FAS, LOCF, ANCOVA). The 5 and 10mg doses of Lu AA21004 were tested separately versus placebo at a 0.025 level of significance, in a pre-specified order. Results: On the pre-defined primary efficacy endpoint, Lu AA21004 5mg and 10mg did not separate from placebo: neither did duloxetine or

Lu AA21004 2.5mg. There was an indication of efficacy across most of the secondary analyses of depression, anxiety, and global scales in the Lu AA21004 5mg and 10mg and the duloxetine groups reaching clinical relevant effect sizes and p-value <0.05. Treatment-emergent adverse events led to the withdrawal of 72 patients: 8% in the placebo group, 6%, 11% and 9% in the Lu AA21004 2.5mg, 5mg and 10mg groups, and 12% in the duloxetine group. The most common adverse events in the placebo, Lu AA21004 2.5mg, 5mg, 10mg and duloxetine groups were nausea (9%, 17%, 17%, 22%, 34%), headache (16%, 14%, 10%, 13%, 14%), dizziness (7%, 5%, 3%, 4%, 16%) and dry mouth (7%, 4%, 6%, 4%, 8%). No clinically relevant changes were seen in vital signs, weight, ECG, or laboratory results. Conclusions: None of the active treatment groups separated from placebo on the primary endpoint in this 8-week MDD study. Findings on the secondary outcome measures were supportive of likely efficacy, for Lu AA21004 5mg and 10mg. Lu AA21004 (2.5, 5 and 10mg) was well tolerated. Trial Registration: This study has the ClinicalTrials.gov identifier: NCT00635219.

NR04-03

SCHIZOAFFECTIVE DISORDERS, METABOLIC SYNDROME AND CARDIOVASCULAR RISK: PREVALENCE AND 12-MONTH EVOLUTION IN SCHIZOAFFECTIVE PATIENTS IN SPAIN.

Chp.:Antonio Benabarre Ph.D., Villarroel, 170, Barcelona, 08036 Spain, Co-Author(s): Maria P. Garcia-Portilla, Ph.D., Lorenzo Livianos, Ph.D., Francisco Mesa, M.D.

SUMMARY:
Purpose: The purpose of this study was to assess the prevalence and evolution of metabolic syndrome (MS) and cardiovascular risk in patients with schizoaffective disorder in Spain, and the impact on their functionality and quality of life. Methods: Using baseline data from the SAMET study (12-month, prospective, naturalistic study), MS prevalence and cardiovascular risk were evaluated. Patients' demographic and clinical information was collected. As well as weight, height, waist circumference at the umbilicus, body mass index (BMI), and blood pressure. Overweight was defined, using WHO criteria, as BMI =25 kg/m2 and obesity as BMI =30 kg/m2. A fasting blood sample was drawn to determine glucose, total cholesterol, HDL cholesterol, LDL cholesterol, and triglyceride levels. MS was defined as fulfilment of at least three of the following components (NCEP/ATP III definition): waist circumference >102 cm (men) or >88 cm (women), triglycerides =150 mg/dL, HDL < 40 md/dL (men) or <50 mg/dL (women), blood pressure =130/=85 mm Hg and fasting glucose =110 mg/dL. Cardiovascular risk was estimated using the Systematic Coronary Risk Evaluation (SCORE) model for 10-year cardiovascular mortality risk and the Framingham function for the 10-year overall risk for any fatal or non-fatal coronary heart disease. Results: 335 patients were enrolled in the study. The mean age was 42.2+10.9 years and 53.4% were male. 35.8% were obese and overweight was found in 40.5% of sample. 50.4% were smokers. Data to determine prevalence of MS (NCEP/ATP III) was available in 252 patients. MS prevalence was 39.3% (36.7% in males, 45.1% in females; p=0.1918). Regarding the prevalence of MS components, 46.7% of the patients met the waist circumference criterion, 58.2% had triglycerides =150 mg/dL, 39.9% met the HDL criterion, 56.1% had high blood pressure and 13.2% met the glucose criterion. Females were more likely than males to meet the HDL criterion (55.5% vs. 29.7%; p<0.0001). SCORE and Framingham functions were calculated for 239 and 207 patients, respectively. The 10-year cardiovascular mortality risk (SCORE) was 0.8+1.2 (males 0.9+1.2 vs. females 0.6+1.2; p=0.0926). The 10-year risk for coronary heart disease (Framingham) was 7.6+7.1% (males 8.7+7.9 vs. females 6.3+5.9; p=0.0137). 7.1% of the patients were classified as having a high/very high cardiovascular mortality risk (SCORE =3%). 24.2% of the patients showed a high/very high risk of coronary heart disease (Framingham =10). Conclusions: From the data obtained a high prevalence of MS and high cardiovascular risk can be observed among patients with diagnosis of schizoaffective disorder in Spain. Coronary heart disease risk was significantly higher in males than in females. It is important to consider and understand the metabolomics aspects associated with cardiovascular risk in this population to help to implement preventive and therapeutic programs in higher risk groups.

NR04-04

THE EFFECT OF TEMPERAMENT AND CHARACTER FEATURES ON ANTIDEPRESSANT TREATMENT

RESPONSE

Chp.:Ali Bozkurt M.D., Gn. Tevfik Saglam Cd. Etlik, Ankara, 6018 Turkey, Co-Author(s): Mehmet AK, M.D., Ali Bozkurt,M.D., Bikem Kargi,Ph.D.

SUMMARY:
Objective: Although numbers of antidepressants are increasing nonresponders to antidepressant treatment is still high. In this study, depressive patients who were responders and non-responders to antidepressant treatment have been compared with healthy controls in terms of temperament traits and character dimensions. The effect of temperament and character features on antidepressant treatment response has been investigated. Methods: Major depressive disorder has been diagnosed with SCID-P. The number of subjects who met the inclusion criteria and accepted to join the study was 85. They have fulfilled Temperament and Character Inventory (TCI) and Beck Depression Inventory (BDI) before the antidepressant treatment began. At week ten 51 patients were responders to antidepressant treatment and 34 patients were nonresponders. These two groups have been compared with 50 healthy controls. Results: Major depressive patients who did not respond to antidepressant treatment have significantly higher Harm Avoidance (HA) and lower Reward Dependence (RD) and Cooperativeness (C) scores than patients which have responded to antidepressant treatment. This significant difference is also seen when compared with healthy controls. There was no significant difference between responders and healthy controls. Therefore temperament and character features have been assumed as properties which negatively affect the response to antidepressant treatment. Conclusion: Treatment success in depressive patients can be increased combining pharmacotherapy with psychotherapy, especially with cognitive therapy, in patients who have temperament and character features which have negative effect on treatment outcome.

NR04-05

RISK ESTIMATE FOR DISCONTINUATION DUE TO ADVERSE EVENTS WITH ZIPRASIDONE VS. PLACEBO IN SCHIZOPHRENIA, MANIA OR BIPOLAR DEPRESSION

Chp.:Joseph Calabrese M.D., 10524 Euclid Ave 12th Fl, Cleveland, OH 44106, Co-Author(s): Keming Gao, M.D., Ph.D., Elizabeth Pappadopulos, Ph.D., Onur N. Karayal, M.D., M.Ph., Sheela Kolluri, Ph.D.

SUMMARY:
Background: Patients with bipolar depression (BPD), bipolar mania (BPM), schizophrenia (SZ) have different sensitivity and tolerability profiles during antipsychotic (AP) treatment [1,2]. It remains unknown if patients with these 3 psychiatric conditions have different risks for discontinuations due to adverse events (DAEs) with ziprasidone (ZIP) treatment. This study estimates the risk for DAEs with ZIP monotherapy vs. placebo (PBO) in these 3 psychiatric conditions. Methods: Pooled data from 9 double-blind, PBO-controlled, short-term (= 6 weeks), Pfizer-sponsored studies for ZIP in BPD (flexible, low and high dose-ranges), BPM (flexible dose), and SZ (fixed dose) were analyzed by indication and by dose (10mg - 200mg/d). We report the incidence of DAEs, somnolence, akathisia, overall EPS and =7% weight gain in ZIP and PBO groups, the risk difference (RD, ZIP rate – PBO rate) with 95% confidence interval (CI) (RD and CIs all reported as percentages), and estimate the numbers needed to treated to harm or benefit (NNTH/NNTB). Results: The risk for DAEs was not significantly different between ZIP and PBO in BPM, BPD or SZ. For akathisia, the risk difference was not significant in BPD, but significant in BPM with a RD of 8.4% (CI: 4.3, 12.5) and NNTH of 12. In SZ, the akathisia risk difference was not significant. For overall EPS, the risk difference was not significant in BPD, but significant in BPM with a RD of 8.7% (CI: 4.4, 12.9) and NNTH of 12. In SZ, the EPS risk was higher for ZIP vs. PBO with a RD of 3.2% (CI: 0.04, 6.3) and NNTH of 31 for the 40mg/d; and 5.6% (CI: 0.7, 10.6) and NNTH of 18 for the 160mg/d. For somnolence, the RD was significant in BPD, with a RD of 10.0% (CI: 5.6, 14.4) and NNTH of 10 for the low-dose ZIP and 14.1% (CI: 8.8, 19.4) and NNTH of 7 for high-dose ZIP;, in BPM with a RD for somnolence was 14.3% (CI: 9.0, 19.6) and NNTH was 7. In SZ, the risk for somnolence was significantly high only for ZIP 160mg/d with a RD of 11.7% (CI: 3.7, 19.7) with NNTH of 8 and ZIP 200mg/d with RD of 17.8% (CI: 8.3, 27.4) and NNTH of 6. For = 7% weight gain, in all 3 indications, the risk for ZIP vs. PBO was not significant. Conclusion: ZIP monotherapy was well-tolerated by subjects with BPD, BPM and SZ, relative to PBO, but the risks for AEs varied by

indication. Subjects with BPD had an increased risk only for somnolence for ZIP vs. PBO, but subjects with BPM had an increased risk for akathisia, EPS and somnolence. The findings in BPD and BPM are not consistent with earlier studies, where subjects with BPD had lowest tolerability and highest sensitivity to APs compared to SZ or BPM [1, 2]. This inconsistency may be attributed to differences in dose ranges and titration schedules. Reference: 1) J Clin Psychopharmacol. 2008 Apr;28(2):203-9. 2) Int J Neuropsychopharmacol 2010 Sep 29:1-12. This study is supported by Pfizer Inc.

NR04-06

PSYCHOSOCIAL DETERMINANTS OF MOOD AND ANXIETY DISORDERS UP TO EIGHT MONTHS POSTPARTUM

Chp.:Diana Carter M.D., Reproductive Mental Health Program, BCCWH, 4500 Oak St, Vancouver, BC, V6H 3N1, Vancouver, BC, V6H 3N1 Canada, Co-Author(s): Shaila Misri, M.D., FRCPC, Jasmin Abizadeh, B.A., Gillian Albert, B.Sc., Deirdre Ryan, M.D., FRCPC,

SUMMARY:
Objective: Clinical evidence suggests that women diagnosed with mood and anxiety disorders during pregnancy may follow different longitudinal trajectories. Little is known about risk factors and indicators that predict postpartum treatment outcome. Methods: The course of postpartum mood and anxiety disorders was examined in fourty-two women who enrolled in this study. All women were treated with antidepressants during their pregnancy. Twenty two women completed every monthly visit up to eight months postpartum. Mood and anxiety symptoms were monitored with the Hamilton Rating Scales for Depression and Anxiety (HAM-D/A). Psychosocial and biological determinants, including personal/family histories of mental disorders, comorbidity of Axis I disorders, sexual abuse, partner support and dose changes, were assessed for their potential influence on treatment outcome. Results: A mean percent change in HAM-D scores of 58% and in HAM-A scores of 35% were observed when comparing scores at entry to eight month follow-up. Overall, 75% of participants reported improvements in HAM-D and HAM-A scores. Separate multiple linear regressions were conducted with mean percent changes in HAM-D and HAM-A scores in relation to various factors. In the HAM-D model, having a family member with a psychiatric diagnosis predicted a less positive change, accounting for almost 7% of the variance (ß = -.263, t = -1.357, p = .192, r2p = .067). Having had a previous psychiatric illness unrelated to pregnancy was an even stronger predictor associated with a more positive change, accounting for 16.3% of the variance(ß = .430, t = 2.115, p = .049, r2p = .163). Similarly, in the HAM-A regression, having had a previous psychiatric illness unrelated to pregnancy also predicted a more positive change, accounting for 4.4% of the variance (ß = .215, t = .997, p = .332, r2p = .044). However, a history of sexual abuse predicted a less positive change in anxiety symptoms, accounting for about 6.5% percent of the total variance (ß = -.264, t = 1.207, p = .243, r2p = .065). None of the other variables commonly associated with mood and anxiety disorders proved to be significantly associated with treatment outcome. Conclusion: Symptom improvement was observed for 75% percent of the women, with a higher level of improvement of depressive symptoms. Predictors of treatment outcome varied among the disorders. A family history of depression was a predictor of worsening of depression in the postpartum, where as a history of sexual abuse predicted worsening of anxiety symptoms in the postpartum. Women with a previous psychiatric illness unrelated to pregnancy had greater improvements in depression and anxiety symptoms than women without such an illness. Thus, their response to treatment was better, even though all of the women may be at the same or greater risk for relapse. It is important to study different biological and psychosocial predictors when assessing treatment outcome in perinatal women.

NR04-07

STEADY-STATE LEVELS OF THE ANTIDEPRESSANT LU AA21004 IN PLASMA, BRAIN AND CSF, AND 5-HT TARGET ENGAGEMENT IN THE RAT

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SUMMARY:
Background The multimodal antidepressant

Lu AA21004 is a 5-HT3 and 5-HT7 receptor antagonist, 5-HT1A receptor agonist, 5-HT1B receptor partial agonist and inhibitor of the 5-HT transporter. Here, we attempt to establish a relationship between steady-state rat plasma, brain-free fraction and CSF levels to predicted 5-HT transporter and 5-HT1B receptor occupancy. Methods To evaluate steady-state tissue drug levels and corresponding targeted 5-HT transporter and 5-HT1B receptor occupancy, each rat (body weight; 350-450 g) was implanted with two osmotic mini-pumps (Alzet model 2ML1; Durect corp., Cupertino CA) each loaded with 2 mL (41.3 mg/mL) of Lu AA21004 HBr salt (free base equivalent; 32.5 mg/mL). The osmotic mini-pumps had an average release rate of 9.5 µL/hr (18.3 mg/kg/day) and the blood, brain and CSF tissue collection began 24, 26, and 28 hours post implantation (n= 4 at all time points but n=3 at 26 hr,) and upon collection, LC/MS/MS analysis was performed to measure the corresponding tissue drug levels. An ex vivo brain slice autoradiography from each animal was performed to determine 5-HT transporter and 5-HT1B receptor occupancy using [3H]DASB and [3H]GR125743, respectively. The remaining brain tissue was used for ex vivo brain-free fraction determination. Results Lu AA21004 plasma exposures (mean ± sd) at 24, 26 and 28 hr post mini-pump implant were 1872 ± 657, 2640 ± 1148 and 2813 ± 763 ng/mL, respectively, indicating systemic exposure reaching steady-state levels. The corresponding brain exposures were 5925 ± 1855, 8089 ± 1640 and 9520 ± 2750 ng/g. The observed steady-state exposures provide a sustained brain to plasma ratio of 3:1. Over the same time course, the 5-HT transporter and 5HT1B receptor occupancies in brain slices were determined to be 81 ± 6%, 81 ± 1% and 89 ± 1% and 48 ± 3%, 50 ± 5% and 73 ± 5%, respectively, indicating the engagement of the targets as predicted from acute ex vivo occupancy studies (data not shown). Interestingly, the observed steady-state Lu AA21004 CSF levels (a potential surrogate measurement for brain-free fraction) were significantly lower, at 3.3 ± 0.8, 3.3 ± 0.7, and 3.4 ± 0.7 ng/mL at 24, 26 and 28 hr post implant. Conclusions In this study, the Lu AA21004 exposure in rat plasma, brain and CSF and the corresponding targeted occupancy of 5-HT transporters and 5-HT1B receptors was determined to establish a tissue exposure-occupancy relationship. The observed CSF exposure, a potential surrogate marker for brain-free fraction, was significantly lower than total brain levels. To further understand this potential disconnect with respect to free drug disposition in CSF and 5-HT target engagement, ex vivo brain-free fraction measurements will be undertaken. The high observed 5-HT target engagement could be due to long transporter/receptor residency of Lu AA21004 or membrane-bound 5-HT targets being exposed to high drug levels within the membrane. Funding: This study was funded by H. Lundbeck A/S.

NR04-08

WHAT HAPPENS NEXT? PHARMACOLOGICAL TREATMENT PATTERNS IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER WHO INITIATE SELECTIVE SEROTONIN REUPTAKE INHIBITORS

Chp.:Peter Classi M.S., Lilly Corporate Center, Indianapolis, IN 46285, Co-Author(s): Susan Ball, Ph.D, T. Kim Le, M.S.

SUMMARY:
Objective: To describe the pharmacological treatment patterns in patients diagnosed with major depressive disorder (MDD) that initiate selective serotonin reuptake inhibitors (SSRIs) as a first line treatment. Methods: This retrospective analysis was conducted in a large US managed care claims database from Jan 2006 to Dec 2008. Patients included in the study were >=18 years old, had >=2 diagnosis codes for MDD, filled at least 1 prescription for an SSRI and had at least 2 years of continuous pharmaceutical and medical benefit enrollment. Patients were excluded from the study if they had any pharmacological depression treatment 12 months prior to the initial SSRI prescription. The following treatment groups were defined: monotherapy as a prescription solely for an SSRI; combination as an overlap of the initial SSRI with another psychotropic medication; adjunctive as a prescription for a psychotropic medication subsequent to the SSRI; switch as the end of the SSRI prescription to a different antidepressant; and discontinued as a lack of prescription refill for initial SSRI with no new psychotropic medication initiated. Results: 2,885 patients met inclusion criteria, mean age was 44 years and 66% were female. More patients initiated SSRI monotherapy (n=2,307, 80.0%) compared to SSRI combination therapy (n=578, 20.0%). Among SSRI monotherapy patients, 877 (38.0%) received adjunctive therapy, 723 (31.3%) continued on SSRI monotherapy with

no treatment changes, 342 patients (14.8%) switched to a different antidepressant, and 365 (15.8%) discontinued treatment during the 12-month post period. Anxiolytics were the most common adjunctive therapy and serotonergic noradrenergic reuptake inhibitors (SNRIs) were the most common switch therapy.Conclusion: Prescription patterns in this study suggest that the majority of patients who are prescribed an SSRI will not stay on monotherapy but will need additional intervention, most commonly the addition of a second medication. Research was funded by Eli Lilly and Company.

NR04-09

USE OF AN ANTIDEPRESSANT, AN ATYPICAL ANTIPSYCHOTIC, AND PSYCHOTHERAPY AND/OR MENTAL HEALTH COUNSELING IN MAJOR DEPRESSIVE DISORDER IN THE USA

Chp.:Lawrence Cohen Pharm.D., Washington State University,College of Pharmacy, P.O. Box 1495, Spokane, WA 99210-1495, Co-Author(s): David A. Sclar, Ph.D., Pharm.D., Linda M. Robison, MSPH, Kimberly K. Laubmeier, Ph.D., Iftekhar D. Kalsekar, Ph.D., Robert A. Forbes, Ph.D.

SUMMARY:
Objective: Discern the extent of use of an antidepressant (AD), a second generation atypical antipsychotic (AP), and psychotherapy (PT) and/or mental health counseling (MHC), either alone, or in combination, among patients diagnosed with major depressive disorder (MDD) in the United States (U.S.). Methods: The U.S. National Ambulatory Medical Care Survey (NAMCS) is a national probability sample designed and conducted by the U.S. National Center for Health Statistics (NCHS) of the U.S. Centers for Disease Control and Prevention; data are collected by the U.S. Bureau of the Census. Data from 2007 were extracted for: (1) office-based physician-patient encounters (office-based visits; OBV) with an ICD-9-CM code for MDD (296.2-296.36, 300.4, 311), without co-morbid mental illness; and (2) physician-patient encounters (OBV) with a diagnosis of MDD marked on the "diagnostic clinical checklist" (DCC), without co-morbid mental illness. Statistical analyses were conducted using the Statistical Analysis System (SAS®; Cary, North Carolina USA) version 9.1.3. The quantitative methods employed addressed the complex survey sampling design. Descriptive statistics and logistic regression derived odds-ratios (OR) and 95% confidence intervals (CI) are reported. Results: In the ICD-9-CM cohort there were 28,457,078 OBV with an MDD diagnosis; 20,090,702 (70.6%) OBV with prescribing (Rx) for AD; 2,420,885 (8.5%) OBV with Rx for AP; 1,981,968 (7.0%) OBV with Rx for both AD and AP; 6,238,727 (21.9%) OBV reported use of PT; 3,271,217 (11.5%) OBV reported use of MHC; 6,809,644 (23.9%) OBV with Rx AD and PT and/or MHC; 1,323,145 (4.6%) OBV with Rx AP and PT and/or MHC; 1,170,038 (4.1%) OBV with Rx AD and AP and PT and/or MHC. In the DCC cohort there were 74,561,367 OBV with MDD; 37,470,406 (50.3%) OBV with Rx for AD; 3,877,385 (5.3%) OBV with Rx for AP; 2,785,941 (3.7%) OBV with Rx for both AD and AP; 8,167,897 (11.0%) OBV reported use of PT; 4,200,495 (5.6%) OBV reported use of MHC; 7,835,337 (10.5%) OBV with Rx AD and PT and/or MHC; 1,628,276 (2.2%) OBV with Rx AP and PT and/or MHC; 1,280,615 (1.7%) OBV with Rx AD and AP and PT and/or MHC. Multivariate logistic regression models indicate use of PT and/or MHC increased when physician specialty was Psychiatry (OR=29.11 (95% CI=13.34 – 63.52) in the ICD-9-CM cohort; OR=46.05 (95% CI=22.26 – 95.24) in the DCC cohort). Conclusion: Among patients with MDD, use of PT and/or MHC increased when physician specialty was Psychiatry, irrespective of use of pharmacotherapy. Funding Source: Bristol-Myers Squibb Company.

NR04-10

DEFINING (CURE FROM) DEPRESSION: DO GENERAL PRACTITIONERS AND PSYCHIATRISTS SING FROM THE SAME HYMN SHEET? THE DESCRIBE SURVEY

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SUMMARY:
OBJECTIVES: To document the outcome dimensions that physicians see as important in defining cure from depression. The study also aimed to analyse physicians' attitudes about depression and to find out whether they affect their prescribing practices and/or the outcome dimensions that they view as important in defining cure. DESIGN: Observational study comprising

a two-part web-based survey.Setting The Belgian Central Medical File database was used to identify physicians for inclusion. PARTICIPANTS: 369 Belgian physicians (264 general practitioners [GPs]; 105 psychiatrists). MAIN OUTCOME MEASURES: A 52-item questionnaire based on six validated scales was used to rate the importance of several depression outcome dimensions. Physicians' attitudes about depression were also assessed using the Depression Attitude Scale. RESULTS: GPs and psychiatrists strongly agreed that functioning and depressive symptomatology were the most important outcome dimensions in defining cure while anxious and somatic symptomatology were least important. GPs and psychiatrists differed significantly in their attitudes about depression (P=0.001). Overall, 69% of psychiatrists and 37% of GPs prescribed antidepressants to >50% of their patients. Logistic regression revealed that the attitude factors of GPs – but not psychiatrists – were significantly associated with their rates of antidepressant prescription (P=0.02) and that certain attitude factors predicted which outcome dimensions were seen as important in defining cure. CONCLUSION: Belgian GPs and psychiatrists strongly agreed on which criteria were important in defining cure from depression but differed in their attitudes about depression. GP attitudes significantly affected their prescription patterns. The outcome dimensions that were considered important in defining cure were influenced by physicians' attitudes – this was more pronounced in GPs than in psychiatrists.

NR04-11

A NATURALISTIC, PRAGMATIC CLINICAL TRIAL OF THE USE OF TMS IN THE TREATMENT OF MAJOR DEPRESSION

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SUMMARY:
Background: Transcranial magnetic stimulation (TMS) has been shown, in controlled clinical trials, to be a safe and effective antidepressant treatment for patients who have failed to benefit from initial antidepressant medication treatment for major depression. There are few studies that have examined the effectiveness of the use of TMS in actual clinical practice. Assessment of naturalistic, pragmatically-oriented clinical outcomes are an important method that can provide real-world validation of information obtained from the controlled clinical trial setting. Methods: Ninety-nine patients with a primary diagnosis of major depressive disorder, who had failed to receive adequate benefit from prior antidepressant treatment, sought treatment with TMS in clinical practice. Forty clinical practices participated in this study. TMS treatment was provided as clinically determined by the evaluating physician. Clinical outcome assessments were performed prior to initiation of the first TMS treatment, at two weeks after treatment began, at the point at which the clinician determined that maximal acute treatment had been reached, and at six weeks if the final acute treatment was longer than six weeks. Assessments included the Clinician Global Impressions Severity of Illness scale (CGI-S), the Patient Health Questionnaire 9 Item scale (PHQ-9), and the Inventory of Depressive Symptoms Self Report scale (IDS-SR). The primary outcome measure was the CGI-S change from baseline. Secondary outcome measures included continuous outcome on the PHQ-9 and the IDS-SR, as well as categorical outcome on all rating scales. Results: The study population included 70/99 females. The average age of the study population was 46.9 years. The most common primary diagnosis was major depressive disorder, recurrent episode, severe, without mention of psychotic behavior (296.33). Eighty-seven percent (87/99) of patients completed acute treatment. Forty-seven patients (47.5%) had failed to benefit from two or more adequate antidepressant medication treatments in current episode. Clinician rated outcome showed 44/99 patients (44.4%) achieved a final CGI-S score of 1 or 2. Patient self report measures were consistent with clinician observation. By IDS-SR criteria, 52/99 patients (53.6%) achieved response and 34/99 patients (35.1%) achieved remission by end of acute treatment. By PHQ-9 criteria, 66/99 patients (66.7%) reported either no or mild depression at the end of acute treatment. Conclusion: In pragmatic, naturalistic clinical practice settings, TMS achieves clinical outcomes and adherence rates that exceed those reported in controlled clinical trials. These data validate the results of prior controlled studies and support the use of TMS as an effective treatment in patients who have failed to benefit from initial antidepressant treatment.

NR04-12

IN VIVO CHARACTERIZATION OF LEVOMILNACIPRAN, A BALANCED SEROTONIN NOREPINEPHRINE REUPTAKE INHIBITOR

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SUMMARY:
The following information concerns a use that has not been approved by the U.S. Food and Drug Administration. Objective: Levomilnacipran (1S, 2R-milnacipran, LVM) is a potent and selective serotonin (5-HT) and norepinephrine (NE) reuptake inhibitor (SNRI) in clinical development for the treatment of major depressive disorder. In this study, LVM was characterized in vivo by measuring brain monoamine levels and assessing efficacy in depression and anxiety models in rodents. Additionally, safety was evaluated in cognition/attention models, sensory motor gating test and in spontaneous locomotor activity assay. The SNRIs duloxetine and venlafaxine were also tested as comparators. Methods: Extracellular levels of 5-HT, NE, and dopamine (DA) in rat prefrontal cortex were measured using in vivo microdialysis. Efficacy in depression was evaluated in mouse forced swim test (FST), mouse tail suspension test (TST); efficacy in anxiety was investigated in rat ultrasonic vocalization (USV) test. Safety assays in rats included 5-choice serial reaction time task (5-CSRTT) for attention, delayed non-matching to position (DNMTP) for cognition, and prepulse inhibition of startle reflex (PPI) for sensory motor gating; spontaneous locomotor activity (LMA) in mice was also assessed. Results: LVM increased cortical levels of 5-HT, DA, and NE with minimum effective dose (MED) of 10 mg/kg. Duloxetine increased 5-HT, DA, and NE levels with MED of 0.63 mg/kg, 2.5 mg/kg, and 10 mg/kg, respectively. Venlafaxine showed similar effects as LVM on DA, but more efficaciously and/or potently increased levels of 5-HT and NE. LVM decreased immobility in TST and FST with MED of 2.5 and 20 mg/kg, respectively. Duloxetine was less potent than LVM in TST (MED = 10 mg/kg) but showed equivalent potency to LVM in FST. Venlafaxine was inactive in TST but its efficacy in FST was comparable to LVM. In the USV model of anxiety, LVM exhibited efficacy from 5 mg/kg. Duloxetine was less potent than LVM (MED= 20 mg/kg) in this model and venlafaxine was inactive. In safety assays, LVM slightly disrupted performance in 5-CSRTT and DNMTP at high doses (40 mg/kg). In comparison, duloxetine impaired performance in these tasks at lower doses (5-10 mg/kg). Venlafaxine (from 20 mg/kg) also slightly disrupted performance in 5-CSRTT but had no marked effect in DNMTP task. LVM had no effect on LMA up to 10 mg/kg. Duloxetine significantly decreased LMA at 40 mg/kg whereas venlafaxine tended to increase LMA in a dose-dependent manner. None of the SNRIs affected sensory motor gating in the PPI test. Conclusions: LVM compared with duloxetine and velafaxine exhibited a "balanced" inhibition of NE and 5-HT uptake in rat prefrontal cortex. In rodent models of depression and anxiety, LVM was more potent and/or efficacious than duloxetine and venlafaxine and showed relatively better safety margins in cognitive and locomotor tests. Supported by Forest Laboratories, Inc and Pierre-Fabre Médicament.

NR4-13

TESTOSTERONE-RELATED SEX DIFFERENCES IN CORTICAL THICKNESS IN THE DEVELOPING BRAIN

Chp: Tuong-Vi Nguyen, M.D. Co-Author(s): Simon Ducharme, M.D., Kelly N. Botteron, M.D., James McCracken, M.D., Megan Mahabir, B.Sc., Mimi Israel, M.D., M.Sc., Alan C. Evans, Ph.D., Sherif Karama, M.D., Ph.D.

SUMMARY:
Objective: Testosterone-related effects on the developing brain have been mostly examined with functional magnetic resonance imaging and voxel-based morphometry, a technique that does not disambiguate thickness-related from surface area-related cortical volume differences. The objective of this study is to examine testosterone-related sex differences in cortical thickness (CTh) in normal children/adolescents. Regions of interest include the superior/inferior frontal gyri, orbitofrontal, cingulate, sensorimotor and insular cortices. Method: Data from the NIH MRI Study of Normal Brain Development (n=282 subjects, 4-24 years old, 469 MRIs obtained longitudinally over 4 years) were analyzed using linear mixed effects models to examine the association between testosterone levels and CTh while controlling for age, sex, total brain volume and time of collection. Results: Significant age by testosterone and sex by testosterone interactions on cortical thickness were found. Males showed a negative association between CTh and

testosterone levels in the left posterior cingulate cortex (PCC) (ages 14-22), progressing to include the left precuneus (ages 16-19), left dorsolateral prefrontal cortex (DLPFC) (ages 16-21) and left anterior cingulate cortex (ACC) (ages 20-22). Females showed a positive association between CTh and testosterone levels in the right somatosensory cortex (SSC) (ages 5-8), a relationship that was later reversed, with a negative association in the same area (ages 20-22). Conclusions: Results suggest the presence of sex- and age-specific effects of testosterone on the developing brain. Sex- and age-specific differences in visuospatial and executive functions (mediated by the PCC, ACC, DLPFC) and fine sensorimotor skills (mediated by the SSC) may be related to testosterone levels throughout childhood and adolescence.

NR4-14

A DOUBLE-BLIND, RANDOMIZED, PLACEBO-CONTROLLED, RELAPSE-PREVENTION STUDY WITH LU AA21004 IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER

Chp: Marianne Dragheim, M.D. Co-Author(s): J-P Boulenger, M.D., Henrik Loft, M.Sc., Ioana Florea, M.D.

SUMMARY:
Objective: To evaluate the long-term efficacy and tolerability of Lu AA21004 in a relapse-prevention study of major depressive disorder (MDD). Method: In this multicenter trial, 639 adult patients with MDD (DSM-IV-TR criteria) and a baseline Montgomery-Åsberg Depression Rating Scale (MADRS) total score >=26 were assigned to 12-week, open-label treatment with Lu AA21004 at 5 or 10mg/day. Remitters [MADRS <=10] at both Weeks 10 and 12 were randomised to either placebo or to continue on their final dose of Lu AA21004 for 24-64 weeks. The pre-defined primary efficacy endpoint was the time to relapse within the first 24 weeks of the double-blind period using the Cox proportional hazard model. Relapse was defined as a MADRS total score >=22 or an insufficient therapeutic response as judged by the investigator.Results: 400 patients were randomised to double-blind treatment with placebo (n=194) or Lu AA21004 (n=206). The primary analysis showed a statistically significant difference in favor of Lu AA21004 versus placebo with a hazard ratio of 2.01 (95% CI: 1.26-3.21; p=0.0035). The proportion of patients who relapsed was lower in the Lu AA21004 group (13%, n=27) than in the placebo group (26%, n=50). Lu AA21004 was well tolerated. Adverse events led to withdrawal of 54 patients (9%) in the open-label period, and 5 patients (3%) for placebo and 16 patients (8%) for Lu AA21004 groups in the double-blind period. The most common adverse events were nausea, headache, and nasopharyngitis during open-label treatment and headache, nasopharyngitis, and accidental overdose equally distributed between the placebo and Lu AA21004 treatment arms in the double-blind period. No clinically relevant changes over time were seen in clinical laboratory results, vital signs, weight, or ECG parameters. Conclusions: In this long-term study, Lu AA21004 (5 and 10mg/day) was effective in preventing relapse in patients with MDD and was well tolerated as short-term and as maintenance treatment.
Trial Registration: This study has the ClinicalTrials.gov identifier: NCT00596817

NR04-15

PARTIALLY AND NON-RESPONDING DEPRESSED PATIENTS TO CITALOPRAM REACHED REMISSION MORE OFTEN WITH ADD-ON TC-5214, A NEURONAL NICOTINIC CHANNEL MODULATOR

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SUMMARY:
Purpose: Step 1 of the STAR*D trial (1) demonstrated a modest (49%) response rate following citalopram (CIT) monotherapy, and in Step 2 the relative superiority of augmentation over switching (35% vs. 27% remission rates) was shown (2). A secondary analysis from a phase IIb study explored whether being a partial vs. non-responder to first line CIT treatment affected a patient's subsequent outcome from add-on TC-5214. Methods: Data were analyzed from a study of 579 patients who met DSM-IV criteria for Major Depressive Disorder (MDD), had a Montgomery Asberg Depression Rating Scale (MADRS) score >27 and a Clinical Global Impression - Severity of illness (CGI-S) score =4, received 8 weeks open label treatment with CIT. Patients with an inadequate response (n=270), defined as a MADRS change from baseline score =50%, an absolute score =17 and a CGI-S score =4 were randomized to 8 weeks double-blind treatment with add-on TC-5214 (flexible dose 1, 2, 4 mg bid) or add-on placebo (PL) to continuing CIT. In this analysis, inadequate responders were defined at the end of open treatment as (a) non-responders (MADRS change <10%) or (b) partial responders (MADRS change 10-49%). Remission rates at the end of double-blind treatment were compared on the Hamilton Depression Rating Scale (HAMD-17) (=7). Results: In patients with non-response to CIT (n=106), CIT

+ TC-5214 (n=54) statistically significantly improved HAMD-17 remission vs. CIT + PL (n=52) (33% vs. 15%, p=0.04). In patients with partial response to CIT (n=159), CIT + TC-5214 (n=79) statistically significantly improved HAMD-17 remission vs. CIT + PL (n=80) (43% vs. 21%, p=0.004).
Conclusions: a) For both partial and non-responders to CIT, a statistically significant higher proportion receiving CIT + TC-5214 reached remission compared to those receiving CIT + PL. b) Although not analyzed for statistical significance, partial responders reached remssion numerically more often than non-responders. Research funded by Targacept, Inc. 1. Trivedi et al. (2006). Evaluation of Outcomes With Citalopram for Depression Using Measurement-Based Care in STAR*D: Implications for Clinical Practice. American J Psychiatry 163:28-40. 2. Rush et al. (2006). Acute and Longer Term Outcomes in Depressed Outpatients Requiring One or Several Treatment Steps: A STAR*D Report. American J Psychiatry 163:1905-1917.

NR04-16

POOLED ANALYSIS OF EFFICACY OF ONCE-DAILY EXTENDED RELEASE QUETIAPINE FUMARATE TO DETERMINE THE EFFECT AS ADJUNCT TO SSRI OR SNRI IN MDD PATIENTS

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SUMMARY:
Objectives: To evaluate the efficacy of quetiapine XR (QTP-XR) as adjunct to SSRI or SNRI in patients with MDD and inadequate response to ongoing antidepressant (AD) therapy. Methods: Pooled data were analyzed from two 6-wk, double-blind, randomized, placebo (PBO)-controlled trials (D1448C00006/D1448C00007) of QTP-XR (150 and 300mg/day)+AD. This post-hoc subgroup analysis evaluated effect of AD type (SSRI or SNRI) on efficacy outcomes including: change from randomization at Wk 6 in MADRS (primary), HAM-D, and CGI-S total scores. Response (>=50% reduction in MADRS total score) and remission (MADRS total score <=8) at Wk 6 were evaluated. Results: In patients receiving QTP-XR as adjunct to SSRIs (n=569), QTP-XR 150 and 300mg/day vs PBO+SSRI significantly improved MADRS total score (least squares means [LSM] change, -14.7, p<0.05; both doses vs -12.6) and HAM-D total score (-13.5, p<0.05; -13.7, p<0.01 vs -11.6). QTP-XR 150 (-1.7, p<0.01) but not 300mg/day (-1.6, p=0.065) significantly improved CGI-S total scores vs PBO+SSRI (-1.3). Response rates: 55.6% (p=0.163) QTP-XR 150mg/day; 59.0% (p<0.05) QTP-XR 300mg/day vs PBO+SSRI (48.5%). Remission rates: 38.1% (p<0.05) QTP-XR 150mg/day; 38.2% (p<0.05) QTP-XR 300mg/day vs PBO+SSRI (27.2%). In patients receiving QTP-XR as adjunct to SNRIs (n=248), QTP-XR 150 (LSM change, -14.7, p<0.01) and 300mg/day (-15.0, p<0.01) significantly improved MADRS total score vs PBO+SNRI (-10.8). QTP-XR 150 and 300mg/day significantly improved HAM-D total score (-13.4, p<0.01; both doses vs -10.0) and CGI-S (-1.5, p<0.05; -1.6, p<0.01 vs -1.1) vs PBO+SNRI. Response rates: 50.0% (p=0.309) QTP-XR 150mg/day; 60.0% (p<0.05) QTP-XR 300mg/day vs PBO+SNRI (42.1%). Remission rates: 31.7% (p<0.05) QTP-XR 150mg/day; 31.1% (p<0.05) QTP-XR 300mg/day vs PBO+SNRI (15.8%). Conclusions: In this analysis in patients with MDD and inadequate response to ongoing AD, adjunctive QTP-XR (150 and 300mg/day) was effective in both SSRI and SNRI subgroups. AstraZeneca funded.

NR04-17

META-ANALYSES OF ASENAPINE EFFICACY VS PLACEBO IN BIPOLAR I DISORDER AS MONOTHERAPY AND ADJUNCT THERAPY COMPARED WITH OTHER ATYPICAL ANTIPSYCHOTICS

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SUMMARY:
Objective: Superiority of flexible-dose asenapine (5 or 10 mg twice daily [BID]) monotherapy vs placebo for mania in bipolar I disorder patients was demonstrated in 2 randomized, double-blind, placebo- and olanzapine-controlled 3-week trials. Superiority of flexible-dose asenapine (5 or 10 mg BID) vs placebo as adjunctive therapy in bipolar I disorder patients with incomplete response to lithium or valproate monotherapy was

shown in a separate randomized, double-blind, placebo-controlled trial. We describe meta-analyses of asenapine vs placebo and other atypical antipsychotics (AAPs) based on available placebo-controlled trials. Methods: The primary endpoint was change from baseline Young Mania Rating Scale (YMRS) total score at week 3 vs placebo. Data for asenapine (5 or 10 mg BID) and comparator AAPs were obtained from all monotherapy trials (n=19) or adjunct treatment trials in patients with incomplete response to lithium or valproate monotherapy (n=10) published at the time of the analysis. Meta-analyses used a random-effects model; Cochran's Q statistic assessed study homogeneity. The effect of compound was investigated with (weighted) linear regression. Results: Combining the asenapine monotherapy studies, the estimated difference in the change in baseline YMRS total score with asenapine was superior to placebo by 4.5 points (95% CI, 2.5–6.4; p<0.0001); results across studies were homogeneous (Q=0.7, df=1, p=0.41). The effect size of asenapine vs placebo was comparable to the overall effect size of AAPs (4.8 points; 95% CI, 3.7–6.0). For the latter analysis study results were not homogeneous (Q=69.5, df=19, p<0.001); a notably large treatment effect was observed for 1 risperidone study (Khanna et al. Br J Psychiatry 2005;187:229–234) and aripiprazole studies tended to have small treatment effects. A potential source of heterogeneity could be a difference across compounds, however, the overall F test for differences among compounds could not be rejected (F[5,15]=1.58, p=0.23). The treatment effect for adjunctive asenapine was superior to placebo by 2.4 points (95% CI, 0.5–4.3); this was comparable to the overall AAP adjunctive treatment effect vs placebo (2.6 points; 95% CI, 1.9–3.3). The adjunctive therapy study results across AAPs were markedly homogeneous (Q=8.1, df=9, P=0.53). Discussion: The clinical trial program for asenapine reveals statistical superiority over placebo, as monotherapy or adjunctive therapy to lithium or valproate, for acute bipolar mania. When considered in light of published clinical trials indicating that asenapine appears to be well tolerated in patients with bipolar mania, these meta-analyses are instructive in revealing that, within the class of AAPs, the efficacy of asenapine versus placebo for both monotherapy and adjunctive therapy is similar to that of other treatment options. (This research was supported by Merck, Whitehouse Station, NJ.)

NR04-18

PREVALENCE AND PATTERN OF AXIS I COMORBIDITY IN MAJOR DEPRESSIVE DISORDER AND BIPOLAR DISORDERS IN A TERTIARY CLINICAL SAMPLE

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SUMMARY:
Objectives: National surveys and clinical studies have shown that comorbidity in mood disorders is a rule rather than an exception. However, the pattern of Axis I comorbidity in mood disorders remains unclear, especially in clinical settings. This study explores the pattern of Axis I comorbidity in a sample of patients who are seen for routine clinical care in a tertiary academic center. Methods: Patients who are seen for routine psychiatric outpatient care in the Mood and Anxiety Clinic of Mood Disorders Programs at University Hospitals Case Medical Center were assessed with MINI-STEP-BD version (Mini International Neuropsychiatric Interview Systematic Treatment Enhancement Program for Bipolar Disorder) at the initial evaluation visit. The prevalence of co-occurrence of anxiety disorders, substance use disorders, eating disorders, and attention deficit hyperactivity disorder (ADHD) with major depressive disorder (MDD) and bipolar disorders was calculated. The pattern of these comorbidities with mood disorders was analyzed. Results: Among the 200 patients who were assessed with MINI, 80 had MDD, 76 had bipolar I disorder (BPI), 23 had bipolar II disorder (BPII), 6 had bipolar disorder not otherwise specified, and 15 had no mood disorder. The prevalence of any lifetime comorbid anxiety disorder was 84%, 79%, and 87% for MDD, BPI, and BPII, respectively. The prevalence of any lifetime comorbid alcohol use disorder was 21%, 53%, and 65% for MDD, BPI, and BPII, respectively and the prevalence of any lifetime comorbid drug use disorder was 9%, 36%, and 26% for MDD, BPI, and BPII, respectively. Comorbid lifetime adult ADHD was 10%, 22%, and 9% for MDD, BPI, and BPII, respectively. The top four patterns of comorbidity were MDD + any anxiety disorder (22%), bipolar disorder + any anxiety disorder (14%), bipolar disorder + any anxiety + any alcohol use disorder (8%), and bipolar disorder + any anxiety + alcohol use disorder + drug use disorder (7%). There were only 5% of patients with an anxiety disorder alone, 4% with bipolar

alone, and 4% with MDD alone. More than 8% of patients with bipolar disorder also had an anxiety disorder and ADHD with or without a substance use disorder. Conclusion: Axis I comorbidity is highly prevalent in patients with mood disorders in this clinical sample, which is consistent with the findings from national epidemiological studies. A structured systematic diagnostic interview is essential to uncover these comorbidities. The number of comorbid Axis I disorders in bipolar disorders undoubtedly complicates the treatment of bipolar disorder. Clinical trials targeting patients with different comorbidities are urgently needed to provide guidance for clinical management.

NR04-19

A RANDOMIZED PLACEBO-CONTROLLED TRIAL OF DULOXETINE IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER AND ASSOCIATED PAINFUL PHYSICAL SYMPTOMS

Chp.:Paula Gaynor Ph.D., Lilly Corporate Center, DC 4103, Indianapolis, IN 46285, Co-Author(s): Murali Gopal, M.D., Wei Zheng, Ph.D., James M. Martinez, M.D., Danette Hann, Ph.D., Michael J. Robinson, M.D., Lauren B. Marangell, M.D.

SUMMARY:
Objective: Physical symptoms, often painful, are commonly associated with major depressive disorder (MDD) and are associated with poorer outcomes. Duloxetine is known to be effective in the treatment of both MDD and certain painful conditions without comorbid MDD. Many patients who suffer from MDD initially present with painful physical symptoms. The impact of duloxetine on painful symptoms associated with MDD has been reported in MDD clinical trials, but few studies specifically evaluated patients with MDD and painful symptoms of moderate or greater severity at baseline, as was the case in this trial. Methods: This prospective double-blind randomized clinical trial enrolled adult outpatients presenting with MDD (DSM-IV-TR criteria; Montgomery Asberg Depression Rating Scale [MADRS] Total Score = 20) and at least moderate pain (Brief Pain Inventory [BPI-SF] average pain rating = 3). Eligible subjects were randomly assigned to either placebo (N=266) or duloxetine (N=262) 60 mg once daily. Co-primary outcomes were the mean change from baseline to endpoint in the MADRS total score and the mean change from baseline in the BPI average pain rating over 8 weeks of treatment. The Sheehan Disability Scale Global Functional Impairment score (SDS) was used to assess functioning. The mean changes from baseline to endpoint in MADRS total score, BPI average pain rating and SDS, were analyzed using mixed-effects model repeated measures (MMRM) approach, and the remission rate in MADRS total score was analyzed using the Cochran-Mantel-Haenszel test with stratification by investigator. The percentage of subjects with each treatment emergent adverse event and the percentage of subjects that discontinued due to adverse events were analyzed using Fisher's exact test. Results: Compared with placebo, there was significantly greater improvement from baseline to endpoint for duloxetine in the mean MADRS Total Score, mean BPI average pain rating, and mean SDS ($p<.05$). There was a significantly higher remission rate, defined a priori as the percentage of patients with MADRS Total Score = 12 at both of the last 2 study visits, among duloxetine-treated subjects compared with placebo ($p<.05$). Duloxetine treatment emergent adverse events (=5% and at least twice as great as placebo) included: nausea, somnolence, constipation, decreased appetite, and hyperhydrosis. Rates of discontinuation due to adverse events were greater for duloxetine than placebo ($p<.05$; 8.0% vs 3.4%, respectively). Conclusion: These results support duloxetine's efficacy and tolerability in the treatment of depression, associated painful physical symptoms, and overall functioning in patients with MDD and at least moderate pain associated with MDD.

NR04-20

DEMOGRAPHICS AND OPEN-LABEL ESCITALOPRAM THERAPY IN ADULTS WITH MAJOR DEPRESSIVE DISORDER: PRIOR TO ADJUNCTIVE LISDEXAMFETAMINE DIMESYLATE OR PLACEBO

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SUMMARY:
Objective: To describe baseline characteristics and effects of prospective open-label escitalopram therapy on symptoms of major depressive disorder (MDD) in adults prior to randomization of those

with residual symptoms to augmentation with lisdexamfetamine dimesylate or placebo. Method: This multicenter trial enrolled adults (18-55 y) with MDD; comorbid ADHD and other Axis I disorders (by SCID-I) were excluded. Prospective open-label escitalopram for 8 weeks was followed by randomization of adults with residual symptoms (17-item Hamilton Rating Scale for Depression [HAM-D17] >/=4) to 6-week, double-blind augmentation with LDX or placebo. Efficacy assessments included: Montgomery-Asberg Depression Rating Scale (MADRS) total; HAM-D17; Clinical Global Impressions-Severity (CGI-S); Quick Inventory of Depressive Symptomatology-Self Report (QIDS-SR); and the Global Fatigue Index (GFI) of the Multidimensional Assessment of Fatigue (MAF). Safety assessments included open-label treatment adverse events (AEs), vital signs, and laboratory findings. Results: Of 246 enrolled adults, 239 received escitalopram and 10 withdrew due to TEAEs during open-label treatment; 177/239 (72.0%) met criteria for residual symptoms (HAM-D17>/=4) and were randomized. During open-label treatment, 59.4% were female; 74.1% were white; 6.3% were Hispanic. Mean (SD) age was 37.9 (10.21) y and BMI was 28.8 (5.25) kg/m2. Mean (SD) time since first MDD diagnosis and since onset of current episode was 6.2 (8.17) y and 15.5 (28.58) months, respectively; 174/239 (72.8%) experienced >/=1 prior (eg, >/=2 total) depressive episodes; 231 had no history of psychiatric hospitalizations; 94 received prior pharmacotherapy for MDD. Mean (SD) MADRS total, HAM-D17, and QIDS-SR scores at lead-in baseline were 32.8 (4.86), 25.1 (3.05), and 14.5 (4.08), respectively; mean (SD) MAF GFI score was 33.8 (8.91). Mean (SD) change from baseline at week 8 in MADRS (n=196) was -16.6 (9.31); in HAM-D17 (n=195) was -12.1 (6.71); and in QIDS-SR (n=216) was -5.5 (4.73); mean (SD) change in MAF GFI (n=216) was -9.6 (12.19). Of 239 participants, 2 were mildly ill and 237 were moderately to severely ill by CGI-S at baseline; at week 8, of 220 participants, 76 were borderline or not ill, 61 were mildly ill and 83 were moderately to markedly ill. For adults receiving open-label treatment, 72.0% had AEs; most were mild or moderate; 2 serious AEs occurred. AEs with an incidence >/=5% were dry mouth (15.5%), nausea (15.5%), headache (8.4%), diarrhea (7.1%), insomnia (7.1%), somnolence (7.1%), nasopharyngitis (6.7%), and anorgasmia (5.4%). No significant mean changes were seen in vital signs and laboratory findings. Conclusion: While symptoms for adults with MDD decreased with open-label antidepressants, more than 70% had residual symptoms (HAM-D17>=4) after 8 weeks of escitalopram. The safety profile of escitalopram was consistent with previous reports. Clinical research was funded by the sponsor, Shire Development Inc.

NR04-21

SCREENING FOR BIPOLAR DISORDER AND USE OF ANTIDEPRESSANT DRUGS IN BIPOLAR DEPRESSION IN ITALY

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SUMMARY:
Introduction: The prevalence of bipolar disorders (BD) in the community is in debate and the prescription of antidepressant drugs (ADs) in bipolar depression could be underestimated. Objective: To evaluate both the prevalence of BD and the appropriateness of ADs' prescriptions. Methods: Design of the study: community survey. Study population: sample randomly drawn from municipal records of adult population. Sample size: 4999 subjects from 6 Italian regions. Tools: questionnaire on psychotropic drugs consumption, Structured Clinical In¬terview for DSM-IV modified (ANTAS), Mood Disorder Questionnaire (MDQ). Results: 3398 subjects were interviewed (68% of the recruited sample). Positivity at MDQ was higher in males than in females (3.4% vs 2.8%) but the dif¬ference was not statistically significant (OR=1.2, P=0.37). The association between MDQ positivity and a diagnosis of Depressive Episode (DE) was statistically significant for males (OR=14.9, P<0.0001) and for females (OR=8.3, P<0.001); 30% of the subjects with MDQ positivity and DE lifetime diagnosis were taking ADs. Conclusions: The positivity prevalence at the MDQ was similar to community surveys in other settings. The use of ADs in people with MDQ positivity and DE diagnosis needs to be taken into account.

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NR04-22

EFFICACY AND TOLERABILITY OF MULTIPLE DOSES OF LU AA21004 IN AN 8-WEEK TREATMENT OF ADULTS WITH MAJOR DEPRESSIVE DISORDER

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SUMMARY:
Objective: Lu AA21004 is a multi-modal antidepressant that acts as a 5-HT3 and 5-HT7 receptor antagonist, 5-HT1A receptor agonist, 5-HT1B receptor partial agonist, and inhibitor of the 5-HT transporter in recombinant cell lines. Lu AA21004 is in clinical development for the treatment of major depressive disorder (MDD). Methods: Adults aged 18-75 yrs, with a diagnosis of MDD, major depressive episode of >3 months in duration, and MADRS >26, were randomized to receive Lu AA21004 1 mg, 5 mg, or 10 mg or placebo for 8 weeks. Assessments of depressive symptoms were made at baseline, Weeks 1, 2, 4, 6, and 8. Efficacy was measured using reduction in HAM-D24 total scores after 8 weeks of treatment compared with placebo. Response rates (defined as a =50% decrease in HAM-D24 total score from baseline), remission rates (defined as a MADRS total score =10), and mean CGI-I scores at Week 8 were also assessed. Adverse events (AEs) were assessed throughout the study. Results: A total of 560 subjects (mean age 46.4 yrs) from Europe, Asia, Australia, and South Africa were randomized. After 8 weeks of treatment, there were significant reductions from baseline in the HAM-D24 total score for all Lu AA21004 treatment groups compared with placebo (P<0.001). Response rates at Week 8 were 47.5%, 45.3%, and 49.6% for the Lu AA21004 1 mg, 5 mg, and 10 mg groups, respectively, compared with 23.0% for the placebo group (P<0.001 for all). Remission rates at Week 8 were 25.9% (P=0.062), 28.8% (P=0.015), and 26.6% (P=0.026) for the Lu AA21004 1 mg, 5 mg, and 10 mg groups, respectively, compared with 16.5% for the placebo group. Mean CGI-I scores at Week 8 were 2.37, 2.37 and 2.29 for the Lu AA21004 1 mg, 5 mg, and 10 mg groups, respectively, compared with 2.84 for the placebo group (P<0.001 for all). The most common AEs in the Lu AA21004 1 mg, 5 mg, and 10 mg, and placebo groups were nausea (7.9%, 15.7%, 12.9%, 4.3%), headache (6.4%, 11.4%, 5.0%, 7.9%), and dizziness (0.7%, 3.6%, 6.5%, 2.1%), respectively. Conclusions: In this 8-week study, treatment with Lu AA21004 1 mg, 5 mg, and 10 mg, significantly reduced symptoms of depression compared with placebo in adults diagnosed with MDD. Treatment with Lu AA21004 was well-tolerated in this study.
Funding: Takeda Pharmaceutical Company, Ltd.

NR04-23

CORRELATION BETWEEN FUNCTIONALITY AND SUBJECTIVE PERCEPTION OF IMPROVEMENT UNIPOLAR DEPRESSED PATIENTS IN REMISSION

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SUMMARY:
Introduction In treatment studies of unipolar depression, remission is defined by the score achieved in sympthomatic rating scales. Many patients in sympthomatic remission cannot regain the funcionality levels they had prior to getting sick, and attain an incomplete recovery in this sense. Functional improvment is rarely included in studies of effectiveness and should be included in the concept of recovery operation as resolution of symptoms. The objective of this study is to evaluate whether a correlation exists between subjective perception of improvement and functionality in depressive patients in symptomatic remission. Materials and methods.Seventy eight ambulatory patients belonging to two public hospitals in the

cities of Buenos Aires and La Plata were included in this cross sectional study. After verifying the diagnosis of unipolar depression with the affective disorders module of structures interview MINI 500, HAM-D scale was administered to determine symptomatic remission (less or equal to 7 points), and FAST scale as measurement of functionality. All patients completed self-administered inventory of depressive symptoms of Beck (BDI) as a way to evaluate the subjective perception of improvement. Scores of BDI were separated in two dimensions, affective-cognitive (F1) and somatic (F2). Correlation was analyzed between scores of FAST and BDI (total and both domains).
Results FAST scale's scores showed a statistically significant positive correlation with BDI total scores (Spearman's Rho = 0.682 p < 0,001) and with both dimensions (BDI F1, Spearman's Rho = 0.596, p < 0,001; BDI F2, Spearman's Rho = 0.703, p < 0,001). In regression analysis, including other variables like number of episodes, age of first episode and HAM-D scores, somatic dimension of BDI was a significant predictor of the variability of FAST scores (r2 = 0,50). Conclusions The somatic domain score from the BDI questionnaire was an important predictor of funcionality in this sample. This would suggest that the subjective perception of discomfort, at the somatic level, is associated with poorer global functioning in depressed patiens with symptomatic remission. This happens even if they have the same perception of affective-cognitive symptoms. In conclusion, in these patients remission scores did not ensure the functionality or subjective well-being.

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NR04-24

VANADIUM, CHROMIUM AND MANGANESE LEVELS IN CEREBROSPINAL FLUID FROM PATIENTS WITH DEPRESSIVE DISORDERS, AS COMPARED TO MATCHED CONTROLS

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SUMMARY:
Objective/Hypothesis: Several studies have investigated the levels of trace metals in patients with mood disorders; mainly in tissues as serum, whole blood, hair and urine. When investigating mood disorders, it is tantamount to sample as close as possible to the organ of interest. We chose to measure the trace metals in cerebrospinal fluid from patients suffering from depressive disorders. Vanadium, chromium and manganese all have relevance to the hypothesis that the pathophysiology of depression involves an attenuated glucose metabolism in astroglia 1). Methods: Spinal fluid samples from 83 patients with depressive disorders were analyzed for vanadium, chromium and manganese, utilizing an Agilent quadrupole ICPMS 7500c. Of the 83 patients, there were 41 men, mean age was 43.9 years with a standard deviation (SD) of 13,8 years, range 20 – 82 years and 42 women, mean age 45.0 years, and age range 19 – 71 years. Control samples, age-and sex-matched for each of the patients, were obtained from the Neurological clinic, Haukeland University Hospital. These samples were from patients not suffering from neurological diseases. One patient sample could not be analyzed because of too small sample volume. Results: We chose to use the difference between a patients and his/her corresponding control sample (?C). ?C for vanadium was: mean = 0,81 ng/ml, SD = 0,35, range = 0.2 – 2.1. ?C for chromium was 4.6 ng/ml, SD = 2.88 and range: -1.4 - 9.8. For manganese median ?C was 0.30 ng/ml and range: -3.3 – 4.6. All ?C were significantly different from zero, p = 0.000. Discussion/Significance: Our findings confirm earlier findings in serum from depressed and bipolar patients. For chromium, there had been found lower values compared to both non-depressed and recovered. For manganese increased levels in depression and lowered in mania had been found.

In addition to measuring as close as possible to the organ of interest, our results all are in accordance with the hypothesis that depressive pathophysiology is an attenuated glucose metabolism in astroglia 1). Both vanadium and chromium are close involved in insulin action. Only astroglia, not neurons have a glucose absorption influenced by insulin. And 80% of the brain manganese pool is part of the two astroglial-unique metalloenzymes pyruvat carboxylase and glutamine synthase.

NR04-25

A POTENTIAL ANTIDEPRESSIVE EFFECT OF THE ORAL HYPOGLYCAEMIC SULPHONYLUREAS

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SUMMARY:
Objective/Hypothesis: We tried to determine if the OR for the use of antidepressants and oral antidiabetic agents, varies according to the type of hypoglycaemic treatment. Method/Proposed Methods: We used data from the Norwegian Prescription Database for 2006, aged 20 and above (3,434,233 persons). All medications were dispensed by pharmacies and in addition collected by the patients. Only drugs used on a needed and long-lasting basis were registered (i.e. at least 3 months regular use). The ATC groups were A10A (insulins), A10B (oral antidiabetics; biguanides, sulphonylureas and thiazolidinediones) and N06A (antidepressants). Discussion/Significance: OR was calculated by logistic regression, sex- and age-adjusted. The alpha level was set at 0.0005 because of the great number of patients. Use of sulphonylurea only had an OR of 1.27 for co-prescription with antidepressants, 95% confidence interval (CI) 1.21 – 1.34, significantly lower compared to a biguanide alone (1.59, 1.54 - 1.64), which was the most common regimen. Sulphonylurea alone had the significantly lowest OR of all, followed by sulphonylurea in combination with other oral antidiabetics. Of these groups of hypoglycaemic agents, only sulphonylureas stimulate insulin release per se. Given 1,2) the hypothesis that depression is an attenuated cerebral glucose metabolism in astroglia and 3) that astroglia, not neurons, have a glucose absorption influenced by insulin, the insulin-releasing properties of sulphonylureas might include an antidepressant effect.

NR04-26

THE CHARACTERISTICS OF BIPOLAR OUTPATIENTS IN REMISSION SHOWING FALSE-NEGATIVES ON THE MOOD DISORDER QUESTIONNAIRE

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SUMMARY:
Objectives : This study aimed to examine demographic and clinical characteristics in false-negative Mood Disorder Questionnaire(MDQ) in bipolar patients. Method : The study sample included 60 DSM-IV bipolar outpatients in remission state. Patients completed Korean version of Mood Disorder Questionnaire(K-MDQ) and Korean version of Beck Cognitive Insight Scale(K-BCIS). A trained clinician administered the Young Mania Rating Scale(YMRS), the Hamilton Depression Rating Scale(HDRS) and the Global Assessment of Functionning(GAF). According to K-MDQ score excluding further two questions, patients were categorized into two groups (MDQ=7 : K-MDQ-positives and MDQ<7 : K-MDQ-negatives). Demographic and clinical characteristics between these two groups were analyzed. Results : There was not significantly difference in demographic variables and clinical variables except K-BCIS between K-MDQ-positives and K-MDQ-negatives. K-MDQ-negatives reported statistically significantly lower score on the BCIS index score and Reflectiveness index score. Conclusion : These results suggest that the false-negative MDQ bipolar patients score lower cognitive insight, and lack of insight is a confounding factor in detecting bipolar patients by using MDQ.

NR04-27

EFFECTIVENESS OF ARIPIPRAZOLE IN BIPOLAR DISORDER PATIENTS TAKING COMPLEX PHARMACOTHERAPY

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SUMMARY:
Objectives: Efficacy studies have informed treatment of bipolar disorder (BD) patients with aripiprazole as monotherapy or added to lithium or valproate, but have excluded patients with complicated comorbidities and/or taking complex pharmacotherapy. We reviewed measurement-based care treatment records of such patients to address questions clinicians may commonly encounter regarding the effectiveness of aripiprazole in patients with challenging forms of bipolar disorder. Methods: We naturalistically administered open aripiprazole to Stanford University Bipolar Disorders Clinic patients assessed with the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) Affective Disorders Evaluation, and monitored longitudinally with the STEP-BD Clinical Monitoring Form. Results: 97 patients (52 BD I, 40 BD II, 5 BD NOS, mean±SD [median] age 40.2±15 [37.5] years, 75.3% female, with 72.2% having at least one lifetime comorbid psychiatric disorder) received aripiprazole, initiated at Stanford in 80 patients, and initiated prior to Stanford in 17 patients. Baseline mood state was most often syndromal or subsyndromal depression (49.5%) or euthymia (28.9%). For all 97 trials, mean aripiprazole final dose was 17.6±10.3 (15) mg/day and mean total duration was 411±509 (190) days. In 80 trials started at Stanford, mean initial dose was 7.7±4.9 (5) mg/day, and after a mean of 75±131 (20) days, mean maximum dose was 22.0±9.4 (27.5) mg/day, most often given with dinner or at bedtime. For all 97 trials, aripiprazole was combined with a mean of 2.9 (at least 2 in 76.3% of patients, at least 3 in 60.8%) other prescription psychotropic medications and a mean of 1.1 prescription non-psychotropic medications. Final compared to baseline mean Clinical Global Impression-Severity of Illness (CGI-S) score in 69 patients with baseline mood symptoms improved by 0.9 ($p < 0.001$), in 28 patients with baseline euthymia worsened by 0.6 ($p = 0.01$), and in all 97 patients improved by 0.5 ($p = 0.002$). Among 27 patients who retained/attained recovered status taking aripiprazole at Stanford for at least 2 months, 13 (48.1%) relapsed after 318.23±284.10 (240) days. For all 97 trials, subsequent psychotropic was added in 54.6% of patients after 142±141 (104) days, with an overall trial duration of 592±577 (429) days. In 45.4% of patients with no subsequent psychotropic medication added, mean trial duration was 192±294 (91.5) days. Subsequent additional pharmacotherapies were added due to depressive symptoms in 29.9% of patients, anxiety or insomnia in 12.4%, mood elevation symptoms in 7.2%, or weight control in 5.2%. Aripiprazole was discontinued in 60.8% of trials, after on average 281±392 (126) days, most often due to inefficacy for mood (in 32.0%, primarily depression) or adverse effects (in 22.7%, primarily central nervous system side effects). Aripiprazole was not discontinued in 39.2%, with a mean duration of 612±603 (477) days. Aripiprazole yielded a non-significant 1.8 lbs mean weight increase from first observation (176.3±44.1 lbs) to last visit taking aripiprazole (178.1±45.3 lbs), with 17.0% (16/94) having 7% or greater weight gain. Discussion: Aripiprazole decreased illness severity in symptomatic BD outpatients taking complex pharmacotherapy, but was frequently discontinued (albeit on average after 281 days), consistent with the challenging nature of this population.

NR4-28
Work Productivity Among Full-Time Employees By Severity Of Depression As Measured By The WPAI & HPQ

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SUMMARY:
Objectives: The goal of the current study was to examine the burden of depression symptoms on employees using two different measures of work productivity. Methods: Individuals (=18 years of age) employed full-time with diagnosed depression (excluding bipolar disorder) completed a Web-based computer-generated 25-minute survey in February 2010 (study population identified by Harris InteractiveTM). The survey used validated scales including the Patient Health Questionnaire (PHQ-9) to assess depressive symptoms, and the Health and Work Performance Questionnaire (HPQ) and Work Productivity and Activity Impairment (WPAI) questionnaires to assess work productivity (absenteeism and presenteeism). Higher scores on the HPQ and WPAI absenteeism scales represent more hours of work missed. Higher scores on the HPQ presenteeism scale represent better performance, while lower scores represent better performance on the WPAI presenteeism scale. Work productivity was assessed by depression severity using a trend test based on an analysis of covariance with age, gender and PHQ-9 score as independent variables. Inferential statistics were used to describe

and quantify inter-cohort differences. Results: A total of 1,051 full-time employees were included in the analysis (58% female, mean age 47 yrs, and 38% held professional employment). PHQ-9 scores indicated 423 (40.25%) employees with no depression symptoms, 319 (30.35%) with mild symptoms, 166 (15.79%) with moderate symptoms, 82 (7.80%) with moderately severe symptoms, and 61 (5.80%) with severe symptoms. All levels of depression were associated with decreased work productivity. Results of the HPQ (presenteeism, $p<0.0001$) and WPAI (absenteeism and presenteeism, $p<0.0001$) showed progressive worsening of work productivity in employees by increasing severity of depression. The WPAI was able to associate depression severity with good sensitivity (Pearson's R coefficient of correlation with PHQ-9 was 0.3158 for absenteeism and 0.6055 for presenteeism with trend test $p<0.0001$ for both). Conclusions: Depression has a significant impact on reducing job productivity as measured by both the WPAI and HPQ. Presenteeism and absenteeism worsened with increasing depression severity, although decreased productivity was seen at all depression levels. Funding: Takeda Pharmaceutical Company, Ltd.

NR04-29

EFFICACY AND TOLERABILITY OF LU AA21004 5 MG IN A 6-WEEK TREATMENT OF ADULTS WITH MAJOR DEPRESSIVE DISORDER

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SUMMARY:
Objective: Lu AA21004 is a multi-modal antidepressant that acts as a 5-HT3 and 5-HT7 receptor antagonist, 5-HT1A receptor agonist, 5-HT1B receptor partial agonist, and inhibitor of the 5-HT transporter in recombinant cell lines. Lu AA21004 is in clinical development for the treatment of major depressive disorder (MDD). Methods: Adults aged 18-75 years, with a diagnosis of MDD, a current major depressive episode of at least 3 months in duration, and a baseline MADRS total score =30 were eligible for this multicenter, randomized, double-blind, placebo-controlled, parallel-group study. After initial screening, subjects were randomized to receive either Lu AA21004 5 mg or placebo for 6 weeks followed by a 2-week medication-free discontinuation period. Efficacy was measured using change from baseline in HAM-D24 total score at Weeks 1, 2, 4, and 6 of treatment compared with placebo. Response (defined as >50% reduction in HAM-D24 total score from baseline) and remission rates (defined as MADRS <10) at Week 6 were also measured. Adverse events (AEs) were assessed throughout the study. Results: A total of 600 subjects (mean age 42.4 years) from the US were randomized into the study. There were no significant differences in the reduction of the HAM-D24 total score from baseline between the Lu AA21004 5 mg and placebo groups at any timepoint. There were no significant differences between the Lu AA21004 5 mg and placebo groups in response (46.2% for both) or remission rates (29.1% in the Lu AA21004 5 mg group and 32.2% in the placebo group) at Week 6. The majority of AEs were considered mild to moderate in intensity, with the most common across the Lu AA21004 and placebo groups being headache (17.1% and 15.1%), nausea (19.1% and 9.4%), diarrhea (11.4% and 7.0%), dry mouth (8.4% and 6.4%), and dizziness (6.4 % and 7.4%), respectively. Conclusions: In this study of adults with MDD, Lu AA21004 5 mg did not differ significantly from placebo in reducing HAM-D24 total scores or in overall response or remission rates. Treatment with Lu AA21004 5 mg was well-tolerated in this study. Funding: This study was sponsored by the Takeda Pharmaceutical Company, Ltd.

NR04-30

GENETIC AND CLINICAL CORRELATES OF SUICIDAL BEHAVIOR IN BIPOLAR PATIENTS ACCORDING TO FIRST EPISODE POLARITY

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SUMMARY:
INTRODUCTION: Bipolar patients are at high risk of attempting suicide. The determination of a hypothetical risk profile for attempting suicide could help clinicians in the management of this serious medical complication. Our aim was to evaluate the impact of genetic and clinical variables related to the first mood episode in the emergence of suicidal behavior. METHODS: 111 outpatients from the Bipolar Disorder Program at the Hospital Clinic of Barcelona were consecutively recruited from February 2009 to June 2010. Inclusion criteria were

(i) bipolar I or II DSM-IV diagnosis, (ii) age > 18 years, (iii) meeting criteria for ethymia (HDRS= 8 and YMRS =6) and (iv) obtaining informed consent from all patients. Exclusion criteria were the presence of (i) mental retardation, (ii) severe organical disease and (iii) mixed polarity at first episode. The protocol study was approved by the Hospital Clinic of Barcelona Ethics Committee. All patients were assessed with a semi-structured interview to obtain socio-demographical and clinical data. Suicide attempt was defined as any harmful act committed with some intent to die. The Val66Met polymorphism of the BDNF gene was genotyped using Taqman 5'-exonuclease assay. The 5-HTTLPR polymorphism of the SERT gene was genotyped following the protocol previously described by Lesch et al (1996). We studied the time to first suicidal attempt as a dependent outcome. For the univariate analysis, the Kaplan-Maier estimator was applied to estimate the survival curves. Age at onset was categorized into three groups (before 22; between 22 and 33; and more than 33). In each variable, the log-rank test was used to compare their curves. For the multivariate analysis, we assessed the proportional hazards model of Cox. Significance level was fixed in p= 0,05. We used SPSS v.15 for this purpose. RESULTS: With regard to univariate analysis, when we compared the survival curves from each variable only the age at onset differed significantly (p= 0,022). After running the multivariate analysis we detected that depressive polarity at first episode (HR:4,054, IC 95%=1,712-9,602, p=0,001), presence of psychotic features (HR:3,189, IC 95%=1,295-7,852, p= 0,012) and early onset (presenting the first episode before 22 years (HR:2,977, IC 95%=1,060-8,364, p=0,038) or from 22 to 33 years (HR:3,125, IC 95%=1,193-8,185, p=0,020) increase the risk for attempt suicide in bipolar patients. No significant relationship between the genotype of the Val66Met (BDNF gene) or 5-HTTLPR (SERT gene) and suicide attempts was found. CONCLUSIONS: Our results show that depressive first mood episode polarity, presence of psychotic features during the first mood episode and early age at onset (younger than 33 years), but not the polymorphisms of BDNF or SERT genes are associated to the emergence of suicidal behavior in bipolar disorder.

NR04-31

CORRELATIONS BETWEEN PLASMA C-REACTIVE PROTEIN LEVEL AND SYMPTOMS OF MANIA

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SUMMARY:

Objective Inflammation plays an important role in the phenomenology and pathophysiology of mood disorders (1, 2). Circulating C-reactive protein (CRP) increases in response to inflammation, and bipolar mania has been associated with an increased level of plasma CRP (3). The aim of the present study was to detect a simultaneous trend between the concentration of CRP and symptoms of mania. Method Between May and August 2010, 16 inpatients (9 males) were selected from a psychiatric ward at a general hospital in Busan, South Korea. Selected inpatients met the DSM-IV-TR diagnostic criteria for manic episodes, had a basal temperature less than 37°C, had a white blood cell count less than 10,000/mL, and had a body mass index (BMI) less than 25 kg/m2. We performed immunoassays to measure plasma CRP and evaluated symptoms of mania using the Brief Psychiatric Rating Scale (BPRS). Data were analyzed by detecting bivariate associations between CRP level and each item of the BPRS using the Spearman's rank-order correlation analysis. The differential effects of age, BMI, duration of illness, and total BPRS score on the level of plasma CRP were determined using multiple regression analysis. Results The BPRS total score (ß = 0.041, t = 4.496, p = 0.0009) was associated significantly with the level of plasma CRP, but the other variables were not. In addition, the level of plasma CRP was correlated significantly with BPRS items 8 (grandiosity, r = 0.66, p = 0.0051), 10 (hostility, r = 0.54, p = 0.0298), 11 (suspicion, r = 0.51, p = 0.0413), and 14 (uncooperativeness, r = 0.77, p = 0.0005). Conclusions The level of plasma CRP correlated positively with hostility and uncooperativeness. These findings suggest that inflammation may be associated with the irritable symptomatology of mood disorders and is in concordance with results of a previous study that reported induced irritability resulting from

interferon-alfa therapy (4). Additional studies are warranted to explain the roles of inflammation on thought content in mood disorder.

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NR04-32

EVALUATING THE IMPACT OF VILAZODONE ON SLEEP IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER

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SUMMARY:
Objective: To assess the effect of vilazodone, a novel serotonin 1A receptor partial agonist and reuptake inhibitor antidepressant, on sleep in patients with major depressive disorder (MDD). Methods: Data were pooled from two 8-week, randomized, double-blind, placebo (PBO)-controlled, multicenter studies in adults with DSM-IV-TR–defined MDD. Evaluations of the effect of vilazodone on sleep were based on comparisons with PBO with respect to changes in 17-item Hamilton Depression Scale (HAM-D-17) sleep-related items (early, middle, and late insomnia), HAM-D-17 sleep subscale (total of the 3 sleep items), Montgomery-Asberg Depression Rating Scale (MADRS) reduced sleep item, sleep-related treatment-emergent adverse events (TEAEs), and time to sleep improvement. Results: Among 891 randomly assigned patients, baseline MADRS and HAM-D-17 total scores were 31.4 and 25.0 (respectively) reflecting, on average, MDD of moderate severity. Most patients reported a baseline score of >=4 (sleep reduced or broken by at least 2 hours) on the MADRS reduced sleep item. After adjusting for baseline severity, vilazodone treatment was associated with significantly greater improvements on the HAM-D-17 sleep subscale (least square mean [LSM] change: –1.8 in vilazodone vs –1.5 in PBO) and numerically greater improvements in each HAM-D-17 sleep item and in the MADRS reduced sleep item. Significantly more vilazodone patients experienced a TEAE related to sleep disorder or disturbance (10.8% in vilazodone vs 3.7% in PBO), with insomnia being the most commonly reported. Sleep-related TEAEs were considered mild or moderate in the majority of both vilazodone and PBO patients (91.5% vs 93.8%), with no patient in either treatment group discontinuing because of a sleep-related TEAE. No statistically significant differences in time to sleep improvement were noted between vilazodone and PBO patients. Additionally, among patients with severe baseline sleep disturbance, significantly better improvement in the HAM-D-17 Maier subscale was noted in the vilazodone group (LSM change: –5.5 in vilazodone vs –4.4 in PBO). Conclusions: Quantitative evaluations demonstrate that treatment with 40 mg/day vilazodone, compared with PBO, is associated with small, consistent improvements in sleep depth and duration even though patients receiving vilazodone were more likely to experience sleep-related TEAEs. These findings support that vilazodone has a relatively neutral risk/benefit profile with respect to effects on sleep quality. This study was supported by PGxHealth LLC, a division of Clinical Data, Inc.

NR04-33

VERBAL WORKING MEMORY AND FUNCTIONAL OUTCOME IN DEPRESSIVE PATIENTS RECEIVING PAROXETINE: A PROSPECTIVE STUDY

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SUMMARY:
Background: Patients with major depressive disorder

(MDD) have been reported to perform less well in neurocognitive tests than normal controls. Objective: This naturalistic longitudinal study was conducted to test the hypothesis that verbal working memory (WM) in patients with MDD is predictive of the functional outcome. Methods: The subjects consisted of 22 adult outpatients receiving paroxetine as antidepressant therapy. The assessments were performed using the 7-item Hamilton Rating Scale for Depression (HAM-D7) for the severity of depression, and the Digit Sequencing Task (DST) for evaluation of verbal WM. Functional outcome was rated on a scale of 0 (non-impaired) to 3 (severely impaired). Results: At 12 weeks, nine out of the 22 patients with a current episode of MDD exhibited full remission. A significant decrease of the HAM-D7 scores was observed during the 12-week study period, whereas the DST scores also showed significant increase. At baseline, the functional outcome was significantly correlated with the scores on HAM-D7, but, at 12 weeks, it was significantly correlated with both HAM-D7 and DST scores. According to a multiple regression analysis conducted using a forward stepwise procedure, the DST scores at baseline significantly contributed to prediction of the functional outcome at 12 weeks, and the HAM-D7 scores at baseline significantly contributed to prediction of the HAM-D7 scores at 12 weeks. Conclusions: The findings in this study suggest the existence of a correlation between a deficit of verbal WM and the functional outcome after treatment in patients with MDD, and antidepressant therapy with paroxetine might help improve verbal WM.

NR04-34

ZIPRASIDONE ADJUNCTIVE TO LITHIUM OR VALPROATE FOR BIPOLAR RELAPSE PREVENTION: DOSE ANALYSES, RELAPSE CHARACTERIZATION AND TRIAL DESIGN

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SUMMARY:
Background: A recent study found that ziprasidone (ZIP) is an effective adjunctive treatment to lithium or valproate in the maintenance treatment of bipolar I disorder (BD)1. Here we further characterize relapse rates by dose, timing of particular relapses during early or late phase of the 6-month treatment period, and compare relapse prevention studies to understand optimal trial design parameters. Methods: This trial enrolled subjects with a recent or current manic or mixed episode of BD. In the 2.5-4 month, open-label (OL) period, subjects received adjunctive ZIP (80mg, 120mg or 160mg/d given bid). Subjects who stabilized (CGI-I = 3 for 8 weeks with stable dose of all medications for = 4 weeks) were randomized ZIP or placebo (PBO) for a 6-month double-blind (DB) period. We report Kaplan-Meier survival analyses by dose vs. PBO, baseline MRS and MADRS severity scores and description of type and timing of relapses using LOCF scores during the DB period. Results: Probability of being relapse-free for the 80mg (N= 60), 120mg (N =40), and 160mg (N=27) dosage groups vs. PBO (N=111) was associated with p-values of .2, .004, and .4, respectively. Relapse rates for the 80mg, 120mg, and 160mg dosage were 23%, 10%, and 26%, respectively. The probability of continuing treatment for the 80mg, 120mg, and 160mg dose arms vs. PBO was significantly greater for the 120 mg/day dosage (p = .001), but not for the 80 or 160 mg/day dosage (both p=.2). Rates of discontinuation for any reason for subjects treated with 80mg, 120 mg and 160 mg/day dosages were 42%, 20% and 37%, respectively. In the OL phase, both baseline mean MRS and MADRS scores did not differ markedly across treatment groups, except for a higher baseline MADRS score for the 160mg group. In the DB phase, the mean MRS scores were consistent across ZIP treatment groups, but the mean (95% CI) MADRS score was highest in the 160mg (10.4, CI: 7.2 to 13.7) dose group compared to 80mg (4.9, CI: 3.4 to 6.3), 120mg (3.8, CI: 2.1 to 5.5) and PBO (4.7, CI: 3.6 to 5.9) groups. From a total of 61 relapses, only 9 mixed-manic relapses occurred in the ZIP groups vs. 20 in the PBO group, while 16 depressive relapses each occurred in the ZIP vs. PBO groups. In the DB phase, most depressive relapses (24/32) occurred by week 4, while mixed, manic relapses were evenly distributed over time. Conclusions: These post-hoc analyses indicate statistical superiority for the 120mg, but not the 80 or 160mg ZIP dosage groups in relapse prevention vs. PBO. Most relapses during the first 4 weeks of the double-blind phase were depressive rather than mixed, manic. Incorporating more stringent stabilization criteria in future clinical trials for bipolar disorder appears to improve generalizability of relapse prevention studies and facilitates statistical analyses by retaining higher proportions of subjects to study completion.

1) Bowden CL et al., J Clin Psychiatry. 2010 Feb;71(2):130-7. This study was sponsored by Pfizer Inc.

NR04-35

COMPULSIVE BUYING IN BIPOLAR DISORDERS

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SUMMARY:
Objective: The objective of this research is investigating the frequency of compulsive buying in bipolar disorder and searching the difference between the clinical variables of the cases with and without compulsive buying. Method: In this research, 100 cases which is diagnosed as bipolar mood disorder acording to DSM-IV are evaluated consecutively, who are followed up as outpatients and signed informed consent. After the diagnosis interview (SCID-I and SCID-II) mood disorders registry form and compulsive buying scale is asked for patients complete. Results: Compulsive buying is found 7 % in cases with bipolar mood disorder. There is no difference in age and sex found between cases with and without compulsive buying. Premenstruel syndrome and acute onset and ending were more frequent, severity of the first episode and number of manic episodes were more higher in compulsive buyers (relatively, p= 0.002, 0.011, 0.011, 0.043 and 0.007). Cases with axis-1 and axis-2 comorbidities have much higher compulsive buying scores (p= 0.025 and 0.005). The diagnosis are obsesive compulsive disorder and impulse control disorder in axis-1, borderline, obsesive compulsive and narsicistic personality disorders for axis-2. Conclusion: Compulsive buying is evaluated in the impulsive compulsive spectrum and concurrently is respected as a behavioral addiction phenomenon among cases with bipolar mood disorder. These patients can be clinical hotspots sometimes, comorbidities are also noteworthy.

NR04-36

DIFFERENCES BETWEEN UNIPOLAR AND BIPOLAR SEASONAL AFFECTIVE DISORDER: DEXAMETHAZON SUPRESSION TEST

Chp.:Sermin Kesebir M.D., Erenkoy RSH Hospital, Istanbul, 34105 Turkey, Co-Author(s): Hale Yaci, MD., Gorkem Gencer, MD., Mustafa Bilici, MD.

SUMMARY:
Objective: The aim of this work is to find out if there is any difference of cortisol levels found by dexamethasone suppression test (DST) between unipolar and bipolar cases with seasonal course. Method: Cases with seasonal mood disorder (showing seasonal course as longitudinal course determinant according to DSM-IV during diagnosis interview with SCID-I) and who have approved the approval form were taken consecutively for the study during their normal polyclinic monitoring when they were in remission. The average of age is 51±8.7 for 14 unipolar cases (13 women, 1 man) and 44.3±5.2 for 7 bipolar cases (6 women, 1 man). Findings: Not being suppressed with DST is more frequent (p=0.011) among bipolar cases with seasonal course (100%) than unipolar cases (42.8%). In seasonal coursed mood disorder that cannot be suppressed with DST, socio-economical level is worse, social support is less, childhood trauma is more often, stressors before first episode is less, age of onset is earlier, episode severity before and after the prophylactic treatment is higher, episode number before the prophylactic treatment is more, IGD score after the prophylactic treatment is lower (p=0.005, 0.037, 0.011, 0.026, 0.034, 0.011, 0.006, 0.001 and 0.016, respectively). Result: This study is the first to compare unipolar and bipolar cases in seasonal mood disorder and puts forward important differences. Another important finding is that it shows cortisol level that cannot be suppressed with DST in seasonal mood disorder cases have better courses than others.

NR04-37

THE EFFECTS OF PSYCHIATRIC TREATMENT ON QUALITY OF LIFE IN KOREAN PATIENTS WITH DEPRESSIVE DISORDERS

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SUMMARY:
Objective: Depressive disorder is a common and debilitating disorder with negative impact on the quality of life (QOL) for both sufferers and their families. The purpose of this study was to evaluate the effect of psychiatric treatment on QOL in Korean patients with depressive disorders. Method: This study was based on an open-ended naturalistic design with a 6-months follow-up. The subjects in this study were 317 patients with depressive disorders in a cohort of clinical research center for depression in Korea and were assessed for depressive symptoms using the Korean version of Hamilton Depression Rating Scale (K-HDRS) and their subjective quality of life was assessed using the Korean version of WHO Quality of Life Scale Abbreviated Version (K-WHOQOL-BREF). The subjects were divided into two groups: remission group (K-HDRS=7) and non-remission group (K-HDRS=8). Results: Remission group (n=149) showed significant improvement in all 4 domains (i.e., physical health, psychological, social relations, and environmental) of K-WHOQOL-BREF at 6-months and non-remission group (n=168) showed significant improvement in 3 domains except social relations domain at 6-months. The repeated measures ANOVA showed a significant effect of time (baseline vs. 6-months) and group (remission vs. non-remission) on all 4 domains of K-WHOQOL-BREF before controlling for baseline depression. After controlling for baseline depression, the repeated measures ANCOVA showed a significant effect of time on only a social relations domain and showed group differences between remission and non-remission groups for all 4 domains. The time by group effect was significant regardless of controlling for baseline depression, indicating that the groups did exhibit different patterns of improvement of QOL over 6-months. Multiple regression analysis showed that physical health domain of K-WHOQOL-BREF was the only significant predictor for improvement of depression at 6-months. Conclusion: This study confirms that psychiatric treatment seems to be associated with significant improvements in most domains of QOL in Korean patients with depressive disorders and moreover, the improvement of QOL after psychiatric treatment can be achieved in most patients with or without remission of depression.

NR04-38
FACTORS INFLUENCING ANXIETY, AND DEPRESSION IN BREAST CANCER PATIENTS TREATED WITH SURGERY

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SUMMARY:
Objectives : The purpose of this study is to investigate the variables that influence the anxiety, depression in the patients with breast cancer with surgery. Methods: Thirty two breast cancer outpatients were participated from the breast center of a Dong-A university hospital. Socio-demographic characteristics, clinical variables, anxiety(Hamilton anxiey scale), depression(Hamilton rating scale for depression), self-esteem(self-esteem scale), body image(body image scale), quality of life(EORTC QLQ-BR23) were gathered from subjects. esults: Correlation analysis showed several variables were correlated with the anxiety and derpession of the breast cancer patient: body image, side effect of systemic therapy, breast symptom, arm symptom, upset by hair loss, future perspective. According to stepwise linear regression analysis on the breast cancer patient of hamilton anxiety total score, the following four variables were founded: side effect of systemic therapy, self-esteem, body image, tumor size. According to stepwise linear regression analysis on the breast cancer patient of hamilton depression total score, the following six variables were founded: side effect of systemic therapy, self-esteem, hope for reconstruction, religion, axillary node invasion, tumor size. Conclusion: Study of factors influencing of breast cancer patients' depression and anxiety, psychosocial variables were also important as socio-demographic and clinical charateristics. In the course of future treatment of breast cancer patients, appropriate psychological intervention is needed. For managing anxiety and depression, development of systematized program and evaluation research is needed.

NR04-39
COGNITIVE FUNCTIONING IN EUTHYMIC BIPOLAR I PATIENTS: IMPACT OF ATYPICAL ANTIPSYCHOTICS

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SUMMARY:
Objective: While cognitive deficits are commonly found in euthymic patients with bipolar I disorder, it is unclear what role medication plays in contributing to the level of impairment. Although recent studies indicate negligible effects of mood stabilizers, several post-hoc analysis have demonstrated potential for a more severe impact of antipsychotics. The present study aims to determine the effects of different antipsychotics on executive function and verbal learning/ memory by comparing performance in euthymic bipolar I patients between those receiving add on treatment with risperidone or quetiapine, to those on mood stabilizer monotherapy. Method: Bipolar I outpatients who were within three years of their first manic episode and who were receiving follow up within the VHHSC STOP-EM longitudinal study were selected for analysis if they met the following criteria at time of cognitive testing: euthymic (YMRS = 6, HAMD = 8), had not had an acute mood episode for at least 4 weeks, and were receiving treatment with a mood stabilizer alone (lithium or divalproex), or a mood stabilizer plus risperidone or quetiapine for = 12 weeks. Out of 66 patients, 37 met inclusion criteria (risperidone + mood stabilizer; n=10, quetiapine + mood stabilizer; n=16, mood stabilizer monotherapy; n=11). Groups were compared with each other and with 28 matched healthy controls on measures from 3 dimensions of Executive Function: Inhibition (Stroop, CANTAB Stockings of Cambridge), Working Memory (WAIS-III Letter/Number Subtest, CANTAB Spatial Working Memory), and Set-Shifting (Phonemic Verbal Fluency, CANTAB Intradimensional/Extradimensional Shift Test) as well as Verbal Learning/Memory measures from the California Verbal Learning Test-2. Results: Despite being well matched in terms of demographic and clinical variables, patients treated with risperidone + mood stabilizer performed significantly worse than those treated with quetiapine + mood stabilizer or mood stabilizer monotherapy and healthy controls in Working Memory, Set-Shifting and Verbal Learning/Memory ($p<0.01$). Conclusions: Results suggest that in patients with bipolar I disorder, addition of risperidone to a mood stabilizer in maintenance therapy may have a negative impact on select aspects of executive function and verbal learning/memory, an effect not seen with quetiapine. Further randomized investigations are needed to elucidate the unique cognitive profiles of atypical antipsychotics used in this population. Funding: The STOP-EM program was funded by an unrestricted research grant from AstraZeneca Canada.

NR04-40

EXAMINATION OF THE ASSOCIATION BETWEEN SELF-PERCEIVED COGNITIVE DIFFICULTIES AND LEVEL OF DEPRESSION AMONG EMPLOYED PATIENTS WITH CURRENT DEPRESSION

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SUMMARY:
Objectives: Many facets of job performance are impaired by depression. While it is hypothesized that cognitive deficits may be an underlying reason for reduced productivity, cognitive testing has resulted in ambiguous results. Reduced performance in depressed employees may be attributed to self-perceived cognitive difficulties. The goal of the current study was to assess self-perceived deficits in cognition experienced by depressed employees. Methods: Individuals (=18 years of age) employed full-time with diagnosed depression (individuals with bipolar disorder were excluded) completed a Web-based computer-generated 25-minute survey (study population identified by Harris InteractiveTM). The patient survey used validated scales including the Perceived Deficits Questionnaire (PDQ) to assess cognitive deficits (memory, attention, planning and organization, and concentration) on a 0-20 scale where higher scores indicate greater impairment, and the Patient Health Questionnaire (PHQ-9) to evaluate depression severity. The impact of depression on the PDQ scores was assessed using a trend test based on an analysis of covariance with age, gender, and PHQ-9 score as independent variables. Results: A total of 1,051 employees were included in the analysis (58% female, mean age 47 yrs, and 38% held professional employment). PHQ-9 scores indicated 423 (40.25%) employees with no depression symptoms, 319 (30.35%) with mild symptoms, 166 (15.79%) with moderate symptoms, 82 (7.80%) with moderately severe symptoms, and 61 (5.80%) with severe symptoms. PDQ scores showed that perceived cognitive functioning worsened with increasing

severity of depression symptoms (p<0.0001). PDQ scores showed the greatest impairment in the attention/concentration and planning/organization scales in the severely depressed (12.26 and 12.25, respectively) compared with non-depressed subjects (4.45 and 3.75, respectively). Conclusions: In full-time employees experiencing depression, self-perceived cognitive difficulties worsened with increasing severity of depressive symptoms. Funding: This study was funded by the Takeda Pharmaceutical Company, Ltd.

NR04-41

THE ASSOCIATION OF GLUCOCORTICOID RECEPTOR POLYMORPHISM WITH ANTIDEPRESSANTS TREATMENT RESPONSE IN PATIENTS WITH MDD

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SUMMARY:
Background: Cortisol and corticotropin-releasing hormone (CRH) affect the serotonin (5-HT) system. During the stress response, glucocorticoids (GCs) stimulate all these features of 5-HT transmission. Conversely, 5-HT transmission is impaired and noradrenergic transmission in the hippocampus is suppressed during chronic psychosocial stress and hypercortisolism, which is similar to the series of events evident during depression. Glucocorticoid receptor (GCCR), which is encoded by NR3C1 gene located in chromosome 5q31, has been known to be involved in the stress response. The GCCR polymorphisms affect GC sensitivity, which is associated with cortisol feedback effects. The degree of cortisol feedback is closely related to the development of depression and may also be affected by antidepressants. Therefore, we hypothesized that the GCCR polymorphisms are associated with the response to treatment with antidepressants. Methods: Trained psychiatrists examined all of the subjects using the Structured Clinical Interview for DSM-IV Axis I disorders (SCID-I) and the Korean version of the Diagnostic Interview for Genetic Studies (K-DIGS). The severity of depression was assessed using the 21-item Hamilton Depression Rating (HAMD21) scale. Only subjects with a minimum score of 18 on the HAMD21 scale were enrolled. During the treatment period in the study, all subjects took citalorpam or mirtazapine at a daily dose of 10-60 mg or 15–60 mg, respectively. Clinical symptoms were evaluated using the HAMD21 scale at baseline and after 1, 2, 4, and 8 weeks of treatment. The genotype frequencies were compared using logistic regression analysis, and between-genotype differences in the decrease in the HAMD21 score were analyzed using a linear regression analysis in 257 Korean patients with MDD. Results: The proportion of patients with MDD possessing the G allele on +1830C>G was higher in responders (42.4%) than in non-responders (13.3%) to citalopram treatment at 4 weeks (P = 0.009, odd ratio = 6.42 (1.60 – 25.8). The reductions in the HAMD21 scores showed a trend to be larger in G allele carriers (73.47 ± 11.26%) than those in patients with the CC genotype (51.68 ± 3.92%) after 4 weeks of mirtazapine treatment (P = 0.087). In contrast, the reductions in the HAMD21 scores were smaller in G allele carriers (46.09 ± 2.65%) than those in patients with the CC genotype (54.84 ± 1.99%) after 4 weeks of mirtazapine treatment (P = 0.016). The patients having CC genotype showed better response to mirtazapine than to citalopram (62.0% vs 42.2%, P = 0.024, Table1), and the patients possessing G allele showed better response to citalorpam than to mirtazapine (77.8% vs 50.7%, P = 0.046, Table1). Conclusion: These results suggest that GCCR+1830C>G affects the outcome of antidepressant treatment in patients with MDD, and that this polymorphism may be a good genetic marker for choosing an appropriate antidepressant for individuals.

NR04-42

A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY OF DESVENLAFAXINE 10 AND 50 MG/D EFFICACY AND SAFETY IN DEPRESSED OUTPATIENTS

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SUMMARY:
Objective: Desvenlafaxine (administered as desvenlafaxine succinate), a serotonin-norepinephrine reuptake inhibitor approved for treating major depressive disorder (MDD), has demonstrated antidepressant efficacy at 50-, 100-, 200-, and 400-mg/d doses. The

primary objective of this study was to compare the antidepressant efficacy and safety of desvenlafaxine 10- and 50-mg/d doses with placebo in depressed outpatients. Method: Adult outpatients (aged =18 y) who met Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition, Text Revision) criteria for MDD with a 17-item Hamilton Depression Rating Scale (HAM-D17) total score =20 at screening and baseline, were randomly assigned to receive placebo or desvenlafaxine (10 or 50 mg/d) after a 6- to 14-d placebo lead-in period in an 8-wk, phase 3, fixed-dose trial. The primary efficacy endpoint, change from baseline in the HAM-D17 total score, was analyzed using an analysis of covariance, with treatment as a factor and baseline in the HAM-D17 total score as a covariate. Efficacy analyses were based on the intent-to-treat (ITT) population (took =1 dose of double-blind study drug, =1 postbaseline HAM-D17 evaluation) and last observation carried forward (LOCF), Safety data were collected throughout the trial. Results: The ITT population include 673 patients (placebo, n=223; desvenlafaxine 10 mg/d, n=226; desvenlafaxine 50 mg/d, n=224). For the primary efficacy endpoint, change from baseline to final evaluation in adjusted HAM-D17 total scores, neither desvenlafaxine 10 mg/d (–9.28) nor desvenlafaxine 50 mg/d (–8.92) separated from placebo (–8.42).There were no significant differences among treatment groups in the rates of treatment response (=50% decrease from baseline on HAM-D17 total score; placebo, 38%; 10 mg, 44%; 50 mg, 41%) or remission (HAM-D17 total score =7; placebo, 19%; 10 mg/d, 23%; 50 mg/d, 17%). A total of 2/226 (0.9%) and 4/224 (1.8%) patients discontinued desvenlafaxine 10 and 50 mg/d, respectively, due to adverse events (AEs; placebo, 5/223 [2.2%]). Discontinuation due to lack of efficacy occurred in 4/223 (1.8%), 3/226 (1.3%), and 6/224 (2.7%) patients on placebo, desvenlafaxine 10- and 50-mg/d groups, respectively. Treatment-emergent AEs (TEAEs) were reported by 147/223 (65.9%) placebo-treated patients, and by 155/226 (68.6%) and 154/224 (68.8%) desvenlafaxine 10-mg/d– and 50-mg/d–treated patients, respectively. No new safety findings were observed. Conclusions: Although previous studies have confirmed the antidepressant efficacy of desvenlafaxine 50 mg/d, in this study the 50-mg/d dose failed to reach statistical significance. In addition, our finding that the 10-mg/d dose failed to separate from placebo is not surprising given that doses below 50 mg/d have not previously demonstrated efficacy. TEAEs with both doses of desvenlafaxine were similar to placebo. Supported by funding from Pfizer Inc, formerly Wyeth Research.

NR04-43

IMPACT OF DEFICIT IN SOCIAL COGNITION IN BIPOLAR PATIENTS WITH LOW FUNCTIONALITY . CASE REPORT

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SUMMARY:

Introduction Bipolar Disorder is a chronic disease with persistent clinical changes beyond the acute manic or depressive phases. In the maintenance phase of bipolar disorder, even in patients in remission states or euthymic, we find altered clinical dimensions. It is through residual mood symptoms or alterations in cognitive functions. These alterations, emotional or cognitive, in bipolar euthymic patients in remission can cause deficits in functionality.Objective The aim of this study is to assess whether functional deficits in patients with bipolar disorder in remission is correlated with changes in social cognition and the persistence of residual symptoms Method Six consecutive patients were evaluated in an outpatient unit in a psychiatric hospital. Bipolar Disorder Diagnosis was made with the MINI-Plus scale. Was taken, as inclusion criteria, for symptomatic remission scores <7 points on the HAM - 17 and <8 points on the YMRS. Functionality was measured using the FAST scale. The cognitive study was performed with Eye test, Foux Pas Results In this case report we found an positive apparent correlation between the FAST scale and the test of emotional glances coefficient of correlation: 0.56 and a negative linear correlation between the FAST scale and the test of faux pas, coefficient of correlation 0.36 . This case report shows that patients with impaired ToM correlated positively with changes in the FAST scale. The limitacciones of this report is the sample size

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NR04-44

EFFECTS OF GENETIC VARIANCE IN P2RX7 ON OUTCOME OF MOOD DISORDERS ARE MEDIATED BY NEUROTICISM, ANXIETY AND ALCOHOLISM

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SUMMARY:
Background: Numerous linkage studies have found a susceptibility locus for bipolar disorder and major depressive disorder in chromosome 12q24. Among genes in that chromosome is P2RX7 (purinergic receptor P2R, ligand-gated ion channel, 7), which codes for a calcium-mediated ATP-receptor. In association studies, 9 positive and 4 negative findings of the role of some SNP of P2RX7 in the etiology of mood disorders are reported. Of the negative studies, 2 had a positive correlation of P2RX7 with mood symptoms. In our previous study, two SNP's of P2RX7, in addition to having a mood disorder, had a correlational relation to time ill in up to 5 year prospective follow-up (Soronen submitted). The risk allele T/Tyr predicted having a mood disorder but also more time ill so that homozygous carriers spent 12% and 24% more time ill. Objective: We set out to explore in mood disorders associations between P2RX7 variant rs208294 and prospective time ill as a continuous trait marker for illness. We hypothesized that the previously noticed effect of P2RX7 variant rs208294 on time ill would at least partly be mediated by neuroticism, anxiety and alcoholism and explored the mutual importance of these factors. Methods: We genotyped 178 DSM-IV bipolar I and II and 272 major depressive disorder patients who had been carefully diagnosed with semi-structured interviews and prospectively followed up for a median of 60 (range 6-83) months. The main end point was time ill from prospective life charts. Three possible ways of genetic effect were tested using structural equations models (SEM): 1) the genetic effect is direct on outcome, 2) the genetic effect is mediated by the degree of neuroticism and prevalences of comorbid disorders, and 3) the genetic effect is an interaction effect with the other factors affecting outcome. Results: Patients with the risk allele T/Tyr of P2RX7 rs208294 had a higher number of episodes (median 3 vs. 2, U=1916, Z=-2.9, p=0.004), especially major depressive episodes (3 vs. 2, U=19767, Z=-2.4, p=0.017) during lifetime, and spent 9% more time in major depressive states (22% vs 13%, U=17936.5, Z=-2.4, p=0.016) and 23% less time euthymic (51% vs 28%, U=169235, Z=2.2, p=0.031, p<0.001) as compared to patients without the risk allele. Based on SEM including also neuroticism, anxiety and alcoholism, genetic variance had no direct effect on time ill. Instead, the effect was mediated by severity of neuroticism (in female, one point- increase in neuroticism led to 5% more time ill) and prevalence of anxiety (in dominant male, having anxiety disorder led to two instead of one years ill in 5 years), as well as an interaction of these factors with genetic variance to affect outcome. Gender affected the effect size. Conclusion: Having rs208294 T/Tyr variant is associated with a more depressive course of mood disorders. This is not a direct genetic effect on time ill but a mediated susceptibility effect mainly through neuroticism and anxiety.

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Disorders and Predicts Clinical Outcome in Three Clinical Cohorts.

NR04-45

A DESCRIPTIVE ANALYSIS OF A COHORT OF 121 BIPOLAR PATIENTS TREATED AT AN ACADEMIC MEDICAL CENTER

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SUMMARY:
Bipolar Disorder (BPD) remains a crippling disorder affecting millions of Americans. Treatment is usually complex and requires long term commitment by providers and patients. The purpose of this study was to determine the percentage of patients in an academic medical practice that achieve a clinically meaningful remission or response to treatment. METHODS This project was approved by the institutional IRB. The charts of 271 outpatients at The University of Toledo Department of Psychiatry billed for BPD over the last 18 months were reviewed and diagnoses were validated. Ultimately, 121 patients, 37 women and 84 men treated for a minimum of 12 months were descriptively analyzed. Three volunteer physicians rated every standardized medication management note from the time of the patient's initial diagnostic assessment to the time of the cutoff date of April 1, 2010. Raters determined mood states at the time of each visit based on the patient's subjective report, the recorded objective evaluation of the attending or resident and the Clinical Global Impression of Improvement Scale rated at the time of each visit. "Euthymia" was arbitrarily defined as 12 consecutive months of euthymic mood. "Response" was defined as "much improved" and not meeting DSM-IV-TR criteria of mild illness for 12 consecutive months. Active illness was defined as failure to achieve 12 consecutive months of either. STATISTICS Analysis consisted of descriptive statistics, analysis of variance and Chi square using SPSS. RESULTS In our cohort, 43.8% achieved at least 12 consecutive months of euthymia or response while 56.1% failed to do so. The mean duration of euthymia in months was 32.2 and for response group it was 25.4 months. There were no gender or in age differences among groups. Prescribing patterns of mood stabilizers, atypical antipsychotics and antidepressants, alone or in combination, were no different in any group. Sustained recovery was associated with longer lag times to recovery ($p < 0.05$). Patients in all groups were largely compliant with taking medication but patients who remained actively ill were more likely to have missed appointments ($p < 0.05$). CONCLUSION It appears that antidepressants are commonly prescribed in conjunction with one or two mood stabilizing agents with equal frequency in all groups. However, it does not appear that antidepressants worsen outcomes. We found no medication regimen superior to any other. Instead, prognosis appears to be related to intrinsic factors associated with the phenotype of the illness. Compliance with appointments was a significant factor associated with improvement. Time to recovery may be a factor in maintaining improvement. Further research is needed to explore the association between recovery and specific medicines within a class and the role of adjunctive psychotherapy in this group of seriously ill patients.

NR04-46

BASELINE METABOLIC STATUS IS A MODERATOR OF OUTCOME IN BIPOLAR DISORDER PATIENTS: ANALYSIS OF POOLED DATA FROM ZIPRASIDONE MONOTHERAPY CLINICAL TRIALS

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SUMMARY:
Background Metabolic syndrome (MetS) and its constituent risk factors are highly prevalent in patients with bipolar disorder (BPD) and are associated with more complicated psychiatric illness and poorer treatment outcomes. However, efficacy data from controlled trials has generally not been analyzed as a function of these risk factors. Methods Data from ziprasidone-treated subjects from 2 3-week clinical trials of ziprasidone monotherapy for the treatment of acute mania were pooled. Key inclusion criteria were: screening and baseline Mania Rating Scale (MRS) scores = 14 (=2 on at least 4 items); weight =80% and =140% of ideal for gender, height, and frame; and no clinically important laboratory or ECG findings. Controlled type II diabetes (random glucose <180 mg/dl) and controlled hypertension (systolic < 175 and diastolic = 95 mm Hg) were allowed. Metabolic risks factors (measured at baseline or during screening) were defined as: BMI >28.8 (corresponds to waist circumference of >100 cm), triglycerides (TGs) =150 mg/dL, random glucose >140 mg/dL, systolic blood pressure = 130 mmHg and/or diastolic = 95 mmHg. Cholesterol fractions were not measured; precluding assessment for MetS. Outcome measures

for these analyses were remission (MRS <10 at endpoint) and response (MRS reduction >50% from baseline to endpoint [LOCF]). The odds of attaining each outcome measure were analyzed by the presence vs absence of each risk factor using a Cochran-Mantel-Haenszel Test, controlling for protocol. Odds Ratios (OR, 95% CI for OR, p) were estimated. In addition, the difference in LS mean change in GAF score from baseline to endpoint (LOCF) was analyzed by the presence/absence of each of the risk factors using ANCOVA models controlling for protocol and baseline. Results Of 267 total subjects, the number exceeding the cutoffs were: BMI, 70 (26%); TGs, 132 (49%); glucose, 19 (7%); blood pressure, 97 (36%). Remission and response rates of subjects without elevated BMI were significantly greater than those of subjects with elevated BMI (ORs, 1.8 [p=0.03] and 1.9 [p=0.02], respectively). Remission and response rates of subjects without vs with elevated glucose were also significantly greater (ORs, 3.3 [p=0.03] and 5.5 [p=0.004], respectively). These comparisons were not significant for TGs or blood pressure. For each risk factor, those without vs with the risk factor had significantly greater improvement in LS mean GAF score: for glucose, 342% greater (p=0.0006); for BMI, 49% (p=0.01); for TGs, 43% (p=0.006); for blood pressure, 33% (p=0.04). Discussion These results strongly suggest that patients with bipolar disorder who have elevated blood glucose and/or elevated BMI do not respond as well to antipsychotic treatment of acute mania as those without these conditions; results for elevated triglycerides and blood pressure were less clear. In bipolar patients, the hazards posed by these components of MetS appear to include poorer outcome of treatment for acute mania.

NR04-47

ELECTROCONVULSIVE THERAPY AND REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION AND SERUM BRAIN-DERIVED NEUROTROPHIC FACTOR LEVELS IN DEPRESSED PATIENTS

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SUMMARY:

Objective: Brain-derived neurotrophic factor levels are decreased in individuals with depression and increase following antidepressant treatment. Both electroconvulsive therapy (ECT) and repetitive transcranial magnetic stimulation (rTMS) are effective in the treatment of major depressive disorder (MDD), particularly in drug-resistant patients, however their molecular mechanism of action is still unclear. It has been suggested that ECT and rTMS exert their clinical effects by altering BDNF levels. The objective of this study is to compare pre- and post-treatment serum brain-derived neurotrophic factor (BDNF) levels in patients with drug-resistant MDD who received either ECT or rTMS. Method: This was a prospective, single-blind study comparing pre- and post-treatment serum BDNF levels of patients with drug-resistant MDD who were currently experiencing a major depressive episode and received ECT or rTMS treatment. Twenty-nine patients were recruited from a single-center, tertiary care mood disorders clinic in Kingston, Ontario. Serum BDNF levels were measured one week prior to and one week after treatment using the sandwich ELISA technique. Depression severity was measured one week before and one week after treatment using the Hamilton Depression Rating Scale. The main outcome measure was the change in serum BDNF concentration from baseline to post-treatment. Two-sided normal distribution paired t-test analysis was used to compare pre- and post-treatment BDNF concentration and illness severity. Bivariate correlations using Pearson's coefficient assessed the relationship between post-treatment BDNF levels and post-treatment depression severity. Results: There was no significant difference in serum BDNF levels before and after ECT, although concentrations tended to increase from a baseline mean of 9.95 ng/ml to 12.29 ng/ml after treatment (t= -1.615, p= 0.137). Treatment with rTMS did not significantly alter BDNF concentrations (t= 1.111, p= 0.282). Depression severity significantly decreased following both ECT (t= 3.955, p= 0.003) and rTMS (t= 5.645, p< 0.001). Post-treatment BDNF concentration was not significantly correlated with post-treatment depression severity in patients who received either ECT (r= -0.133, p= 0.697) or rTMS (r= 0.374, p= 0.126). Conclusions: This study suggests that ECT and rTMS may not improve depression severity by altering serum BDNF levels. BDNF serum concentration may not be a biomarker of ECT or rTMS treatment response.

NR04-48

SAFETY, EFFICACY AND TOLERABILITY OF QUETIAPINE XR IN POSTPARTUM WOMEN DIAGNOSED WITH BIPOLAR DISORDER II

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SUMMARY:
Objective: This prospective, open-label study examined the safety, efficacy and tolerability of Quetiapine XR in the treatment of postpartum Bipolar Disorder II (BD II). Impact of treatment on depressive and anxiety symptoms was assessed. Sleep and quality of life were monitored, as clinical evidence suggests that both are negatively impacted by BD II. Blood pressure, weight and side effects were recorded. Methods: Twenty-six women enrolled in the study. Fifteen women completed a 14 week trial on Quetiapine XR (50-300mg) daily. Mood and anxiety symptoms were monitored with the Hamilton Rating Scale for Depression (HAM-D) and the Montgomery Asberg Depression Rating Scale (MADRS). Sleep was assessed with the Pittsburgh Sleep Quality Index and HAM-D. Functionality was assessed with the Quality of Life Enjoyment and Satisfaction Questionnaire. Blood pressure, weight and side effects were recorded at each visit. Results: 93.3% reached remission by week 14 (MADRS, p=.000)) and the average dose of response was 150mg. HAM-D confirmed a significant decrease in depression scores (80% remission, p=.000) and also a significant decrease in anxiety scores (questions 12,13, p=.000) by week 12. Sleep quality improvements were statistically significant by week 12 (Ham-D questions 6,7,8, p=.000 and PSQI, p=.000). Quality of life improved significantly in all domains (p=.001). No significant change in weight was observed from baseline to week 14 (mean of 107.60lbs vs 112.20lbs, p=.134). No statistically significant change was observed in systolic blood pressure from baseline to week 14 (113.4 vs 116.5, p=.536). Sedation was report by all women in the study and other transient side effects included dizziness, dry mouth, appetite increase and headaches. Nobody reported lack of sexual desire. By week 12 all side effects ceased. Dropout reasons: childcare issues/ transportation (50%), extraordinary fatigue and sedation (25%), fear of lab tests (12.5%), high levels of triglycerides at baseline (12.5%). Conclusion: Majority of patients with Bipolar II reached remission of depressive and anxiety symptoms on 150mg Quetiapine XR. The HAM-D overlaps with some anxiety symptoms, which explains the difference in remission rates based on the MADRS and HAM-D (93.3% vs 80%). The quality of life after treatment improved significantly to the point of complete restoration of functionality. Sleep improved significantly, even though somnolence was experienced as a frequent transient side effect of the medication. Other side effects were minimal and transient. Specifically, lack of sexual desire was not observed. Blood pressure and weight remained unchanged.

NR04-49

PHARMACOLOGICAL IN VITRO PROFILE OF LU AA21004, A NOVEL MULTIMODAL DRUG FOR THE TREATMENT OF MOOD DISORDERS

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SUMMARY:
Objective: Unmet needs persist in the treatment of mood disorders. Lu AA21004 is a novel compound with a unique pharmacological profile that offers the potential to benefit these patients. In these studies the in vitro target profile of Lu AA21004 was studied. Methods: Binding affinities for the serotonin (5-HT) transporter and 5-HT receptors were determined by displacement of appropriate [3H]ligands bound to cloned and native transporters and receptors. Functional effects of Lu AA21004 on the relevant targets were determined using recombinant cell systems expressing the transporter and the relevant receptors. Results: Lu AA21004 displayed affinity for the cloned human (h)5-HT1A receptor (Ki = 15 nM) but was considerably less potent at the native rat 5-HT1A receptor (Ki = 670 nM). In a functional [35S]GTP?S binding assay, Lu AA21004 demonstrated agonism (EC50 = 200 nM; intrinsic activity = 96%) at the cloned h5-HT1A receptor. Lu AA21004 displayed high affinity binding for the cloned h5-HT3A receptor (Ki = 4.5 nM) and potent functional antagonism at cloned

rat and human 5-HT3A receptors (IC50 = 0.2 nM and 20 nM, respectively). Lu AA21004 showed high affinity binding for the cloned h5-HT transporter (Ki = 1.6 nM) and similarly potent activity when assayed with rat synaptosomes (IC50 = 5.4 nM). In addition, Lu AA21004 exhibited affinity for the cloned h5-HT1B receptor (Ki = 36 nM) and the cloned h5-HT7 receptor (Ki = 19 nM). At 1 µM, Lu AA21004 showed no significant activity when tested against 63 other receptors, enzymes, ion channels and transporters. Conclusions: Lu AA21004 exerts an agonistic effect at the h5-HT1A receptor, an antagonistic effect at the h5-HT3A receptor, and an inhibitory effect on the human 5-HT transporter. Moreover, Lu AA21004 may affect serotonergic activity by interacting with the h5-HT1B - and h5-HT7 receptors. Thus, Lu AA21004 displays a unique in vitro pharmacological profile affecting several serotonergic targets. This multi-modal action may translate into unique clinical effects. Lu AA21004 is currently undergoing clinical development for the treatment of major depressive disorder.

NR04-50

AN EXAMINATION OF MECHANISMS OF WEIGHT GAIN IN PATIENTS WITH DEPRESSION

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SUMMARY:
Background: The current obesity epidemic impacts more than 1 billion adults worldwide. Individuals with mood disorders are particularly vulnerable to weight gain, due in part to an illness symptom profile that impacts appetite and energy and the iatrogenic weight-gain effects associated with psychotropic medications. The exact physiological mechanisms through which medication cause weight gain have yet to be clearly elucidated, however. The primary objective of this study is to examine changes in caloric consumption, physical activity and basal metabolic rate (BMR) in drug naive patients with major depressive disorder (MDD) receiving selective serotonin reuptake inhibitor (SSRI) monotherapy. We hypothesize that there will be notable change in at least one of the three components over a 6 months period of medication, and that these changes will be associated with weight gain. Methods: We will assess 30 drug naive patients with MDD being started on an SSRI at the mood disorders clinic, St. Joseph's Healthcare, Hamilton. For the nutritional assessment, a non-consecutive 3-day dietary record will be used to collect data to examine food intake and nutrition software will analyze calorie consumption. Physical activity will be monitored using the GTM1 ActiGraph, a device designed to monitor human activity and record energy expenditure. BMR will be obtained using the Moxus metabolic cart canopy system, which collects data on resting expiratory rate, ventilation and VO2. As a secondary objective, mitochondrial dysfunction will be assessed through levels of lactate and fasting glucose. Mitochondrial dysfunction has been linked to both obesity (through insulin-resistance) and psychiatric disorders. Conclusion: In order to effectively deal with the increase in obesity and its related comorbid physical illnesses in patients with a mood disorder, we first need to understand the underlying mechanisms that predispose the population to weight gain. Only then can we be effective in implementing programs to deal with this issue in a mental health setting.

NR04-51

ACHIEVING AND SUSTAINING REMISSION IN BIPOLAR I DISORDER WITH ADJUNCTIVE ZIPRASIDONE

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SUMMARY:
Background: Achieving and sustaining remission in bipolar I disorder (BD) is challenging due to fluctuations in symptomatic stability. Few long term studies examine BD remission criteria. Masand et al evaluated remission in subjects with BD receiving aripiprazole in a 26-week study.1 Adjunctive ziprasidone (ZIP) plus lithium or valproate was efficacious for BD in a recent 6-month randomized trial.2 In this post hoc analyses, we report rates of symptomatic point remission and sustained remission using 4 criteria. We hypothesized that subjects who achieved remission with ZIP plus lithium or valproate were more likely to sustain remission than those randomized to receive placebo (PBO) plus lithium

or valproate. Methods: The study comprised an open-label (OL) stabilization period of 10-16 weeks, during which ZIP plus lithium or valproate was administered. After stabilization for 8 consecutive weeks on the adjunctive regimen, subjects were randomized to ZIP or PBO plus lithium or valproate in the 6 month double-blind (DB) phase. Two of the remission criteria were: 1)MRS score = 7 + MADRS score = 10 and 2)MRS score = 7 + MADRS score = 10, CGI-I score = 1. We examine the percentage of subjects achieving symptomatic remission and achieving sustained remission (= 8 weeks) during the DB phase by treatment group. Results: At the end of the OL stabilization phase, 238 stabilized subjects (53%) receiving ZIP plus lithium or valproate were randomized in the DB phase. During the DB phase, symptomatic remission as per criterion 1 at weeks 8, 16, and 24 were: n=70(55.1%), n=64(50.4%), and n=61(48.0%) for ZIP plus lithium or valproate, vs. PBO plus lithium or valproate n=62(55.9%), n=48(43.2%), and n=41(36.9%) with p=.73, p=.004, and p=.04 respectively. Using criterion 2, remission rates for ZIP plus lithium or valproate were n=33(26.0%), n=33(26.0%), and n=31(24.4%) vs. PBO plus lithium or valproate were n=27 (24.3%), n=20(18.0%), and n=20(18.0%) for weeks 8, 16 and 24 weeks with p=.61, p=.04, and p=.14, respectively. As per criterion 1, the sustained remission rates for ZIP treatment at 8, 16, and 24 weeks were n=49(36.2%), n=49(54%), and n=54(42.5%) vs. PBO treatment with n=39(35.1%), n=41(36.9%), and n=37(33.3%) with p=.89, p=.43, and p=.04, respectively. Using criterion 2, the sustained remission rates at weeks 8, 16, and 24 were: n=11(8.7%), n=24(18.9%), and n=23(18.1%) for ZIP plus lithium or valproate vs. n=10(9.0%), n=15(13.5%), and n=16(14.4%) for PBO plus lithium or valproate with p=.52, p=.16, and p=.21, respectively. Discussion: In this long-term maintenance study for BD, these analyses indicate that of those subjects achieving remission on ZIP plus lithium or valproate, most maintained remission at weeks 8, 16, and 24. This indicates that not only is ZIP effective in preventing relapse in BD but also leads to sustained remission. 1) Psychopharmacol Bull. 2008; 41:12–23. 2) J. Clin Psychiatry. 2010;71:130–137. This study was supported by Pfizer Inc.

NR04-52

PATTERNS OF USE AND COSTS ASSOCIATED WITH THE USE OF NON-PHARMACOLOGICAL INTERVENTIONS IN PATIENTS WITH MAJOR DEPRESSIVE DISORDERS

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SUMMARY:
OBJECTIVES: The goal of antidepressant drug therapy should be the absence of significant depressive symptoms along with a complete recovery from impaired function, referred to as full remission. With any first-choice antidepressant medication, about 50-70% of patients will have a significant treatment response. Of these treatment responders, however, only 33-50% achieve full remission. A significant proportion of major depressive disorder (MDD) patients is therefore left with residual or persistent symptoms despite apparently adequate antidepressant therapy, and may be classified as treatment-resistant. Treatment-resistant depression (TRD) is defined as the failure to achieve full remission with an antidepressant drug used at an adequate dose for an adequate duration of time. A significant minority of patients having chronic TRD (about 20-30%) do not have a satisfactory response to sequential trials of various drug-drug and drug-psychotherapy combinations. TRD patients that typically do not respond to pharmacological treatments may be candidates for non-pharmacological interventions such as electroconvulsive therapy (ECT) and vagus nerve stimulation (VNS). The non-pharmacological interventions have been found to be effective for some patients with TRD. Unlike pharmacotherapy studies, very little work has been conducted examining the economic burden associated with the use of non-pharmacologic interventions. The objective of this study is to evaluate the characteristics of patients receiving ECT or VNS for MDD and to assess direct medical expenditures for these patients. METHODS: Patients with MDD who received ECT or VNS between 2001 and 2009 were identified in the PharMetrics Patient-Centric Database. Patient groups were analyzed based on receiving ECT alone, VNS therapy with and without programming and analysis services, and the combination of ECT and VNS. Patients receiving VNS in conjunction with epilepsy diagnosis codes were excluded. Patient characteristics and payer costs per patient per year enrolled in the plan

were compared. RESULTS: The average medical expenditures for patients who received ECT over the period from 2001 to 2009 were $15,675 per patient per year enrolled (N=3,886) and $19,783 per patient who received VNS therapy (N=267). This compares to $29,884 in expenditures for MDD patients who received both ECT and VNS (N=35). The differences in annual medical expenditures were primarily driven by outpatient and physician office services, including behavioral therapy, and pharmacy expenditures. CONCLUSIONS: Our results demonstrate that patients receiving non-pharmacological interventions for the treatment of MDD accrued significantly higher per patient medical costs due to higher medical resource use. The highest costs were seen in patients receiving both types of non-pharmacological therapy. These findings suggest that the cost-effectiveness of other non-pharmacological treatment interventions for TRD, such as deep brain stimulation, should be conducted.

NR04-53

PATTERNS OF ADVERSE EVENTS AND DISCONTINUATION DURING BIPOLAR MAINTENANCE TREATMENT WITH ZIPRASIDONE AND A MOOD STABILIZER

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SUMMARY:
Background: The objective of this post hoc analysis was to examine the relationship between the most common adverse events (AEs) and ensuing discontinuations in a real-world treatment scenario. A recent double blind, placebo controlled trial evaluated the maintenance of effect of ziprasidone plus adjunctive lithium or valproic acid in symptomatic outpatient subjects with a recent or current manic or mixed episode of Bipolar I Disorder. This report describes data obtained during the preceding open-label phase where patients were initially stabilized on ziprasidone. Methods: The trial consisted of 2 periods, a 2.5 4 month, open label stabilization period followed by a 6 month, double blind maintenance period for the stable patients. In the stabilization period, open label ziprasidone (80 160 mg daily) was added to lithium or valproic acid after the mood stabilizer had been maintained at a therapeutic serum concentration for at least 2 weeks. This report describes data on the incidence and course of AEs as well as patterns of discontinuation during the open label phase. Results: Detailed efficacy data are reported elsewhere (Bowden et al. 2010). Of 1088 patients screened, 586 were assigned to the open label phase of the study and 241 patients [41.3%] were stabilized and entered the double blind phase or completed this period. Of the 343 [58.7%] who did not complete, 158 discontinued for reasons related to the study drug. Of these 158 subjects, 31 [19.6%] left the study due to lack of efficacy, 126 [79.7%] discontinued due to AEs. Discontinuations due to AEs showed a decline over time with 42, 25, 18, 19, 9, 7, 1, 8, 2, and 4 discontinuations per week for weeks 1 to 10 respectively: Most commonly cited reasons for discontinuation [n, %] were sedation [37, 6.3%], somnolence [25, 4.3%], dizziness [14, 2.4%], nausea [14, 2.4%], fatigue [8, 1.4%], insomnia [8, 1.4]% and akathisia [7, 1.2%]. No patients discontinued due to weight gain. The reported incidence of these AEs was as follows [n, %]: sedation [132, 22.6%], somnolence [95, 16.3%], dizziness [45, 7.7%], nausea [37, 6.3%], fatigue [42, 7.2%], insomnia [39, 6.7%] and akathisia [47, 8.0%]. Severe AEs were as follows [n, %]: sedation [24, 4.1%], somnolence [17, 2.9%], dizziness [4, 0.7%], nausea [4, 0.7%], fatigue [5, 0.9%], insomnia [3, 0.5%] and akathisia [3, 0.5%]. Conclusions: These data provide relevant information regarding the time course and frequency of AEs during the initiation of ziprasidone in clinical practice as adjunctive treatment for bipolar mania/mixed states. The results suggest that certain AEs such as akathisia are better tolerated than others such as nausea. These data will be of particular interest to clinicians using combined pharmacotherapy for long term management of bipolar disorder. Reference: Bowden CL et al. J Clin Psych 71 (2010) 130-7. This study was supported by Pfizer Inc.

NR04-54

SERUM FOLATE AS A RISK FACTOR FOR DEPRESSION IN DIABETIC PATIENTS

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SUMMARY:
Objective: The purpose of this study is to assess whether low normal serum folate is associated

with an increased risk of depression in patients with Diabetes Mellitus (DM). Methods: The National Health and Nutrition Examination Survey (NHANES) is a comprehensive survey performed regularly to evaluate the overall health and nutrition status of the United States population. For this case-control study, we combined NHANES data collected between 1999 and 2006. Participants were considered eligible for inclusion if they were at least 20 years of age, reported a history of DM, and had responded to a depression questionnaire. Subjects with folate deficiency (serum folate <2 ng/ml) were excluded, leaving 546 eligible participants. Depression was defined as scoring positively on either the World Health Organization Composite International Diagnostic Interview (CIDI) or the Patient Health Questionnaire (PHQ), both of which match the DSM-IV criteria for major depression. The prevalence of depression in diabetic subjects with low normal serum folate (folate 2-7 ng/ml, n=58) was compared to the prevalence in those without low normal serum folate (folate >=7 ng/ml, n=488) using multivariate logistic regression, adjusting for other risk factors of depression (age, gender, race, marital status, and smoking). SAS PROC SURVEY methodology was employed. Results: The age-adjusted prevalence of depression in subjects with DM was 6.3% in the group with low normal serum folate and 4.9% in the group without low normal serum folate. A low normal folate was associated with a two-fold increase in the odds of depression in diabetic subjects (OR 2.29; CI 1.01 to 5.18). Conclusions: Our results show that a low serum folate – even when not low enough to cause megaloblastic anemia – is associated with a higher prevalence of depression among patients with DM. The results of this study are promising, given that recent evidence in the literature has suggested that correcting low serum folate and supplementing antidepressants with folic acid may improve the efficacy of antidepressant therapy. This has the potential to reduce the dosage of antidepressants necessary for these patients and minimize metabolic side effects that are particularly pertinent to diabetic patients. This study indicates the need to include diabetic patients in future research regarding folic acid supplementation in depression. This study was funded by the Philadelphia College of Osteopathic Medicine's D'Alonzo Memorial Scholarship. Disclaimer: The views of the authors do not necessarily reflect the positions of the Department of the Army or the Department of Defense.

NR04-55

EVALUATING THE EFFICACY AND TOLERABILITY OF VILAZODONE IN PATIENTS WITH ANXIOUS DEPRESSION

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SUMMARY:
Objective: To evaluate the efficacy and tolerability profiles of vilazodone, a novel serotonin 1A receptor partial agonist and reuptake inhibitor, in the treatment of patients with anxious depression. Methods: Data from two 8-week, randomized, double-blind, placebo (PBO)-controlled, multicenter studies evaluating the safety and efficacy of 40 mg/day vilazodone in adult patients with DSM-IV-TR–defined moderate to severe depression were pooled. Anxious depressed patients were identified as the subpopulation with a 17-item Hamilton Depression Scale anxiety/somatization subscale score of >=7 at baseline. These studies excluded patients with general anxiety disorder. Changes from baseline to end of treatment were evaluated for a variety of depression and anxiety severity measures. Changes in overall clinical condition were also assessed. Results: Eighty-two percent of all randomly assigned patients met the criteria for anxious depression. Patients receiving vilazodone demonstrated significantly greater mean changes from baseline in the Montgomery-Asberg Depression Rating Scale (–12.7 in vilazodone vs –9.9 in PBO) and Hamilton Anxiety Scale total scores and in the Clinical Global Impression-Improvement score at end point. Similar percentages of patients in both groups discontinued prematurely for any reason; 7.4% and 3.2% of patients receiving vilazodone and PBO, respectively, withdrew because of treatment-emergent adverse events (TEAEs). The most commonly reported TEAEs included diarrhea, nausea, and headache. Conclusions: In this pooled analysis of two placebo-controlled studies, vilazodone 40 mg/day is associated with significant improvements in both depression and anxiety severity in patients with anxious depression. The tolerability profile of vilazodone in anxious depression is similar to that observed in the general major depressive disorder population. This study was supported by PGxHealth LLC, a division of Clinical Data, Inc.

NR04-56

SELEGILINE TRANSDERMAL SYSTEM

(STS) FOR ANXIOUS DEPRESSION: A POST HOC ANALYSIS OF 3 RANDOMIZED, PLACEBO-CONTROLLED, DOUBLE-BLIND STUDIES

Chp.:Donald Robinson M.D., 4111 Wake Robin Drive, Shelburne, VT 05482, Co-Author(s): Kimberly Blanchard Portland Ph.D., Sunil Mehra M.D.

SUMMARY:
Objective: Significant symptoms of anxiety are present in approximately half of patients with major depressive disorder (MDD). Previous studies indicate that patients with anxious depression may take longer to respond to antidepressant treatments and have a lower rate of response than patients with MDD lacking significant anxiety symptoms. This post hoc analysis seeks to compare the efficacy of STS versus placebo in patients with anxious versus nonanxious major depression. STS has been shown to be an effective and well-tolerated acute and maintenance treatment for MDD. STS delivers sustained blood levels of monoamine oxidase inhibitor (MAOI) directly into systemic circulation, thereby avoiding the need for a tyramine-restricted diet at the 6-mg/day dose. Methods: Data from 3 short-term (two 6-week and one 8-week), randomized, double-blind, placebo-controlled clinical trials of STS were pooled for this analysis (N=741). Anxious depression was defined post hoc by a Hamilton Rating Scale for Depression (HAM-D) anxiety/somatization factor score greater than or equal to 7 as measured at baseline. Analysis of covariance (ANCOVA) and logistic regression modeling were used to test the effectiveness of STS versus placebo on the Montgomery Åsberg Depression Rating Scale (MADRS) and 28-item HAM-D at treatment endpoint. Results: Two-thirds of the sample met the criteria cited above for 'anxious depression' (66.7%, n=494) based on the HAM-D anxiety/somatization score. Both anxious and nonanxious depressed patients receiving STS showed significantly greater improvement at endpoint on MADRS and HAM-D total scores versus patients receiving placebo (all $p<0.05$). Remission rates as defined by endpoint MADRS were significantly better in both anxious and nonanxious patients treated with STS compared with placebo ($p<0.05$), although remission based on 28-item HAM-D did not reach statistical significance ($p<0.1$). Conclusion: STS is an effective treatment for patients with major depressive disorder presenting with anxious or nonanxious depression. This study was funded by Dey Pharma, L.P.

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NR04-57
RATE OF USE OF AN ANTIDEPRESSANT, AN ATYPICAL ANTIPSYCHOTIC, OR THE COMBINATION AMONG PATIENTS DIAGNOSED WITH MAJOR DEPRESSIVE DISORDER IN THE USA

Chp.:Linda Robison M.S., Washington State University, College of Pharmacy, P.O. Box 646510, Pullman, WA 99164-6510, Co-Author(s): David A. Sclar, Ph.D., Pharm.D., Lawrence J. Cohen, Pharm.D., Kimberly K. Laubmeier, Ph.D., Iftekhar D. Kalsekar, Ph.D., Robert A. Forbes, Ph.D.

SUMMARY:
Objective: To discern the rate of prescribing of an antidepressant (AD), a second generation atypical antipsychotic (AP), or the combination among patients diagnosed with major depressive disorder (MDD) in the United States (U.S.). Methods: The U.S. National Ambulatory Medical Care Survey (NAMCS) is a national probability sample designed and conducted by the U.S. National Center for Health Statistics (NCHS) of the U.S. Centers for Disease Control and Prevention; data are collected by the U.S. Bureau of the Census. Data from 2007 were extracted for: (1) office-based physician-patient encounters (office-based visits; OBV) with an ICD-9-CM code for MDD (296.2-296.36, 300.4, 311), and without co-morbid mental illness; and (2) physician-patient encounters (OBV) with a diagnosis of MDD marked on the "diagnostic clinical checklist" (DCC), and without co-morbid mental illness. Analyses were conducted using the

Statistical Analysis System (SAS®; Cary, North Carolina USA) version 9.1.3. Rates per 1,000 OBV and per 1,000 U.S. population (USP), as of July 1, 2007, were calculated. Results: In 2007, there were: (1) 28,457,078 OBV with an ICD-9-CM code for MDD (31.4 per 1,000 OBV; 101.4 per 1,000 USP); 20,090,702 (70.6%) OBV with the prescribing (Rx) for AD (22.2 per 1,000 OBV; 71.6 per 1,000 USP); 2,420,885 (8.5%) OBV with Rx for AP (2.7 per 1,000 OBV; 8.6 per 1,000 USP); 1,981,968 (7.0%) OBV with Rx for both AD and AP (2.2 per 1,000 OBV; 7.1 per 1,000 USP); and (2) 74,561,367 OBV with MDD marked on the DCC (82.2 per 1,000 OBV; 265.8 per 1,000 USP); 37,470,406 (50.3%) OBV with Rx for AD (41.3 per 1,000 OBV; 133.6 per 1,000 USP); 3,877,385 (5.2%) OBV with Rx for AP (4.3 per 1,000 OBV; 13.8 per 1,000 USP); 2,785,941 (3.7%) OBV with Rx for both AD and AP (3.1 per 1,000 OBV; 9.9 per 1,000 USP). Conclusion: Among patients with MDD, and without co-morbid mental illness, the rate of Rx for both AD and AP ranged from 2.2 per 1,000 OBV when the OBV had an ICD-9-CM code for MDD (296.2-296.36, 300.4, 311), to 3.1 per 1,000 OBV when the OBV had MDD marked on the DCC. Funding Source: Bristol-Myers Squibb Company.

NR04-58

ANXIETY RESIDUAL SYMPTOMS IN FULL REMITTED DEPRESSIVE PATIENTS. (RESIST STUDY)

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SUMMARY:
Background: Recent studies have emphasised the clinical impact of residual depressive symptoms on remission and outcome of Major Depressive disorder. Fewer studies have analyzed the anxiety symptoms after full remission in depressive patients. Objective: To determine the prevalence and severity of residual anxiety symptoms in depressive patients after remission. Method: A naturalistic, multicenter, nationwide, prospective epidemiological study was designed. A total of 1595 subjects who met DSM-IV criteria for MDD were initially recruited. They were evaluated after 6-8 weeks of antidepressant treatment and follow up after 8-12 weeks.The 30-item Self-rated Symptom Depression Inventory (SDI-SR-30) was used. Full remission was defined as a SDI-SR-30 score =14 in the two evaluations. Results: 133 patients (8.3%) were in full remission. The prevalence of anxiety residual symptom was high: Irritable mood (21.8%) anxious mood (38.3%), somatic complaints (28.6%), sympathetic arousal (21.8%), panic/phobic symptoms (3.8%) and gastrointestinal symptoms (17.3%). Conclusion: There is a high prevalence of anxiety residual symptoms in full remitted depressive patients. Special attention should be paid to the presence of and risk associated with residual anxiety symptoms. Clinicians should address them to enhance the effectiveness of antidepressant treatment strategies.

NR04-59

EFFECTS OF SUBCHRONIC TREATMENT WITH THE MULTIMODAL ANTIDEPRESSANT LU AA21004 ON RAT BRAIN NEUROCHEMISTRY

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SUMMARY:
Background: The multimodal antidepressant Lu AA21004 is a 5-HT3 and 5-HT7 receptor antagonist, 5-HT1A receptor agonist, 5-HT1B receptor partial agonist and inhibitor of the 5-HT transporter. Acute microdialysis studies in rats have demonstrated a dose-dependent increase in extracellular brain serotonin (5-HT), norepinephrine (NE), and dopamine (DA) levels [1]. We examined the effect of Lu AA21004 under steady-state conditions and related the neurotransmitter output to SERT occupancy. Methods: Male Wistar rats were anesthetized with isoflurane and implanted with osmotic minipumps, which delivered vehicle, 19.0, or 28.0 mg/kg/day of Lu AA21004, or 7.5 mg/kg/day escitalopram. After 3 days, microdialysis probes were stereotaxically implanted into each rat. The effects of an acute challenge with 10.0 mg/kg Lu AA21004 were also assessed. Finally, 5-HT transporter (SERT) occupancy was estimated in satellite animals for each treatment group using ex vivo autoradiography. Results: Lu AA21004 produced a statistically significant increase in extracellular 5-HT, NE, and DA levels at SERT occupancies corresponding to 88 and 98%. Moreover, Lu AA21004 elevated basal 5-HT release to a significantly greater extent than 7.5 mg/kg/

day escitalopram, despite similar levels of SERT occupancy (92%). Acute challenge with 10.0 mg/kg Lu AA21004 in rats that received 3 days of vehicle caused significant increases in 5-HT release, while no additive effect was observed in rats that received either dose of Lu AA21004 for 3 days. Conclusions: These data support the hypothesis that Lu AA21004 exerts its effects by modulating several serotonergic targets. This multimodal action may translate into unique effects in the clinic.

NR04-60

VERY EARLY CHANGE IN DEPRESIVE SYMPTOMS DURING AUGMENTATION TREATMENT WITH QUETIAPINE XR: EVIDENCE FROM A MENTAL HEALTH TELEMETRY STUDY

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SUMMARY:
Introduction: The trajectory of response to treatment for depression is poorly understood. The purpose of this study was to use real-time "mental health telemetry" to prospectively examine change in depressive and anxiety symptoms for depressed patients receiving augmentation treatment with an atypical antipsychotic. Methods: Six-week, open-label study of the addition of Quetiapine XR (range 50-300 mg, mean final dose 107 mg) to patients with MDD who were non-responsive to standard antidepressant treatment. In addition to 6 scheduled study visits, all participants completed wirelessly transmitted self-report ratings of depressive and anxiety symptoms ("Mental Health Telemetry") twice-daily on a Palm Treo Smartphone for one week prior to baseline, as well as during the entire treatment phase. Results: Among all participants (n=26, mean age 45.7 years, 69% female, 54% with comorbid GAD), there was a 3.7 point mean drop in total score of the QIDS-Self Report as reported by Mental Health Telemetry (16.6 to 12.9). Of this change, 54% of the improvement occurred during the first 72 hours of treatment. Overall response rate (= 50% decrease in HDRS17 at endpoint) was 68%, with 44% of patients achieving remission (HDRS17 = 8). Mean HAM-A scores changed from 19.0 (baseline) to 10.6 (final). Conclusions: Very early changes in depressive symptoms were found among MDD patients receiving augmentation treatment with Quetiapine XR. This novel approach to close monitoring of study participants using Mental Health Telemetry provides tremendous opportunity for better understanding of patient outcomes in both research and clinical settings.

NR04-61

THE REAL-WORLD HEALTH CARE UTILIZATION AND COSTS IN NEWLY DIAGNOSED DEPRESSION PATIENTS BETWEEN 2006 AND 2008

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SUMMARY:
Objectives: This study examined real-world estimates of healthcare utilization and costs of depressed patients following their initial diagnosis compared to an age- and gender-matched cohort without depression. Methods: A cohort of patients with an incident depression diagnosis (ICD-9-CM 296.2, 296.3, 298.0, 300.4, 309.0, 309.1, 309.28, or 311) in 2006 and an age- and gender-matched comparator cohort were extracted from the Thomson Reuters MarketScan® database. Each patient's initial depression diagnosis was considered their index date. Control patients were randomly assigned an index date. Study subjects were required to be free of a depression diagnosis and have no evidence of antidepressant use for 1 year prior to their index date. The study period began at the index date and continued until either the last day of the study period, December 31, 2008, or earlier if the patient was lost to follow-up, as derived from each patient's enrollment data. Medical care utilization and costs were assessed for the depressed and comparator cohorts. Results: We identified 175,092 patients with diagnosed depression. Total utilization (sum of visits plus prescriptions) was approximately 2.1-fold greater among depressed patients than among the non-depressed comparator cohort (34.3 vs. 16.2 per patient-year); a differential that was driven by outpatient visits (17.6 vs. 6.6 per patient-year). Total health care costs of the depressed cohort were more than 2.7-fold greater than the non-depressed comparator cohort ($10,840 vs. $3,980 per patient-year). Results were consistent throughout virtually all major utilization and

prescription dispensing categories and generally increased with increasing age. Follow-up utilization and costs for comparators were similar to baseline (15.6 and $3,420 at baseline), whereas these metrics increased 40% and 58% (24.5 and $6,840 at baseline) for depressed patients following their depression diagnosis Conclusions: When compared to age- and gender-matched depression-free comparators, depressed patients had substantially higher health care utilization and costs. Funding: Takeda Pharmaceutical Company, Ltd.

NR04-62

PRESCRIBING PATTERN AND PREDICTORS OF USE OF AN ATYPICAL ANTIPSYCHOTIC AMONG PATIENTS DIAGNOSED WITH MAJOR DEPRESSIVE DISORDER IN THE UNITED STATES

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SUMMARY:
Objective: To discern the extent of the prescribing of a second generation atypical antipsychotic (AP), either alone, or in combination with an antidepressant (AD), among patients diagnosed with major depressive disorder (MDD) in the United States (U.S.); and the influence of physician specialty on said prescribing. Methods: The U.S. National Ambulatory Medical Care Survey (NAMCS) is a national probability sample designed and conducted by the U.S. National Center for Health Statistics (NCHS) of the U.S. Centers for Disease Control and Prevention; data are collected by the U.S. Bureau of the Census. Data from 2007 were extracted for: (1) office-based physician-patient encounters (office-based visits; OBV) with an ICD-9-CM code for MDD (296.2-296.36, 300.4, 311), and without co-morbid mental illness; and (2) physician-patient encounters (OBV) with a diagnosis of MDD marked on the "diagnostic clinical checklist" (DCC), and without co-morbid mental illness. Statistical analyses were conducted using the Statistical Analysis System (SAS®; Cary, North Carolina USA) version 9.1.3. The quantitative methods employed addressed the complex survey sampling design. Descriptive statistics and logistic regression derived odds-ratios (OR) and 95% confidence intervals (CI) are reported. Results: In the ICD-9-CM cohort there were 28,457,078 OBV with an MDD diagnosis; 20,090,702 (70.6%) OBV with an Rx for AD; 2,420,885 (8.5%) OBV with Rx for AP (7.4% continued; 1.1% new); and 1,981,968 (7.0%) OBV with Rx for both AD and AP. In the DCC cohort there were 74,561,367 OBV with MDD; 37,470,406 (50.3%) OBV with Rx for AD; 3,877,385 (5.2%) OBV with Rx for AP (4.5% continued; 0.7% new); 2,785,941 (3.7%) OBV with Rx for both AD and AP. Multivariate logistic regression models predicting AP utilization indicate that the probability of Rx for AP increased when the physician specialty was Psychiatry (OR=10.97 (95% CI=5.57 – 21.58) in the ICD-9-CM cohort; OR=10.63 (95% CI=6.68 – 16.93) in the DCC cohort). Conclusion: In 2007, the proportion of OBV for MDD reporting the Rx of an AP, either alone, or in concert with an AD, was 15.5% based on ICD-9-CM codes, and 8.9% based on the DCC. In both the ICD-9-CM and DCC cohorts the probability of Rx for AP increased when the physician specialty was Psychiatry. Funding Source: Bristol-Myers Squibb Company

NR04-63

PREVALENCE OF METABOLIC SYNDROME IN SUBJECTS WITH MELANCHOLIC AND NON-MELANCHOLIC DEPRESSIVE SYMPTOMS: A FINNISH POPULATION-BASED D2D-COHORT STUDY

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SUMMARY:
Objective: To evaluate the prevalence of the metabolic syndrome (MetS) in subjects with predominantly melancholic or non-melancholic depressive symptoms in a Finnish population-based sample. Method: The original study population consisted of 2820 randomly selected 45-74 years old men (N=1337) and women (N=1483) with a mean age of 60 + 8 years, who participated in a

study evaluat-ing the efficacy of the Finnish diabetes prevention programme (FIN-D2D). The health examinations were carried out in 2007 according to the WHO MONICA project protocol, and the metabolic syn-drome was defined according to criteria of the National Cholesterol Education Program (NCEP-ATPIII). A subsample of 432 participants scoring = 10 points on the Beck Depression Inventory (BDI) was identified. A summary score of the melancholic items in the BDI was used to divide the subjects with depressive symptoms into a melancholic and a non-melancholic group. Results: The prevalence of MetS was higher among subjects with non-melancholic depressive symp-toms compared to subjects with melancholic symptoms (69 % vs. 55%, p=0.004). The prevalence of MetS among non-depressed subjects was 51%. The sex- and age-adjusted odd ratio (OR) for MetS when comparing the non-melancholic and melancholic group was 1.84 (95%CI 1.20 to 2.80, p=0.005), and for non-melancholic and non-depressed population 2.10 (95%CI 1.62 to 2.73, p=<0.001, and for melancholic and non-depressed group 1.15 (95%CI 0.81 to 1.61, p=0.44). Conclusions: Non-melancholic depressive symptoms may be more frequently associated with the metabolic syndrome, which should be taken in account in treatment selection and follow-up.

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NR04-64

ERRALPHA MRNA EXPRESSION LEVELS IN PERIPHERAL BLOOD CELLS MAY BE A PREDICTOR OF PHARMACOTHERAPY RESPONSE IN THE PATIENTS WITH MAJOR DEPRESSION

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SUMMARY:
Background: Several lines of evidence have implicated elevated oxidative stress in the pathogenesis of depression. On the other hand, a couple of reports have revealed that some antidepressants decreased the mitochondrial activities in cell culture experiments, and electroconvulsive therapy (ECT) increased oxidative stress markers in the prefrontal cortex of the animals. Estrogen-related receptor alpha (ERRalpha) is a member of the nuclear hormone receptor superfamily that has been identified due to its sequence similarity to the estrogen receptor, and a key regulator of mitochondrial activity and oxidative capacity. In our cell culture experiments, hydroxyl radicals increased dramatically ERRalpha mRNA. The purpose of this study is to clarify whether the ERRalpha and mtDNA mRNA expression levels in the peripheral blood cells are related to the symptoms of the major depression. Methods: Major depression was diagnosed according to the DSM-IV criteria. The degrees of the depression were assessed by a Hamilton Depression Rating Scale. 7 patients have failed to respond to the pharmacotherapy (they took higher dosage of antidepressants than the equivalent of 150 mg/day imipramine for more than 8 weeks), and then they were considered non-responders. Other patients responded to the pharmacotherapy, and were considered responders. All healthy control subjects were screened to exclude significant current or past medical or neurological illness, significant alcohol or drug abuse and past or current Axis I psychiatric illness. This protocol was approved by the Institutional Review Board of Yamaguchi University Hospital. Informed written consent was obtained for all subjects. Results: The pharmacotherapy or ECT improved the depressive symptoms in all patients. In depressive state, the expression of ERRalpha mRNA level was higher in

the responder group than the non-responder group. Pharmacotherapy did not change the ERRalpha mRNA expression levels in the responder group, but ECT increased the ERRalpha mRNA expression levels in the non-responder group. There were no differences in the mtDNA mRNA expression levels between the groups. After treatment, responder group showed the decrease in mtDNA mRNA expression levels. Conclusions: ERRalpha mRNA expression in peripheral blood cells may be a predictor of pharmacotherapy response in the patients with major depression, and ECT could ameliorate lower ERRalpha mRNA expression levels and depressive symptoms in the treatment-resistant major depression, but the mitochondrial activities may not be correlated with the improvement of the depressive symptoms in major depression.

NR04-65

EFFICACY AND SAFETY OF ADJUNCTIVE OPC-34712 IN MAJOR DEPRESSIVE DISORDER: A PHASE II, RANDOMIZED, PLACEBO-CONTROLLED STUDY

Chp.:Michael Thase M.D., 3535 Market Street, Suite 670, Philadelphia, PA 19104, Co-Author(s): Maurizio Fava, M.D., Mary Hobart, M.Sci., Aleksandar Skuban, M.D., Peter Zhang, M.Sci., Robert D. McQuade, Ph.D., William H. Carson, M.D., Raymond Sanchez, M.D., Robert A. Forbes, Ph.D.

SUMMARY:
Objective: OPC-34712 is a new D2 dopamine partial agonist with a biochemical and pharmacologic profile designed to provide improved tolerability and likely greater efficacy than first-generation partial agonists. This study assessed the efficacy and safety of OPC-34712 as an adjunctive to standard antidepressant therapy (ADT) in patients with MDD who had exhibited inadequate response to one–three prior ADTs. Methods: This was a Phase II, multicenter, randomized, double-blind, placebo-controlled trial (Study 331-08-211) comprised of three phases: a screening phase (7–28 days); a prospective phase (Phase A): 8-week single-blind, adjunctive placebo to assess response status to ADT (=50% reduction in the 17-item Hamilton Depression Rating Scale [HAM-D17] total score); and a randomized phase (Phase B): 6-week double-blind, assessment of adjunctive OPC-34712 vs. placebo in patients with an inadequate response to ADT. Randomized subjects had been in the current depressive episode >8 weeks, had a HAM-D17 Total Score >18 at baseline and had not responded to ADT in Phase A (<50% reduction in HAM-D17 total score). Randomization was to daily OPC-34712 (0.15 mg, n=62; 0.50 ± 0.25 mg, n=120; or 1.5 ± 0.5 mg, n=121) or placebo (n=126) adjunctive to ADT. Primary efficacy endpoint was mean change from baseline of Phase B to endpoint on the Montgomery–Åsberg Depression Rating Scale (MADRS) total score. Primary analysis objectives were to compare the efficacy of the 0.50 mg/day dose vs. the 1.5 mg/day dose of OPC-34712 with placebo. Results: Among 429 randomized patients, completion rates at Week 14 were 82–85% and similar for all treatment groups, with a low incidence of discontinuation due to adverse events. Statistically significant improvements in mean MADRS total score, from baseline to endpoint, were observed only for subjects receiving adjunctive OPC-34712 at the 1.5 mg/day dose compared with placebo (p=0.0303), while subjects receiving the 0.5 mg/day dose did not have significant improvements in MADRS total score compared with placebo. The 1.5 mg/day dose also showed statistical superiority to placebo on secondary endpoints of the Sheehan Disability Scale (p=0.016) and Clinical Global Improvement-Severity Scale (p=0.006). Commonly reported adverse events (all doses of OPC-34712 >5%) were upper respiratory tract infection (6.9%, 21/303), akathisia (6.6%, 20/303), weight gain (6.3%, 19/303), and nasopharyngitis (5.0%, 15/303). Mean change from baseline in body weight was 1.6 kg for OPC-34712 (1.5 mg/day) compared with 0.77 kg for placebo. Discussion: OPC-34712 was well tolerated and effective as adjunctive treatment for MDD patients with an inadequate response to ADT. In addition, a statistically significant response was observed as early as Week 2 after initiation of treatment with the 1.5 ± mg/day dose. Supported by Otsuka Pharmaceutical Development and Commercialization, Inc.

NR04-66

EFFICACY AND SAFETY OF DESVENLAFAXINE 25 AND 50 MG/D IN A RANDOMIZED, PLACEBO-CONTROLLED STUDY OF DEPRESSED OUTPATIENTS

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SUMMARY:
Objective: The short-term efficacy of the serotonin-norepinephrine reuptake inhibitor desvenlafaxine (administered as desvenlafaxine succinate) for treating major depressive disorder (MDD) has been demonstrated for 50-, 100-, 200-, and 400-mg/d doses1; the recommended therapeutic dose of desvenlafaxine is 50 mg/d. This study assessed the efficacy and safety of desvenlafaxine 25- and 50-mg/d doses compared with placebo for treating MDD. Method: Depressed adult outpatients (aged =18 y) in the United States and (aged =20 y) in Japan, who met Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition, Text Revision) criteria for MDD with a 17-item Hamilton Depression Rating Scale (HAM-D17) total score =20 at screening and baseline, were randomly assigned to receive placebo or desvenlafaxine (25 or 50 mg/d) after a 6- to 14-d placebo lead-in period in an 8-wk, fixed-dose trial. The primary efficacy variable was change from baseline in HAM-D17 total score. Efficacy analyses were based on an intent-to-treat (ITT) population (took =1 dose of double-blind study drug, =1 postbaseline HAM-D17 evaluation), last observation carried forward (LOCF), using analysis of covariance for the primary endpoint. Results: The ITT population included 699 patients (placebo, n=231; desvenlafaxine 25 mg/d, n=232; desvenlafaxine 50 mg/d, n=236). The reduction in HAM-D17 total scores from baseline to final evaluation was significantly greater for desvenlafaxine 50 mg/d (–10.02) compared with placebo (–8.52) after adjusting for multiplicity. Desvenlafaxine 25 mg/d did not separate from placebo on the primary efficacy endpoint (–8.98). A significantly greater percentage of patients receiving the desvenlafaxine 50-mg/d dose (46.2%; P=0.015), but not the 25-mg/d dose (41.8%), had a response to treatment (=50% decrease from baseline HAM-D17 total score) compared with placebo-treated patients (34.6%). Remission rates (HAM-D17 total score =7) did not differ significantly among treatment groups (placebo, 19%; 25 mg/d, 17%; 50 mg/d, 26%). A total of 8/232 (3.4%) and 8/236 (3.4%) patients discontinued desvenlafaxine 25 and 50 mg/d, respectively, because of adverse events (AEs; placebo, 6/231 [2.6%]); rates of discontinuation due to lack of efficacy were 2/231 (0.9%), 2/232 (0.9%), and 1/236 (0.4%), for placebo and desvenlafaxine 25- and 50-mg/d groups, respectively. Safety findings were comparable to previous desvenlafaxine trials, however, rates of treatment-emergent AEs were slightly lower: treatment-emergent AEs were reported by 137/231 (59.3%) placebo-treated patients and 147/232 (63.4%) and 162/236 (68.6%) desvenlafaxine 25-mg/d– and 50-mg/d–treated patients, respectively. Conclusions: These results confirm the antidepressant efficacy of desvenlafaxine 50 mg/d and extend previous findings by demonstrating desvenlafaxine 50 mg/d as the lowest effective dose for treating MDD.

NR04-67

EFFICACY AND SAFETY OF LISDEXAMFETAMINE DIMESYLATE AS AUGMENTATION THERAPY IN ADULTS WITH MAJOR DEPRESSIVE DISORDER TREATED WITH AN ANTIDEPRESSANT

Chp.:Madhukar Trivedi M.D., 5323 Harry Hines Blvd, Dallas, TX 75390, Co-Author(s): Andrew Cutler, M.D.; Cynthia Richards, M.D.; Robert Lasser, M.D.; Brooke Geibel, B.A.; Joseph Gao, Ph.D.; Angelo Sambunaris, M.D.; Ashwin Patkar, M.D.

SUMMARY:
Objective: To evaluate the efficacy and safety of lisdexamfetamine dimesylate (LDX) used as augmentation to an antidepressant in adults with major depressive disorder (MDD).Method: This multicenter trial enrolled adults (18-55 y) with MDD: comorbid, ADHD and other Axis I disorders were excluded. Following an 8-week open-label escitalopram treatment (titrated to 20mg/d), participants with residual depressive symptoms (17-item Hamilton Rating Scale for Depression [HAM-D17] score>/=4) were randomized to 6-week adjunctive treatment with double-blind LDX (20, 30, or 50mg/d) or placebo. Adults were further stratified as nonremitters (Montgomery-Asberg Depression Rating Scale [MADRS] >10) or remitters at randomization to augmentation (week 8). Efficacy assessments were mean change from week 8 in MADRS total score (primary, analyzed by ANCOVA in nonremitters, with prespecified 2-sided significance level of 0.10); HAM-D17; Clinical Global Impressions-Severity (CGI-S) and -Improvement (CGI-I); and Quick Inventory of Depressive Symptomatology-Self Report (QIDS-SR). Safety assessments included treatment-emergent adverse events (TEAEs), systolic (SBP) and diastolic (DBP) blood pressure, pulse, ECG, and laboratory findings. Results: Of 246 enrolled adults, 239 received open-label treatment and 173 received randomized treatment: 129 nonremitters (65 LDX; 64 placebo) and 44 remitters

(23 LDX; 21 placebo). Of 89 adults withdrawing early, 20 withdrew during randomized treatment (6 [3.5%] due to TEAEs). During randomized treatment, 61.8% (107/173) were female; 76.9% (133/173) were white. The mean (SD) MADRS total scores for nonremitters at point of randomization to augmentation (week 8) were 20.3 (7.16) and 20.8 (6.42) for LDX and placebo groups, respectively. At endpoint (week 14) of randomized treatment, least squares mean (SE) change from week 8 was significantly greater (P=.0902) with LDX (-7.1 [0.93]) versus placebo (-4.9 [0.94]) in nonremitters). No differences were found for remitters. For adults receiving randomized treatment, 60.2% (53/88) on LDX and 49.4% (42/85) on placebo had TEAEs; 1 serious TEAE during randomized treatment occurred in an adult receiving placebo. TEAEs with an incidence >/=5% for LDX vs placebo, respectively, were dry mouth (11.4% vs 0%); headache (11.4% vs 4.7%); decreased appetite (6.8% vs 2.4%); nasopharyngitis (5.7% vs 3.5%); and insomnia (4.5% vs 7.1%). Mean (SD) change from week 8 to 14 in SBP, DBP, and pulse for LDX was 2.3 (9.04) mmHg, 0.9 (6.61) mmHg, and 3.3 (8.45) bpm, respectively. No clinically significant mean changes were seen in ECG and laboratory findings. Conclusion: Augmentation with LDX for adults with MDD and residual symptoms on escitalopram met prespecified signal detection parameters. Further studies are needed. The safety profile of LDX was consistent with prior LDX ADHD studies and long-acting stimulant use.Clinical research was funded by the sponsor, Shire Development Inc.

NR04-68

AN INVESTIGATION OF THE EFFECTIVENESS AND COGNITIVE SIDE EFFECTS OF BIFRONTAL ECT

Chp.:Howard Weeks M.D., 501 Chipeta Way, Salt Lake City, UT 84108, Co-Author(s): Mikala Saccoman, M.S., Elaine Clark, Ph.D., Kathleen Light, Ph.D., Wendy Birmingham, M.A., Gordon Chelune, Ph.D., Yana Suchy, Ph.D., Kelly Smith, M.D., Lowry Bushnell, M.D.

SUMMARY:
Objectives: To investigate both the effectiveness and cognitive side effects of electroconvulsive therapy (ECT) conducted with bifrontal electrode placement. Methods: Patients receiving bifrontal ECT for a major depressive episode at a university based neuropsychiatric hospital between 9/09 and 10/10 underwent a battery of psychiatric and neuropsychological tests prior to treatment (which was 8-10 ECT sessions over 3 weeks), immediately post-treatment, and one month later. Results: 17 participants (mean age 41.7, 59% males, 41% inpatients) were enrolled and none dropped out of the study. 88% of the participants were considered responsive to bifrontal ECT immediately post-treatment (defined as a 50% or more reduction in HAM-D scores) and 73% continued to meet this criterion one month after treatment was completed. There was no neuropsychological evidence that bifrontal ECT caused serious and persistent anterograde amnesia, processing speed problems, or deficits in executive functions. Two types of deficits were observed; both memory for autobiographical information and verbal fluency scores were statistically poorer than pre-ECT. Verbal fluency recovered and no longer differed from pre-ECT levels, while autobiographical deficits also improved but remained statistically poorer at one month. Conclusions: This pilot study describes the effectiveness of bifrontal ECT in relieving the core symptoms of depression and its effects on cognitive functioning. In this community sample, bifrontal ECT was considered effective in treating severe depression for the majority of participants. Although on average participants displayed short-term deficits in verbal fluency, these effects had resolved by one month later. Persistent deficits in memory recall for biographical information remained at 1 month when compared to pre-treatment status. The biographical deficits are consistent with other published reports. No other significant or lasting cognitive effects resulted from ECT conducted bifrontally. These results are promising in that they may help quell patients' fears concerning the cognitive side effects of ECT treatment.

NR04-69

SUSTAINED REMISSION, NUMBERS NEEDED TO TREAT, AND COMPLETE REMISSION IN A PLACEBO-CONTROLLED LEVOMILNACIPRAN STUDY IN MAJOR DEPRESSIVE DISORDER

Chp.:Peter Werner Ph.D., Harborside Financial Center, Jersey City, NJ 07311, Co-Author(s): Jennifer Li, Ph.D., Lucilla Mansuy, M.D., Anjana Bose, Ph.D.

SUMMARY:
The following information concerns a use that has not been approved by the U.S. Food and

Drug Administration. Objective: Levomilnacipran (1S, 2R-milnacipran), a potent and selective norepinephrine and serotonin reuptake inhibitor, is in clinical development for treatment of major depressive disorder (MDD). Post hoc analysis of data from a placebo-controlled clinical trial were performed to characterize the effects of levomilnacipran treatment on complete remission (MADRS<=5) and sustained remission (MADRS<=10 Weeks 4 to 10). The numbers needed to treat (NNTs) for response (50% reduction in MADRS score) and remission were also estimated. Methods: A 10-week, randomized, flexible-dose study evaluated efficacy and safety of levomilnacipran sustained release (SR) 75-100 mg/day (n=276) versus placebo (n=277) in patients (18-70 years) with DSM-IV–defined MDD. Primary efficacy outcome was Montgomery-Asberg Depression Rating Scale (MADRS) total score change from baseline to Week 10. Post hoc analyses compared the effect of levomilnacipran relative to placebo on complete remission and sustained remission using LOCF. Results: Significantly more levomilnacipran- than placebo-treated patients achieved remission (MADRS<=10; 46% vs. 26%, P<.0001). In patients with severe depression (MADRS>=30 at baseline), remission rates were 40% and 22% for levomilnacipran and placebo, respectively (P=.0004). For patients who achieved remission at Week 4, the effect was sustained until end of Week 10 in 87% of levomilnacipran- and 68% of placebo-treated patients (P=.0303). At end of Week 10, 24% of levomilnacipran patients achieved complete remission (MADRS<=5) versus 11% for placebo (P<.0001). The difference in complete remission rates between treatments was even more pronounced in severely depressed patients (25% versus 5%; P=.0004). Numbers needed to treat (and their 95% confidence intervals) for response, remission, and complete remission were 6 (4, 12), 5 (4, 8), and 7 (5, 13) respectively. Conclusions: Levomilnacipran treatment resulted in significantly higher rates of complete remission and sustained remission relative to placebo. NNTs and their 95% confidence intervals suggest that levomilnacipran may have notable treatment benefits for patients with MDD. Supported by Forest Laboratories, Inc. and Pierre-Fabre Médicament.

NR04-70

PREDICTING DEPRESSION AND INSECURE ATTACHMENT USING FUNCTIONAL MAGNETIC RESONANCE IMAGING

Chp.:Zimri Yaseen M.D., 317 E 17th St 9th Fl, New York, NY 10003, Co-Author(s): Xian Zhang, Ph.D., Igor Galynker, M.D., Ph.D.

SUMMARY:
Objective: Objective measurement of depression and attachment security remains elusive. Both depression and insecure attachment have been associated with changes in brain reactivity in response to viewing emotionally significant faces. In this study we developed a method to calculate predicted scores for the Beck Depression Inventory II (BDI) and the Adult Attachment Interview (AAI) coherence of mind scale of global attachment security using fMRI imaging of subjects viewing pictures of attachment figures. Methods: 28 female subjects age 18-30 (14 healthy controls and 14 unipolar depressed, defined by The Mini-International Neuropsychiatric Interview) were scored on the Beck Depression Inventory II (BDI) and the Adult Attachment Interview (AAI) coherence of mind scale of global attachment security. They were then scanned (fMRI) using a Philips Intera 3T machine while viewing a random sequence of pictures of mother (M), friend (F), and stranger (S) through MRI-compatible viewing goggles. Multiple linear regression was performed, regressing BOLD signal for contrast images (M-F, M-S and F-S) onto BDI and AAI scores for each subject. Group analysis of the regression results was used to generate regions of interest that constrain the volume of fMRI data. Principal component analysis was used to further reduce the dimension of fMRI data to 2 principal components, and a linear transformation was then obtained to optimally reconstruct the fMRI of one subject based on the fMRI data of the remaining subjects. Applying the same transformation to sample BDI and AAI scores yielded the predicted BDI and AAI scores. Since the number of subjects was limited, for each subject, the other 27 subjects were used as the sample to build the transformation matrix (leave one out approach). Results: In general, the predicted BDI showed good agreement with the actual BDI using BDI<=13 as a cut-off score for depressed versus non-depressed, and the predicted AAI showed good agreement with the actual AAI using AAI<=3.5 as a cut-off score for insecurely versus securely attached. In receiver operator characteristic analysis of the algorithm we found area under the curve (AUC)=0.88 and p-value<0.001

for BDI and AUC=0.84 and p-value=0.003 for AAI. Conclusions: Functional magnetic resonance imaging has the potential to provide objective assessments of depression and attachment security.

NR04-71

ECONOMIC DISTRESS AND SUICIDE: WILL THE U.S. FOLLOW THE TREND IN JAPAN?

Chp.:William Yates M.D., 8601 S Darlington Ave, Tulsa, OK 74137, Co-Author(s): Maki Matsuki, M.D., Hideyuki Matsuki, M.D, Ph.D., Steven Thurber, Ph.D, William H. Meller, M.D.

SUMMARY:
BACKGROUND: The role of economic recession and unemployment in affecting suicide rates is important given the recent worldwide economic crisis. Japan preceded the U.S. and Europe in rising unemployment and stagnant economic growth by a period of about 10 years. Suicide rates sharply increased (47.3% in men and 23.1% in women) in Japan concurrent with a 50% increase in the unemployment rate in 1998 and 1999. The U.S. and Europe have experienced sharp unemployment increases in 2009 and 2010. OBJECTIVE: The objective of this study is to examine the timing and extent of economic distress in Japan and in the U.S. and estimate the increase in U.S. suicides if the U.S. follows the suicide trend experienced in Japan. METHODS: Suicide trends in Japan by age, gender and year were examined in relation to a series of economic variables. Economic trends by year were compared between Japan and the U.S. to estimate the timing of a potential economic effect on suicide rates in the U.S. Estimated numbers of additional U.S. suicides were calculated based on Japanese rates applied to the number of suicides in the U.S. in 2007. RESULTS: Economic trend analysis supports a U.S. pattern similar to Japan for economic stagnation and increased unemployment beginning in the U.S. between 2008 and 2012. If U.S. rates of increased suicide approximate those in Japan, the U.S. would experience a yearly increase of deaths due to suicide estimated at 14,610 per year (95% CI=7,820 to 21,660/year) CONCLUSIONS: U.S. clinicians and public health officials need to be alert to the potential for the U.S. to experience a significant increase in suicides if the U.S. follows the pattern of Japan. A recent increase in suicides in U.S. "baby boomers" may be a harbinger of the onset of this pattern.

NR04-72

EARLY IMPROVEMENT PREDICTS LATER OUTCOME IN MANIC OR MIXED EPISODES ASSOCIATED WITH BIPOLAR I DISORDER: POST HOC ANALYSES OF ASENAPINE STUDIES

Chp.:Jun Zhao Ph.D., 126 E Lincoln Ave, Rahway, NJ 07065, Co-Author(s): Xianwei Ha, Ph.D., Armin Szegedi, M.D., Ph.D.

SUMMARY:
Objective: Early symptomatic improvement is a clinically useful indicator of later individual treatment outcome in unipolar depression, bipolar depression, and schizophrenia. We performed pooled, post hoc analyses of 2 asenapine clinical trials to assess whether early improvement of manic symptoms predicts outcome in a population of bipolar I disorder patients experiencing acute manic or mixed episodes. Methods: Data were pooled from the intent-to-treat populations of two 3-week randomized, double-blind trials [NCT00159744 and NCT00159796]. Patients were administered flexible-dose sublingual asenapine (5 or 10 mg twice daily; n=372), oral olanzapine (5–20 mg once daily; n=391), or placebo (n=197). Early improvement, defined as reductions from baseline Young Mania Rating Scale (YMRS) total score using cutoff values of =15%, =20%, and =25%, was assessed in each patient at days 2, 4, and 7. Week 3 treatment outcomes included response (=50% YMRS total score reduction) and remission (YMRS total score =12). Associations between early improvement and treatment outcome were calculated using Fisher exact tests; odds ratios classified their relative strength. Sensitivity (SN), specificity (SP), and positive (PPV) and negative (NPV) predictive values were also calculated as previously described by Szegedi et al (J Clin Psychiatry 2009;70:344–353). Missing treatment outcomes for individual patients were treated as treatment failures. Results: Early improvement was strongly associated with positive treatment outcome in all analyses. The earliest positive associations across all cutoff values studied were observed with asenapine at day 2 for both response (all P<0.04) and remission (all P<0.007), olanzapine at day 4 for response (all P<0.02) and day 2 for remission (all P<0.002), and placebo on day 7 (response, all P<0.003; remission, all P=0.0005). Odds ratios for early improvement leading to

positive outcome for all cutoff values were higher for asenapine (1.8–9.1) than for olanzapine (1.4–3.5) and placebo (1.3–8.0) in the majority of analyses performed. Respective remission values for SN, SP, PPV, and NPV at day 4 at the =15% cut-off were 80%, 58%, 48%, and 85% for asenapine; 76%, 43%, 49%, and 71% for olanzapine; and 50%, 67%, 31%, and 82% for placebo. Conclusion: Early improvement was strongly associated with response and remission at week 3 in patients treated with asenapine or olanzapine, with the high NPV indicating little chance of stable remission in the absence of early improvement. Thus, information obtained after 2–4 days of treatment with asenapine or olanzapine may be clinically useful for assessing whether a patient will benefit from a recently initiated treatment. (This research was supported by Merck, Whitehouse Station, NJ.)

NEW RESEARCH POSTER SESSION 05
May 16, 2011
1 – 3 PM
Hawaii Convention Center, Exhibit Hall, Level 1

NR05-01
COMPLETE AND SUSTAINED RESPONSE TO CITALOPRAM AND ESCITALOPRAM IN PATIENTS WITH DEPRESSION AND ANXIETY: A CANDIDATE GENE ANALYSIS

Chp.:Laura Gedge M.S.C., 11 Meritage Lane, Niagara on the Lake, L0S1J0 Canada, Co-Author(s): Ruzica Jokic, M.D., Roumen Milev, M.D., Ph.D.

SUMMARY:
Objective: The initial course of antidepressant treatment is ineffective for over half of patients with depression and for 25% of patients with anxiety, resulting in a need to try other medications in an effort to find one that is effective. This large individual variation in antidepressant treatment outcome may have a genetic basis. Genotype at candidate genes involved in the pathophysiology of illness and the mechanism of action of selective serotonin reuptake inhibitors (SSRIs) may predict treatment effectiveness, reducing the likelihood that patients will experience unsuccessful treatments in the future. The objective of this study is to determine whether genotype at the catechol-O-methyltransferase (COMT) rs4680, dopamine D2 receptor (DRD2) rs1800497, serotonin receptor 1A (5-HTR1A) rs6295 or serotonin transporter promotor 5-HTTLPR single nucleotide polymorphisms is associated with response to citalopram and escitalopram SSRI treatment in patients with depression and anxiety. Method: Participants were recruited from primary care centres in Kingston, Ontario. A candidate gene analysis was performed to compare the genotypes of 21 patients with Major Depressive Disorder or Generalized Anxiety Disorder who responded to citalopram or escitalopram treatment with 143 healthy control participants who did not have depression or anxiety. Medication responders began citalopram or escitalopram treatment and experienced improvement in illness severity prior to the commencement of this study, and continued treatment throughout the study. Patients who were treated with citalopram or escitalopram for greater than one year, and who stopped the medication for a period of time during which their symptoms returned, and upon re-commencing the medication their symptoms were again reduced, were classified as medication responders. Genotype was determined at COMT rs4680, DRD2 rs1800497, 5-HTR1A rs6295 and 5-HTTLPR. Chi squared tests were used to compare genotypic and allele frequencies between responders and controls. The main outcome measure was the difference in genotypic frequency between responders and controls at each of the polymorphisms studied. Results: There was no significant difference in genotypic frequencies between responders and controls at COMT rs4680 (p= 0.89), DRD2 rs1800497 (p= 0.07), 5-HTR1A rs6295 (p= 0.39) and 5-HTTLPR (p= 0.55). Allele frequencies did not significantly differ between responders and controls at each of the studied polymorphisms (p> 0.05). Conclusions: This pilot study suggests that genotype at COMT rs4680, DRD2 rs1800497, 5-HTR1A rs6295 and 5-HTTLPR is probably not associated with response to citalopram and escitalopram treatment in patients with depression and anxiety. A larger sample size, along with a genome-wide scan are needed to identify genetic variants that predict antidepressant response.

NR05-02
ELECTRONIC PATIENT RECORD AND DATA MINING: A NEW APPROACH FOR IDENTIFYING BIOLOGICAL CAUSALITY

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SUMMARY:
Objective: The Danish Health Registers have with great success been used to study co-morbidity, cause of illness, family predisposition etc. However they only contain principal diagnoses, and thus lack in detail. An alternative and much richer source of data on a multitude of clinical conditions springs from the Electronic Patient Record (EPR) that may be used to complement the register-bases studies. The scope of the study is to discover biological causes of disease, and the specific aim is to find biological causes of co-morbid conditions identified in the records by means of data mining. Method: The study uses data mining to construct the phenotypic space for each individual patient based both on formally assigned diagnoses and the clinical conditions mentioned in the EPR notes. This phenotypic space is used to identify overrepresented and unexpected co-morbidities, the basis of which is subsequently studied using a Systems Biology approach. Co-morbidity (defined as two or more diagnoses in same patient) is taken to indicate that diagnoses that occur frequently together may have a shared biology. A two step model ensures that noise and spurious findings in EPR are eliminated by an independent Systems Biology replication procedure. We performed data mining, in the form of text mining, on 10 years of EPR covering 3290 patients many with multiple admissions from the Mental Health Centre Sct. Hans. First, we created the phenotypic space for each patient, and used it to list all occurrences of co-morbidity. We then divided the overrepresented co-morbidities in three categories: (1) Trivial co-morbidity reflecting similar or identical diagnoses (2) Cause-effect co-morbidity representing two linked clinical conditions (3) Unexpected co-morbidity with no known relation All the unexpected co-morbidity (i.e. category 3) was further analyzed, searching for biological causality by means of a system biological approach, to examine whether the co-morbidity could be explained by shared genes, gene-complex or biological pathways. Results: The 3290 patients have in average 2,7 assigned ICD 10 diagnoses, and text mining added 9,6 diagnoses. 80 % of the assigned diagnoses were from chapter 5 “Mental and behavioural disorders”, by adding text mining this number dropped to 24 %. There were 674 different diagnoses, and more than 200.000 possible co-morbidities, 802 of which were overrepresented more than two-fold and about 270 co-morbidities were rated in category 3. For one category-3 comorbidity, we discovered a hitherto unrecognized shared biology underlying the corresponding two clinical conditions. The clinical conditions sharing a common biological basis can be interpreted as a shared genetic predisposition to side effects or to an autoimmune condition. Conclusion: We have provided proof of concept that data mining of electronic patient record is a new method to find biological causes for medical conditions otherwise hidden to the eye.

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NR05-03

QUANTITATIVE MAPPING OF DELETED MITOCHONDRIAL DNA IN MICE EXPRESSING MUTANT POLG1

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SUMMARY:
Objective: This study investigates the underlying mechanisms of bipolar disorder (BD) by analyzing

candidate regions responsible for BD at a molecular and genetic level. A mitochondrial hypothesis for BD has suggested that aberrant mitochondrial function results in increased cellular vulnerability in regions involved in mood disorders. Using transgenic mice containing a proofreading deficient mtDNA polymerase, POLG1, we can hypothesize to see an accumulation of deleted mtDNA (?mtDNA) in these regions. We have reported that ?mtDNA is accumulated in several brain areas including paraventricular thalamic nucleus (PVT) (Takata et al, ISBD 2010). Here, a coronal slice of our transgenic mice brain was subjected to laser microdissection, followed by ? mtDNA quantification using quantitative real-time PCR. This experiment focuses on one coronal slice situated at Bregma -0.75 mm which included two additional candidate regions: suprachiasmatic nucleus (SCN) and paraventricular hypothalamic nucleus (PVN). Patients with BD have also displayed abnormal circadian rhythms. SCN is known to be the center of circadian rhythm and we can hypothesize that this region is involved in some of the manifestations of BD. PVN was chosen because it is known to be involved with stress response. Method: The experiment was performed as previously presented (Takata et al, ISBD 2010). A coronal brain slice at Bregma -0.75 mm was made from an 87-week-old transgenic mouse expressing a mutant POLG1. A grid format was applied across one hemisphere and rectangle sections were cut and captured using laser microdissection. ?mtDNA was selectively amplified using an outward primer set designed on mtDNA D-loop region with an optimized extension time in PCR. The amount of accumulation was measured using quantitative real-time PCR. A threshold cycle (Ct) value was calculated to determine ?mtDNA levels with respect to total wilt-type mtDNA (measured in a control experiment using an ND4 primer). Ct values were then color coded and used to generate a heat map to determine where ?mtDNA levels were the greatest. Results: ?mtDNA was found in relatively high levels in anterior PVT (aPVT), and PVN. However there was not a significant amount found in SCN. There was an unexpected high amount in the subfornical organ (SFO) situated within the third ventricle. Conclusions: The finding in the PVT further supported our previous finding that ?mtDNA is accumulated in this region (Takata et al, ISBD 2010). Although there was negligible ?mtDNA in SCN, the center of circadian rhythm, PVT is also involved in the regulation of circadian rhythm, which may be involved in the altered activity rhythm in the transgenic mice. Furthermore, accumulation of ?mtDNA in PVN, which contains corticotropin-releasing hormone neurons, may be involved in behavioral alteration in the transgenic mice. SFO is responsible for body fluid homeostasis including regulation of cerebrospinal fluid (CSF). Ventricular enlargement is one of most established neuroimaging findings in bipolar disorder, which SFO may play some role in. A possible role of CSF regulation in ventricular enlargement in bipolar disorder should be further studied. Sources of funding come from Riken Brain Science Institute's Laboratory for Molecular Dynamics of Mental Disorder and Albert Einstein College of Medicine.

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NR05-04

THE VISUAL N2-P3 COMPLEX IN SCHIZOPHRENIA: A COMPARISON IN CLINICALLY-UNAFFECTED FIRST DEGREE RELATIVES, FIRST EPISODE AND CHRONIC PATIENTS

Chp.:Sherlyn Yeap M.B., Our Lady's Hospital, Navan, Co. Meath, Republic of Ireland, Co-Author(s): John J. Foxe, Ph.D., Ian Fiebelkorn, Ph.D., Simon P. Kelly, Ph.D., Jogin H. Thakore, M.D. Ph.D., Sophie Molholm, Ph.D.

SUMMARY:

Background: N2 and P3 event-related potentials are abnormal in schizophrenia. Numerous studies have determined the P300 as an endophenotype for schizophrenia. However, the bulk of studies have been in the auditory domain and diagnostically unspecific. In this study we set out to evaluate

the visual N2-P3 complex in three large cohorts involving patients with schizophrenia, their clinically unaffected first-degree relatives and first-episode schizophrenia patients and to compare it with the auditory N2-P3. Methods: The visual task was a go/no-go paradigm differentiating between line drawings of 2 kinds of animal and subjects comprised 52 patients, 32 unaffected first-degree relatives, 20 first-episode patients and 36 healthy controls. Event-related potentials were recorded from 72 scalp channels. Amplitude and latency of the visual N2-P3 complex were analyzed across the four groups. Results: There was a reduction in both the N2 and P3 amplitude and with no latency shift in either component in chronic and first episode schizophrenia patients compared to controls. First-degree relatives did not exhibit a reduced visual P3. Conclusions: The visual N2-P3 complex is a state rather than trait marker in schizophrenia.

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NR05-05

FUNCTIONAL CONNECTIVITY OF DELIRIUM STATE: A RESTING STATE FMRI STUDY

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SUMMARY:
Delirium, an acute decline in attention and awareness, is a common and life-threatening, clinical syndrome among older persons. This study aims to investigate the resting state of delirium for better understanding of the pathophysiology of delirium. Participants comprised 20 hospitalized medical patients aged 65 years and older with delirium diagnosed by psychiatrists and 22 medical out-patients without delirium who underwent 5-min resting functional magnetic resonance imaging (fMRI) scans. For 13 of the 20 delirium patients, fMRI scans obtained during and after resolution of delirium. We obtained serials of the Delirium Rating Scale-Revised-98 (DRS-R-98) and Memorial Assessment Scale (MDAS) to measure a severity of delirium. We analyzed resting-state functional connectivity (rsFC) maps of the cortex using seed regions such as the posterior cingulate cortex (PCC) and anterior cingulate cortex (ACC) known as parts of the default mode network. In addition, the resting-state functional connectivity strength (rsFCS) between subcortical regions-of-interest including the intralaminar nucleus of thalamus (ILN), mesencephalic tegmentum (mTEG), and basal forebrain (BF) known as parts of reticular activating system and acetylcholinergic system was investigated by calculating temporal correlations in MR signal levels between the two regions. The rsFC map of delirium patients revealed more expanded connectivities of cortex with PCC and ACC during delirium than control comparisons while those expanded connectivity disappeared after resolution of delirium. The mean value of the rsFCS between ILN and mTEG differed significantly delirium patients and control participants ($p = 0.003$); and the within-patient comparison identified trend, but not statistically significant difference between during and after delirium ($p = 0.062$). Both the between group comparison with the controls and delirium patients, and the within group comparison of paired scans showed significant differences in the rsFCS between ILN and BF ($p = 0.009$ and $p = 0.039$, respectively). Additional analysis revealed that the rsFCS between PCC and ACC significantly correlated with scores of the DRS-R-98 and MDAS ($r = -0.461$, $p = 0.041$; $r = -0.496$, $p = 0.026$). The rsFCS between mTEG and BF, showed significant difference in between comparison of delirium patients and control participants ($p = 0.017$), inversely correlated with the interval of paired scans ($r = -0.564$, $p = 0.023$). The results of this study suggest a dynamic change of rsFC through the course of delirium, and a relationship between the pattern of rsFCS and clinical course of delirium. An invalid self-surveillance system represented as excessive excitation of cortex during resting-state associated with severity of delirium would result in sensory overload, confusion, and/or psychosis. Reversible reduction in rsFC of the reticular activating system associated with duration of delirium would explain altered consciousness levels.

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NR05-06

FUNCTIONAL NEUROANATOMY OF WEAK CENTRAL COHERENCE IN AUTISM

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SUMMARY:
Functional Neuroanatomy of Weak Central Coherence in Autism Autism is a developmental disorder characterized by impaired social interaction and communication, and by repetitive behaviors and restricted general interests. One theory proposed to explain symptoms of autism is the theory of "weak central coherence," which proposes that people with autism have compromised perception of global, holistic information, whereas people without autism generally show a strong bias for holistic perception1. As a consequence, they may be relatively good at tasks where attention to local detail is advantageous. This may explain why people with autism have difficulty with tasks involving global perception, including recognition of faces and understanding words in context, while at the same time exhibiting relatively enhanced or preserved performance of tasks that involve local detail processing such as the Block Design and Embedded Figures tasks3. However, there is an absence of functional neuroimaging evidence that autistic subjects have impaired global processing. Previous studies have examined local but not global processing differences in autistic subjects using functional magnetic resonance imaging (fMRI)2,3,4. We therefore conducted a global and local abstract shape-detection task using fMRI in 14 autistic and 10 control subjects in a 3T magnet. In general, both groups were found to activate attention and cognitive control networks (bilateral parietal BA7, frontal operculum, dorsolateral prefrontal cortex and pre-supplemental motor area/cingulate gyrus), as well as bilateral early visual areas in the lateral occipital cortex. No regions were found in which control subjects had greater activation. Subjects with autism showed greater activation of the lateral occipital visual region in the right hemisphere and bilateral frontal operculum in both local and global tasks. This suggests greater difficulty in maintenance of attentional set and cognitive control and the possibility of less efficient processing in occipital areas in autism.

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NR05-07

THE RELATIONSHIP BETWEEN REGIONAL GRAY MATTER VOLUME AND PSYCHOPATHOLOGICAL SYMPTOMS IN SCHIZOPHRENIA PATIENTS: A VOXEL-BASED MORPHOMETRY STUDY

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SUMMARY:
Brain imaging modalities are powerful tools to unveil the specific structural difference between schizophrenic patients and healthy controls. To further understand the disease and its brain abnormality, psychopathological symptom dimensions had been introduced for further investigation. We conducted a VBM MRI study among 92 schizophrenia patients and 98 healthy controls. The Positive and Negative Symptom Scale (PANNS) were used for assessment of the psychopathology. The difference between schizophrenic patient group and the healthy control were gray matter deficits over the superior, middle, medial and inferior frontal gyrus, the cingulate gyrus, paracentral lobule, the precuneus, cuneus,

middle occipital gyrus, the superior temporal gyrus, and the insula. Instead of using factor analysis to develop further psychopatological models in previous studies or describing it with criteria defined by ourselves, we directly used the PANNS items as a descriptor. We adopted the concept of the remission criteria proposed by Andreason's group and selected the items of P1 (delusions), P2 (conceptual disorganization), P3 (hallucinatory behaviors), N1 (blunted affet), N4 (passive/apathetic social withdrawal), N7 (stereotyped thinking), G5 (mannerism/posturing), and G9 (unusual thought content) and compared these with our brain imaging findings. The positive items subtotal scores, negative items subtotal scores, general items subtotal scores and the PANNS total scores were also used for analysis. Multiple regions of gray matter deficit were identified by our study. The parahippocampal, the precentral gyrus, middle frontal gyrus, precuneus area, and cerebellum gray matter volume had negative correlation with P2. The inferior temporal gyrus was associated with P3. The parahippocampal and claustrum were related to positive total score. N1 had negative correlation with cerebellar areas. N4 were associated with the superior and medial frontal areas, the lingual gyrus, the middle occipital gyrus and the superior temporal gyrus. Negative total score correlated with the preuneus, cuneus area, middle frontal areas and the limbic system. G5 were associated with anterior cingulate, superior frontal, precunes area and cerebellum. General total score correlated with insula, the cingulate and medial frontal regions, the precentral and middle frontal areas and the superior temporal gyrus. The PANSS total score were associated with the anterior cingulate, middle frontal, subcollosal gyrus, lingual gyrus, insula, lentiform nucleus and the cerebellum. The implication of the brain deficits area related to specific psychopathogical symptoms, the possible relationships to brain functions and specific brain circuitry, and the subsequent understanding of the underlying mechanism and possible future treatment targets regarding schizophrenia is discussed.

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1)Regarding voxel-based morphometry(VBM) MRI studies of schizophrenia patients, Honea et al. had published a meta-analysis of 15 VBM studies up to May 2004. Collectively, 390 patients and 364 healthy controls were examined and 50 regions of gray matter, white matter deficits were reported. The most consistent results were decreased gray matter in the superior temporal gyrus and the left medial temporal lobe. The difference of brain structure, as a whole, between schizophrenic patients and healthy subjects had been unraveled. However, to further understand the relationship of structural changes and the disease itself, efforts had been put into delineating specific brain region differences according to different psychopathological dimensions of schizophrenic patients. Koutsouleris et al. reported a VBM study in 2008 and compared the gray matter density of 175 schizophrenic patients, and 177 healthy controls. Irrespective to symptomatology, deficits in gray matter density were noted over prefrontal, limbic, paralimbic, temporal, and thalamic areas in schizophrenia patients. They later assessed the patients with PANSS and did a factor analysis. A three-factor model was used and revealed gray matter deficits in: (1) the orbitofrontal, medial prefrontal, lateral prefrontal, temporal, limbic, subcortical areas among the negative factor subgroup, (2) the left perisylvian, thalamic areas among the positive factor subgroup, and (3) the bilateral temporal, insula, and medial prefrontal areas among the disorganized factor subgroup. Nenadic et al. reported a VBM study in 2010 of VBM study of 99 schizophrenic patients, and 113 healthy controls. The Scale for assessment of positive symptoms (SAPS), and the Scale for assessment of negative symptoms (SANS) were used to assess the patients' psychopathological symptoms and a factor analysis was done. Brain deficits were noted in the thalamus among negative factor subgroup, in the superior temporal cortex among the paranoid/hallucinatory factor subgroup, and in the medial temporal and thalamus among the disorganized factor subgroup. Deficits over the prefrontal areas were overlapped in the three factor subgroups.

2)Different study design to define the descriptors of pyschopathology had been developed by different research groups. Horn et al. reported in 2010 a study investigating gray matter volume differences specific to formal thought disorder in schizophrenia. VBM were performed in 20 right handed schizophrenic patients, and 20 matched healthy controls. Scales for the assessment of thought, language and communication (TLC) were used to assess formal thought disorder. They discovered that the more severe of TLC scores, the more deficits in regions of the left superior temporal sulcus, left temporal pole, right middle orbital gyrus, and the right cuneus and lingual gyrus. Molina et al. published a study in 2010 investigating subcortical and cortical gray matter differences between Kraepelinian

and non-Kraepelinian schizophrenia patients. VBM of 26 Kraepelinian patients (no evidence of remission of symptoms, continuous hospitalization, and complete dependence for basic needs), 18 non-Kraepelinian patients and 41 healthy controls were done. The results showed deficits in: (1) the frontal, occipital, limbic, striatal, and thalamic areas among Kraepelinian patients vs. healthy controls, (2) the basal ganglion, left precentral, right medial occipital regions in Kraepelinian vs. non-Kraepelinian patients, and (3) the left dorsolateral prefrontal regions in non-Krapelinian patients vs. healthy controls. The studies mentioned above had gain substantial understanding regarding psychopathological symptoms and structural brain difference in schizophrenic patients. This is an important strategy in order to unveil the underlying pathological mechanism of schizophrenia. However, due to the different tools and definition for assessment of the psychopathological symptoms by each research groups, comparison between study results could be difficult.

NR05-08

TREATMENT OF DEPRESSED PARENTS AND CHILD PSYCHOPATHOLOGY: DATA FROM TWO STUDIES

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SUMMARY:
Introduction: Parental major depressive disorder (MDD) is the strongest risk factor for MDD and other psychiatric disorders in children. These children have an increased risk of mood, anxiety, and behavioral disorders[1]. Possible mechanisms underlying this risk include: genetic heritability, neuroregulatory mechanisms during development, stress, and negative parental affect and behaviors. Previous research has shown that effective treatment of maternal MDD results in a significant reduction of psychiatric symptoms in the child followed by improved overall functioning[2]. Ongoing research by our team aims to broaden these findings by examining children, including siblings, of depressed mothers and fathers undergoing treatment for MDD; and by obtaining frequent child assessments, information on co-parents, and family psychiatric history. Hypothesis: a)Children of depressed parents have increased rates of psychiatric disorders; and b) Parental remission from depression is associated with improved functioning and a decrease in psychiatric symptoms in offspring across two separate studies. Methods: We compare the results of two separate studies. The first study (STARD*D-Child) includes children of mothers who were participants in the STAR*D multi-site trial comparing effectiveness of different treatments for MDD[2]. The second, ongoing study, (NIMH-Child) includes children with either a mother or father enrolled in a double-blind treatment study combining anti-depressants to hasten remission of MDD. In both studies, child psychiatric diagnoses and symptoms were assessed using the K-SADS-PL and overall functioning with the C-GAS. Parental remission status was determined using HAMD17 scores. Demographic data, diagnoses and symptoms counts were compared for baseline results (i.e. before parental treatment) from the completed trial, STAR-D-Child (N=151), and the ongoing study, NIMH-Child (N= 148). Results: There was no significant difference in the rates of psychiatric disorders in the groups of offspring. Nearly half of the children (45% STAR*D, 43% NIMH-Child) had a current or lifetime psychiatric disorder, including behavioral (29%, 24%), anxiety (18%, 20%), and mood disorders (19%, 16%). Both studies had an even distribution of gender and a mean age of 12 years. Additional results from NIMH-Child show an association between decreasing parental MDD symptoms and decrease in child symptoms in the first three months after the initiation of parental treatment. Conclusions: Results demonstrate high incidence of psychiatric disorders in children of depressed parents from two separate studies. Furthermore, the prevalence and distribution of these disorders at baseline are strikingly similar. Discussion: Upon completion of NIMH-Child, the association between remission of parental MDD and decreases in children's psychiatric symptoms can be confirmed to determine whether the results of STAR*D-Child are replicated. Furthermore, analysis of sibling outcomes will provide valuable information regarding risk factors within families. Delineation of the mechanisms of risk that impacts child outcome in this group is essential in providing effective treatments and interventions. If it is replicated that parental remission does indeed

provide significant reductions in child symptoms over time, the urgency for rapid and effective treatment in parents can be utilized in the clinic and used in psychoeducation strategies with parents and health care providers.

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NR05-09

CLINICAL TRIALS IN CHILD AND ADOLESCENT PSYCHIATRY: CURRENT TRENDS AND FUTURE PROJECTIONS

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SUMMARY:

Background: Psychotropic drug trials in children and adolescents are needed because some disorders either present mainly in this population or differently from adults. We aimed to describe characteristics of clinical trials of psychotropic medications in children and adolescents to assess how they are being conducted and to identify areas of potential improvement. Methods: We searched clinicaltrials.gov for clinical trials of psychotropic drugs in children and adolescents. Trials that started in January 2000 or later were included. Data was extracted based on predefined variables of interest. The following search terms were used: Psychotropic drugs; Recruitment: all studies; Study Results: all studies; Study Type: Interventional Studies; Age Group: Child (birth-17 years). Results: 172 clinical trials met the inclusion criteria. The median sample size was 80 (3 to 1400). Majority of trials were placebo-controlled (55.8%) followed by uncontrolled trials (32.5%) and those using an active comparator (11.6%). A higher proportion of trials funded by federal sources or industry used an uncontrolled study design (66.2%) compared to 37.6% trials funded by University/Industry& University (chi square test, p= 0.08). The disorders studied were: Bipolar I Disorder (23.8 %), Psychotic disorders (15.6%), Depressive disorders (11.2%), and Pervasive Developmental Disorders (17.4%). The majority of trials assessed an antipsychotic (54.0%), followed by antidepressants (25.0%) and mood stabilizers (11.0%). Of trials in Bipolar I Disorder, 58.5% assessed an antipsychotic rather than a conventional mood stabilizer. Industry funded 27.9% of trials, federal sources funded 31.9%, Universities funded 23.8%, and 16.2% were funded jointly by Industry and Universities. Of antipsychotic trials, 33.0% were funded by industry compared to 21.8% of trials of other drugs (Fisher's exact test, $p < .001$). The median sample size for studies funded by industry (median 181, range 3 to 448) was statistically significantly greater than for those not funded by industry (median 75, range 11 to 5000) or those funded by both (median 30, range 8 to 158; Kruskal-Wallis test p= 0.0001). Only 13 trials (7.6%) used drugs with novel mechanisms (e.g., Creatine, D-Cycloserine etc.). Conclusions: Most trials have focused on second-generation antipsychotics and these are mostly being funded by Industry.The potentially powerful effect of commercial funding sources on driving psychopharmacology research needs to be recognized and additional sources of funding should be encouraged. The greater sample size of industry-funded trials may further increase their impact. There exists a need for more drug trials in Bipolar depression, trials that compare active treatments to each other, and trials of drugs using novel mechanisms. Addressing all these issues is necessary to ensure a pipeline of improved treatments for mental disorders in children and adolescents.

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NR05-10

INHALED STEROID INDUCED MANIA IN AN ADOLESCENT FEMALE: A CASE REPORT

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SUMMARY:
Beclomethasone is a synthetic, halogenated glucocorticoid with anti-inflammatory and vasoconstrictive effects. Its inhaled form is used for the treatment of asthma, allergic and non-allergic rhinitis and viral croup . It accomplishes this by inhibiting leukocyte infiltration and suppressing the humoral immune response. The mechanism of the anti-inflammatory properties of corticosteroids is believed to involve phospholipase A2 inhibitory proteins and lipocortins, which regulate the biosynthesis of inflammatory mediators such as prostaglandins and leukotrienes . The risk of adrenal suppression is more associated with the usage of systemic steroids. Psychiatric symptoms associated with corticosteroid therapy include mood swings, mania, hypomania and depression. To our knowledge, there are at least six case reports published where the isolated use of inhaled corticosteroids led to the development of psychiatric symptoms in the pediatric population. In most cases symptoms occurred in first week and the most commonly reported symptoms are insomnia, aggressiveness, uninhibited behavior, mania, irritability and increased energy. Ms. A is a 16-year old Caucasian female with no significant past psychiatric history, who presented to an outpatient psychiatric clinic in 2010 with acute mania. The patient had grandiosity ("God gave me the mission to save the world), flight of ideas, impulsivity (self-mutilating behavior), racing thoughts, pressured speech, decreased need for sleep and high energy. On mental status examination, she reported a euphoric mood and described delusions of grandiosity. She denied experiencing any hallucinations. She had pressured speech and her affect was mood-congruent. The symptoms began one week prior to presentation, immediately after she was prescribed a beclomethasone inhaler 42 mcg 1-2 inhalation each nostril twice daily to treat her worsening asthma. She was not taking any other prescription or over-the-counter medications. Her past psychiatric, substance abuse or medical histories were not significant except recent history of asthma. She had no known drug allergy. There was no known family history of mood disorder. Her routine labs were WNL. After consulting her pediatrician, the beclomethasone was discontinued and her manic symptoms resolved within 48 hours. She did not require mood stabilizer or psychiatric hospitalization. The mechanism of the psychiatric side effects of corticosteroids remains unclear. Some studies suggest that the steroids increase dopamine concentration in the brain. The therapeutic efficacy of treatment with a dopamine antagonist in patients with corticosteroid-induced mania suggests that dopamine metabolism plays a significant role in production of psychiatric symptoms. Studies show that steroid-induced psychiatric symptoms occur more commonly in females and are dose-dependent. Higher doses and systemic use tend to elicit more side effects and they can occur during any stage of treatment, including withdrawal. Sometimes mood-stabilizing drugs such as lithium or antipsychotic medications such as riperidone can be used as treatment or prophylaxis of these symptoms. This case report suggests a temporal association between the use of inhaled corticosteroids and development of manic symptoms. The inhaled route has been used more widely and has generally been considered safe in the management of asthma in the pediatric population. Conclusion: Inhaled Corticosteroid-induced mood symptoms are

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NR05-11

AN ONLINE, E-LEARNING SPIRITUALITY-BASED TREATMENT PROGRAM FOR DEPRESSION IN ADOLESCENTS: QUALITATIVE EXPLORATION OF PARTICIPANTS' EXPERIENCE.

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SUMMARY:
Purpose:The prevalence of depressive disorders in adolescents is on the rise. Given the limited mental health resources available for adolescents, particularly those in rural areas, and the significant burden of disease there is a great need for new treatment options that are accessible, safe, effective and acceptable to adolescents. The benefit of an online, e-learning treatment program is that it is cost-effective, accessible, and can easily be delivered to adolescents in any location with Internet access. A growing body of evidence suggests that spirituality may play a role in the recovery from depression. Our previous research strongly supports the efficacy of using a self-study, spirituality-based intervention for depression in adults. Our team has created a spirituality-based intervention program for adolescents with major depressive disorder. The program could present an innovative and low cost treatment option for young patients with major depressive disorder.Methods: Study Design: An online, e-learning program was pilot tested in a randomized, wait list controlled trial. Population: Eligible adolescents with major depressive disorder were be randomized one of two study groups: the internet-based spirituality program group or a wait list control group. Intervention: The intervention consists of a self-study, internet based, modular, eight week teaching program. The program is presented in a multimedia format, and includes teaching of skills such as relaxation and mindfulness techniques. Participants randomized to the intervention group participated in an eight week intervention period followed by a 16 week follow-up phase. All participants placed in the control group participated in the internet-based teaching program after an initial eight week waiting period. Outcome Measures: The following measures were used throughout the pilot trial: a) depression severity (Children's Depression Rating Scale-Revised), b) depression response and remission rates (Children's Depression Rating Scale-Revised), c) self-rated psychological health (second edition of the Piers-Harris Children's Self-Concept Scale), d) spiritual well-being (Spiritual Well-Being Scale adapted and validated for use in adolescents). Qualitative data was obtained during follow-up interviews after completion of the eight-week program. Results and conclusions: Qualitative exploration of participants' experiences focuses on how depressed adolescents, and mental health professionals assess the value (strengths and weaknesses) of the online, e-learning treatment program. It is feasible to develop an online, e-learning treatment program for major depression in adolescents. This program model could be relevant for future development of other accessible, cost-effective, online-based treatment programs.

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NR05-12

EFFECTS OF INTELLIGENCE AND SPECIFIC FACTOR OF EXECUTIVE FUNCTIONS TO AUDITORY VERBAL MEMORY ABILITY IN CHILDREN WITH ADHD

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SUMMARY:

Objectives:
The purposes of this study are to examine the effects of intelligence, attention, working memory and inhibitory function to auditory verbal memory ability and find out the main component of neurocognitive factors leading to memory deficit in children with ADHD. Methods: A total of 188 children with ADHD(male(n=167) and female(n=21)) aged 7-12 years were enrolled in this study. The intelligence was measured by Korean version of the Wechsler Intelligence Scale for Children III(K-WISC-III), and executive functions including attention, working memory and inhibitory functions were measured using the Computerized Neurocognitive Function Test-IV(CNT-IV) such as Verbal Learning Test(VLT), visual and auditory Continuous Performance Test(CPT) and controlled CPT(CCPT), digit and span test, Trail Making Test(TMT), Stroop Color-Word interference test(Stroop test), and Wisconsin Card Sorting Test(WCST). We used the correlation analysis and stepwise multiple regression analysis for the relationship between auditory verbal memory and other executive functions. The data were analyzed using the Statistical Package for Social Science(SPSS) for windows, version 18.0(SPSS Inc; Chicago, IL, USA), with a significance level of 0.05. Results: The mean intelligence quotient was 98.12(±13.64). The correlation test showed that each neurocognitive functions were affected reciprocally, but could rarely explain more than 15% of variation. And, the multiple regression analyses showed that the auditory verbal memory ability was significantly predicted by the full scale intelligence, omission errors of VCPT, backward test of digit span test and processing speed index(R^2=0.258,p<0.001). Tests of the each predictors revealed that full scale intelligence quotient(t=2.76,p<0.01), omission errors of VCPT(t=3.30,p<0.01), backward test of digit span test(t=3.13,p<0.01) and processing speed index(t=2.10,p<0.05) contributed significantly to the regression equation. Conclusions: The results of this study demonstrate that the auditory verbal memory ability of the children with ADHD was mainly affected by overall intellectual level, auditory working memory, visual attention and information processing speed.

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NR05-13

CHILDHOOD AND ADOLESCENT ANTECEDENTS OF PERSONALITY DISORDERS

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SUMMARY:

Background: Personality disorders are rooted in childhood and adolescence. Objectives: To determine the rate of children and adolescents diagnosed with behavioral and emotional disorders who are diagnosed with a personality disorders in adulthood. Methods: Prospective cohort study of children and adolescents receiving psychiatric care at all Community Mental Health Centers, between January 1, 1986 and December 31, 2009. Inclusion criteria: Patients 1) had to receive their first diagnosis (ICD-10) between 0 and 17 years old; 2) had to have at least three visits in the Mental

Health Center; and 3) had to be at least 18 years old at the time of the conduction of this study. Among all psychiatric diagnosis in childhood and adolescence we selected those disorders assigned to more than 5% in our sample. We determined the rates of personality disorder in adulthood among subjects with selected disorders. Results: 186 subjects diagnosed with an ICD-10 F3 category [28,40% CI 95% (23,89-32,98)], 597 with F4 category [18,59% CI 95% (16,82-20,36)], 141 subjects with F5 category [15,40% CI 95% (12,33-18,48)], 100 subjects with F8 category [16,23% IC 95% (12,40-20,06)] and 587 with F9 category [17,36% CI 95% (15,68%-19,04%)] were diagnosed with a personality disorder during follow-up in adult mental health services. Conclusion: Subjects with behavioral and emotional disorders diagnosed in childhood and adolescence are at risk of developing a personality disorder in adulthood. More research is needed in order to develop preventive and intervention strategies targeted to high risk population.

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NR05-14

RAPUNZEL SYNDROME (GIANT TRICHOBEZOAR) IN AN ADOLESCENT MALE WITH EATING DISORDER AND TRICHOPHAGIA

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SUMMARY:

Objective: Rapunzel syndrome is a rare complication of trichobezoar, in which ingested hair forms a mass extending past the stomach into the small intestine. Bezoar, derived from the Persian word “padzahr” (antidote) describes a calcified mass, usually formed in the lumen of ruminant animals, believed to have antidotal power. Almost all reported cases describe pathology and surgical intervention in young girls. We present the unusual case of a 17 year-old boy of Ecuadorian descent, with no prior psychiatric history. We will identify clinical characteristics and complications associated with trichophagia and describe comorbid psychiatric conditions. Method: The patient was admitted for abdominal discomfort and vomiting for three days. This was the patient’s third hospital visit for such complaints. Psychiatric consultation was requested, as the patient seemed withdrawn, isolated and made little eye contact, with minimal interaction with the staff. Laboratory studies were unremarkable except an abdominal x-ray showing a shadow in the mediastinum. After basic medical evaluation, endoscopy showed a trichobezoar extending into the distal duodenum (Rapunzel syndrome) with ulceration. The mass could not be removed endoscopically, but surgically and measured nearly four feet in length. The patient had strikingly long hair with which he constantly played. Eyelashes, eyebrows and scalp hair were intact, in contrast to classical trichotillomania. According to his mother, the patient had a habit of breaking his hair from the ends and eating it. He was in denial of his condition. The patient was a tenth grader and was left behind twice due to absences from school secondary to abdominal pain. The family had noticed him to be increasingly withdrawn and isolated, after they moved into a basement apartment. The patient had decided to be a vegetarian at age 14. His parents were unsupportive. In fact, his mother would urge him to eat meat during hospitalization, with which he would comply. He was preoccupied with his body image and losing further weight even though he

had lost nearly 18 kg in the past two years. He had minimal interaction with his parents, spending much time in his room. Results:In addition to trichophagia and Eating Disorder, he was assessed to be overtly anxious and depressed. Treatment with Fluoxetine was recommended on discharge. The patient returned to the ER, a week after discharge for an infected surgical wound. He had taken the fluoxetine inconsistently. His picking of the wound had caused a fistula with pus draining from the wound site. He was hypokalemic and dehydrated. Conclusions: While "Pica" describes the eating of non-nutritive substances in typically younger children, it poorly describes this patient's condition, failing to capture an adolescent onset with broader impairments of impulse control (skin picking, breaking and eating hair;) eating disorder (distorted body image, need to lose weight;) and mood disorder (withdrawal, apathy.)

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NR05-15

ADOLESCENT CONVERSION DISORDER WITH HYSTERICAL QUADRIPLEGIA FOLLOWING HEAD TRAUMA

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SUMMARY:

OBJECTIVE: Conversion disorders have been described in children and adolescents, but rarely following physical trauma. This case highlights the importance of provider awareness about this unique presentation. METHODS: Psychiatric consultation was requested for a 16 year-old girl of Peruvian descent, who was admitted to the pediatric intensive care unit after a head-on soccer field collision. Despite a fall, there was no loss of consciousness. She was able to walk out of the field with a wobble. Within a few minutes she lost sensation on the lower half of her body more so on the left side. Her face was weak on the left side, as well. By the time she was taken to the hospital she was unable to move her upper and lower extremities. She was then transferred to a tertiary care hospital for trauma treatment, where she was found unable to speak for sometime, communicating only by eye blinking. She was intubated for impending respiratory paralysis. It was noted that she was able to move her extremities when given propofol. MRI, CT-Angiogram and x-ray imaging showed no head or neck injury. The patient had inconsistency in motor responses across different examinations with an absence of autonomic sequelae. The patient was a sophomore with average grades. She resided with her parents and older brother. Her brother had signed up to join the Marines and was leaving for his oath taking ceremony in a week. The father abused alcohol and frequently argued with the mother, leaving the brother as the father figure. RESULTS: Mental status was remarkable for dysphoric mood, speaking with difficulty and clenching her teeth. Reflexes could not be elicited consistently. On right-sided knee jerk she moved muscles inconsistent with the reflex, i.e. right gastrocnemius instead of quadriceps. The patient was taught progressive muscle relaxation. Her motor and sensory loss improved gradually over the several days of her hospital stay. CONCLUSIONS: While childhood and adolescence conversion disorder following psychological trauma is amply recognized, a PubMed search reveals only a handful of cases of the disorder following physical trauma. Possibility of head and neck injuries can complicate the identification of conversive paralysis. Clinicians in non-psychiatric settings need to be mindful that early psychiatric consultation can not only aid in diagnosis, but also in recovery.

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NR05-16

PSYCHIATRIC INTERVENTIONS IN MANAGING PEDIATRIC OBESITY: A

REVIEW OF THE LITERATURE

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SUMMARY:
Objective: Review the literature pertaining to childhood obesity, associated psychiatric comorbidities, and successful treatments and interventions. The goal of this study was to provide psychiatrists and psychiatrists-in-training with additional knowledge to tackle this growing epidemic. Method: We searched for publications between January 1995 and December 2010 by means of a PubMed literature search as well as reviewed the relevant articles obtained from reference lists. Results: Psychiatric comorbidities, such as depression, anxiety, and behavioral disorders, are prominent in obese pediatric patients. Body mass index measurements in the obese range and adolescents' perceptions of themselves as significantly overweight have been associated with increased suicidal ideations and increased suicide attempts have been reported in this patient population. Most psychiatrists have had little to no formal training on weight management issues during their residency training and find a lack of clear guidelines as a barrier to providing optimal care to their obese patients. Recent studies have emphasized the importance of family-based treatment and long-term maintenance approaches at increasing efficacy of interventions. Mnemonics (such as the 5-2-1-0 message which stands for at least 5 servings of fruits and vegetables per day, less than 2 hours of television or computer screen time per day, a minimum of 1 hour of physical activity daily, and consumption of zero sugar-sweetened beverages) can be useful tools at dispersing important lifestyle modification recommendations, particularly when combined with cognitive-behavior therapy techniques. Conclusions: Psychiatrists can play an important role in the management of pediatric obesity by providing patients and their families with specific treatment recommendations and continued support and guidance at each follow-up visit. By acting as a liaison among the patient's multidisciplinary team, the psychiatrist may be a valuable resource to non-psychiatrists as well. This coordinated care approach has been shown to have improved outcomes at managing obesity in the pediatric population.

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NR05-17

INFORMATION SOURCES USED BY PARENTS OF CHILD PSYCHIATRIC PATIENTS

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SUMMARY:
Objective: The main goal of this study was to explore the sources of information used by parents of patients at a child psychiatric outpatient clinic. Specifically, this study sought to determine the frequency of use and value of each source of information and whether the subjects had access to sources of information they highly valued. Background: The amount of time a Child Psychiatrist can spend with patients and educating their caregivers is often just enough to cover the basics about a diagnosis, medication options, and side effects. As patients and their families are beginning to take more control of their treatment decisions, it could be useful to know where they may be turning for their information. Methods: The subjects in this study were parents or guardians accompanying patients at a child psychiatric outpatient clinic during the summer of 2009. IRB approval through the University of Virginia was granted before the study was initiated. The clinic is a part of The University of Virginia Department of Psychiatry and Neurobehavioral Sciences and serves as a referral base for central and southwestern Virginia. Approximately 60% of the patients have Medicaid as their insurance. The study used an anonymous self report parental questionnaire which collected information on the patient's age, number of previous visits the patient had made to the clinic, and whether the parent/guardian had access to the Internet at home or work. Subjects were requested to indicate which of six information sources (Psychiatrist in the clinic, other health care provider, family/friends, Public Library, Web Social Networks, and Web Medical Information) were used to become informed about the symptoms, diagnosis, or treatment of the patient. They were also requested to indicate the value of each source used (low, medium, high). The survey was voluntary and offered to the subjects by the clinic staff during the check in process. Results: One hundred surveys were completed and usable. The patient ages ranged from 2 to 18 with a Mean of 11.37 and a standard deviation of 4.02. The majority (63%) of the patients had more than 10 previous visits to the provider in the clinic. Ninety-four percent of the subjects reported having access to the Internet at work or home. The Mean number of information sources used by the 94 subjects with internet access was 4.26 with a Standard Deviation of 1.52. Eighty-nine percent of the subjects indicated that the physician in the clinic was a source of information, and this source was the most frequently indicated. Web Social networks and Public Libraries were the least frequently selected as information sources, with each being selected by approximately 48% of the subjects. In addition to being the most highly reported source of information, the physician in the clinic also received the highest percentage of high value (71.4%) of any source. The source with the next highest percentage of high value (50%) was Web Information, followed by Other Physician source with 45.6%. Conclusion: The number of caregivers who have access to the Internet at home or work (94%) was higher than predicted. Since the vast majority of caregivers utilize Internet based

information sources, and value the physician's expertise, child psychiatrists should recommend quality web sources such as aacap.org or psych.org.

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NR05-18

D-CYCLOSERINE FOR EXPOSURE THERAPY ENHANCEMENT: A SYSTEMATIC REVIEW

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SUMMARY:

Objective: Basic research on the brain circuitry underlying fear learning and extinction suggests that d-cycloserine (DCS), a partial agonist of the N-methyl-D-aspartate (NMDA) receptor, has a role in enhancing extinction learning. There has been growing body of evidence in animals that DCS has role in enhancing response to extinction training. In 2004, first study was done in clinical setting to extend the theory to extinction learning in context of exposure therapy. Since then there have been number of small clinical trails with DCS augmentation with exposure therapy in different anxiety disorders. This abstract provides a systematic review of DCS enhancement of exposure therapy in all the clinical trials. Methods: A Medline and PsychINFO database search was conducted from 1960 to 2010 using the search terms of phobic disorders, anxiety disorders, obsessive-compulsive disorder (OCD) and DCS. A total of 59 articles were initially found. Only 8 were included in final analysis based on inclusion criteria. For inclusion the studies needed to be double blind randomized placebo controlled trials with all the subjects getting exposure therapy with or without cognitive interventions. Only clinical studies which had anxiety condition as per DSM IV diagnostic criteria were included. Studies which had subclinical conditions, anxiety traits or used any other forms of therapy were excluded.
Results: All the 8 studies were double blind randomized controlled trials. All the subjects got exposure based treatment with or without cognitive intervention. Randomization was done either to DCS + therapy or placebo + therapy arm. 4 studies had OCD, 1 had panic disorder, 2 had social anxiety disorder (SAD) and 1 had acrophobia as anxiety condition. Total patients across 8 studies were 235 with average of 29 per study. Differences between the demographic characteristics across the two groups in most of the studies were insignificant or adjusted for any significant variation. DCS doses used in studies ranged from 50mg in 4 studies, 100mg in 2 studies, 125 mg in 1 study and 250mg in 1 study. One study used an extra arm of randomization with second DCS dose of 500mg. The dose administration time varied from 1 hour before the session in 5 studies, 2 hours in 2 studies and 4 hours in 1 study. Number of therapy sessions varied from 2 in 1 study, 5 in 3 studies, 10 in 3 studies and 12 in 1 study. Three studies used biweekly sessions and rest used weekly sessions. Most consistent findings across the studies was DCS results in more rapid response to treatment with significant improvement in mid treatment. No increased adverse effects of DCS were found in any of the studies. Most of the studies found no significant difference in mean long term follow up (1.5 month) . Also studies commented on the importance of doses and time of administration. Conclusion: This systematic review of existing literature suggests that DCS has role in augmentation of exposure-based treatment. DCS augmentation has the potential to increase the efficacy and overall effectiveness of exposure therapy by rapid progress in therapy. This was especially in the beginning of the therapy course and so can lead to enhanced motivation and fewer therapy drop outs. Major limitation of all the studies was small sample size. To have stronger evidence that DCS augments exposure based anxiety treatments, there is a need for conducting multisite studies with significantly larger sample sizes.

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NR05-19
WITHDRAWN

NR05-20
DIAGNOSTIC STABILITY OF ACUTE AND TRANSIENT PSYCHOTIC DISORDER OVER 1 – 2 YEARS: DATA FROM SOUTH INDIA

Chp: Srinath Gopinath, D.P.M. Co-Author(s): Janardhanan C Narayanaswamy, M.D., Virupaksha Harave Shanmugam, D.P.M, Dhanya Raveendranathan, M.D., Biju Viswanath, M.D., Muralidharan Kesavan M.D

SUMMARY:
Introduction: Acute psychosis follow-up studies from India suggest that its outcome is more favorable. It tends to recur and cases convert mainly into either schizophrenia or affective disorder. Methodology: The files of patients who presented with first episode of acute and transient psychotic disorder (n=57) in the year 2004 were reviewed and follow up data ascertained. Results: The mean age of the sample was 30.72 years. The mean duration of illness episode was 18.15 ± 17.10 days. There was follow up data available for 77.2 %(n=44) and 75.4%(n=43) of the sample at the end of first and second years. Relapse into another episode was noted in 47.4% and 54.4% respectively at the end of one and two years respectively. The diagnosis changed into other disorders like bipolar disorder, schizophrenia and unspecified psychosis while a majority retained the initial diagnosis of acute psychosis. Conclusion: This replicates the earlier findings that acute psychosis is a relatively stable condition with some degree of conversion to affective and non affective psychosis overtime.

NR05-21
COMPETENCE AND POOR INSIGHT: A SYSTEMATIC REVIEW

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SUMMARY:
Objective Formally, incompetence implies that a patient cannot meet the legal requirements for informed consent. Clinical practice shows that

psychiatric patients with poor insight do not always consent to treatment, leaving the clinician with an untreated patient with a bad prognosis and few or no options for intervention. Our aim was to review the scientific literature on (i) the relationship of competence and insight in patients with psychiatric disorders, (ii) how competence and insight are connected in these patients and (iii) whether there are differences in competence and insight among patients with different disorders. Methods A search in PubMed/Medline was performed using the terms "competence", "competency", "capacity", "decision making" and "MacCAT", combined with both "insight" and "psychiatry". Articles were assessed on relevance criteria by two independent reviewers. Study design, study population, variables and outcomes were extracted. Results Seven articles were included, on studies of psychiatric inpatients and outpatients and of psychotic and non-psychotic patients. All studies used the MacArthur Competence Assessment Tool for Treatment (MacCAT). All studies but one found a strong correlation between poor insight and incompetence. Conclusions Psychotic patients with poor insight are very likely to be incompetent, and psychotic patients with adequate insight are generally competent. In non-psychotic disorders however, another relationship emerges. Competence and insight do not completely overlap in these patients. Most incompetent patients in this group have poor insight, but non-psychotic patients with adequate insight were incompetent in a substantial number of cases. In sum: non-psychotic patients with adequate insight can be incompetent.

NR05-22

TRAUMATIC BRAIN INJURY AND POST-TRAUMATIC STRESS DISORDER; A DIAGNOSTIC DILEMMA OF CO-MORBIDITIES

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SUMMARY:
OBJECTIVE: Post- traumatic Stress Disorder (PTSD) and its co-morbid conditions, particularly Traumatic Brain Injury (TBI) have been rapidly gaining interest. PTSD has been associated with TBI (10%) and seizures (2.3%). In this case report, we discuss the complex behavioral issues of an individual with PTSD and co-morbid diagnoses – TBI and seizures. We identify diagnostic and management dilemmas among individuals with these complex co-morbid conditions. METHODS: The case report discusses a 20-year-old African American male who was admitted to an inpatient neurology unit. The patient had a history of seizure disorder, TBI, and "acting out" behavior attributed to PTSD. The patient was placed on video EEG monitoring to further delineate his epileptic events. Psychiatric consultation was requested for management of PTSD as well as his "acting out" behavior. RESULTS: Multiple events were captured on video EEG monitoring including those that were initially described as "acting out" behaviors. Four of these events were identified as right frontal lobe epilepsy. These events lasted 30-40 seconds and consisted of complex motor movements with preserved speech. The patient was subsequently treated with a loading dose of Levitarectam, and transitioned to Oxcarbazepine and Topiramate. Following this treatment, patient was "seizure-free" for four days. Subsequently, he had an event that was not associated with epileptiform activity on the EEG. A more in-depth examination of the events helped identify previously overlooked details that differentiated seizures from PTSD related symptoms. CONCLUSION: The complex interplay of symptoms between TBI, PTSD and epilepsy often makes it difficult for the clinician to decipher the true etiology of the behavioral changes. In this case, the patient demonstrated complex behaviors resulting from frontal lobe seizures that clinically appeared to trained staff as "acting out." Obtaining a detailed history, acquiring appropriate investigations and a cohesive multidisciplinary management are often the keys to clearly understanding the nature of these symptoms and to formulate the appropriate management strategy.

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NR5-23

PSYCHOSES IN THE GENERAL POPULATION: A CASE FOR THE RELEVANCE OF SUBCLINICAL PSYCHOSES

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SUMMARY:
Objectives: 1) To estimate the prevalence of psychotic symptoms in a large, nationally representative sample of adults in the United States; 2) To examine the association between race/ethnicity and psychotic symptoms; 3) To explore the relationship of psychotic symptoms with symptoms of distress and/or dysfunction. Method: Data from the Collaborative Psychiatric Epidemiology Surveys (CPES) were used to analyze prevalence, correlation and risk factors of several psychotic symptoms. CPES combines three nationally representative surveys: the National Comorbidity Survey Replication (NCS-R), the National Survey of American life (NSAL), and the National Latino and Asian American study (NLAAS). The sample consisted of 16,423 non-institutionalized adults age 18 and over living in the United States, with an oversampling of minority groups. We estimated prevalence of psychotic symptoms in the data using questions regarding lifelong and 12-month prevalence of hallucinations and delusions. Bivariate and logistic regression analyses were used to examine the association of psychotic symptoms with eight socio-demographic variables and four psychosocial variables. SPSS version 18 for complex samples was used for data analysis to provide weighted estimates and account for complex sample design. Results: The overall lifetime prevalence of delusions, hallucinations, or any psychotic symptom was 2.2%, 10.7%, and 11.6%, respectively. In the logistic regression analysis, Hispanic and Asian ethnicity were independently associated with a lifetime history of experiencing psychotic symptoms (OR=1.71, 95% Confidence Interval (CI)=1.31-2.23 and OR=1.33, 95% CI=1.00-1.77, respectively). Among persons with a lifetime history of psychotic symptoms, 21% had no distress or dysfunction, 48% had distress and no dysfunction, 25% had dysfunction and distress, and 6% had dysfunction but no distress. The proportional distributions were similar for persons with 12-month prevalence of psychosis. The presence of high levels of distress (OR=2.10, 95% CI=1.54-2.87) or dysfunction (OR=1.65, 95% CI=1.20-2.27) or both (OR=3.44, 95% CI=2.38-4.97) was strongly associated with having experiences of psychotic symptoms. Conclusions: The prevalence of psychosis in the general population is greater than one in ten. There are associations of psychosis with race/ethnicity (Latinos and Asians have higher prevalence) that are independent of other socio-demographic and psychosocial factors. Psychotic symptoms are generally not benign, but are often associated with distress and dysfunction. This suggests that like other psychiatric conditions, psychosis is on a continuum, and there are subclinical states that are associated with both distress and/or dysfunction.

NR05-24

CHARACTERIZATION OF CLINICAL TRAITS OF NEUREXIN1-GENE DELETION IN 2 UNRELATED FAMILIES WITH PSYCHIATRIC ILLNESS: A FAMILY CASE REPORT

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SUMMARY:
Introduction: Neurexin1 (NRXN1) is located on chromosome 2p16.3 and is one of the largest known human genes; 1,1 Mb. It encodes the protein neurexin, a cell surface protein involved in the synapse signaling process. Mutations or disruption in the neurexin1 gene has been associated with a range of clinically pleiotropic conditions including psychiatric, neurological and somatic diseases. Method: A screening of Copy Number Variation (CNV) was conducted in a samples stemming from an Epilepsy Clinic and a Mental Health Service Hospital on clinical indication of patients with severe symptoms. Relatives were invited to participate in the study. All participants have been genome-wide analysed (GWAS) with Affymetric SNP Array 6.0, Taqman PCR or Illumina 1M-Duo and were psychopathological characterized by the Schedules of Clinical Assessment in Neuropsychiatry (SCAN 2.1). Results: Two unrelated families were found with disruption of NRXN1. The probands had early onset of schizophrenia and severe mental retardation with epilepsy as comorbidity, respectively. The proband with schizophrenia inherited the CNV from the father who suffered shortly from a delusional disorder (DSMIV). Mental retardation is present among the father's relatives and ongoing analysis will determine whether they also carry the CNV. The second proband inherited the CNV from a psychiatric healthy mother, whereas the father suffering from schizophrenia is deceased and is unavailable for analysis. GWAS of a mentally healthy brother is ongoing as is sequencing of the complementary chromosome of the proband in an attempt to identify putative mutations that

may lead to compound heterozygocity and thus account for the extremely severe phenotype. The Poster will in depth present the genetic, clinical, epidemiological and psychopathological profile of recruited members of the two families. Discussion: In one family the NRXN1-deletion segregates with the clinical phenotype. In the other family the paternal phenotype may account for the more severe phenotype in the offspring through compound heterozygosity.

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NR05-25

INTERACTION BETWEEN GENETIC VARIANTS OF SAPAP3 GENE AND SLC1A1 ON INCREASED RISK OF ATYPICAL ANTIPSYCHOTICS-INDUCED OBSESSIVE-COMPULSIVE SYMPTOMS

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SUMMARY:

Objectives Obsessive compulsive (OC) symptoms have been described as adverse effects of atypical antipsychotics (AAP). Considering evidences of a biological relation between glutamatergic system and both obsessive compulsive disorder and AAP, genes involved in this system could be promising candidates for the susceptibility of AAP-induced OC symptoms. This study aimed to determine whether SAPAP3 gene coding a postsynaptic scaffolding protein of glutamatergic synapse is associated with AAP-induced OC symptoms in schizophrenia patients. Further, interaction between SAPAP3 gene and a previously reported susceptibility gene, the glutamate transporter gene SCL1A1, on this phenotype was explored. Methods Subjects were clinically stable patients with schizophrenia who were receiving AAP treatment (n=94). The OC group consisted of patients with AAP-induced OC symptoms, and the non-OC group consisted of patients who had received AAP for more than 24 months without developing OC symptoms. Three SNPs (rs11264126, rs4653114, and rs10493064) in SAPAP3 gene were genotyped. The allelic/genotypic/haplotypic association analysis and gene-gene interaction analysis with rs2228622 of SLC1A1 were performed. Results A significant association with AAP-induced OC symptoms was observed for rs4653114 in both allelic analysis (adjusted permutation P=0.035). In the regression model using sex and medicine type as covariates, the same trend of association (adjusted permutation P=0.056) was observed at rs4653114 for the additive model. And haplotype analysis showed a significant association for additive model (adjusted permutation P=0.046) at rs11264126-rs4653114 block. In the analysis of gene-gene interaction, we found a significant interaction effect of rs4653114 of SAPAP3 gene and rs2228622 of SLC1A1 (permutation P=0.035) on AAP-induced OC symptoms and 30.187-fold increased risk for individuals carrying all risk genotypes at both loci in comparison with reference group who carried no risk genotypes. Conclusions These results suggest that SAPAP3 gene and it's interactions with SLC1A1 are involved in the susceptibility to developing OC symptoms in patients with schizophrenia who are receiving AAP treatment.

NR05-26

SEROTONERGIC AND BDNF GENES FOR DEPRESSION WITHIN 2 WEEKS OF STROKE

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SUMMARY:
Background and purpose: Polymorphisms of serotonin transporter (5-HTT) and brain-derived neurotrophic factor (BDNF) have been investigated as candidate genes for post-stroke depression (PSD). The serotonin 2a receptor (5-HTR2a) genes have been investigated as a risk factor for depression, but have not been yet tested for PSD. This study aimed to investigate whether the 5-HTT, 5-HTR2a, and BDNF genes are associated with PSD independently and/or interactively in a sample of Korean stroke patients.Methods: In 276 stroke cases, depression was diagnosed using DSM-IV at 2 weeks after stroke, further classified to major PSD (N=29), all (major plus minor) PSD (N=77), and control (N=199) groups. Genotyping for 5-HTTLPR, STin2 VNTR, 5-HTR2a 1438A/G, 5-HTR2a 102T/C, and BDNF val66met was conducted. Individual associations between these polymorphisms and PSD were estimated using the logistic regression model, and the gene-gene interactions were investigated using the generalized multifactor dimensionality reduction method. Results: The 5-HTR2a 1438 A/A genotype was independently associated with major PSD, and the 5-HTTLPR s/s and the BDNF met/met genotypes were independently associated with all PSD. There was a significant interaction between 5-HTR2a 1438A/G and BDNF val66met polymorphisms for major PSD and a borderline significant interaction between 5-HTTLPR and BDNF val66met polymorphisms for all PSD. Conclusions: In what we believe is the largest genetic study of PSD to date, we found evidence for 5-HTR2a polymorphisms as susceptibility genes and gene-gene interactions between serotonergic and BDNF systems for depression present in the acute stage following stroke.

NR05-27

POSTSTROKE DEPRESSION AND CARE BURDEN OF CAREGIVER

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SUMMARY:
Objectives : This study aimed to explore the determinants of care burden among caregivers for the stroke patients at acute phase. Methods : In 123 patients with stroke and their family caregivers, data on care burden (Zarit Burden Interview) and various socio-demographic and clinical characteristics were obtained at 2 weeks after stroke. After uni- or bi-variate analyses, multiple linear regression tests were performed to determine the independent risk factors for care burden. Results : In the uni- or bi-variate analyses, five potential risk factors were identified: higher age, previous stroke, lower cognitive function and severer depressive symptom of stroke patients, and no aid carer of caregivers. In the multiple regression analyses, only the severer depressive symptom of stroke patients was identified as a determinant of care burden. Conclusion : To mitigate care burden during the acute phase of stroke, appropriate measures of clinical intervention need to be taken to prevent the depressive symptom of stroke patients.

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NR05-28

PREDICTORS OF LENGTH OF STAY IN AN ACUTE PSYCHIATRIC FACILITY

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SUMMARY:
Introduction Length of stay (LOS) in acute psychiatric hospitals has long been the focus of attention heightened in recent years, with the current economic climate and a growing realization that health care costs need to be contained. LOS has a strong positive relationship with the cost of each hospitalization. Longer LOS also puts the hospital at potential financial risk as they must provide adequate documentation for necessity of care. This study was designed to identify the predictors for the length of stay, which are present at the time of admission. Methodology:This study was a retrospective chart review of 391 admissions to Mid Missouri Mental health center, a State funded acute psychiatric. They were reviewed with respect to selected variables on a pre-constructed checklist

based on previous studies and clinical experience relevant to this mental health facility. Univariate analyses were performed to examine individual correlates of LOS. LOS. Regression modeling with the natural logarithm of LOS as the dependent variable was used to identify a multivariate model for LOS. Regression on the log of LOS leads to a multiplicative model in the original metric. Results Overall median LOS was 9 days with a range of 1 to 189 days. Age, marital status, involuntary admission and diagnosis of an affective disorder or a psychotic disorder were shown to be independent variables that predicted length of stay. These variables in a multivariate model accounted for approximately 19% of the variance in log(LOS). Substance abuse was shown to be a predictor for a shorter length of stay but was not selected for inclusion by the multivariate model building statistical procedure. Conclusion Identification of predictors for LOS may help early recognition of such key factors as early as the admission and greater emphasis can be focused on such patients to aid in early discharge of patients. A young unmarried patient admitted on involuntary basis or by his/her guardian, with an affective disorder or psychotic disorder diagnosis had the longest length of stay.

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NR05-29

SERVICE EVALUATION OF THE CURRENT CARE RECEIVED WITHIN PAYMENT BY RESULTS CARE CLUSTERS IN A LONDON MENTAL HEALTH NHS TRUST

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SUMMARY:

Payment by results(PbR) is being introduced as the new way of commissioning mental health services in England from 2012-2013(DOH,2010). PbR is already in use in the acute care sector in the UK to pay for hospital based acute services. There have been difficulties in using this system for chronic conditions. Work is now under way to implement this in mental health in England which will perhaps be the first country to implement PbR for mental health commissioning. PbR mainly consists of activity based funding based on healthcare resource groups based on a national tariff. The expectation is that the service providers will need to demonstrate attainment of certain outcomes for patients in the clusters to attract the

payment attached to that cluster. Work is ongoing in various UK mental health pilot sites which feed into national Department of Health supported sub groups who are developing various streams of this work. Background: PbR is being developed for prospective commissioning of secondary mental health services in the UK and is expected to be rolled out nationally by 2013. The commissioning framework for mental health is moving away from activity based commissioning through primary care trusts by block contracts to an outcomes (results) based commissioning structure aimed to reward good practice and areas of high quality while also improve efficiency (DoH 2010) trusts to allocate their patients to one of the 21 care clusters that will form the basis of this work. In addition to this, local suitable care packages are being developed to reflect the service provision for each of these clusters. This service evaluation reflects the nature of the care currently received within the care clusters. The 21 PbR clusters contain groupings of patients that are thought to be sufficiently clinically similar in their illness severity and needs and thus requiring similar treatment resources. A HONOS derived 18 question assessment tool called as the mental health clustering (MHCT) tool is used by clinicians as various points in the care pathway to allocate patients to the clusters. This methodology in mental health services has not been successful. Self et al, 2008 noted that this could be due to the variability in needs within same diagnostic categories, variable course of disorders and the unpredictable sequence in which community and inpatient services are used. Method:This project set out to examine the current care received within these clusters in a secondary mental health service where PbR is being implemented. A random sample of 6 (working age adults and older adults) patients from each cluster was chosen (n=126) from each cluster was chosen. The care received by these patients in a six month period was studied. Information about their diagnosis, recording of clinical assessments and risk information, clinical contact, multi professional interventions, inpatient stays, period with home treatment or crisis interventions teams, use of mental health act was collected.The study showed a wide variation in care within clusters in the 3 boroughs of London within the same healthcare service reflected in a wide variation in the resource utilisation. This variability will need to be considered when services are paid according to PbR. Activity collecting as a basis for tariff development problematic in mental health because activity in the care reflects available resources and thus current funding rather than patients' needs.

NR05-30

STELLATE GANGLION BLOCK FOR TREATMENT OF PTSD

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SUMMARY:
Stellate ganglion block is a procedure recently used at Walter Reed Army Medical Center and Tripler Army Medical Center in cases of treatment refractory PTSD. The objectives of this poster are to 1) explain the procedure involved with blocking the stellate ganglion, 2) present the theoretical basis for use of the procedure in cases of PTSD and 3) to present the results of using stellate ganglion block in two patients with treatment refractory PTSD.

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NR05-31

DISTRIBUTION OF LOUDNESS DEPENDENCE OF AUDITORY EVOKED POTENTIAL (LDAEP) AND ITS CLINICAL CORRELATES IN KOREAN PATIENTS WITH MAJOR DEPRESSIVE DISORDER

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SUMMARY:
Objective: Despite the growing implications of the LDAEP in major depressive disorder (MDD), a limited number of studies exist for LDAEP in relation to demographic and clinical factors in patients with MDD. Therefore, this study investigated the distribution of LDAEP and its correlation with various factors and explored a possible pathway for predicting relative degree of the LDAEP in Korean patients with MDD. Method: A total of 401 patients (104 male, 297 female) with MDD, diagnosed by DSM-IV were exzmined between 2007 and 2010. Demographic and clinical variables were documented and Hamilton Depression Rating Scale (HDRS) was assessed. Electrophysiological recordings with auditory stimulation composed of tones at five intensities (55, 65, 75, 85, and 95 dB) were performed. LDAEP was evaluated by using cortical activity at Cz calculated as the slope of linear regression of the peak-to-peak N1/P2 amplitudes. All study procedure was performed within two weeks of commencement with pharmacological treatments. Results: The mean of the LDAEP (μV/10db) was 0.9276 (SD=0.7911) in patients with MDD. Significant differences in the strength of LDAEP according to gender (p=0.03). Marital statuses influenced the degree of LDAEP significantly in male patients (p=0.01) and in female patients, but not in statistically different level(p=0.05). In females, core depression (p=0.04) and anxiety subscales (p=0.03) of HDRS were higher in low LDAEP group compared to high LDAEP group. Conclusions: Our result demonstrated the distributions of the LDAEP in patients with MDD. We found that marital status, gender, smoking status, and HDRS scores may influence the relative strength of LDAEP. Whether the different distributions of marital status among the three LDAEP groups reflect a trait or a state in reaction to stressful event of relationships should be clarified in future. Further studies are indicated to determine clinical and biological implications of the LDAEP in MDD.

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NR05-32

PATHOLOGICAL CRYING: A COMPREHENSIVE REVIEW

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SUMMARY:
Mr. X is a 43 year old male with a past medical history of hypertension and multiple strokes who was brought to the Emergency Room because his behavior had changed and he was exhibiting violent tendencies. On admission he was unable to provide any history due to severe vascular dementia as a result of multiple strokes. He had these strokes as a result of noncompliance with his hypertension medications. In the ER he was unable to provide any history. He would answer questions in one word mono-syllables. His mood was labile and he would often exhibit frequent pathological crying. It was difficult to assess his thought content, thought processes, or insight and judgment. He was transferred to the psychiatry unit and was later diagnosed with schizoaffective disorder. He was started on injectible Prolixin and continued on Seroquel which he was on prior to admission. He was later transferred to a group home upon discharge from the unit. Two weeks later the patient returned to the hospital from the group home since he was found to be somnolent and refused to eat breakfast or talk. He was admitted to the medical floor where extensive workup was undertaken but no abnormalities were found on labs. Neurology was later consulted to rule out the possibility of another stroke. However repeat MRI only showed evidence of prior strokes in the left temporal, bilateral thalamic and pontine areas along with significant areas of diffuse atrophy. The patient's family stated that he had these strokes four years ago because he was noncompliant with his hypertension medications. At that time he became cognitively impaired and also had behavioral changes. Also, it was felt that since he had no prior history before his strokes of schizophrenia or bipolar disorder it is unlikely that he has a diagnosis of schizoaffective disorder. He did exhibit a hyperactive gag reflex

and pseudobulbar palsy which required him to get a PEG tube. The likely diagnosis for the patient's pathological crying is pseudobulbar affect. This review article will examine pseudobulbar affect which is characterized by inappropriate boughts of laughter and/or crying in association with neuropathologies such as stroke, multiple sclerosis, amyotrophic lateral sclerosis etc. The purpose of this article is to help psychiatrists to differentiate this syndrome from other illnesses such as bipolar disorder or schizophrenia. It will discuss diagnosis and management options from a neuropsychiatric angle.

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NR05-33

VIDEO-RECORDING BRAIN INJURED PATIENTS TO DETERMINE DECISION MAKING CAPACITY

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SUMMARY:

Mr. W is an 80 year old man with multiple medical comorbidities including prior right MCA stroke, vascular dementia, CAD with three stents placed, Diabetes, Ischemic Cardiomyopathy with EF 30-40%, and Hypertension presented to the ER with multiple ICD shocks. Upon interrogation of the ICD it was found that the device was inappropriately firing to atrial fibrillation rhythms with rapid ventricular response at heart rate over 180 rather than for ventricular arrhythmias. At this time the patient had failed all medical management for atrial fibrillation and was therapeutically anticoagulated on Coumadin. Further complications arose such as an osteomyelitis from a large necrotic ulcer in his left malleolar area resulting in sepsis from MRSA infection. Vascular surgery did not recommend performing an above knee amputation and the EP Cardiologist did not recommend replacing the ICD battery given the patient's poor prognosis and DNR/DNI code status. The patient's MMSE at baseline was 16-18 in that he was only oriented to self but beyond that he would confabulate all his answers. This was discussed with the son who decided to consult his family. In the hospital the patient's son video-taped his father discussion of that situation to facilitate the extended family's decision. In the video the patient stated "Its not my time to go yet". As per the son and his family, they felt the patient was oriented and actively engaged in the private discussion. The Ethics Committee concluded based on the video-recording that the patient had the mental capacity to make autonomous decisions and did not indicate a desire to deactivate his ICD device. Psychiatry was consulted by the medical team who felt the patient lacked decision making capacity. When psychiatry saw him they agreed the patient lacked decision making capacity at the time they saw him but felt the issue should be addressed at a more opportune time since his mental status was possibly waxing and waning. The above knee amputation was performed successfully but he developed MRSA sepsis requiring broad spectrum antibiotics. At this time the EP Cardiologist still felt that replacing the ICD battery would be too risky given the CHAD score of 6/6 and the fact he was fully anticoagulated on warfarin. The patient's son video-taped his discussion with the father regarding these sensitive issues in order to again facilitate his family's final decision. At this time it was decided that measures such as intubation would likely do more harm to the patient so he was made hospice care. The main focus of this case study is to discuss the issues regarding the use of audio-visual devices in the medical setting in order to make decisions regarding medical care. It poses a serious problem given the easy access to recording devices by the public. Some of the questions that will addressed include when is appropriate to use such devices and what influence will it have on physicians as well as non-physicians, for example family members and ethics committees, in terms of making medical decisions. It will also consider the role of video recording in brain injured patients such as Mr. W who are compromised in terms of their mental capacity.

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NR05-34

THE RELATIONSHIP BETWEEN PHYSICIAN BELIEFS AND CLINICAL RESPONSE: RE-ANALYSIS OF DATA FROM THE HYPERICUM DEPRESSION TRIAL STUDY GROUP

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SUMMARY:
Objective: We previously showed that patients in the Hypericum Depression Trial Study Group study who guessed that they were receiving an active treatment as opposed to placebo were more likely to respond, regardless of treatment assignment. We reanalyzed data from this randomized placebo-controlled comparison trial of St. John's wort (SJW) versus sertraline for major depressive disorder (MDD) to determine whether clinical improvement in patients was associated with physician belief that they were receiving active therapy rather than placebo. Methods: 340 adults with MDD and baseline scores of 20 or greater on the 17-item Hamilton Depression Scale (HAM-D-17) were randomized to either SJW 900-1500 mg/d, sertraline 50-100 mg/d, or placebo for 8 weeks. At week 8, physicians were asked to guess their patients' assigned treatment. The Intent-to-Treat (ITT) sample included 243 subjects with at least one post-baseline visit for which physician guess data were available. Univariate ANOVA was used to determine association between doctor guess and clinical improvement. Logistic regression examined whether treatment assignment moderated the effect of belief on response (50% or greater decrease in HAM-D-17 score) and remission (final HAM-D-17 score <8). Results: Patient guesses tended to significantly agree with doctor guesses, with 53% agreement for SSRI, 67% for SJW, and 52% for placebo ($p<0.001$ for all). Doctors were more likely to guess placebo correctly (36%), compared to identifying SSRI (19%) or SJW (22%), but comparisons reached significance only for guessing SSRI versus placebo ($p<0.001$) or guessing an active treatment (SSRI or SJW) versus placebo ($p=0.018$). A significant association was observed between the doctors' guess and treatment response ($p<0.001$). Comparisons in response rates between guess groups reached significance when doctors guessed SJW versus placebo ($p<0.001$) or SSRI versus placebo ($p<0.001$) but not for guessing SSRI versus SJW ($p=0.864$). ANOVA with change in HAMD as dependent variable and doctor guess and treatment received as fixed factors showed that assigned treatment had no significant association with improvement; Doctor guess was significantly associated with improvement ($p<0.001$); there was no significant interaction between treatment and guess. When patient guesses were added as a fixed factor, the interaction between patient guess and improvement had a trend to significance ($p=0.075$); all other interactions were not significant. Conclusions: Doctors tended to guess that patients had received placebo when the improvement in HAMD scores and corresponding response rate was low, and they guessed active treatment when improvement was large, regardless of actual treatment received. These results are consistent with our previous finding suggesting an association between patient belief and treatment response. However, doctors may be more likely to be influenced by observed clinical response or side effects than by pre-existing beliefs.

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NR05-35

ATYPICAL ANTIPSYHCOTICS FOR THE TREATMENT OF COTARD'S DELUSIONS

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SUMMARY:
We are reporting two cases of patients previously diagnosed with schizophrenia that were admitted to our psychiatric inpatient unit due to the severity of their Cotard's delusions. Cotard's delusions could be underestimated in regular clinical practice nowadays. Non suicidal patients suffering this syndrome could respond quetiapine longer acting. Patients having Cotard's delusions and suicidal thoughts would benefit from clozapine or electroconvulsive therapy.

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NR05-36

DO VETERANS WITH PTSD RECEIVE FIRST LINE PHARMACOTHERAPY FOR PTSD? RESULTS FROM THE LONGITUDINAL VETERANS HEALTH SURVEY

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SUMMARY:
Background: Treatment guidelines support the use of selective serotonin reuptake inhibitors (SSRI) and serotonin-norepinephrine reuptake inhibitors (SNRI) as first line pharmacotherapy for patients with PTSD. A central assumption is that the patient will receive an uninterrupted trial of a medication that is both adequate in length (at least twelve weeks) and of sufficient dosage; that is, a "therapeutic trial." There has been little research examining patient characteristics associated with receiving first line pharmacotherapy for PTSD. Objective: The present study uses data from the Longitudinal Veterans Health Study (LVHS), an observational study of Veterans Administration (VA) patients recently diagnosed with PTSD, to examine patient factors associated with receiving first line pharmacotherapy, i.e., a therapeutic trial of an SSRI/SNRI antidepressant. Methods: The sample consisted of 482 VA patients between the ages of 18 and 69 with a DSM-IV diagnosis of PTSD (309.81) received during any VA outpatient clinic visit between May 31, 2006 and Dec 7, 2007. Patients were randomly sampled from four strata. Veterans from the current conflicts in Iraq and Afghanistan and female Veterans were intentionally oversampled in this national survey. Responses were analyzed, in conjunction with archival and pharmacy databases, to determine if Veterans received first line SSRI and SNRI for PTSD. Multivariate logistic regression models identified associated sociodemographic and survey characteristics. Results: As expected with oversampling, 50.4% were recent returnees from the current conflicts in Iraq and Afghanistan and 47% were female. The average age was 40 years, 68.8% of the sample self-reported race and ethnicity as white, 19.2% as African American and 14% as Hispanic and Latino. Of the 377 Veterans prescribed a psychotropic

medication, 73% received an SSRI/SNRI, of which 61 % (N=168) received a therapeutic trial. In logistic regression models, Veterans who served in Iraq and Afghanistan were just as likely to be started on first line pharmacotherapy as Veterans from prior eras (OR 1.11 C.I 0.71-1.73) but were less likely to complete a therapeutic trial, (OR 0.44 C.I 0.26-0.75, p< 0.01) even when controlling for factors such as index clinic type, amount of PTSD psychotherapy received, severity of symptoms and history of inpatient mental health stay. In a post hoc analysis having a concurrent depression diagnosis moderated the relationship between being a veteran of the current conflicts in Iraq and Afghanistan and odds of receiving a therapeutic trial of first line medication. (OR=0.29, CI=0.09-0.94, p<0.05) Conclusions: Our study shows reduced levels of prescribing amongst veterans from the current conflicts in Iraq and Afghanistan, a finding which parallels previous patterns of lower mental health treatment utilization in this population. Clinician prescribers should target resources to assess the specific health beliefs of this cohort of Veterans who have PTSD and Depression. Incorporating these findings into treatment plans may, in turn, increase the level of patient engagement in a therapeutic trial of medication. This work was supported by the U.S. Department of Veterans Affairs (VA) Office of Academic Affiliations Advanced Fellowship Program in Mental Illness Research and Treatment; VA Sierra-Pacific Mental Illness Research, Education and Clinical Center; the VA National Center for Posttraumatic Stress Disorder; and the VA P

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NR05-37

THERAPEUTIC DRUG MONITORING OF ANTIDEMENTIA DRUGS

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SUMMARY:
Introduction: Knowing that new strategies for a causal treatment of dementia are not available for daily routine yet, the optimization of administered drugs by therapeutic drug monitoring (TDM) seems to be the most valid tool to improve pharmacotherapy of dementia. Materials and Methods: First a novel high performance liquid chromatography (HPLC) assay for the detection and estimation of all antidementia drugs (donepezil, galantamine, rivastigmine and memantine) in serum has been developed and validated. Then TDM of antidementia drugs was established in the gerontopsychiatric routine of the AGATE (working group for pharmacotherapy in psychiatric clinics) pharmacovigilance program. Using the therapeutic and the dose-related reference range as well as the patients´ individual medical data, causes for abnormalities were derived which explained higher and lower antidementia drug levels. Results: Exemplary we show the results from the TDM of patients with memantine treatment. A total of 30 memantine samples were analyzed. Only in 9 cases the memantine serum concentrations were in line with the therapeutic target value (=90 ng/ml defined by Kornhuber 2007). 21 memantine serum concentrations were too low. Using the dose-related reference range (Haen 2008) demonstrated that the memantine serum levels were mostly in line with the administered dose. In one case the memantine serum concentration was too high (renal failure) and in 7 cases too low (compliance, diuretic drugs, increased renal function, overweight). Conclusion: The TDM of patients with memantine treatment have shown that most of the dementia patients were underdosed. In most cases doses until 40 mg memantine are necessary to reach the therapeutic reference range. Therewith TDM is a valid tool to make dosage adjustments and to improve antidementia drug therapies.

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NR05-38

DRUG INTERACTION RESULT IN RELAPSE OF PSYCHIATRIC SYMPTOM: INTERACTION BETWEEN RISPERIDONE AND TERBENAFINE, A CASE REPORT

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SUMMARY:
CYP2D6 is major hepatic cytochrome and is major portal for metabolism of numerous psychotic and non psychotic drugs. This enzyme exhibit high interindividual variability due to genetic polymorphism. Drug drug interaction became major area of concern in the age of polypharmacy. Destabilization of previously stable patient need very cautious investigation of all current and past medications of the patient to avoid overmedication of antipsychotics. We are presenting a case of DDI where patient was unknowingly taking an antifungal medication for his nail infection which results in relapse in his positive symptoms of schizophrenia. Mr. M, a 43-year old man with diagnoses of schizoaffective disorder – Bipolar type since last 9 years, was brought to the hospital for decompensation of his psychotic symptoms. Which includes non commanding auditory hallucinations, persecutory delusions and some Extrpyramidal symptoms. Patient had always been medication and visit compliant and had received a Risperdal Consta 37.5 mg injection 2 weeks before presentation. He had been psychiatrically stable on this regimen for a period of 4 years. Few days after admission he admits taking Terbinafine prescribed by a PCP for his nail infection. Risperidone level check which confirms CYP2D6 inhibition. Symptoms resolved 12 days after stopping terbenfine. Risperidone level check again. Risperidone is a selective monoamininergic antagonist with high affinity for Dopamine type D2 , serotonin 5HT2, a1- and a2-adrenergic, and histamine H1 receptors1. The main metabolic pathway is through hydroxylation in liver where Risperidone is metabolized extensively into 9OH risperidone by the enzyme CYP2D6.2 In presence of inhibitors of CYP2D6 (example Fluoxetine, paroxetine) this conversion can hamper , which results in increase in concentration of Risperidone 3 and sometime also decrease concentration of 9 OH Risperidone. Ratio of risperidone and 9 OH-Risperidone can be use and an indicator of CYP2D6 activity. Ration >1 is an indicator of presence of strong blocker for CYP2D6 except in poor metabolizers 4. In present case patient ratio was 2.5 when he was on terbenafine. terbanafin is an antifungal agent with half life of 200 to 300 hours, this strong blocker of CYP2D6. Current hypothesis from De Leon etal suggests that Risperidone is more potent blocker of D2 receptor, this can explain presence of etrapyramidal symptoms in the patient. Several case reports suggests that patients stopped taking Risperidone due to development of EPS in presence of a CYP2D6 blocker. 5. Unique finding which is noted in the present case is the relapse of positive psychotic symptoms. This cannot be explained by current opinion and need further investigation into psychodynamics of risperidone. Some of the previous studies giving concept of 9 OH risperidone as active moiety of risperidone and responsible of antipsychotic effects.6 one study reports improvement in negative symtoms of patients on risperidone when they started on Paroxetins (CYP2D6 blocker) but they also fail to show any improvement in positive symtoms of schizophrenia. 7 This case report of an important drug interaction suggests that physicians should consider whether a drug interaction has occurred when a stable patient decompensate. Further research needs to be done to understand the pharmacodynamics of the drug risperidone. level of Ris/9OH ris 10/4 (on terbenafine) Level of Ris/9OH ris 1/5 (not on terbenfine)

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NR05-39

RECHALLENGE WITH CLOZAPINE AFTER NEUTROPENIA; A CASE PRESENTATION DEMONSTRATING THE ROLE OF GENETIC TESTING.

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SUMMARY:
Objective Although clozapine is the most effective antipsychotic for treatment resistant schizophrenia, it is underprescribed. 1 This is due to many factors, including the risk of clozapine induced agranulocytosis (CIA) and neutropenia. 2 CIA is a potentially fatal adverse drug reaction that is defined as an absolute neutrophil count drop to below 500cells/mm3. An association between CIA and specific major histocompatibility complex (MHC) genes has found between CIA and MHC class II, DQ beta 1 (HLA-DBQ1). 3 Genetic testing can assess a patient's HLA-DQB1 genotype; however, the role or utility of this test in clozapine rechallenge has not been defined. This case presentation will address the question: what is the role of genetic testing for patients with a history of CIA or neutropenia prior to rechallenge? Method The evaluation and care of a female patient treated in an inpatient university psychiatric hospital is presented. Over 18 months prior to admission, the patient had sustained dramatic benefit from clozapine. Clozapine was discontinued when the patient developed neutropenia and subsequently the patient decompensated requiring hospitalization. Over the next five months, the patient had inadequate response to various pharmacologic treatments and electroconvulsive therapy (ECT). She also required multiple hospitalizations throughout this time. Due to the patient's previous positive response to clozapine, the decision was made to pursue clozapine rechallenge. With the patient's consent, genetic testing was performed to assess for the absence of a high risk genotype. A blood sample was submitted to PGxHealth and the PGxPredict:CLOZAPINE 4 test was done to determine the genotype of a single nucleotide polymorphism in the HLA-DQB1 gene. Upon rechallenging clozapine, the main outcomes measured would become an adequate response to therapy and a continued lack of CIA or neutropenia. Results Genetic testing showed the patient's HLA-DBQ1 gene to be G/G genotype which confers a lower risk of agranulocytosis. This absence of a high-risk genotype in the gene HLA-DQB1 is reported to have an estimated risk of CIA of 0.32% 3,5 The patient had a positive clinical response to clozapine and has not required hospitalization since rechallenge. There has been no agranulocytosis or reoccurrence of neutropenia over 13 months. ConclusionsThis case report is another example of how genetic testing may become the cornerstone of personalized care. Since clozapine rechallenge after CIA is often associated with a rapid and severe reoccurrence of agranulocytosis, 6 genetic testing may provide an important opportunity to minimize risk. PGxPredict:CLOZAPINE needs to be further evaluated for its potential in minimizing risk of neutropenia or agranulocytosis prior to clozapine rechallenge, but if this test is found to be beneficial, it could serve to increase the number of patients identified as candidates for rechallenge with clozapine.

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NR05-40

EFFICACY OF INJECTABLE FORMS OF HALOPERIDOL VS ZIPRASIDONE VS OLANZAPINE IN TREATMENT OF ACUTELY AGITATED PATIENTS

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SUMMARY:
Background: Currently, the most commonly used medications for the management of acute agitation are intramuscular (IM) Haloperidol, Ziprasidone, and Olanzapine. In the Emergency Room setting, a common protocol is the usage of Haloperidol 5 mg IM for agitation along with Lorazepam 1-2 mg IM and Benztropine 1mg IM. Recently, the atypical antipsychotics Ziprasidone 20 mg IM and Olanzapine 10 mg IM have gained dominance as first line treatment of agitated patients. In this study, we compared the efficacy of these two atypical antipsychotics to typical antipsychotic Haloperidol IM. METHODS: We compared the efficacy among injectable forms of three antipsychotics, Haloperidol, Ziprasidone, and Olanzapine in the treatment of agitated patients. Inclusion criteria for patients included initiation of injectable treatment in the emergency room. Then, any further course of injectable treatment during the first 72 hours was followed. All medications given by mouth in between injections were also recorded. The efficacy of each antipsychotic injectable was measured by analyzing two factors: 1. the number of patient hospitalizations needing additional treatment with any of the three antipsychotics; 2. the number of patient hospitalizations needing > 1 additional injection with any of the three antipsychotics. RESULTS: 52 hospitalizations were analyzed of patients first treated with Haloperidol injectable, 51 hospitalizations of patients first treated with Olanzapine, and 40 hospitalizations of patients first treated with Ziprasidone. In the Haloperidol group, 42% of hospitalizations needed an additional injection, and 15% needed >1 additional injection. In the Ziprasidone group, 43% of hospitalizations needed an additional injection and 25% needed >1 additional injection. Finally, in the Olanzapine group, 55% of hospitalizations needed an additional injection and 25% needed >1 additional injection. Analyzing these results, the Haloperidol and Ziprasidone groups were nearly identical. Also, while it may appear that Haloperidol IM was more effective due to the overall lesser need for additional injections, there were many factors that could cause this to be lower including differences in patient severity, dosages, and confounding variables. Therefore, it cannot be concluded that one injectable medication was more effective than another. CONCLUSION: In this retrospective study, one cannot conclude the superiority or greater efficacy of one Injectable Antipsychotic over another as the need for additional injections was nearly identical in the Haloperidol and Ziprasidone groups. Also, the greater percentage for Olanzapine may have been due to a number of uncontrolled factors such as level of agitation or treatment-resistant patients. In addition, the appearance of overall less need for more than one additional injections when starting with Haloperidol IM may be caused by differences in patient severity as patients having varying levels of agitation are all labeled as acutely agitated and treated with the same dosage. Another factor is the presence of a confounding variable- medications given by mouth (PO). Patients who did not require additional injectable medications could be explained in part by response to medications given by mouth. This retrospective study exposes limitations to comparing the efficacy among injectable antipsychotics and the need for a controlled, prospective study.

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NR05-41

INTERACTION BETWEEN WARFARIN AND DIVALPROEX: A CASE REPORT

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SUMMARY:
We present the case of AD, a 42-year-old Caucasian female with bipolar disorder on valproic acid and lamotrigine. She presented in acute heart failure and underwent mechanical mitral valve replacement (MVR) and single-vessel coronary artery bypass grafting (CABG). AD's international normalized ratio (INR) was 1.11 on the day of her MVR and CABG (day 1). Daily warfarin was initiated on the morning of day 2. By day 4 her INR was 6.1, then 6.54 on repeat assessment. After fresh frozen plasma, her INR had decreased to 3.23. On day 5, her INR had risen again to 5.42 without any interval warfarin, and serum valproate level that day was 91.7 mcg/ml. Divalproex was held due to concerns of a potential drug-drug interaction. Daily warfarin dosing was tailored to INRs, and, on day 10, divalproex was re-introduced at 250 mg twice daily—half of her admission dose—-in the context of significantly lower doses of warfarin. Due to the difficulty in maintaining a therapeutic INR, divalproex was discontinued within two months of discharge. We describe three theoretical mechanisms of interaction between warfarin and valproic acid. 1) They may interact competitively via the cytochrome p450 system. Warfarin is a racemic mixture, being composed of a more potent (S) enantiomer (metabolized via CYP 2C9) and a less potent (R) enantiomer (metabolized via CYP 1A2, 2C19, and 3A4). Valproic acid inhibits CYP 2C9 and 2C19, increasing levels of both enantiomers. 2) As they are each more than 90% protein-bound, co-administration may lead to the displacement of warfarin from circulating proteins, an increase in the fraction of free warfarin, and enhancement of warfarin's anti-coagulant effects. 3) They may interact via their independent effects on hemostasis. Valproic acid has been shown to lower platelet count, impair platelet aggregation, and prolong prothrombin time. Interactions between warfarin and psychotropics, especially valproic acid, are important and likely under-recognized. Patients receiving warfarin who are started on valproic acid and vice versa should be monitored closely to ensure that the INR remains within therapeutic range. The need for concurrent anticoagulation and mood stabilization may require a period of valproic acid discontinuation, careful titration of warfarin dosing, or possibly even switch to a mood stabilizer with less risk of interaction with warfarin (e.g., lithium). These issues have implications for both safety.

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NR05-42

UNCOMMON ANTIDEPRESSANT DISCONTINUATION SYNDROMES FOLLOWING TAPER OF ESCITALOPRAM AND ABRUPT TERMINATION OF BUPROPRION

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SUMMARY:
Background: Antidepressant discontinuation symptoms have been reported since the introduction of tricyclic antidepressants, and have become

increasingly common since the advent of selective serotonin reuptake inhibitors (SSRIs). They have also been reported with serotonin and noradrenergic reuptake inhibitors (SNRIs) and other classes of antidepressants. Objective: We present three cases of unusual antidepressant discontinuation syndromes in patients being treated for major depressive disorder. Method: The OVID and PubMed databases were searched using the following keywords: serotonin discontinuation syndrome; antidepressant discontinuation syndrome; escitalopram; buproprion. Results: Two young women who wished to discontinue escitalopram due to sexual side effects reported symptoms of discontinuation despite conservative tapering of the medication over a period of two to three months. In the case of the first patient, she complained of loss of balance, anxiety, nausea and a "tingling" feeling in her body. The second reported, nausea an "uncomfortable feeling in the stomach." A third patient abruptly stopped taking buproprion, believing that it was not helping him, and began to hear command auditory hallucinations of a voice saying, "Just kill yourself." In all three cases, the patients' symptoms resolved quickly upon resumption of their medications. Conclusion: Discontinuation symptoms are common with both SSRIs and SNRIs, with the result that most clinicians taper these medications over a period of weeks; however some patients may be more sensitive to dosage decreases and require a slow taper over several months. No discontinuation syndrome has previously been reported with buproprion. Clinicians should be aware of the risk of antidepressant discontinuation symptoms which may occur despite a taper of medication, or with a medication which is considered to carry little propensity to cause a discontinuation syndrome. Patients must be educated about the reasons for not stopping antidepressant medication precipitously, and encouraged to report any adverse effects from reduced dosages.

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NR05-43

RISK FACTORS OF DRUG INTERACTION BETWEEN WARFARIN AND ANTIDEPRESSANT IN A CLINICAL SETTING

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SUMMARY:

Patients with cardiovascular or cerebrovascular diseases such as myocardial infarction, stroke, heart failure, and atrial fibrillation are at increased risk of developing depression and when depression develops, vascular risk is exacerbated further [1][2]. Patients with treatment-resistant depression (failure to respond to a single trial of antidepressant) after an acute coronary syndrome are at an even greater risk for cardiovascular accidents [3]. Treatment of depression in these patients should be emphasized not only to improve quality of life but also to acquire a better prognosis of cardiovascular or cerebrovascular disease. Recent papers suggest the potential for an interaction between antidepressants and warfarin. But most of the literatures that concern the effects of antidepressants on INR while taking warfarin are case reports. Information concerning antidepressant use concurrently with warfarin is scarce. A study evaluating the risk factors for INR change in respect with warfarin and antidepressants would be very helpful. The results of our study provide important exploratory data for using antidepressants in warfarin users. This study was a retrospective case control study using medical records in a general hospital. In this study, we evaluated the risk factors for INR increase after addition of an antidepressant in a total of 160 patients who used warfarin. Patients' sex, age, BMI, aspartate aminotransferase (AST), alanine aminotransferase (ALT), creatinine (Cr), indication of warfarin use, dose of warfarin, type of added antidepressant were assessed for investigating possible risk factors with INR increase = 15% after adding an antidepressant. Among 160 patients, 52 patients (32.5%) showed an elevation of = 15% after adding an antidepressant. We selected 9 antidepressants which were used in more than 4 patients. These 9 antidepressants were used in 148 patients, and they were included in logistic regression analysis. Among the 148 patients, 48

(32.4%) patients showed an increase in INR. Univariate analysis showed sex, level of creatinine, indication of warfarin use, dose of warfarin were potential risk factors for INR increase in respect to antidepressant and warfarin interaction (Table 1). Among the antidepressants included in this study, fluvoxamine (OR 3.53, 95% CIs 0.54-23.38) and fluoxetine (OR 2.09, 95% CIs 0.34-13.00) showed the highest odds ratios for INR increase in warfarin users (Table1). But there was no statistically significant difference among the antidepressants. The results of this study suggest that sex, level of creatinine, indication of warfarin use, dose of warfarin are risk factors for INR increase with respect to the interaction of antidepressant and warfarin. There was no significant difference according to antidepressant type. The small number of patients is a limitation of this study. A large-scale study comparing multiple antidepressants will be needed.

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NR05-44

USE OF PALIPERIDONE IN A PATIENT WITH CYTOCHROME P450 DEFICIENCY

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SUMMARY:

Background : Knowledge about the pharmacokinetics and pharmacodynamics of several new second generation antipsychotics (SGA) now available for use in the U.S. may not be common knowledge amongst practicing psychiatrists. Also, genetic screenings are now more commercially available regarding the cytochrome p450 metabolic enzymes whereby clinicians may be armed with information that will help predict which patients will develop more side effects on certain drugs. Alternatively, as our case will depict, patients sometimes arrive with this metabolic data in hand which then dictates future prescribing.Following is a case where paliperidone was utilized based upon its p450 profile. Case: A 44 year old female patient with Major Depressive Disorder ,Post Traumatic Stress Disorder and Borderline Personality Disorder presented to the inpatient unit with ideas of delusional intensity, obsessive rumination, thought disorganization and mood lability. There was no substance abuse or organic medical conditions to account for these symptoms. She had a history of severe side effects to small doses of many antipsychotics and antidepressants. Upon history and record review, she was found to have a genetic incapacity to metabolize CYP2D6 and CYP2C19 pathway medications efficiently. Supportive techniques were used to convey to patient how the cytochrome p450 system works and in partnership with patient, medications were researched to demonstrate utilization. [table 1]. She was started on hydroxyzine 25mg up to three times daily for anxiety and insomnia as needed and started paliperidone 3 mg/d for psychotic symptoms and mood lability. She tolerated these well and was discharged .As an outpatient she presented some degree of resolved symptoms and tolerated the low doses of these two medications fairly well with side effects of dizziness. Unfortunately, after three months of treatment she developed an increase in total and LDL cholesterol along with an elevated prolactin level. As she was no longer psychotic and her moods were controlled and she was actively engaged in psychotherapy, the paliperidone was discontinued and hydroxyzine continued.Conclusion: Some patients have impaired ability to metabolize psychotropics. Genetic testing is useful in this situation to guide treatment. These patients should be treated with medications that avoid deficient pathways(Table 1) after analyzing available medications using psychopharmacology texts, FDA package inserts and drug company websites. The result was a mutually acceptable drug regimen which the patient tolerated for some time. This case also shows that Paliperidone can be used in this situation.

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NR05-45

A CASE OF DELAYED HYPONATREMIA WITH SERTRALINE THERAPY

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SUMMARY:
Introduction Traumatic brain injury (TBI) affects nearly 1.5 million individuals in the United States each year. During peacetime, over 7,000 Americans with a diagnosis of TBI are admitted to military and veterans hospitals every year; this number increases significantly during combat, during which TBI may comprise up to 20% of survivor casualties. Pain and discomfort relating to injuries are frequent causes of insomnia or sleep disturbance in TBI patients. Sleep disturbance can manifest as difficulty falling or staying asleep, early morning wakening and non-restorative sleep, and affects up to 30% of individuals with TBI. Because there are few studies on pharmacotherapy for sleep disturbances in TBI, many physicians base their intervention on experience with the general population. A literature review was performed and recommendations for treatment of sleep disturbances in patients with TBI are summarized here based on published findings. Conclusion Non-pharmacological means should be the first-line treatment for sleep disturbances in patients with TBI. These include sleep hygiene and cognitive behavioral therapy. Physicians and other clinicians should lend careful attention to the specific sleep complaint, adverse effect profile of the medication, as well as the anticipated duration of treatment before deciding upon a sleep agent for patients with TBI. Table with drugs and their effect on sleep,indication and adverse effects .

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NR05-46

CHANGES IN DEPRESSION AND ANXIETY SYMPTOMS IN PATIENTS UNDERGOING MULTIDSCIPLINARY PAIN TREATMENT

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SUMMARY:
Introduction: Chronic Non-Malignant Pain (CNMP) is a condition that affects a large number of Americans resulting in significant physical and psychological morbidity1,2,3. Depression and anxiety are frequent comorbidities associated with CNMP. While Multidisciplinary Pain Treatment has been shown to improve pain and disability in these patients, the effects of this approach on comorbid depression anxiety is understudied.
Method: We carried out a retrospective chart review of 56 patient who underwent treatment at the Chronic Pain Rehabilitation Center at the Cleveland Clinic. All the patients were diagnosed with Major depressive Disorder and or Anxiety disorder as diagnosed with a combination of a clinical interview and the Depression, Anxiety and Stress Scale (DASS). The following parameters were collected at admission and discharge: Numeric Rating Scale (NRS) for Pain, Depression and anxiety scores on DASS, Pain Disability Index (PDI). The ratings were tabulated for individual patients and

the data was analyzed in PSPP.Results: Of the 56 patients, 12 met criteria for only depression and 14 met criteria for only anxiety. 30 patients met criteria for both depression and anxiety. Of the 42 patients who met criteria for depression, the NRS improved from a mean of 7.46 to 2.83 and the depression sub-score on DASS improved from 25.67 to 12.46. The PDI improved from a mean of 40.14 to 17.38. Of the 44 patients who met criteria for anxiety, the mean NRS improved from 7.21 to 3.08; the anxiety scale improved from 22.52 to 10.11 and the mean PDI scores on admission was 41.19 and at discharge was 16.57. Discussion and Conclusion: This retrospective review indicates that multidisciplinary treatment of Chronic Pain results in the reduction of not only the pain perceived by the patients, but also in the concurrent improvement of depressive and anxiety symptoms. As only patients with a co-morbidity of either depression and anxiety were selected for this study, it is not clear if pain improves independent of the psychiatric symptoms. A case match study with patients without the above psychiatric diagnoses may help address this question.

NR05-47

CONVERSION DISORDER IN AN ACTIVE MILITARY SOLDIER: A CASE REPORT

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SUMMARY:
Introduction Conversion disorder is one of the somatoform disorders characterized by the presence of deficits affecting the voluntary motor or sensory system. The symptoms of conversion disorder suggest neurological or organic causes but are believed to be associated with psychological stressors With increasing number of active military personnel ambivalent due to the unpopularity of the wars, it is expected that the prevalence of conversion disorder co-morbid with PTSD may actually increase. In this report, we describe the case of an active military soldier who developed conversion disorder. We believe this is the first reported case of conversion disorder in an active military soldier. Case Report The patient is a 29 yr old Caucasian active military male who presented with a headache after returning from Iraq. He had been exposed to military combat but denies witnessing blast injuries or loss of consciousness. He subsequently developed right sided hemiparesis and difficulty with his balance. In addition, he presented with short term memory loss. He was admitted to the hospital for a complete neurological work-up including complete neurological examination that was normal as well as a negative MRI and MRA of the head and neck. Other medical work-up was negative. His migraine was treated with amitryptiline 50 mg po qhs. Patient was also depressed and started on sertraline gradually titrated up to 200mg per day. Patient continued to have difficulty with his short-term memory loss and balance problems and re-presented to the hospital four months later with similar symptoms. At this time, he also presented with worsening of his depression and suicidal ideation. After a repeat initial negative medical and neurological work up, he was admitted to the psychiatric inpatient service for acute psychiatric stabilization and further neurological and medical work-up. Mental Status exam at this time revealed a 29 year old male cooperative man with intermittent eye contact. His speech was repetitive and he spoke with a substantial stutter. His mood was depressed and his affect was tearful. There was no suicidal or homicidal ideation intent or plan. There were no delusions, hallucination or any other psychotic processes evident. His thought process was circumstantial but he could be re-directed. His insight and judgment were limited. Short term memory recall was poor. His insight and judgment were impaired. His intelligence was average. On admission, he was continued on his outpatient medications, sertraline 200mg daily and amitryptline 50mg qhs. It was noted that during the inpatient therapy sessions that as he talked about his childhood and became more comfortable in each session, his stuttering would improve and his leg strength would also improve. During his stay on the unit, he went from ambulating in a wheelchair to using a cane. He also underwent neuropsychological testing, which confirmed a suspected diagnosis of conversion disorder related to post-traumatic stress disorder. He revealed a tremendous amount of childhood trauma. His medical and neurological work-up during hospitalization were again negative

and the likelihood of diagnosis of conversion disorder was further strengthened. In addition to his sertraline, clonazepam 0.5mg po bid was added to treat his anxiety symptoms. After 14 days of inpatient stay, the patient's neurological deficits continued to improve until the treatment team felt he was

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NR05-48

NEUROPSYCHIATRIC MANIFESTATIONS OF WHIPPLE'S DISEASE: CASE REPORT AND LITERATURE REVIEW

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SUMMARY:

Whipple's disease is a systemic infectious disease that usually presents with malabsorption, but may involve any organ system of the body. We describe a 48-year old male, with a previous diagnosis of Whipple's disease, who was referred to our outpatient psychiatry clinic for management of gradually declining memory, apathy and a recent onset of psychotic symptoms. Frequent relapses despite multiple antibiotic courses, along with an inability to perform activities of daily living and recent non-adherence to medications attributed to cognitive dysfunction, resulted in him being placed at a skilled nursing facility. Central nervous system (CNS) involvement was confirmed by PCR sequencing of the cerebrospinal fluid (CSF) and brain scans. This scenario presented a variety of clinical questions related to psychiatric diagnosis and management. Whipple's disease is caused by a gram positive bacterium Tropheryma whipplei and can be fatal if not diagnosed and treated. This illness often begins with a prodrome of fever and arthralgia progressing to chronic diarrhea and resultant weight loss. Duodenal biopsy along with the PCR technique is used to confirm the diagnosis. CNS involvement occurs in 20-40% of infected patients and can either present as a systemic illness with predominantly gastrointestinal or rheumatologic features or exclusively as a primary CNS infection. Symptoms of CNS Whipple's disease may be non-specific and may involve seizures, focal neurological deficits, ocular abnormalities, cognitive dysfunction including frontotemporal dementia and psychiatric symptoms such as mood and personality changes or psychotic symptoms. In this poster, we will highlight clinical manifestations and diagnostic techniques used to detect Whipple's disease across all organ systems with a special focus on the CNS. Updated evidence for management of neuropsychiatric symptoms along with prognostic implications will also be discussed.

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NR05-49

A CASE OF PSYCHOSIS IN A PATIENT WITH RIGHT FRONTOPARIETAL STROKE: DIAGNOSTIC CHALLENGES AND TREATMENT

Chp.:Gabrielli Gorospe M.D., 26 Hackett Blvd, Albany, NY 12208, Co-Author(s): Oksana Kershteyn, MD, Victoria Balkoski, MD

SUMMARY:

We present a case of 59 year old male with history of right frontoparietal stroke who was followed by Psychiatry Consultation Liason team in a span of 18 months. We are describing evolution of symptoms, diagnostic challenges and treatment options. At 6 months after the stroke the patient is depressed and highly anxious and after a year the patient presents suicidal and homicidal with paranoia. He develops somatic delusions in the following months despite continued antidepressant medication. Short term trials of low dose Haldol while inpatient was effective in reducing anxiety as well as bringing improvement in thinking. This case examines the diagnostic challenges of managing a patient after right sided frontoparietal stroke and provides treatment recommendations with low dose Haldol and Quetiapine.

NR05-50

RELATIONSHIP BETWEEN SEVERITY OF DELIRIUM AND MORTALITY IN PATIENTS WITH CANCER

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SUMMARY:
Objective: To assess the association between severity of delirium and mortality in cancer patients and to investigate the phenomenology of delirium among those facing imminent death. Method: We retrospectively reviewed the charts of 112 cancer patients with delirium. The subjects, patients at a cancer center, were categorized into three groups (deceased before discharge, discharged without hope for improvement, and improved). Severity of delirium was assessed using the Delirium Rating Scale-Revised-98 (DRS-R-98), and the scores of the three groups were compared after adjusting for the demographic and clinical factors that differed in the univariate analyses ($p < 0.1$).Results: Of the 112 patients, 20 (17.9%) died prior to discharge, 28 (25.0%) were discharged without hope for improvement, and 64 (57.1%) improved during the index admission period. We found a significant difference in the total DRS-R-98 scores of the three groups (24.2, 26.1, and 21.2, respectively, $p=0.002$), which was maintained after adjusting for potential compounding factors (age, abnormality of WBC counts, and use of antibiotics and opioids). The total DRS-R-98 scores in the post-hoc analyses were significantly higher in the deceased-before-discharge and discharged-without-hope-for-improvement groups than in the improved group ($p=0.017$ and <0.001, respectively). According to scores on the DRS-R-98, sleep–wake cycle disturbances; language and cognitive abnormalities; and difficulties with attention, short-term memory, and visuospatial abilities were more frequent in cancer patients in the deceased-before-discharge and discharged-without-hope groups. Conclusion: The severity of delirium at the time of psychiatric consultation was significantly associated with mortality in cancer patients with delirium.

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NR05-51

A STUDY OF FATIGUE AND QUALITY OF LIFE IN EARLY STAGE THYROID CANCER SURVIVOR

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SUMMARY:
Objective: We hypothesized that early stage thyroid cancer survivor, usually experience severe fatigue during acute treatment stage, are more prone to experience symptoms related to fatigue compare to other types of cancer. Method: We collect data from 700 early stage cancer survivors from university hospital and 596(thyroid cancer 297, breast cancer 299) subjects completed study. All subjects completed the study questionnaire including demographic characteristics, history of current and past illnesses, treatment history, WHO-QOL(World Health Organization Quality of Life), EORTC-QLQ30(European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire), HADS(Hospital Anxiety and Depression Scale), BFI(Brief Fatigue Inventory), BPI(Brief Pain Inventory), MDASI(M.D. Anderson Symptom Inventory) and laboratory test results. Results: 93% of subject were female, mean age was 43.1±9.3 and time after treatment was 22.7±26.8 months.Thyroid cancer survivor group showed higher score in Fatigue, Dyspnea and lower score in Pain on EORTC-QLQ30, also showed higher score in Fatigue interference on BFI, Pain interference on BPI, compared to breast cancer survivor group. But there were no differences in HADS score, Fatigue severity and Pain severity.Conclusions: These results suggests that there are more fatigue related symptoms in thyroid cancer survivors and related to quality of life.

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NR05-52

DOCUMENTATION OF EVALUATION OF PATIENT CAPACITY BY NON-PSYCHIATRIC AND PSYCHIATRIC PHYSICIANS

Chp.:Timothy Kreider Ph.D., 68 Watsessing Ave #8, Belleville, NJ 07109, Co-Author(s): Rashi Aggarwal, M.D.

SUMMARY:
Objective: We assessed the clarity, precision, and completeness of the documentation by non-psychiatric physicians and consultation psychiatrists about patients whose condition prompted psychiatric consultation for capacity evaluation. Methods: We reviewed hospital charts at an urban, academic hospital for non-psychiatric inpatients for whom psychiatric consultations were called. Fifty consecutive consultations that involved capacity evaluation were examined. From chart notes written by the primary team (PT), we defined and calculated a "CURA score," with 1 point each for documentation of the patient's ability to Communicate, Understand, Reason, and Appreciate regarding the medical decision in question. A CURA score was calculated from the notes written by the consultation-liaison (CL) team for comparison. The consultation request form and discharge summary were searched for explicit PT documentation of

concerns about capacity. Results: Of the PT notes, only 50% documented any of the elements of a capacity evaluation (CURA=0) and 28% documented only patient communication of a choice (CURA=1). The average CURA for PT notes was 0.8 +/- 0.3 (95% CI). By comparison, none of the CL notes had CURA<2, and the average score was 3.6 +/- 0.2. The consultation request form mentioned "capacity" or "competence" in 70% of cases; in the other cases, the written request described patient behavior (e.g., threatening to leave, refusing disposition) or psychiatric states (e.g., dementia, psychosis) that presumably raised concerns of incapacity. Of the discharge summaries, 50% documented the capacity evaluation, 24% documented psychiatry consultation only, and 26% included no record of the psychiatric consultation or capacity concerns. Conclusion: In our study, non-psychiatric physicians failed, on average, to document even one of the four components of the capacity evaluation, suggesting either that they do not know the components or that they do not appreciate the medical and legal importance of clearly documenting questions about patient capacity. Consulting psychiatrists might use the consultation as a teaching opportunity, perhaps by employing the mnemonic CURA.

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NR05-53

THE BROKEN HEART SYNDROME

Chp.:Jihad Nader M.D., 78 Coolidge St, Brookline, MA 02446, Co-Author(s): Louis Vachon, M.D., Professor in Psychiatry, Boston University School of Medicine.

SUMMARY:

Background: Takotsubo cardiomyopathy (TTC) is an under recognized transient left ventricular dysfunction mimicking an acute coronary syndrome with EKG changes and cardiac enzymes elevation. A psychiatric etiological factor is a major stressful event preceding the onset of symptoms. The course of the myopathy is usually benign and a full recovery is expected in the majority of cases. The cardiovascular criteria to diagnose TTC are: Transient akinesis or dyskinesis of the left ventricular apical and mid-ventricular segments with regional wall-motion abnormalities extending beyond a single epicardial vascular distribution. Methods: 1- The records will be electronically searched for the following terms in the discharge Summary: stress cardiomyopathy, "ampulla" cardiomyopathy, transient left ventricular apical ballooning syndrome, "broken heart syndrome", and neurogenic myocardial stunning. 2- The records will also be electronically searched for demographic variables in the TTC cases: age, sex. 3- The records also will be electronically searched for a psychiatric consult. 4- The Consult Liaison Service of BMC received three requests for consultation during the recent September-December trimester. These cases are reported here. Results: So far 42 unique patients with various spellings of "Takotsubo" in their discharge summaries; 35 of these have "Takosubo" and "Stress or Emotion" between 01/01/2009 and 12/01/2010. None of the other phrases produced any results from discharge summaries.

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NR05-54

THE RELATIONSHIP BETWEEN DIABETES MELLITUS AND BIPOLAR DISORDER IN THE NORWEGIAN POPULATION. A PHARMACOEPIDEMIOLOGICAL STUDY

Chp.:Gjertrud Svendal Other, Torgallmenningen 3a, Bergen, 5014 Norway, Co-Author(s): Anders Engeland, Ph.D., Øyvind Hundal, Ph.D., Anders Lund, Ph.D.

SUMMARY:

OBJECTIVE: Some studies have revealed an association between bipolar disorder and diabetes mellitus [1]. Other studies have discussed the positive effect lithium have on blood sugar regulations [2]. However, some studies have claimed

both bipolar disorder and diabetes mellitus to be a part of a metabolic syndrome [3]. It is not known if or how the usage of medication for diabetes mellitus and bipolar disorder is reflected in the general population. The purpose of the present study is to investigate weather it is more likely to receive lithium if one receives either insulin or peroral antidiabetics. METHODS: Data from the Norwegian Prescription Database for 2006 is being analyzed. This database encompasses all prescriptions from all pharmacies in Norway. The database does not cover drugs given to hospitalized or institutionalized patients. All drugs for constant use are in Norway covered by the public health care system, as long as physicians use the authorised "Blue Prescription". A requirement for this is that the physician confirms that the patients have relevant diagnoses, and are in need of the drugs on a regular and long lasting basis. However, in some cases the physician might not give the patient the right diagnosis. The medications which are object for analysis in this study are lithium in treatment of bipolar disorder, and insulin and peroral antidiabetics in treatment of diabetes mellitus. The data is being analysed for the purpose of ascertaining concurrence of prescriptions for lithium and insulin or peroral antidiabetics. There are many medications used in treatment of bipolar disorder. However the prescripions for these will not reflect the disorder, as these medications also are used to treat other affective disorders as well as epilepsy. Lithium is seldom used in treatment for other illnesses. RESULTS: In the total Norwegian population of 2006 (N=4640219) 7749 received lithium. 48123 received insulin, while 91934 received peroral antidiabetics. 172 persons received both insulin and lithium, and 406 received both peroral antidiabetics and lithium. The prescription of lithium was significantly increased when one received a prescription with insulin or peroral antidiabetics (OR=1.640 (95% CI=1.495-1.798); chi-square p<0.001) in the general population. This correlation was higher comparing peroral antidiabetcs and lithium (OR= 1.703), and lower comparing insulin and lithium (OR= 1.543). Women seem to have an increased risk of receiving insulin or peroral antidaibetcs and lithium compared to men (OR=1.904 for women, OR= 1.376 for men). All calculations are altered for sex and age. Further calculations will be done. CONCLUSION: This study revealed a strong positive association between the prescription of lithium and insulin or peroral antibetics.

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NR05-55

A CASE OF GORHAM'S DISEASE WITH PSYCHOSIS

Chp.:Gretchen Thiemecke D.O., 34800 Bob Wilson Drive, San Diego, CA 92134

SUMMARY:

BACKGROUND: Gorham-Stout Syndrome, otherwise known as Vanishing Bone Disease, Massive Osteolysis, or Lymphangiomatosis, is a condition in which the bone is replaced by proliferation of thin-walled, vascular channels. In the English literature, there are ~200 cases since first discovered in 1838 but none have commented on any psychiatric manifestations to date. Psychosis associated with Gorham-Stout Syndrome has not previously been described. OBJECTIVE: The author reports a case of psychosis in a patient previously diagnosed with Gorham-Stout Syndrome to comment on possible psychiatric manifestations of the disease. METHOD: This is a case report of a 33-year-old male with paranoid delusions and auditory hallucinations who was previously diagnosed at age 28 with Gorham-Stout Syndrome. RESULTS: At age 29, the patient was noted to have absence of multiple bones, including left clavicle, second rib, scapula, and also had a thin sternum on radiographs and CT scan; a nuclear bone scan was negative for abnormal nuclide uptake and clavicle biopsy was negative for malignancy. He was diagnosed with Gorham-Stout Syndrome at that time. He presented to mental health at 33 years old, disheveled, with paranoid delusions and bizarre behaviors. He had a history of marijuana, stimulant, and non-IV opiate use which he had not used since age 29, confirmed by urine drug screen, patient and

mother's report. The patient was diagnosed with Psychosis Not Otherwise Specified with concern for Psychosis Due to General Medical Condition. DISCUSSION: This is a case of psychosis presenting after onset of Gorham-Stout Syndrome. Psychosis associated with Gorham-Stout Syndrome has not previously been described. The history of substance and alcohol use is a confounder in this case, but these issues were in remission for over 1 year prior to presentation. Future observation of patients with Gorham-Stout Syndrome for mental health issues will determine whether this case is merely coincidence, or if there is correlation between Gorham-Stout Syndrome and psychosis. Awareness of this case may lead to future observation for psychosis in these patients.

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NR05-56

SLEEP ARCHITECTURE AND FIBROMYALGIA

Chp.:Amit Vashist M.D., Box 70567, Johnson City, TN 37614, Co-Author(s): Snehalkumar Patel, M.D., Hetal K. Brahmbhatt, M.D., Norman C. Moore, M.D.

SUMMARY:
Background: Fibromyalgia is a chronic pain syndrome characterized by widespread musculoskeletal pain, localized tenderness at characteristic sites, and a nonrestorative pattern of sleep. Disordered sleep in patients with fibromyalgia is typically characterized by difficulty falling asleep, frequent awakenings as well as morning fatigue and diffuse aching. Sleep studies conducted on patients with fibromyalgia have primarily shown a disorder of the NREM sleep that comprises of either a reduced duration of stage 4 sleep or intermittent superimposed intrusions of alpha rhythm on periods of NREM sleep. Other sleep disorders found in fibromyalgia patients include sleep apnea, narcolepsy-like syndromes and periodic leg movements associated with arousal. Moreover, it has been reported in several studies that fibromyalgia is frequently associated with reduction of stages 1, 2 and REM sleep. Objective: To explore further if the sleep patterns of patients with fibromyalgia are significantly different from normal controls as well as from patients suffering from psychiatric conditions like depression, anxiety disorder, bipolar disorder etc.Methods: We used pubmed.gov to extract literature that looked into the impact of fibromyalgia on sleep architecture. Initially, we selected 53 scientific papers and we subsequently excluded 11 publications since in those articles there was a considerable overlap of psychiatric conditions like depression, anxiety disorder etc. with fibromyalgia which confounded the picture as to which condition was predominantly causing distortions in sleep architecture. Overall, we reviewed 42 papers to support our study. Results and Conclusion: Our review of fibromyalgia literature suggests that the sleep architecture in patients with fibromyalgia is distorted and significantly different from patients without musculosketal pain as well as from patients with other psychiatric conditions.

NR05-57

SYNCHRONICITY: MEANINGFUL COINCIDENCE DETECTION AMONG INDIVIDUALS AFFILIATED WITH A MEDICAL SCHOOL

Chp.:George Costin M.D., 901 W Jefferson, springfield, IL 62702, Co-Author(s): Kristina Dzara, Ph.D., David S. Resch, M.D.

SUMMARY:
Objectives: - In Jungian psychology, synchronicity refers to a low probability intersection between two events in a narrow window of time. The Weird Coincidences Scale (WCS-2) was previously designed to assess coincidence detection. Researchers were urged to improve the measurement of self-reported coincidences. - Our objectives were to retest the WCS-2 constructs in an academic medical setting and assess how they relate to: 1) age 2) direct patient care and 3) positive or negative emotional events. Methods: - An email invitation to complete an online survey was sent to everyone from Southern Illinois University School of Medicine (SIU-SOM). - The survey included

18 WCS-2 items, questions regarding perceptions of coincidences and significant life events, and demographic information. Results:- 286/2862 responded (10% RR). Sample size calculations found the N marginally acceptable (90% confidence level; 4.6% margin of error). Post-hoc power analyses indicated significant power (1.00) (effect size .05; alpha error .05). - The WCS-2 items factored into 3 scales, suggested by prior literature: Interpersonal, Agentic, and Analysis/Interpretation. One Analysis/ Interpretation item - the respondents' belief that coincidences can be explained by laws of probability and chance – did not fit (factor loading -.657). It was analyzed as a separate construct, called Probability/ Chance. - Descriptive statistics for the Interpersonal and Agentic scales were similar to published results. The Analysis/ Interpretation scores were considerably higher.- There was only 1 significant relationship between age or direct patient care and the WCS-2 variables. Direct patient care was negatively related to the interpersonal scale (ryx = -.130, p= .035). However, age and Probability/ Chance were negatively related (ryx = -.233, p= .001), while direct patient care and Probability/ Chance were positively related (ryx = .129, p= .034) - All relationships between the 3 WCS-2 scales and positive or negative life events were significant. These correlations ranged from .373 to .471 for positive events and .184 to .316 for negative events (p<.05). Additional t-tests indicated that those who associate coincidences with positive and/or negative life events differ on all 3 WCS-2 scales (higher means) and the Probability/Chance variable (lower mean), compared to those who don't (p= .001). Conclusions:- SIU-SOM affiliates commonly perceive coincidences. - The WCS-2 items factored into three scales, with one outlier. To improve inter-item reliability, analyze the Probability/Chance variable separately. - There is little evidence that age or direct patient care are related to the WCS-2 items. - The WCS-2 scales were related to both positive and negative life events. - Coincidence detection around positive and/or negative life events suggests an association with emotional states and search for meaning that aligns with previously published findings.

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NR05-58

CLINICAL SKILLS VERIFICATION: INITIAL PERCEPTIONS AND PERSPECTIVES OF PSYCHIATRY RESIDENTS

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SUMMARY:

A thorough history taking along with assessment of the mental state examination and clinical formulation of a case, followed by supervised evaluation and feedback have been considered essential components during the training process of psychiatry residents. In the previous years, the American Board of Psychiatry and Neurology (ABPN) has also conducted the Psychiatry Boards examination in two parts, with the second part focusing on clinical skills. In 2006, ABPN initiated the process of revamping the examination system which led to the elimination of boards part II. Following that, the ABPN has required that the residency programs provide a proof of evaluation of clinical skills to establish the residents' eligibility for the boards' exam. In an effort to standardize and streamline the documentation of an evaluation of clinical skills, the Clinical Skills Verification (CSV) form was proposed to aid the training programs in the process. This is also accompanied by instructions for the assessor to grade a clinical encounter. At least three of these forms will need to be satisfactorily completed by a candidate during residency training to be eligible for board certification. After obtaining IRB approval for the proposed survey, we will use an online questionnaire with several questions aiming to explore psychiatry residents' attitudes and concerns regarding the components of the CSV form as well as the grading process. The responses

will be gathered using a Likert rating scale and the results will be analyzed using appropriate statistical methods. We will reach out to the residents in training programs nationally by contacting them through their programs and through list-servs. This will be followed by timely reminders to obtain maximum response. This survey will be helpful in identifying any potential obstacles in this fairly new process, which can then be improved to provide a uniform means for such a clinical assessment.

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NR05-59

CHANGING PATTERNS OF PERSECUTORS IN DELUSION OF SCHIZOPHRENIA DURING ABOUT 30 YEARS (1980-2009)

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SUMMARY:

Objectives : Research suggests that phenomenology of delusion in schizophrenia is influenced by culture and environment. Researchers in our hospital studied the persecutors in the schizophrenic delusions during 1980-1982 and 1990-1992. To investigate the influence of societal changes on delusional contents of schizophrenia, we studied persecutors in delusions of schizophrenic inpatients during two year period of 2007-2009 and compared them with data of 1980-1982 and 1990-1992. Methods : Data for the comparative study on persecutors in delusions of schizophrenics covers the following periods: first study from June 1, 1980 to May 31, 1982 with 120 admitted patients, second study from June 1, 1990 to May 31, 1992 with 120 admitted patients, and third study from June 1, 2007 to May 31, 2009 with 98 patients admitted with diagnosis of schizophrenia at Hanyang University Medical Center. Results : Persecutors such as police, secret agents, the military and communist political figures appearing within persecutory delusions of patients with schizophrenia significantly decreased ($p<0.001$), while the appearance of persecutors such as unidentified persecutors significantly increased ($p<0.001$). There also existed a gender difference. In males, persecutors such as police, secret agents, the military and communist political figures decreased ($p<0.001$). However neighbors ($p<0.01$) and unidentified persons ($p<0.001$) increased. In females, persecutors of police, secret agents, the military and communist political figures ($p<0.001$), immediate family, relatives ($p<0.001$), and neighbors ($p<0.001$) decreased. However coworker or friends ($p<0.01$), unidentified persons ($p<0.001$) and medical personnel ($p<0.001$) increased. Also, persecutory behavior in the delusion has become less severe than in the past. Destruction ($p<0.01$) and serious threats ($p<0.001$) decreased, but coverts ($p<0.001$) increased. Conclusions : Results from this study suggests that change in delusion of schizophrenia may reflect transformation of South Korea toward open, democratic, and politically free society. The decrease of persecutors such as police, secret agents, the military and communist political figures suggests that political suppression at the government or national level went down. Furthermore the increase of unidentified persecutors suggests that the persecutions from reality have also lessened. Persecutory behavior in the delusions has become less aggressive than in the past. It reflects the strengthened social security in South Korea. As the results of this article show, the social and political environment in South Korea has become safe and free during the past 30 years.

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NR05-60

EFFECTS OF A PSYCHIATRIC LABEL ON MEDICAL RESIDENTS' ATTITUDES

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SUMMARY:
Background: Although research on the negative attitudes towards psychiatric patients has increased recently, few data are available on the attitude of medical residents towards a psychiatric label. Objective: To investigate the effect of a psychiatric label on the attitudes of medical residents towards an individual. Methods: French medical residents were contacted by email through the residents' mailing list and invited to anonymously fill in an online questionnaire assessing demographic information and attitudes towards an individual described in a vignette. The medical residents were randomly assigned to one of two hypothetical vignettes describing the same apparently "healthy" individual, differing only in the presence of a psychiatric label given to one of them. Participants (n=322: 64.6% female, mean(SD) age = 27.7(1.9), mean(SD) duration of residency = 2.4(1.3) years) reported on the social distance scale their attitudes towards the described individual and their willingness to treat this person. Results: After statistical adjustment for age, gender and duration of residency, residents allocated to the psychiatric-diagnostic label group reported being less at ease with becoming the individual's next-door neighbor (OR[95%CI]=8.49 [2.89–24.96], p<.01), working in the same place (OR[95%CI]=2.23[1.0–4.79], p<.05), sharing a house (OR[95%CI]=2.38 [1.45–3.89], p<.01), having him look after their children (OR[95%CI]=3.10[1.83–5.24], p<.01), having a member of their family or a relative dating him (OR[95%CI] =3.01[1.88–4.81], p<.01), having their finances run by the individual (OR[95%CI]=1.59[1.02–2.49], p<.05), and less willing to become friends with the described individual (OR[95%CI]=1.75[1.10–2.78], p<.05). They were also more uneasy about having to examine the individual next time he visits the emergency room (OR[95%CI]=3.96[1.44–10.95], p<.01). Conclusion: Although more comprehensive assessment of willingness to treat individuals with a psychiatric label are warranted, our results support the need to implement programs that fight stigma in the curriculum of medical residents.

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NR05-61
RISK FACTORS FOR THE NUMBER OF ECT TREATMENTS

Chp.:Katherine Beresford M.D., 50 North Medical Drive, Salt Lake City, UT 84132, Co-Author(s): Howard Weeks, M.D., Kelly Smith, M.D., Lowry Bushnell, M.D., Nathan Pace, M.D.

SUMMARY:
Objective: Electroconvulsive therapy (ECT) has been shown to be effective in treating a variety of psychiatric illnesses, including mood and psychotic disorders. Many clinicians believe that the number of ECT treatments required for symptom improvement is correlated with severity of illness; however, there have been limited studies to support this theory. This study attempts to correlate the ECT treatment number (TN) with specific diagnoses, including Bipolar disorder (with and without psychosis) and Unipolar Depression (with and without psychosis); along with factors such as age, gender, and ASA (American Society of Anesthesiologists physical status classification score) in a large patient population. Methods: Data from a university associated neuropsychiatric hospital database was extracted for 1221 patients who received ECT over a 16 year period (November 1994 to November 2010). For each patient, diagnosed with either Bipolar disorder (with and without psychosis) or Unipolar Depression (with and without psychosis), factors such as age, gender, ASA, and the outcome TN were recorded. A multivariable linear regression modeled the effect of these covariates on TN. Results: During the course of treatment, most patients had a single series of 8-10 bifrontal ECT treatments. For all patients, the average number was 18 ECT treatments, but with a median TN of 10 and mode of 8. The average was increased due to the inclusion of long term maintenance patients during the 16 year period. Data analysis indicated that the presence of psychosis, independent of specific diagnosis, increased the TN by about an average of 4 treatments (TN = 4.25, p = 0.00725). Gender had a significant effect, with male patients receiving on average 4 fewer treatments during their ECT course (TN = -3.64, p = 0.00597). Finally, having an ASA of III (severe systemic disease) versus ASA II (mild systemic disease), increased the TN by about 7

(ASA = 7.22, p = 3.46e-06). There was no significant effect of age or diagnosis (Bipolar vs. Unipolar) on the number of treatments. Conclusions: This large retrospective study with an exploratory data analysis describes the effect that diagnosis, age, gender, and physical status may have on total ECT treatment number. Age and diagnosis had no significant effect on treatment number while psychosis, poor premorbid medical functioning (ASA), and female gender all were associated with an increased total number of treatments. Since the presence of psychosis and increased ASA (more severe medical illness) led to increased number of ECT, this appears to support the above hypothesis that severity of illness correlates with increased ECT treatment. Additionally, these findings may aid clinicians in treatment planning and help predict treatment course in certain patients. Other data sources should be analyzed to confirm identification of these risk factors for increased number of ECT treatments.

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NR05-62

RANDOMIZED CONTROLLED TRIAL OF COMPLIANCE THERAPY IN CHINESE OUTPATIENTS WITH SCHIZOPHRENIA IN HONG KONG

Chp: Sze Lai Shirley Wong, M.Psy.

SUMMARY:

Background: Non-compliance is one of the major preventable causes of relapse and morbidity in psychotic patients. Compliance therapy as one of the measures to counteract non-compliance, offers a systematic and individualized approach, with the ideal of the patients taking an active role in illness monitoring and negotiating treatment decisions in partnership with mental health professional (Kemp et al, 1997). It was found to improve patients' attitude towards drug treatment, insight into illness, drug compliance and global functioning in psychotic patients in randomized controlled trials (Kemp et al, 1996a, 1996b, 1998). Aims: To determine whether compliance therapy, a cognitive-behavioral intervention, could improve insight and compliance with treatment in Chinese outpatients with Schizophrenia. Method: At East Kowloon Psychiatric Center, Chinese outpatients with Schizophrenia, including defaulters, who fulfilled the inclusion criteria, were recruited over a 6 weeks period. They were randomly selected in a 1-in-3 basis for baseline assessment. Patients with poor drug compliance determined by a Compliance Scale (Kemp et al 1996a, 1996b) entered the randomized controlled trial. Patients in the compliance therapy group were given 2 sessions of individually based compliance therapy lasted around 45 minutes each, while patients in the control group were provided with standard outpatient treatment. Instruments: Brief Psychiatric Rating Scales (BPRS) (Overall & Gorham, 1988), Drug Attitude Inventory (DAI) (Hogan et al. 1983)(translated to Chinese by Ho-Ling Cheng), Self-rated Insight Scale (Wong et al 1999)(validated by Chinese version of Insight and Treatment Attitude Questionnaire (ITAQ) (McEvoy et al 1981)). Results: One hundred and thirteen patients who fulfilled the inclusion criteria were sampled, including 15 randomly selected defaulters. Sixty-one patients with poor drug compliance, were randomly assigned to control and compliance therapy groups. Thirty-three patients entered the control group while 28 patients entered the compliance therapy group. There was no significant difference in demographic and clinical data between the two groups. Those patients who received compliance therapy showed statistically significant improvements in attitude towards drug treatment, insight and compliance after the therapy, while no significant change in these parameters was observed in the control group. These significant differences were observed even at 1 month after the completion of compliance therapy.Conclusions: Compliance therapy is a pragmatic method for improving insight and compliance with drug treatment in Chinese outpatients with Schizophrenia and its gains can persist for at least one month. Declaration of interest: Nothing to declare.

NEW RESEARCH POSTER SESSION 06
May 16, 2011
7 – 8 AM
Hawaii Convention Center, Exhibit Hall, Level 1

NR06-01

ASSESSMENT OF THE TREATMENT PATTERNS AND HEALTHCARE COSTS IN PATIENTS WITH SCHIZOPHRENIA TREATED WITH ATYPICAL ANTIPSYCHOTICS USING MEDICAID DATABASES

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SUMMARY:
Objective: Atypical antipsychotic drugs are the mainstay of therapy for patients with schizophrenia. Optimal adherence with these agents is an important factor contributing to the beneficial impact of these therapies. However, atypical antipsychotics have been associated with certain side effects, which can impact patients' adherence. This study is aimed at describing the treatment patterns and quantifying the healthcare costs in Medicaid patients with schizophrenia treated with atypical antipsychotics. Methods: Healthcare claims from the New Jersey (01/1997 to 12/2008), Florida (10/2001 to 05/2008), Iowa (01/1998 to 06/2006), and Missouri (01/1997 to 06/2008) Medicaid programs were analyzed. Patients with >=6 months of continuous insurance coverage, newly initiated on an atypical antipsychotic (i.e., no use in prior 6 months), with >=2 dispensings of any atypical antipsychotics, and >=1 diagnosis of schizophrenia (ICD-9: 295.x) were included. Adherence was assessed through compliance and persistence. Compliance during the first 12 months of follow-up was estimated using medication possession ratio (MPR), defined as the sum of the days of supply of medication divided by 365 days. Persistence was defined as continuous drug use without a gap of >=30 days between medication refills. Proportion of compliant patients (MPR >=0.8) and Kaplan-Meier rates of persistence were reported. The proportion of patients with a claim for treatment-emergent side effect and annualized all-cause healthcare costs for a period of 6 months before versus after the incidence of a side effect were also reported. Results: Of the 31,857 study patients, mean age was 44.7 years and 34.8% were females. Mean treatment exposure to the index drug was 949 days; 22.4% of patients switched atypical antipsychotic during the first year of follow-up. Mean (median) MPR and proportion of compliant patients with index therapy were 0.5 (0.5) and 33.1%, respectively. Kaplan-Meier rates of persistence with index therapy after 6, 12, and 24 months were 40.7%, 27.6%, and 16.5%, respectively. From treatment initiation until the last dispensing of any atypical antipsychotics, over 45.5% of patients experienced at least one treatment-emergent side effect: the risk of developing metabolic syndrome, ventricular arrhythmia, and extrapyramidal syndrome/akathisia during that period was estimated at 36.2%, 21.3%, and 6.1%, respectively. The incidence of side effects was associated with a significant increase in healthcare costs ($30,081 vs. $33,793 for the period pre- vs. post-side effect; cost increase: $3,712, P<.0001). Conclusion: Based on real-world data from a large cohort of schizophrenic patients initiated on atypical antipsychotic, less than 30% were persistent on therapy during the first year of treatment. Atypical antipsychotics were associated with treatment-emergent side effects for 45.5% of patients which translated into greater healthcare costs. Funded by Novartis Pharmaceuticals Corporation.

NR06-02

STUDY QUALITY AND PLACEBO RESPONSE IN RANDOMIZED CONTROLLED TRIALS IN SCHIZOPHRENIA CONDUCTED 1966-2009

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SUMMARY:
Introduction Variations in the quality of psychiatric trials can substantially affect the likelihood of detecting efficacy signals in these trials. In this study, we searched the MEDLINE database for randomized, double-blind, placebo-controlled trials (RCTs) in schizophrenia published 1966-2009, and reviewed 63 publications as basis for this quality rating analysis. The analysis objectives were to identify potentially important study and reporting quality factors that could explain the increasing placebo response observed in recent psychiatric trials. Method We analyzed the rating scores for both study quality and reporting quality of all placebo-controlled RCTs of antipsychotic

treatment in schizophrenia and schizoaffective disorder (SAD), published from 1966 to 2009 Quality of the RCTs was evaluated using a validated study quality rating scale (Kocsis et al., 2010). We analyzed the total scores for ubject description domain (4 items), outcome measures (5 items), data analysis (5 items), treatment assignment (3 items), overall quality of study (3 items), and an omnibus rating of the overall quality of the study (scored from 1 to 7). Reporting quality was analyzed applying an Agency for Healthcare Research and Quality (AHRQ) rating checklist system developed for RCTs, with a maximum score of 17. The relationships of study quality factors, dropout rates, and placebo response were also investigated using a meta-regression analysis. Placebo response in short-term treatment (2-12 weeks) was defined as mean change from baseline in BPRS total score (derived from PANSS in 11 studies).Results The mean omnibus rating of the quality of an entire study was 4.4 (SD 1.7, score range 1 to 7). There was a significant correlation between the omnibus study quality item and placebo response ($p<0.05$). Only 16 (26%) trials demonstrated that a full and appropriate randomization method had been implemented following baseline assessment. The overall mean reporting quality rating score was 15 (SD 1.4), but only 36 (58%) studies met the outcome reporting quality criteria. Forty-one (65%) publications provided funding details and sources of support. When study quality and reporting scores in the meta-analysis of placebo response were incorporated, the placebo effect size was estimated to be 0.09 ($p=0.651$), with adjustments for the omnibus study quality item, -0.25 ($p>0.05$) compared to -0.3 in an unadjusted analysis. A smaller placebo response was observed in studies with a higher completion rate ($p<0.05$). Conclusions Variations in the quality of psychiatric trials and the extent of patient dropouts can substantially affect placebo response and the likelihood of detecting efficacy signals in these trials. The omnibus 1-item rating score provides a useful tool for clinicians and decision-makers in the assessment of the status of empirical evidence and the quality of clinical trials.

NR06-03

PALIPERIDONE PALMITATE VERSUS RISPERIDONE LONG-ACTING THERAPY IN PATIENTS WITH SCHIZOPHRENIA RECENTLY TREATED WITH ORAL ANTIPSYCHOTICS

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SUMMARY:
Introduction: Paliperidone palmitate (PP) and risperidone long-acting therapy (RLAT) are 2 long-acting injectable atypical antipsychotics (APs) effective in treating schizophrenia. This post hoc analysis assessed PP and RLAT in subjects recently treated with oral APs but still experiencing clinically significant symptoms. Methods: This was a subgroup analysis of subjects who received oral APs within 2 weeks before study entry from a 13-week, double-dummy trial (NCT00589914). Subjects were randomly assigned to (1) PP (234 mg, day 1; 156 mg, day 8; once-monthly flexible dosing, days 36 [78 mg, 156 mg] and 64 [78 mg, 156 mg, 234 mg]) and RLAT-matched placebo injections or (2) RLAT biweekly (25 mg, days 8 and 22; 25 mg, 37.5 mg, days 36 and 50; and 25 mg, 37.5 mg, 50 mg, days 64 and 78) and PP-matched placebo injections. RLAT subjects received oral risperidone supplementation (1–6 mg/day, days 1–28; optional thereafter with dose increases); PP subjects received oral placebo. Analyses assessed subjects who received oral risperidone/paliperidone (ris/pali) and subjects who received other oral APs before randomization. Assessments: PANSS, adverse events (AEs). Paired t-tests assessed within-group changes (LOCF methodology). Results: 164 PP subjects received oral ris/pali before study entry; 225 received other oral APs; completion rates were 87.8% and 81.8%, respectively. 152 RLAT subjects received oral ris/pali before study entry; 224 received other oral APs; completion rates were 84.2% and 85.3%, respectively. Mean (SD) PANSS total scores improved significantly at end point in PP subjects whether they had received oral ris/pali (–18.5 [13.5]; $P<0.001$) or other oral APs (–18.7 [16.7]; $P<0.001$). PANSS total score improvements were also significant for RLAT subjects who had received oral ris/pali (–17.1 [13.9]; $P<0.001$) or other oral APs (–18.5 [14.5]; $P<0.001$). Most common AEs

(>=5%) were insomnia (11.6%), headache (7.3%), and injection site pain (6.7%) for PP subjects who received prior oral ris/pali, and insomnia (11.1%), headache (8.9%), akathisia (6.7%), somnolence (5.8%), and schizophrenia (5.3%) for PP subjects who received other oral APs previously. Most common AEs (>=5%) were insomnia (7.2%) and headache (5.9%) for RLAT subjects who received prior oral ris/pali, and headache (8.5%) and insomnia (7.1%) for RLAT subjects who received other oral APs previously.Conclusion: Treatment with PP or RLAT resulted in a significant reduction in symptoms for subjects who had received prior treatment with oral ris/pali or with other oral APs. This, in addition to the drugs' pharmacologic action, supports the contribution of a long-acting formulation to treatment response, suggesting that nonadherence may be a significant contributor to inadequate efficacy of oral formulations in patients with schizophrenia. Supported by Ortho-McNeil Janssen Scientific Affairs, LLC.

NR06-04

DIFFERENCES BETWEEN SCHIZOPHRENIA PATIENTS WHO SWITCH VS. DISCONTINUE ANTIPSYCHOTIC THERAPY

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SUMMARY:
OBJECTIVE: To compare patients who switch vs. discontinue antipsychotic medication on illness characteristics and early changes in patients' clinical status during the long-term treatment of schizophrenia. METHODS: This post-hoc analysis used data from a 1-year randomized open label study of schizophrenia, which permitted switching of antipsychotics when clinically warranted. Baseline patient characteristics and their clinical and functional status were assessed with standard psychiatric measures and reviews of medical records. Patients who switched medication were compared with discontinuers (dropouts without a switch prior to study discontinuation) on baseline sociodemographics, comorbid conditions, body weight, clinical and functional variables, and change on efficacy and tolerability measures after 2 weeks of treatment. Chi-square, Fisher's exact, Wilcoxon rank-sum, and independent t tests were used to conduct group comparisons. RESULTS: Compared to patients who switched antipsychotics (n=191), the discontinuers (n=153) were significantly more likely to be males, uninsured, less adherent with antipsychotics in the prior year, have substance use disorders and to have been previously incarcerated. At baseline, discontinuers had a more severe illness profile, lower GAF scores and poorer functioning. Following 2 weeks of therapy, the discontinuers evidenced less symptom improvement. Moreover, the switchers experienced lack of improvement or some worsening of akathesia compared to improvement among the discontinuers, resulting in significant group differences on akathesia change scores at week 2. CONCLUSIONS: Patients with schizophrenia who switch antipsychotic medication appear to differ from patients who discontinue therapy on sociodemographic characteristics and illness profile at baseline, and on early change in clinical measures. Findings have implications for schizophrenia research and highlight the importance of early clinical improvement in therapy.

NR06-05

EXPECTED OUTCOMES AND COSTS OF ATYPICAL ANTIPSYCHOTICS IN PATIENTS WITH SCHIZOPHRENIA: RESULTS OF A SIMULATION MODEL

Chp.: Jose M. Alvir, Ph.D. Co-Author(s): Sophie Kushkuley, B.S., Kafi N. Sanders, M.P.H., Gerry Oster, Ph.D., Ariel Berger M.P.H.

SUMMARY:
Objective: To characterize expected outcomes and costs of treatment of schizophrenia and schizoaffective disorders with atypical antipsychotics. Methods: We developed a Markov simulation model to estimate expected outcomes and costs among a hypothetical cohort of patients with schizophrenia (including schizoaffective disorder) assumed to begin therapy with aripiprazole, asenapine, iloperidone, olanzapine, quetiapine, risperidone, or ziprasidone. Efficacy of these agents was assumed to be the same; they were assumed to differ only with respect to side effects. Outcomes of interest included therapy discontinuation due to side effects (extrapyramidal symptoms [EPS], akathisia, prolactin disorders, weight gain, metabolic syndrome, diabetes, sedation, somnolence, nausea/vomiting, QTc interval

prolongation), duration of therapy, and death. Costs included those of atypical antipsychotics, treatment of side effects, and all other psychiatric care. The periodicity of the model was one month. Model parameter estimates were based on published and unpublished literature and, as necessary, expert opinion; costs were estimated from the perspective of the US healthcare system (2010 US dollars). The model was run for 12 cycles (i.e., one year) for a hypothetical cohort of 25,000 patients. Patients were followed in the model until discontinuation of initial therapy, death, or one year, whichever occurred first. We also ran several one-way and probabilistic sensitivity analyses. Results: Over a 1-year period, estimated mean time on therapy was 6.7 months for risperidone, 6.8 months for asenapine, 7.2 months for olanzapine, 7.6 months for quetiapine, 8.2 months for iloperidone, 8.4 months for aripiprazole, and 8.6 months for ziprasidone; corresponding rates of therapy discontinuation at one year were 67%, 63%, 70%, 63%, 49%, 46%, and 42%, respectively. Reasons for expected therapy discontinuation varied by agent, but the most frequent one was weight gain. Other important reasons for therapy discontinuation were metabolic syndrome and EPS or akathisia. Estimated monthly costs of therapy were $2718 for risperidone, $2887 for ziprasidone, $3067 for asenapine, $3091 for iloperidone, $3141 for aripiprazole, $3292 for quetiapine, and $3352 for olanzapine. Findings were generally robust in sensitivity analyses. Conclusions: Among the seven atypical antipsychotics we evaluated, aripiprazole, iloperidone, and ziprasidone had the lowest estimated rates of therapy discontinuation; estimated monthly costs of therapy were lowest for risperidone, ziprasidone, and asenapine. Our findings suggest that tolerability may be an important determinant of adherence with atypical antipsychotics and monthly costs of treatment.

NR06-06

A 2-YEAR, RANDOMIZED, OPEN-LABEL STUDY OF OLANZAPINE LONG-ACTING INJECTION VS. ORAL OLANZAPINE IN SCHIZOPHRENIA OUTPATIENTS

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SUMMARY:
OBJECTIVE: To assess long-term treatment effectiveness of monthly olanzapine long-acting injection (LAI) compared with that of oral olanzapine. METHODS: Outpatients with 2 or more episodes of worsening of schizophrenia in the prior 24 months with a baseline PANSS total score <70 were randomly assigned to open-label treatment with 405 mg/4-weeks of olanzapine LAI (N=264) or 10 mg/day oral olanzapine (N=260) for up to 2 years. Dosing was flexible after the first 4 weeks (150-405 mg/4-weeks olanzapine LAI, corresponding to approximately 5-15 mg/day, or 5-20 mg/day oral olanzapine). Investigators could, at their discretion, taper the previous oral antipsychotic (first 2 weeks only) and/or supplement with oral olanzapine 5 mg/day (subsequent 6 weeks only). The primary outcome measure was time to all-cause discontinuation. RESULTS: Of the 643 patients who entered the study, 524 were randomized and 243 completed the study. The two treatment groups did not significantly differ in median time to all-cause discontinuation (645 days LAI, 678 days oral; p=.61), discontinuation rate (54.9% LAI, 52.3% oral; p=.60), or relapse rate (31.1% LAI, 29.2% oral; p=.70). Psychiatric hospitalization rates during the study were very low and similar for the two groups (7.6% LAI, 9.2% oral), but duration of hospitalization was significantly shorter for the LAI group (0.4 days vs. 1.8 days, p=.020). There were no incidents of post-injection syndrome and no clinically significant group differences in adverse events or other safety measures. Mean weight change (via MMRM) over the 2-year study did not significantly differ (p=.866) for the two groups (at 1 year, 2.3 kg LAI vs. 2.9 kg oral; at 2 years, 2.1 kg LAI vs. 2.3 kg oral). To control for the higher maximum allowed dose in the oral group, a post hoc analysis was conducted. When dose increases to 20 mg/day after the initial 8 weeks of treatment were statistically treated as a sub-acute relapse, the LAI group had a lower relapse rate (31.1% LAI, 45.8% oral; p<.001) and a longer median time to relapse (379 days LAI, 213 days oral; p<.001) than the oral group, indicating that dose differences may have impacted the primary study findings. CONCLUSIONS: In outpatients with schizophrenia, olanzapine LAI and oral olanzapine did not significantly differ in treatment effectiveness and were well tolerated for up to 2 years of treatment. Study discontinuation for olanzapine LAI was similar to that of oral olanzapine, despite the 3-hour post-injection observation period and other precautionary procedures related to the risk of post-injection syndrome.Supported by Eli Lilly and Company

NR06-07

INCIDENCE, ONSET, AND DURATION OF TREATMENT-EMERGENT SOMNOLENCE WITH ASENAPINE IN ADULT PATIENTS WITH SCHIZOPHRENIA OR BIPOLAR DISORDER

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SUMMARY:
Objective: Somnolence (including sedation and hypersomnia) may occur with antipsychotic use. This effect may be beneficial in some clinical situations (eg, for managing acute agitation), but when pronounced and prolonged it may be experienced as an adverse event (AE). We assessed somnolence in placebo- and/or active-controlled asenapine schizophrenia and bipolar I disorder trials to understand its incidence, onset, and duration. Methods: We examined 5 cohorts. Schizophrenia data were from 4 short-term (6 wk) trials (asenapine, n=572; placebo, n=378; risperidone, n=59; olanzapine, n=194; haloperidol, n=115), a long-term (52 wk) safety trial (asenapine, n=908; olanzapine, n=311), and 2 long-term (26 wk) trials in patients with persistent negative symptoms (asenapine, n=485; olanzapine, n=464). Bipolar I disorder data were from 2 short-term (3 wk) trials (asenapine, n=379; placebo, n=203; olanzapine, n=394) and a 12-week trial of asenapine as adjunct therapy to mood stabilizers (asenapine, n=158; placebo, n=166). Treatments were: asenapine 5 or 10 mg BID, risperidone 3 mg BID, olanzapine 5–20 mg QD, haloperidol 4 mg BID. Incidence, time to onset, and duration of treatment-emergent somnolence as an AE were assessed in the treated populations. Results: For schizophrenia, incidence of somnolence was higher for asenapine vs placebo in short-term trials (asenapine, 13.1%; placebo, 6.9%; active controls, 5–20%) and comparable to olanzapine in 3 long-term trials (asenapine, 18.4–18.5%; olanzapine, 19.6–21.1%). In those reporting somnolence as an AE, severe somnolence was infrequently reported (0–8%). Somnolence onset (median [days]) occurred early in short-term (asenapine, 2.0; placebo, 7.0; active controls, 2–6) and long-term (asenapine, 9.0; olanzapine, 7.5–9.0) trials; median somnolence duration (days) was relatively brief in short-term (asenapine, 15.0; placebo, 4.5; active controls; 3.0–22.5) and long-term (asenapine, 22.0–25.0; olanzapine, 21.0–25.0) trials. For bipolar I disorder, incidence of somnolence was higher for active treatment vs placebo in short-term (asenapine, 23.8%; placebo, 6.4%; olanzapine, 26.4%) and adjunctive therapy (asenapine, 24.1%; placebo, 10.2%) trials. In those reporting somnolence as an AE, severe somnolence was infrequently reported (0–3%). Somnolence onset (median [days]) occurred early in short-term (asenapine, 1.0; placebo, 2.0; olanzapine, 1.0) and adjunctive therapy (asenapine, 1.5; placebo, 2.0) trials and was of brief duration in short-term (asenapine, 7.0; placebo, 5.0; olanzapine, 8.5) and adjunctive therapy (asenapine, 12.5; placebo, 7.0) trials. Conclusions: With asenapine, treatment-emergent somnolence typically had a median onset of 1–9 days and persisted for 1–4 weeks. The early onset and limited duration of treatment-emergent somnolence associated with asenapine and the active controls from the same trials may be advantageous in a clinical setting. (This research was supported by Merck, Whitehouse Station, NJ).

NR06-08

FIRST-EPISODE PSYCHOSIS AND THE CAREGIVERS' QUALITY OF LIFE: THE NEGATIVE SYMPTOMS PATIENTS CAREGIVERS' SHOW WORSE QOL

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SUMMARY:
The onset of FEP a serious event, it directly affects the family and cause disrupts in theirs dynamics, but there are few studies on the caregivers' Quality of Life (QoL) in Brazil and in the world. The purpose of this study is to asses the caregivers' Qol and correlates this data with patients' symptoms. Fifty caregivers of 50 patients admitted to a FEP Program in São Paulo, Brazil, underwent to ad hoc questionnaire and the SF-36, a generic and multidimensional instrument to evaluate the Quality of Life, which consists of 36 items comprised in 08 domains (Functional Capacity, Physical Aspects, Pain, General Health Status, Vitality, Social Aspects, Emotional Aspects, and Mental Health),), each of them with a score of 0 to 100, with 0 indicating the worst state of health and 100 the best. Patients were evaluated at admission by Structured Clinical Interview for DSM Disorders (SCID-I) and Positive and Negative Syndrome Scale (PANSS).

The caregivers were 40 women (80%), 33 were mothers of the patients (66%) at the average age of 46.1 years (DP: 12,88) and 43 living in the same home with the patient (86%). The patients were 29 men (58%) at the average age of 24.34 years (DP = 7.21) and with diagnoses based on DSM-IV: 25 with affective (50%) and 25 with non-affective psychosis (50%). Results indicated that Qol of the caregivers were compromised and the domains more affected were Vitality (51.57 points, DP = 45.08), Emotional role (61.79 points, DP = 23,92) and Pain (64.37 points, DP = 27.63). The means for patients' PANSS were: Positive: 18.57 (SD: 5.27) and Negative: 21.85 (SD: 8.09). The Positive sub-scales that scored higher were: Delusions: 4.02 (DP = 1.65), Conceptual disorganization: 3.23 (DP = 1.43) and Suspiciousness/persecution: 3.15 (DP = 1.52). The Negative sub-scales that scored higher were: Difficulty in abstract thinking: 4.49 (DP = 1.99), Passive/apathetic social withdrawal: 3.23 (DP = 1.61) and Blunted affect: 3.19 (DP = 1.89). The caregivers' QoL was inversely associated with negative patient's symptoms, much more than positive symptoms. The only two Positive PANNS sub-scales association with decreased caregivers' QoL were: Conceptual disorganization with Pain (r = -0.378, p: 0.001) and Conceptual disorganization with General Health (r = -0.378, p: 0.001). Otherwise the total Negative PANSS score was associated with decreased caregivers' Physical functioning (r = -0.366, p: 0.001) and the following Negative PANSS sub-scale were associated with decreased caregivers' Qol: Poor rapport and Physical functioning (r = -0.377, p: 0.001), Difficulty in abstract thinking and General health (r = -0.355, p: 0.001), Lack of spontaneity and flow of conversation and Physical functioning and Stereotyped thinking and General health (r = -0.448, p: 0.001). We propose that a special care for caregivers of patients with negative symptoms is necessary because the negative impact on their QoL would remains after their involvement in the treatment.

NR06-09

LONG-TERM SAFETY AND TOLERABILITY OF LURASIDONE IN SCHIZOPHRENIA OR SCHIZOAFFECTIVE DISORDER: A 12-MONTH, DOUBLE-BLIND, ACTIVE-CONTROLLED STUDY

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SUMMARY:
Objective: The aim of this study was to evaluate the long-term safety and tolerability of lurasidone in the treatment of schizophrenia or schizoaffective disorder. Methods: Adult outpatients who met DSM-IV criteria for chronic, stable schizophrenia were randomized, in a 2:1 ratio, to 12 months of double-blind treatment with flexible-doses, administered once-daily, of lurasidone 40, 80 or 120 mg, or risperidone 2, 4 or 6 mg. Safety and tolerability measures included adverse events (AEs), body weight, lipid parameters, prolactin, and ECGs. Efficacy assessments included the Positive and Negative Syndrome Scale (PANSS) total score and the Clinical Global Impression, Severity scale (CGI-S). Results: The safety sample consisted of 427 patients randomized to lurasidone and 202 patients randomized to risperidone of whom 147 (34%) completed 12 months of treatment in the lurasidone group and 89 (44%) in the risperidone group. Discontinuations due to adverse events and insufficient clinical response, respectively, occurred in 17% and 7% of patients in the lurasidone group, and 11% and 6% of patients in the risperidone group. The 3 most frequent adverse events in the lurasidone group (vs. risperidone) were nausea (16.7% vs. 10.9%), insomnia (15.8% vs. 13.4%) and sedation (14.6% vs. 13.9%); the 3 most frequent adverse events in the risperidone group (vs. lurasidone) were increased weight (19.8% vs. 9.3%), somnolence (17.8% vs. 13.6%) and headache (14.9% vs. 10.0%). A higher proportion of patients had =>7% endpoint increase in weight on risperidone (lurasidone vs. risperidone, 7% vs. 14%; p<0.001), while a =7% weight decrease was observed more frequently on lurasidone (13% vs. 6%). Treatment with lurasidone and risperidone, respectively, were both associated with LOCF-endpoint reductions in median change in cholesterol (-3.0 vs. -7.0 mg/dL; p=0.321) and triglycerides (-3.5 vs. -1.0 mg/dL; p=0.528). The median endpoint change in glucose was significantly lower for lurasidone vs. risperidone (-0.5 vs. +3.0 mg/dL; p=0.005), with a greater increase in insulin observed for risperidone vs lurasidone (-0.05 vs. +1.25 mU/L). Median endpoint change in prolactin was minimal for lurasidone and significantly higher for risperidone (+0.1 vs. +9.1 ng/mL; p<0.001). LS mean reduction in PANSS total score was -4.7 for the lurasidone treatment group and -6.5 for the risperidone treatment group.

LS mean improvement in the CGI-S was the same (-0.4) for both treatment groups. Discussion: Up to 12 months of treatment with lurasidone, in once-daily doses of 40-120 mg, was safe and well-tolerated in this study with minimal effects on weight and metabolic parameters. Treatment with risperidone was associated with significantly greater effects on weight, measures of glycemic control and prolactin, but not on lipid parameters, compared to lurasidone. Funded by Sunovion Pharmaceuticals, Inc.

NR06-10

USE OF LIPID-LOWERING MEDICATIONS IN PATIENTS WITH SCHIZOPHRENIA: DATA FROM OLANZAPINE-LONG-ACTING INJECTION CLINICAL TRIALS

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SUMMARY:
Objective: Lipid abnormalities are widespread in patients treated with antipsychotics, yet there are few data on lipid-lowering medications (LLM) in this population. We examined LLM usage in patients with schizophrenia treated with olanzapine long-acting injection (Olz LAI). Methods: Data for 2054 Olz LAI-treated patients were pooled from 8 clinical trials, including one >4 years in length. We compared patients receiving LLM at any time vs. those with significant abnormal lipids who never received LLM. Significant lipid abnormality was defined as =6.2mmol/L total cholesterol and/or =3.4mmol/L triglycerides. Outcomes included lipids, weight, cardiovascular risk, treatment-emergent adverse events, and time to all-cause study discontinuation. Results: 144 (7%) of the 2054 patients used LLM at some time during the trials, whereas 664 (32%) had significantly abnormal lipids but never used LLM. Of those receiving LLM, 70 were already on LLM at baseline and 74 began LLM during the trials. LLM patients had greater mean decreases from baseline-to-endpoint in LDL and total cholesterol than those with no LLM (p<.001); there were no significant differences between groups in baseline-to-endpoint mean changes in weight, triglycerides, HDL, or 10-year cardiovascular risk, although patients taking LLM from the beginning of the trials had lower incidence of cardiovascular adverse events during the trials (2.9%) than did no-LLM patients (9.6%). Patients who started LLM during the trial showed mean decreases in total cholesterol, triglycerides, and weight (all p<.001) while on an LLM. LLM-treated patients stayed in the trials statistically significantly longer (log-rank p<.003), with 63% of the LLM patients completing or continuing in the trials vs. 47% of the no-LLM patients. Conclusions: For Olz LAI-treated patients with abnormal lipids, LLM may be useful in addressing metabolic issues and may help patients continue their antipsychotic treatment longer. Further study is needed.

NR06-11

THE IMPACT OF MEDICATION SIDE EFFECTS ON ADHERENCE AMONG PATIENTS WITH SCHIZOPHRENIA: RESULTS OF A CROSS-SECTIONAL NATIONWIDE SURVEY

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SUMMARY:
Objective: The aim of the current study was to examine the relationship between medication side effects and medication adherence among community-dwelling patients with schizophrenia. Methods: Data were taken from a nationwide survey of adults (=18 years old) self-reporting a diagnosis of schizophrenia, collected from December 2007 to February 2008. Data were obtained through self-reported questionnaires on the Internet and through 43 interview facilities across the United States. In addition to demographics and health characteristics, patients reported their current schizophrenia medications, medication-related side effects, and medication adherence (via the Morisky Medication Adherence Scale; MMAS). Logistic regression assessed the relationship between various side effects and self-reported adherence. Results: A total of 1,083 patients completed the survey. The mean age was age was 42.81 (SD=12.11); 51% were female and 39% were non-white. Of patients taking a prescription medication for their schizophrenia (N=876), the most common medication side effects experienced by patients included difficulty thinking or concentrating (48.1%), restlessness (46.4%), insomnia (42.9%), sleepiness (41.1%),

and weight gain (39.3%). A total of 48.5% of patients reported that they "forget to take their medication" and 30.4% reported being "careless at times about taking their medication". Overall, only 42.47% were considered perfectly adherent based on an MMAS score of zero. After controlling for demographics and comorbidities, most side effects were associated with a lower probability of being adherent. Specifically, patients with nausea/vomiting (OR=0.35), difficulty thinking or concentrating (OR=0.36), increased blood glucose (OR=0.37), insomnia (OR=0.38), agitation (OR=0.41), weight gain (OR=0.42), and restlessness (OR=0.46), were all significantly less likely to report perfect adherence with their medications ($p<0.05$ in all cases). Conclusion: Many patients with schizophrenia experience bothersome side effects from their medication; most side effects reduce patients' self-reported medication adherence, though effect sizes vary by side effect.

NR06-12

COMPARISON OF PHYSICIAN-REPORTED AND CLAIMS-BASED MEASURES OF PATIENT ADHERENCE TO ORAL ANTIPSYCHOTICS IN SCHIZOPHRENIA AND BIPOLAR DISORDER

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SUMMARY:
Background: Patients with psychoses, in particular schizophrenia and bipolar disorder, have relatively poor adherence to medication. The literature is scarce on how treating physicians view their patients' adherence relative to actual adherence levels measured through prescription refill data. Purpose: This study examined the relationship between patient adherence to oral antipsychotics as perceived by the physician and actual patient adherence as measured by pharmacy claims in schizophrenia and bipolar disorder. Methods: Pharmacy and medical administrative claims data were obtained from a large commercial managed care plan. Continuously enrolled patients with a diagnosis of schizophrenia or bipolar disorder, and at least an initial prescription of an antipsychotic, were identified, and their adherence levels to antipsychotics as measured by the MPR were determined for 1 year. Physicians who treated the patients were recruited to complete a survey that assessed their beliefs about antipsychotic adherence in general and in specific patients. Additional patient and physician characteristics not captured in the claims database were captured in the physician survey. The physician survey data were merged with the patient-level claims data, and adherence rates were compared, using descriptive statistics, with actual physicians' reports. Results: A total of 153 physicians responded to the survey, representing 214 patients. Almost two-thirds were psychiatrists (65%). Most were in solo (36%) or group (47%) practice, and most did not have formal adherence training (60%). More than two-thirds (68%) reported they discussed with their patients the importance of adhering to treatment and that a vast majority of their patients (~76%) were adherent (more than 70% of the time) to treatment. Of the 214 patients, 44 (21%) had a diagnosis of schizophrenia, 162 (76%) bipolar disorder, and 8 (4%) both. Mean ages of the groups were 46 y, 42 y, and 46 y, respectively; and mean MPRs were 0.65, 0.57, and 0.56, respectively, indicating moderate adherence levels. Of the 44 patients with schizophrenia, 16 (36%) had moderate to low adherence levels (<71% MPR) yet were perceived by their physicians to have high adherence levels (>70%). Of the 162 patients with bipolar disorder, 62 (38%) had moderate to low adherence levels (<71% MPR) yet were perceived by their physicians to have high adherence levels (>70%). Conclusion: These analyses suggest that there may be an incongruity between physician perceptions of their patients' adherence and actual adherence measured through claims analysis. This disparity may lead to delays in appropriate interventions, potentially contributing to patient relapses. Future research should address a possible association between the level of physicians' perceptions of patient adherence (and other self-reported variables) and health care utilization and direct economic outcomes. Funded by Ortho-McNeil Janssen Scientific Affairs, LLC.

NR06-13

PREDICTORS OF QUALITY OF LIFE IN SCHIZOPHRENIA: RELATIONS WITH NEUROCOGNITION, CLINICAL SYMPTOMS, AND PREMORBID ADJUSTMENT

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SUMMARY:
Abstract: Cognition in schizophrenia has received significant attention in the past because of its robust prediction of functional outcome. But recently has increased its key role as predictor of quality of life too. Clinical symptoms and premorbid adjustment have also been related to the longitudinal course of the illness. However, the high degree of intercorrelation among all of these variables leaves unclear whether neurocognitive deficits have a direct effect on the resulting quality of life or whether that relationship is mediated by additional variables in the illness. Purpose: To analyse the specific contribution of each variable to the resulting level of quality of life in schizophrenia. Method: We examined 95 patients with chronic schizophrenia (DSM-IV criteria). PANSS ratings were used to evaluate clinical symptoms. Information regarding onset of illness, number of hospitalizations, and years of evolution of illness were obtained from digital medical records. The cognitive battery included tests for verbal and working memory, executive functioning and processing speed. Affective symptoms were assessed with the Young Mania Scale and Calgary Depression Scale. Quality of Life was assessed six-month follow-up after the recruitment with the Quality of Life Scale and DAS-WHO. Results: Although clinical symptoms and affective symptoms were found to be significantly related to quality of life ($p< 0.01$), positive were not. Cognitive deficits were significantly related to quality of life ($p<0.001$) with verbal memory, verbal fluency, and premorbid cognitive functioning directly predicting quality of life, and executive functioning indirectly via negative symptoms. However, these correlations were moderated by processing speed, so that once the effect of processing speed is controlled, the relation among other cognitive variables and quality of life remains no longer significant. Additionally, working memory, insight and affective symptoms did not contribute to predict quality of life in schizophrenia. Importance/Relevance: A better understanding of the complex interactions among the studied variables will allow the clinician to more acute decisions about treatment priorities to improve quality of life in the patient´s life.

NR06-14
TRENDS AND PREDICTORS OF ANTIPSYCHOTIC ADHERENCE IN MEDICAID PATIENTS WITH SCHIZOPHRENIA: THE ROLE OF COMORBIDITY

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SUMMARY:
Objective: To understand the predictors of adherence to antipsychotic medications among incident users in Medicaid. Methods: We used 2004-2008 MedStat Medicaid claims data to identify patients initiating a second-generation antipsychotic therapy with diagnosed schizophrenia who were not previously using anti-psychotics six months pre-initiation. Medication adherence was constructed using the Proportion of Days Covered (PDC) on antipsychotic using the person-quarter as the unit of analysis. Individuals were dichotomized as adherent or non-adherent using an 80% PDC threshold. The explanatory variables of interest were indicators of comorbid hypertension, diabetes or dyslipidemia and quarter indicators representing adherence time trends. Dichotomous PDC was estimated using random effects logistic regression controlling for age, gender, race, Medicaid eligibility status, Charlson comorbidity index, average antipsychotic copayment, mental health substance abuse coverage, whether their Medicaid plan paid providers on a capitated basis, and the specific antipsychotic initiated. Results: Of the 4,492 patients initiating treatment, average age was 40 (±12.5) years, 44.3% male, 58.4% African-American (AA) and 12% with psychiatrist visits. The proportion of patients who were adherent to antipsychotic medication diminished rapidly following antipsychotic initiation from 79.6% in the quarter of initiation to 43.8% in the fourth quarter following initiation. Among patients initiating antipsychotic treatment, 22.8%, 7.6%, and 8.5% of patients also used medications to manage hypertension, diabetes, and hyperlipidemia respectively. After covariate adjustment, patients with hypertension [odds ratio (OR)=1.25 (95% confidence interval (CI): 1.10, 1.43)] and hyperlipidemia [OR=1.26 (95% CI: 1.03, 1.55)] had greater odds of remaining adherent to antipsychotic treatment than patients without these comorbid conditions. Patients with diabetes were trending toward greater odds [OR=1.13 (95% CI: 0.93, 1.39)] of remaining adherent to antipsychotic treatment. Patients were also more likely to remain adherent if they were age 55 and older [OR = 1.54 (CI:1.31, 1.82)], Black race [OR = 0.57 (CI:0.51,

0.64)], had visits to a psychiatrist at baseline [OR = 1.21 (CI:1.04, 1.41)], were Medicaid eligible through disability [OR = 1.31 (CI: 1.08, 1.58)], and were in capitated plans [OR = 0.85 (CI: 0.76, 0.95)]. Conclusion: Adherence to newly initiated antipsychotic treatment in Medicaid beneficiaries with schizophrenia significantly decreased over the 1-year follow-up. Patients with comorbid conditions were more likely to be adherent with antipsychotic treatment, which may potentially be related to patients receiving better continuity of care due to comorbidities. These results support the need for regular follow-up visits with the health care provider to improve medication adherence among patients with schizophrenia with newly prescribed antipsychotic treatment.

NR06-15

HEALTHCARE COSTS FOR MEDICARE BENEFICIARIES DIAGNOSED WITH SCHIZOPHRENIA COMPARED WITH THE GENERAL MEDICARE POPULATION

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SUMMARY:

Objective: This study was conducted to describe the healthcare costs and treatment patterns of Medicare beneficiaries diagnosed with schizophrenia and to compare these costs with those of the general Medicare population. Methods: This retrospective, descriptive analysis utilized the Medicare Standard Analytic Files (SAFs) containing demographic and claims data for a 5% random sample of Medicare beneficiaries from 1/1/2003 to 12/31/2008. The SAFs were linked by encrypted beneficiary identifiers across years and types of care and included all services covered by Medicare except prescription drugs reimbursed under Medicare Part D. Inclusion criteria for Medicare beneficiaries with schizophrenia (MBS) included >=2 schizophrenia diagnoses within 4 consecutive quarters between 1/1/2003 and 12/31/2007 and >=1 year of follow-up after the first schizophrenia diagnosis. Since the intent was to capture annual resource use per beneficiary, those with <1 year of follow-up were excluded from this cohort. Healthcare costs were defined as payments by Medicare and beneficiaries, including co-pays for all covered services except prescription drugs. Costs were converted to 2010 US dollars using actual update factors defined in rate setting rules for each type of service. Comparisons were made descriptively between the MBS during the observation period and the general Medicare beneficiaries (GMB) in 2008. Results: 36,852 MBS were identified in the Medicare 5% sample, with 165,135 beneficiary-years of follow-up during the observation period (GMB = 36,642,711 beneficiaries). The MBS were younger than the GMB (mean age = 55.2 for MBS versus 70.5 for GMB). Nearly 75% of the MBS were eligible for Medicare because of disability versus 18% of the GMB. Mean annual costs were 74% higher for MBS than for GMB ($17,840 for MBS; $10,276 for GMB). Hospitalization accounted for >50% of total Medicare payments for MBS. Physician services, including those delivered in the inpatient setting to MBS, accounted for 20% of total costs. The overall hospitalization rate was 165% higher for MBS than for GMB (0.90 hospitalization/beneficiary-year for MBS; 0.34 hospitalization/beneficiary-year for GMB). Among the MBS, 70% were hospitalized during the study period, 30% with >1 hospitalization per year; 42% had psychiatric hospitalizations in specialized psychiatric facilities; 14% had psychiatric hospitalizations in general medical beds in acute care hospitals; and 51% had medical hospitalizations. Psychiatric hospitalizations accounted for 49% of inpatient costs. Conclusion: Medicare beneficiaries with schizophrenia had higher annual healthcare costs than the general Medicare population, with hospitalization being responsible for the majority of these costs. They were younger and more likely to qualify for Medicare because of disability, posing a significant economic burden both annually and over the beneficiary lifetime on this publically financed system. Funded by Centocor Ortho Biotech.

NR06-16

A PHARMACOKINETIC STUDY OF ONCE-MONTHLY ARIPIPRAZOLE EXTENDED-RELEASE INJECTABLE SUSPENSION (ERIS) IN ADULT PATIENTS WITH SCHIZOPHRENIA

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David Walling, Ph.D., Suresh Mallikaarjun, Ph.D., F.C.P.

SUMMARY:
Objective: ERIS is a once-a-month intramuscular formulation of aripiprazole. This study was conducted to determine if the plasma concentrations reached by three doses of ERIS – 400, 300 and 200mg – were within the therapeutic range of the available oral formulation. Methods: This was an open-label, parallel-arm, multiple-dose, multicenter study to assess the safety, tolerability, effectiveness and PK of ERIS in subjects (18–64 years old) with a diagnosis of schizophrenia. After a 14-day titration/stabilization on daily oral aripiprazole (10 mg/day), 41 subjects were randomized to receive ERIS (once a month for 5 months) at one of the following doses: 400 mg (n=14); 300 mg (n=16); and 200 mg (n=11). Tolerability and safety were assessed by measuring vital signs, electrocardiograms (ECGs), clinical laboratory tests and adverse event reporting. Potential efficacy was evaluated by the Positive and Negative Syndrome Scale (PANSS), the Clinical Global Impression – Severity (CGI-S) scale and the Clinical Global Impression – Improvement (CGI-I) scale. Results: The mean parameters for the three doses (400, 300 and 200 mg) were, respectively: Css,max (ng/mL): 316, 269 and 100; Css,min (ng/mL): 212, 156 and 95; and AUCt (ug •h/mL): 163, 140 and 54.5. The PANSS, CGI-S and CGI-I scores did not change appreciably from baseline. Overall, 66.7% (n=26) of subjects who received more than or equal to 1 injection of ERIS reported more than or equal to 1 treatment emergent adverse event (TEAE) and these were mostly mild or moderate in intensity. Most common TEAEs were vomiting, injection site pain, upper respiratory tract infection, and tremor. Four (10.3%) subjects discontinued due to TEAEs. No clinically meaningful changes were observed in vital signs, ECGs, extrapyramidal symptoms (EPS) scales or clinical laboratory tests. Conclusions: Mean plasma concentrations following ERIS administration (300 and 400 mg) were consistent with the therapeutic window for daily oral aripiprazole (10 and 30 mg) – Css,max (ng/mL): 137 and 419, Css,min (ng/mL): 76 and 252, respectively (Mallikaarjun et al., 2004).Treatment with ERIS was well tolerated and did not result in any clinically meaningful changes in EPS scales, clinical laboratory tests, vital signs, or ECG parameters. The PK profile of three doses of ERIS suggests that the 400 and/or 300 mg are the most suitable doses for further assessment in large-scale controlled studies of ERIS for the treatment of adults with schizophrenia.
Supported by Otsuka Pharmaceutical Development & Commercialization, Inc.

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NR06-17

EXAMINATION OF SWITCHING FROM MANIA TO DEPRESSION IN SCHIZOAFFECTIVE DISORDER

Chp.:Dong-Jing Fu M.D., 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Co-Author(s): Cynthia A. Bossie, Ph.D., Ibrahim Turkoz, M.S., Larry Alphs, M.D., Ph.D.

SUMMARY:
Background: A mood switch, or transition from a mood episode of one polarity to another, is a core feature of bipolar disorder. It may be triggered by stress, sleep deprivation, and various medications, or it may be spontaneous without identifiable precipitating etiology. Schizoaffective disorder is a distinct diagnostic entity characterized by concurrent symptoms of both schizophrenia and a major mood disorder (depression/mania). Few studies focus on these patients, and the prevalence and impact of mood switching in schizoaffective disorder is not well understood. Recently, paliperidone ER became the first treatment to be approved in the US for the acute treatment of schizoaffective disorder, effective for both psychotic and affective symptoms. This analysis examines mood switches using the paliperidone ER phase 3 trial database, with an initial focus on switching from mania to depression. Methods: Data were pooled from 2 international double-blind placebo-controlled 6-week studies of paliperidone ER in subjects with schizoaffective disorder. For this post hoc analysis, subjects with prominent manic symptoms at baseline were included (HAM-D-17 >16 plus YMRS >=16). Mood switch was defined as (1) >=4-point increase in HAM-D-17 at >=2 consecutive visits or at endpoint or (2) HAM-D-17 =16 at =2 consecutive visits or at endpoint. Depression-related AE rates were summarized. Between-group differences were assessed by the Cochran-Mantel-Haenszel test or

Fisher exact test for categorical measures and by ANCOVA models for continuous measures.Results: 269 subjects met inclusion criteria: 175 paliperidone ER; 94 placebo. YMRS and HAM-D-17 scores improved with paliperidone ER compared with placebo (LS mean difference [SE] vs placebo: –5.6 [1.4], P<0.001, and –2.4 [0.6], P<0.001, respectively). Mood switch defined by criteria 1 occurred in 8.0% of the paliperidone ER group and 17.0% of the placebo group (P=0.019). Rates for mood switch defined by criteria 2 were 4.0% and 12.8%, respectively (P=0.015). Depression-related AEs were reported by 1 subject (0.6%) with paliperidone ER and by 2 subjects (2.1%) with placebo. Conclusion: To our knowledge, this is the largest patient-level prospective meta-analysis of pharmacologic treatments for schizoaffective disorder. This post hoc analysis of subjects with prominent manic symptoms suggests that, compared with placebo, paliperidone ER reduced manic symptoms and decreased switching from mania to depression. Supported by Ortho-McNeil Janssen Scientific Affairs, LLC.

NR06-18

A CONTROLED STUDY WITH A NEW TECHNIQUE FOR COGNITIVE REHABILITATION IN SCHIZOPHRENIA USING FICTION FILMS

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SUMMARY:
Introduction Schizophrenia produces deficits and distortions in perception and understanding of reality, also expressed in the perception and comprehension of films. Fiction films offer an almost unexplored support for cognitive rehabilitation in patients with schizophrenia and other psychoses. After two years of an "ad hoc" clinical experience (Caballero et al, 2010) we have designed a controlled study in order to test the effectiveness of the a new cognitive technique compared to a conventional "film-forum". Methodology 20 patients with DSM-IV-tr schizophrenia treated at the Psychiatric Day Hospital in the Hospital Universitario Puerta de Hierro de Majadahonda (Madrid) participate in a within-group design with quantitative and qualitative measurements. There is an initial and a final assessment using the following instruments: SCID, PANSS, SCIP, scales from MATRICS (speed of processing, attention/vigilance, working memory, reasoning and problem solving, social cognition), IQ (Weschler), Scale of Disease Awareness, IPDE (personality disorders) and Hamilton Scale (anxiety-depression). The material used will be the 12 episodes of the first season of TV series "The Sopranos", created by David Chase. Each chapter will be seen twice for a self-identification of deficiencies or errors each time. Assignment to the intervention groups will be alternative and sequential. A conventional film-forum format will be used for 6 chapters; for the other 6 a guided learning will be used, focusing on the deficits of neurocognition and social cognition detected watching the episodes. For the evaluation of the effectiveness of this technique, a tool specifically designed will be used, which includes: 1. A 45 item scale specific for each episode evaluating attention, concentration, memory, understanding of the main plot and subplots, film characters, dialogues and others. 2. A hetero-applied analogical scale on spontaneous commentaries. 3. A semi-structured qualitative interview and 4. The record of group activities. Results Building and validation of the 45 items scales for each chapter will be offered in this poster as a first release of a wider research program.

NR06-19

PSYCHOSES AND MEDITATION

Chp.:Irene Gonzalez Bocelo M.D., cava alta,13, Madrid, 28005 Spain, Co-Author(s): Ana Montes Montero, M.D.

SUMMARY:
Objective The practice of Meditation is growing over the last years, both as a clinical therapy and as a service to the general population. Despite the beneficial psychological effects of these techniques, some of their practitioners seem to be at psychological risk. With the illustration of a case, we propose a review of the association psychoses and meditation, exploring the different factors that determine its features. Method Based on a real case, we make a clinical review through bibliographic search in Medline and other sources about the relation between different techniques of meditation and psychoses episodes. Results We report the case of a 33 year old female patient who developed an acute and transient psychosis with polymorphic symptomatology after a long time elaborated

oriental meditation. This episode was established as schizophreniform psychoses and remitted rapidly after antipsychotic treatment, finding Schizoid personality traits as a possible vulnerability factor. We present a clinical review of the different aspects involved in this cases, taking to account that the cognitive structure of this experience depends on the symbolic contents assigned, the context and the individual development degree. Conclusions: Meditation can act as a stressor in vulnerable patients. In psychotherapeutic applications that induces altered states of consciousness, changes in the symbolic-conceptual framework can give a new meaning to the experience and promote conflict resolution and personal development psychic. However, a certain degree of psychological development , seems to be necessary to the individual can use these constructively experiences.

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NR06-20

COGNITIVE PERFORMANCE IN PATIENTS WITH ACUTE SCHIZOPHRENIA TREATED WITH LURASIDONE: A DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL

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SUMMARY:
Background: The results of the large-scale CATIE study suggested that atypical antipsychotic medications may not have beneficial effects on cognition. However, the CATIE trial specifically recruited clinically stable patients, did not include placebo controls, and did not require fixed doses of antipsychotic medications. The current study examined cognitive functioning in an international treatment study of unstable patients with schizophrenia (PANSS total score at baseline, mean=97.4, SD=10.5, N=482 in ITT sample). Methods: Clinically unstable patients with schizophrenia were randomized to once-daily treatment with lurasidone 80 mg (n=125), lurasidone 160 mg (n=121), quetiapine XR 600 mg (n=120) and placebo (n=122). Lurasidone is a newly approved atypical antipsychotic medication with high affinity at D2, 5-HT2A, and 5-HT7 receptors and a side effect profile notable for limited effects on weight and metabolic parameters. Cognitive performance was examined at baseline and after 6 weeks of treatment with the computerized CogState system, which has 7 cognitive tests, including the domains of episodic memory, processing speed, and social cognition. Results: Task completion rates averaged 94%, but data integrity failures, based on pre-planned criteria, were noted in 23% of the cases. When the entire ITT sample was examined, there were no statistically significant differences in the CogState composite score between lurasidone dose groups, the active control and the placebo group. When patients whose data failed the prespecified integrity checks were excluded, lurasidone at 160 mg was superior on the composite cognitive functioning measure to both placebo (p=0.05, d=.25) and quetiapine (p<0.01, d=.28), while quetiapine, lurasidone 80 mg, and placebo did not differ from each other. Conclusions: Secondary analyses of cases meeting prespecified criteria for validity of the data suggest a cognitive benefit for the higher dose of lurasidone compared to placebo and quetiapine treated patients. These findings will require replication, but cannot be attributed to practice effects because of the differential effects compared to patients who were also tested on more than one occasion. Further, the levels of data integrity failures are high compared to that of previous trials that used other cognitive assessments, such as the MATRICS consensus cognitive battery.

NR06-21

INFLUENCE OF NEUROCOGNITIVE ABILITY AND SYMPTOM CONTROL ON FUNCTIONAL OUTCOME IN PATIENTS WITH SCHIZOPHRENIA SPECTRUM DISORDER

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SUMMARY:
Objective: As a part of the Clinical Long term Investigation of Psychosis in Sweden (CLIPS), in the NU Healthcare region, research has been focused on three major objectives; symptom control (including the influence of symptomatic remission), neurocognitive ability and functional performance. In this work the aim has been to evaluate the relative influence of symptoms and cognition on functional capacity. Method: In this naturalistic study 266 outpatients were included with the diagnosis of schizophrenia, schizoaffective disorder or delusional disorder. They were investigated with a comprehensive set of instruments. Symptoms were rated on the eight core items from the Positive and Negative Syndrome Scale (PANSS) assessing symptomatic remission status. Cognitive ability was tested with a neuropsychological test battery covering five different domains and finally functional performance was rated on the Specific Level of Functioning scale (SLOF). Results: Functional performance on five of the six SLOF-dimensions was superior for patients in remission, based on independent samples t-tests (Bonferroni corrected). Further, correlation analyses (Pearson) showed that the five neurocognitive dimensions correlated with different functional outcomes on SLOF. Finally, stepwise regression analyses revealed a stronger influence of symptom severity on functional performance, compared to cognitive ability. Conclusion: This study implies that symptoms have a stronger impact on outcome than cognitive performance. This should not be interpreted though as if the cognitive ability is unimportant for outcome. However, our results underline the importance of a successful treatment of existing symptoms for the achievement of real-life milestones.

NR06-22

A PROSPECTIVE, 1-YEAR, OPEN-LABEL, FLEXIBLE DOSE STUDY OF LURASIDONE IN THE TREATMENT OF SCHIZOPHRENIA: SAFETY, TOLERABILITY, AND EFFECTIVENESS

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SUMMARY:
OBJECTIVE: Lurasidone is a new atypical antipsychotic in development for the treatment of schizophrenia and bipolar disorder. The objective of this study was to assess the long-term safety, tolerability, and effectiveness of once-daily 40-120 mg/d lurasidone in a 1-year, open-label study. METHODS: Patients with schizophrenia (ICD-10 with or without acute exacerbation) were enrolled in this study which was conducted in Japan. Lurasidone dosing was initiated at 40 mg/d, and adjusted up to a maximum of 120 mg/d over a 16-week period, and then held fixed from Week 16 to Week 52. The key effectiveness measure was discontinuation of treatment for any cause. Other safety and tolerability outcomes included adverse events (AEs) and laboratory evaluations. Kaplan-Meier and Growth Mixture Model (GMM) analyses were applied. RESULTS: A total of 182 patients, aged 20-64 years, were treated with a mean dose of 71 (SD 26) mg/d lurasidone. There was an increase in dosage from Week 1 to Week 8 within the mean dose range of 41 to 77 mg/day, while dosages at Week 9 and thereafter were stable (within the mean dose range of 80 to 85 mg/day). One hundred and fourteen (63%) patients completed 16 weeks of treatment, and 80 (44%) completed the 1-year study. Eighteen (10%) discontinued due to AEs before 16 weeks, while 35 (19%) discontinued due to lack of efficacy. Kaplan-Meier analysis showed 17% cumulative discontinuation rate for AE at 6 months and 23% at 12 months. Likewise, K-M discontinuation rate due to lack of efficacy was 25% at 6 months and 28.5% at 12 months. Mean weight change at 1 year was -1.5 (SD 4.8) kg. Long term mean changes (SD) from baseline were: total cholesterol -7.5 (25.8) mg/dL, triglycerides -7.9 (56.9) mg/dL, fasting glucose 0.5 (9.8) mg/dL, and prolactin -12.7 (54.0) (ng/mL). Most of the adverse events were mild or moderate, and only 4.4% were rated severe. The trajectory patterns for the primary outcomes (BPRS and PANSS scores) were consistent, showing greatest improvement in the subgroup with higher baseline severity (GMM mean BPRS -9.9 from baseline 61, n=27), compared to the lower baseline severity groups (mean BPRS -6.8 from baseline 49, n=59; and -3.5 from the baseline 34, n=96). CONCLUSIONS: Lurasidone was well tolerated with no adverse mean changes in weight, lipids and prolactin in this 1-year open-label study in subjects with schizophrenia. In addition, lurasidone was associated with a gradual and sustained improvement in total PANSS and BPRS scores.

NR06-23

CLINICAL IMPLICATIONS OF MEDICATION SATISFACTION TO ANTIPSYCHOTICS IN PATIENTS WITH SCHIZOPHRENIA

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SUMMARY:
Object: Medication satisfaction is known to be correlated with improved treatment compliance and outcome. We investigated what clinical factors determine medication satisfaction and how it affects subsequent treatment in patients with schizophrenia. Method: we used Medication Satisfaction Questionnaire (MDQ) to evaluate medication satisfaction of patients (n=70) with schizophrenia who visited psychiatric out-patient clinic of a general hospital. For the purpose of identifying the factors affecting medication satisfaction, we collected the following data from each patient: age, sex, first date of treatment, number of admission, total days of admission, elapsed days after last discharge (EDLD), type of antipsychotics used in current and in latest acute treatment phase, drug related side effects and clinical global impression – severity (CGI-S) scale. To know the influence of medication satisfaction on subsequent treatment, we checked the state of medication and treatment at 4 month after checking MDQ. And we compared the time to event (treatment discontinuation or medication chage) between medication satisfaction group (MSG) (MSQ>4) and medication unsatisfaction group (MUG) (MSQ=4). The Pearson correlation test and linear regression analysis were used to examine the associations between clinical characteristics and MSQ. The Kaplan Meyer Survival curves and the log-rank test were used to examine the time to event. All results were considered to be significant the 5% critical level except linear regression analysis which was considered to be significant the 10% critical level. Statistic calculations were carried out using the SPSS 12.0K for windows. Result: EDLD (r=0.358, p=0.002) was positively correlated with MSQ and CGI-S (r=-0.252, p<0.035) was negatively. The EDLD (B=0.001, t=4.0, p<0.001), weight gain (B=2.213, t=1.8, p=0.073), and sedation (B= 1.115, t=-1.8, p=0.083) mainly determined medication satisfaction. There was no significant difference in MSQ among 6 kinds of antipsychotics [amisulpride (n=6), aripiprazole (n=6), olanzapine (n=17), risperidone (n=31), ziprasidone (n=5), quetiapine (n=5)]. The MSG maintained current treatment longer than the MUG (Log Rank test p=0.046). Conclusion: MSQ seems to be mainly associated with subjective drug side effects such as weight gain and sedation. Patients who satisfied their current mediation were more likely to maintain antipsychotics treatment. Objective clinical severity showed partial correlation with MSQ but seemed to be less significant than subjective discomfortness in determining MSQ. MSQ is simple but very useful measurement to evaluate the patient's attitude toward current antipsychotic medication. So, it can be somewhat useful in managing and treatment planning of patients with SPR.

NR06-24

CAREGIVERS' NEGATIVE EXPERIENCES ARE ASSOCIATED WITH NEGATIVE PATIENT'S SYMPTOMS IN BRAZIL

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SUMMARY:
The onset of First-Episode Psychosis (FEP) disrupts family dynamics, but there are few studies on the caregivers experience in Brazil. The purpose of this study is to asses the different areas of these experiences and correlate then with patients' symptoms. Fifty caregivers of 50 patients admitted to a FEP Program in São Paulo, Brazil, underwent to ad hoc questionnaire and the Brazilian version of Experience Caregiving Inventory (ECI). Patients were evaluated at admission by Structured Clinical Interview for DSM Disorders (SCID-I) and Positive and Negative Syndrome Scale (PANSS). The caregivers were 40 women (80%), 33 were mothers of the patients (66%) at the average age of 46.1 years (DP: 12,88) and 43 living in the same home with the patient (86%). The patients were 29 men (58%) at the average age of 24.34 years (DP = 7.21) and with diagnoses based on DSM-IV: 25 with affective (50%) and 25 with non-affective psychosis (50%). Results indicated that caregivers' negative experiences were associated with negative patient's symptoms, much more than positive symptoms. The PANNS total negative score was associated with Problems with

health services (r = 0.387, p: 0.001). The sub-scales of ECI in caregivers most associated negative symptoms in patients were: Emotional withdrawal and Negative symptoms (r = 0.355, p: 0.001); Emotional withdrawal and ECI Total negative score (r = 0.375, p: 0.001); Poor rapport and Stigma (r = 0.379, p: 0.001); Poor rapport and Problems with health services (r = 0.374, p: 0.001); Difficulty in abstract thinking and Effects on the family (r = 0.374, p: 0.001); Lack of spontaneity and flow of conversation and Problems with health services (r = 0.381, p: 0.001). A special care for caregivers of patients with negative symptoms may offer a model to develop adequate psychoeducational strategies in family interventions.

NR06-25
WITHDRAWN

NR06-26
THE PREVALENCE OF METABOLIC SYNDROME IN KOREAN PATIENTS WITH SCHIZOPHRENIA AND ASSOCIATION WITH WEIGHT GAIN RISK OF ANTIPSYCHOTIC MEDICATION

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SUMMARY:
OBJECTIVE: The high prevalence of metabolic syndrome (MetS) in schizophrenia has been increasingly reported in the mental health literature in these days. The use of second generation antipsychotics with high weight gain may accelerate the development of metabolic syndrome. The aim of this cross-sectional study was to investigate the prevalence of MetS in Korean patients with schizophrenia taking antipsychotics for more than one year. We examined the association of antipsychoitc groups based on the risk of weight gain with the prevalence of MetS. METHOD: This cross-sectional study was conducted from October 2007 to July 2009 at the Seoul National Hospital in Korea. The sample included patients with schizophrenia or schizoaffective disorder who were 18-65 years of age and had been taking antipsychotics for more than one year. MetS was diagnosed according to the National Cholesterol Education Program (NCEP) adapted Adult Treatment Panel III (ATP IIIA) with the Asian-Pacific (AP) abdominal obesity criterion (=90 cm in men, =80 cm in women). Among them, 593 subjects receiving antipsychotic monotherapy were selected and antipsychotics were classified by the risk of weight gain into four groups: problematic (e.g., clozapine, olanzapine), common (e.g., risperidone, quetiapine, chlorpromazine, zotepine, sulpiride), not unusual (e.g., haloperidol, amisulpride), unusual (e.g., aripiprazole, ziprasidone). Associations between presence of MetS and demographic or treatment variables were assessed by using multiple logistic regression analyses. RESULTS: A total of 957 subjects (561 male, 58.6%), aged 41.5 ± 9.4 years and with a mean duration of illness of 18.2 ± 8.0 years were included. The prevalence of MetS was 43.42% [43.0% (men), 43.9% (female); p=0.791] by ATP-IIIA. Abdominal obesity (64.4%) was the most common component of MetS, followed by dyslipidemia. The prevalence of impaired FPG was relatively low (22.9%). Abdominal obesity and low HDL-C were more prevalent in women, whereas high TG and high BP were more prevalent in men. No significant difference was seen in FPG. Presence of MetS was associated with age (p=0.000, OR=1.042, CI 1.020-1.064) and body mass index (p=0.000, OR=1.300, CI 1.230-1.374). Antipsychotic grouping based on the magnitude of weight gain was associated with an increased risk of MetS (p=0.001, OR=1.547, CI 1.207-1.984). CONCLUSION: Our data show a high prevalence of MetS in Korean patients with schizophrenia. Antipsychotics with higher risk of weight gain are associated with an increased prevalence of MetS.

NR06-27
WITHDRAWN

NR06-28
CASE-CONTROL STUDY OF THE RELATIONSHIP OF FUNCTIONING TO SUICIDE IN A COMMUNITY-BASED SAMPLE OF INDIVIDUALS WITH SCHIZOPHRENIA IN CHINA

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SUMMARY:
BACKGOUND: Suicide is the leading cause of

premature death among people with schizophrenia. Many studies indicate that increased difficulties in functioning are associated with suicidal behavior in persons with schizophrenia but these findings are based on clinical samples most of which come from western countries.
METHODS: We conducted a secondary analysis of 74 suicides (cases) and 24 accidental deaths (controls) among persons with schizophrenia identified in a national, community-based psychological autopsy study in mainland China that used the Chinese version of the Structured Clinical Interview for DSM-IV. We used reports from co-resident family members and other associates to assess the effect of schizophrenia on work, on daily activities, on emotions, on social relationships and on self-care at the time the illness was most severe (on 1-5 Likert scales), combined these measures to compute an overall index of maximum dysfunction (on a 0-100 scale), and compared these measures between the two groups. RESULTS: There was no significant difference in the mean (sd) overall maximum dysfunction associated with the illness between suicide [77.8 (21.7)] and accident decedents [82.6 (24.0)], df = 184; t = 1.25, p = 0.213]. Compared to persons with schizophrenia who died by accident, the illness had a less severe effect on the self-care of those who died by suicide [suicide decedents=1.94 (0.94) vs accidental decedents: 2.26 (0.90); df =184 (t = 2.00, p=0.047], but there were no differences in maximum dysfunction between the two groups in work, daily activities, emotions, or social relationships. DISCUSSION: This community-based study of individuals with DSM-IV schizophrenia who died by suicide in a non-western culture only partially supports findings from clinical studies in western cultures. We found no evidence of a greater effect of the illness on the functioning of individuals with schizophrenia who died by suicide versus those who died by accident. In fact, our findings suggest that persons with schizophrenia who die of suicide may be, in some ways, less disabled by their illness than persons with schizophrenia who die of other causes.

NR06-29

METABOLIC AND BODY MASS PARAMETERS OBSERVED WITH JNJ-37822681, A NOVEL FAST-DISSOCIATING D2 RECEPTOR ANTAGONIST, VERSUS OLANZAPINE

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SUMMARY:
Background: JNJ-37822681 (JNJ) is a novel, selective fast-dissociating D2 antagonist being developed as a treatment for schizophrenia. Atypical antipsychotics can be associated with risk for undesirable effects on metabolic parameters. The highly selective profile of JNJ may allow a lower incidence of such side effects. Methodology: In this double-blind, randomized, placebo (PBO) and active controlled study in acute schizophrenia, subjects were randomly assigned to JNJ (10, 20 or 30mg BID) for 12 weeks, olanzapine (OLZ – 15mg QD) for 12 weeks, or PBO for 6 weeks followed by OLZ for 6 weeks. Primary efficacy endpoint: change in PANSS total score from baseline to Week 6. Metabolic parameters were assessed including weight, waist circumference and body mass index (BMI), fasting lipids (fasting triglycerides, total cholesterol, HDL, LDL, and VLDL cholesterol, and free fatty acids), glucose, HbA1c and insulin at baseline, 6 & 12 weeks. Results: A total of 498 subjects were randomized and 60% completed the study. All 3 JNJ groups showed significantly greater reduction in PANSS total at week 6 versus PBO (all p values <0.001). Using a mixed model repeated measures (MMRM) analysis, there was no significant change in any of the JNJ groups versus PBO in triglycerides, HDL cholesterol, LDL cholesterol, VLDL cholesterol, free fatty acids, glucose, HbA1c, and insulin at week 6. In contrast, at the same time point (week 6), statistically significant changes were observed in the OLZ treatment group versus PBO for triglycerides, LDL cholesterol, VLDL cholesterol and free fatty acids. Mean changes in weight were significantly less for all 3 JNJ groups at Week 12 compared with OLZ (i.e. -0.3 kg, +0.3 kg, +0.8 kg respectively, versus +2.7kg). A higher percentage of overweight or obese subjects (i.e. those with a baseline BMI >/= 25) had a >/= 7% increase in weight at Week 12 with OLZ (9.8%) compared with the combined JNJ group (2.3%). In addition, 9.8% of JNJ-exposed subjects with a baseline BMI >/= 25 had a >/= 5% decrease in weight, compared with 0% of OLZ-exposed subjects. Conclusion: Robust clinical efficacy and an associated benign metabolic profile suggest JNJ-37822681 may provide a useful alternative for the treatment of schizophrenia.

NR06-30

LONG-TERM TOLERABILITY OF ONCE-MONTHLY INJECTABLE PALIPERIDONE PALMITATE IN SUBJECTS WITH RECENTLY DIAGNOSED SCHIZOPHRENIA

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SUMMARY:
Introduction: For patients with schizophrenia, early and effective interventions are critical for better long-term outcome. However, as these patients may be poorly adherent and less tolerant of antipsychotic medications, long-acting injectable agents may be beneficial. Objective: To examine the tolerability of paliperidone palmitate (PP) in recently diagnosed subjects participating in a long-term study. Methods: Study phases: screening (<7 days); open-label (OL) PP stabilization (9 weeks [wks]); OL PP maintenance (24 wks); double-blind PP or placebo (up to 63 wks); and OL extension (OLE, 52 wks) (ClinicalTrials.gov NCT00111189). PP was flexibly dosed at 39, 78, or 156 mg (25, 50, or 100 mg eq of paliperidone) once-monthly. This post-hoc analysis compared a Recently Diagnosed (RD; 5 years [yrs] or less) subgroup to a Chronic Group (CG; >5 yrs), and included only those treated continuously with PP during the study. Tolerability measures included AE reports and changes in weight and prolactin levels. AEs reported in a greater proportion of the RD subgroup compared to the CG by a margin of 2% or more were identified. Results: RD (n=216) as compared to CG (n=429) subjects were significantly (p<0.001) younger (31.0 vs 40.6 yrs), more likely to be White (72.2% vs 54.1%), with a lower baseline mean weight/BMI (75.3 kg/25.9 kg/m2 vs 80.5 kg/27.6 kg/m2], a lower percentage of smokers (42.6% vs 57.3%), and a higher mean age at diagnosis (28.0 vs 24.4 yrs). No AEs were 2% or higher in the RD vs the CG group for the month following the first injection. Anxiety was reported at a higher rate in RD vs CG subjects through the 3-month time point (9.7% vs 7.5%) and at each subsequent time point to OLE endpoint. Nausea was reported at a higher rate in RD vs CG subjects at the 6-month time point (4.2% vs 2.1%) and each subsequent time point to OLE endpoint. AEs reported at a higher rate in RD vs CG subjects at OLE endpoint were: schizophrenia (12.5% vs 10.5%), extrapyramidal disorder (4.6% vs 2.3%), influenza (2.8% vs 0.7%), and amenorrhea (3.2% vs 0.9%). AE rates were not higher in the RD group during any time period for pooled events related to EPS (9.3% vs 12.6% through OLE) or glucose (2.8% vs 5.1% through OLE). LS mean weight increase was similar in the RD and CG groups through OLE endpoint (OLE endpoint: 2.6 [0.9] kg and 3.4 [0.7] kg, p=0.42). Prolactin levels increased in both sexes in the RD and CG groups; it was consistently higher in female RD compared to female CG subjects throughout the study (p=0.0002). Conclusions: Long-term treatment of schizophrenia with once-monthly injectable PP at doses of 39 to 156 mg was tolerated in subjects with a recent diagnosis of schizophrenia with no unexpected findings. Nausea and anxiety were reported in more RD than CG subjects from earlier study phases, while schizophrenia, amenorrhea and extrapyramidal disorder were reported in more RD only during the last study phase. Funded by Ortho-McNeil Janssen Scientific Affairs, LLC

NR06-31

METABOLIC SYNDROME IN SCHIZOPHRENIA PATIENTS AND ITS ASSOCIATION WITH SOCIODEMOGRAPHIC AND CLINICAL VARIABLES: A ONE-YEAR PROSPECTIVE FOLLOW-UP STUDY

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SUMMARY:
OBJECTIVES: Metabolic syndrome is prevalent among patients with schizophrenia, yet there has been no prospective study on the correlation between this diagnosis and illness severity. This study aimed to investigate the incidence of metabolic syndrome in a one-year follow-up of schizophrenia patients and its association with clinical variables, including Positive and Negative Syndrome Scale (PANSS) scores. METHODS: Of 112 baseline patients enrolled, 74 completed the 12-month study. We defined metabolic syndrome and determined its incidence per the American Heart Association (AHA)/National Heart, Lung, and Blood Institute

(NHLBI) criteria. We measured sociodemographic, psychiatric, and metabolic profile differences between those with and without metabolic syndrome via unpaired t-tests or chi-square tests. We also conducted logistic regression tests to find variables that best described the development of metabolic syndrome. RESULTS: Within one year, 20 patients (27%) developed metabolic syndrome. The odds ratio between sleep duration and metabolic syndrome was 2.03. Fasting blood sugar and central obesity highly predicted the risk of metabolic syndrome. PANSS scores on the negative subscale were higher in patients with metabolic syndrome. CONCLUSION: This is the first prospective study to investigate the correlation between PANSS and metabolic syndrome. Assessment of the associated risks of metabolic syndrome should be included in the clinical management of schizophrenia patients, to enhance the long-term treatment outcomes.

NR06-32

PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR-GAMMA GENE IS ASSOCIATED WITH THE RISK OF DIABETES IN SCHIZOPHRENIA PATIENTS EXPOSED TO ANTIPSYCHOTICS

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SUMMARY:
Introduction. Data from clinical studies revealed that the incidence of diabetes is four-fold higher in schizophrenia patients than the general population. The occurrence of diabetes is not only present in schizophrenia under antipsychotic treatment, but also has been frequently observed in antipsychotic-naïve schizophrenia patients. Hence it is controversial to define 1) if the diabetes is induced by antipsychotic medication; 2) schizophrenia per se may have predisposition to diabetes. Meta-analyses of genetic linkage studies and genome-wide association analysis have indicated a genetic component of peroxisome proliferator activated receptor-gamma(PPARG) gene in type-2 diabetes and related metabolic traits. Methods. In this study, we hypothesized that the PPARG gene is involved in the development of diabetes in schizophrenia subjects exposed to antipsychotics treatment. Four hundred and one schizophrenia inpatients treated with antipsychotics for more than two years were recruited. Glycated hemoglobin (HbA1C) and fasting plasma glucose (FPG) were measured for 5 times within two years. Results. Among the 29 sinlge-nucleotide polymorphisms (SNPs) of PPARG gene genotyped, 22 non-monomorphic SNPs with minor allele frequency ? 0.03 were used in statistical analysis. Linear auto-regression model adjusted for age, gender, diabetes, antipsychotic medications identified significant associations between the SNPs at intron6, exon7, intron7 and exon8, with HBA1C level. For FPG, similar associations were found among the SNPs, except intron7. Conclusion. Our study suggests that the PPARG gene may play a role in the development of diabetes in schizophrenia patients that possibly secondary to antipsychotics treatment.

NR06-33

WEIGHT CHANGE AND METABOLIC EFFECTS OF ASENAPINE IN PLACEBO- OR OLANZAPINE-CONTROLLED STUDIES

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SUMMARY:
Objective: We describe post hoc analyses of weight change and metabolic effects of asenapine in adults. Methods: Data were pooled from asenapine schizophrenia and bipolar disorder trials that used placebo (n=1748; duration, 1-6 wk) and/or olanzapine (n=3430; duration, 3 to >100 wk) controls. Asenapine dosages were 5 or 10 mg BID (2–20 mg BID in 2 studies); olanzapine dosages were 5–20 mg QD. Inferential analyses using ANOVA assessed change at endpoint from baseline weight, body mass index, and fasting lipids and fasting glucose. Results: The least squares (LS) mean ± SE weight change with asenapine was small yet statistically greater than placebo (1.2±0.2 vs 0.1±0.2 kg; P<0.0001) and was significantly less than olanzapine (0.9±0.1 vs 3.1±0.2 kg; P<0.0001). LS mean ± SE total cholesterol, LDL, and HDL changes did not significantly differ for asenapine

vs placebo, but fasting triglyceride changes did significantly differ (asenapine, 1.8±6.3 mg/dL; placebo, –12.2±5.9 mg/dL; P<0.05). LS mean ± SE changes (asenapine vs olanzapine) significantly differed for total cholesterol (–0.4±1.1 vs 6.2±1.2 mg/dL, respectively; P<0.0001), LDL (–0.3±1.1 vs 3.1±1.2 mg/dL, P<0.05), fasting triglycerides (–0.9±5.4 vs 24.3±5.8 mg/dL, P<0.0001), and HDL (1.3±0.4 vs –0.2±0.4 mg/dL, P<0.01). LS mean ± SE changes in fasting glucose with asenapine significantly exceeded placebo (1.9±1.7 vs –1.6±1.5 mg/dL; P<0.05) and were numerically lower than olanzapine (2.0±1.3 vs 3.3±1.3 mg/dL). Conclusion: These post hoc pooled analyses suggest asenapine was associated with increased weight gain and glucose levels compared with placebo; triglycerides decreased with placebo and did not substantially change with asenapine. Propensity for weight gain or increased serum lipids was lower with asenapine vs olanzapine. (This research was supported by Merck, Whitehouse Station, NJ.)

NR06-34

A RANDOMIZED, OPEN-LABEL STUDY COMPARING EFFICACY AND TOLERABILITY OF AMISULPRIDE AT A STARTING DOSE OF 400MG/DAY VS 800MG/DAY IN ACUTE SCHIZOPHRENIA

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SUMMARY:
Objectives This study aimed to compare the efficacy and tolerability between the group starting initial 800 mg/day (AMI800) and the group titrating from 400mg/day (AMI400) for 6 weeks. Methods A total of 68 patients with acute schizophrenia participated in this 6-week, randomized, multicenter, open-label study. Thirty Patients were randomized to receive initial 400mg/day of amisulpride followed fixed dose titration schedule for first 4 weeks (400mg/day for first week, 600mg for second week, 800mg for third and fourth weeks), then took flexible dose for fifth and sixth weeks. Thirty eight patients were randomized to receive initial 800mg/day of amisulpride took fixed dose of 800mg/day until the end of 4th week, and then the dose was flexibly adjusted for 5th and 6th weeks. Results There were no significant differences between-groups in clinical improvement as evaluated by means of CGI, PANSS, CDSS or GAF at the end of the study. However, in terms of response rate (ie. at least 30% reduction from the baseline PANSS score), a significantly higher portion of the AMI 800 responded from week 4. Both groups showed good tolerability. There were no statistical differences in the overall incidence of adverse events including extrapyramidal side effects between the two treatment groups. Conclusion These results suggest that initial use of amisulpride 800mg has a superior benefit/risk ratio to gradual titration of amisulpride from 400mg especially in the treatment of acute exacerbations of schizophrenia.

NR06-35

NEURAL CORRELATES OF UNREAL OBJECT PERCEPTION IN SCHIZOPHRENIA

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SUMMARY:
Objective: Patients with schizophrenia are known to be impaired at discriminating between real and unreal objects. The aim of this study was to investigate the neural correlates of unreal object perception in patients with schizophrenia. Method: Functional magnetic resonance imaging was conducted on 15 patients with schizophrenia and 15 age-, sex- matched healthy controls while viewing hand drawn pictures representing real or unreal objects. Results: In the unreal object condition compared with the real object condition, patients with schizophrenia showed significantly less activation in the both frontopolar cortex, right dorsolateral prefrontal cortex, left inferior frontal gyrus and right middle temporal gyrus as compared with controls. Conclusions: These findings suggest that executive function and sensory processing is attenuated during unreal object perception in patients with schizophrenia and these abnormalities may be related to the reality distortion syndrome.

NR06-36

THE L-THEANINE AUGMENTATION OF ANTIPSYCHOTIC THERAPY IN SCHIZOPHRENIA PATIENTS ASSOCIATED WITH SERUM LEVELS OF BDNF AND CORTISOL/DHEAS MOLAR RATIO

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SUMMARY:
Objective: L-Theanine (gamma-glutamylethylamide) augmentation to antipsychotic therapy ameliorates positive, activation, and anxiety symptoms in schizophrenia and schizoaffective disorder patients. This study examines the association between circulating levels of neurochemical indicators and beneficial clinical effects of L-theanine augmentation. Method: Serum levels of neurochemical indicators like as brain derived neurotrophic factor (BDNF), dehydroepiandrosterone (DHEA), its sulfate (DHEAS), cortisol, cholesterol, and insulin were monitored in 40 schizophrenia and schizoaffective disorder patients during an 8-week, double-blind, randomized, placebo-controlled trial with L-theanine (400 mg/day). Multiple regression analysis was applied for searching association between improvement in symptom scores and changes in circulating levels of neurochemical indicators for 8-weeks trial. Results: Regression models among L-theanine treated patients indicate that circulating level of BDNF and cortisol to DHEAS molar ratio were significantly associated with the beneficial clinical effects of L-theanine augmentation. In particular, variability of serum BDNF levels accounted for 26.2% of the total variance in reduction of dysphoric mood, and 38.2% in anxiety scores. In addition, the changes in cortisol to DHEAS molar ratio accounted for 30-34% of the variance variability in activation factor and dysphoric mood scores, and for 15.9% - for changes in anxiety scores. Regression models among placebo treated patients did not reach significant level. Conclusion: These preliminary results indicate that circulating BDNF, and cortisol to DHEAS molar ratio may be involved in the beneficial clinical effects of L-theanine as augmentation of antipsychotic therapy in schizophrenia and schizoaffective disorder patients.

NR06-37

TREATMENT RESPONSE TRAJECTORIES AND ANTIPSYCHOTIC MEDICATION IN THE TREATMENT OF CHRONIC SCHIZOPHRENIA

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SUMMARY:
Objective: Studies that account for heterogeneity in treatment response (e.g., Levine & Leucht, 2010) have yet to identify an association with antipsychotic medications. This post-hoc analysis of CATIE (Lieberman et al., 2005) aimed to empirically identify treatment response groups and to examine their association with individual antipsychotic medications. Methods: Participants were from CATIE, an 18-month double-blind randomized controlled trial of patients with chronic schizophrenia. Data analyzed were from Phase I of CATIE during which time patients were treated with their first randomized antipsychotic medication. Recurrent Positive and Negative Syndrome Scale (PANSS) administrations were available on 1332 intent to treat patients to index treatment response trajectories for up to 18 months. Trajectories were empirically identified with mixed-mode latent class regression modeling from which groups were derived. Trajectory groups with the most and least improvement were differentiated by antipsychotic medication (olanzapine, perphenazine, quetiapine, risperidone, and ziprasidone), after adjustments with binary logistic regression modeling. Results: Four response trajectories based on PANSS percent change scores were identified over the 18-month study period. The trajectory group with the most improvement consisted of 27.3% of patients, of whom approximately 96% met the PANSS 30% total change criteria. Logistic regression modeling indicated that membership in the trajectory with the most improvement was significantly ($p<.05$) associated with olanzapine treatment. Conclusion: Based on a post-hoc analysis of CATIE Phase I data, the results suggest that approximately one-fourth (27%) of patients were members of the "most improved" symptom response trajectory group, with significant differences between the antipsychotic

medication groups.

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NR06-38

LURASIDONE IN THE TREATMENT OF ACUTE SCHIZOPHRENIA: RESULTS OF THE DOUBLE-BLIND, PLACEBO-CONTROLLED, 6-WEEK, PEARL 3 TRIAL

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SUMMARY:
Objective: The aim of this study was to evaluate the efficacy and safety of once-daily lurasidone (80 mg/day and 160 mg/day) in patients with an acute exacerbation of schizophrenia. Methods: Hospitalized patients who met DSM-IV criteria for schizophrenia with a PANSS total score =80 were randomized to 6-weeks of double-blind treatment with lurasidone 80 mg (N=125), lurasidone 160 mg (N=121), quetiapine XR 600 mg (QXR; N=120; included to confirm assay sensitivity), or placebo (N=122), administered once-daily in the evening. A mixed model repeated measures (MMRM) analysis was performed for the primary measure, the Positive and Negative Syndrome Scale (PANSS) total score, and the key secondary measure, the Clinical Global Impression-Severity scale (CGI-S). Safety and tolerability measures included adverse events, weight, and lipids. Results: Treatment with lurasidone was associated with significantly greater endpoint improvement, at 6 weeks, on the PANSS total score vs. placebo (-10.3) among patients in the 80 mg (-22.2; P<0.001) and 160 mg (-26.5; P<0.001) dosage groups. On the CGI-S, significant endpoint improvement was observed versus placebo (-0.9), during treatment with both the 80 mg (-1.5; P<0.001) and 160 mg (-1.7; P<0.001) doses of lurasidone. Significant separation from placebo occurred by Day 4 for both lurasidone doses on the PANSS total score. QXR produced significantly greater endpoint improvement than placebo on the PANSS total score (-27.8 vs. -10.3; P<0.001) and the CGI-S (-1.7 vs. -0.9; P<0.001). The following adverse events occurred with an incidence =5% and =2-times placebo: akathisia (L80; L160), nausea (L80; L160), parkinsonism (L80; L160), dizziness (L80; L160), somnolence (QXR), constipation (QXR), dry mouth (QXR), increased weight (QXR), and arthralgias (QXR). Treatment with lurasidone 80 mg and 160 mg, respectively, was associated with a mean increase in weight that was not significantly different from placebo (+0.6 kg and +0.6 kg vs. +0.1 kg) while the mean increase in weight was significantly higher vs placebo for quetiapine XR (+2.1 kg; P<0.001). Total cholesterol and triglycerides were decreased at endpoint on both doses of lurasidone, but were increased on quetiapine XR. Discussion: Lurasidone 80 mg and 160 mg, administered once-daily in the evening, demonstrated superiority compared to placebo on the PANSS total score, with significant improvement demonstrated at day 4, and at all subsequent study visits. Lurasidone was well-tolerated, with no dose-related increase in adverse events, despite treatment with a dose of 160 mg, which is the highest studied in controlled clinical trials to date. Treatment with lurasidone was associated with minimal changes in weight or metabolic parameters. Significant increases in weight and lipids were observed for quetiapine XR compared to placebo.
Funded by Sunovion Pharmaceuticals, Inc

NR06-39

BENEFIT-RISK ASSESSMENT OF MAINTENANCE THERAPY IN SCHIZOPHRENIA COMPARING LONG-ACTING INJECTABLE (LAI) PALIPERIDONE PALMITATE WITH PALIPERIDONE ER

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SUMMARY:
Introduction: Maintenance therapy in schizophrenia is an important public health concern because of the clinical, social, and economic consequences when

patients stop therapy and relapse. The benefit-risk profiles of LAI and oral atypical antipsychotics are likely to differ given the different pharmacokinetics and related adherence patterns. This work assesses benefits and risks of paliperidone palmitate (PP) vs paliperidone ER using the Benefit-Risk Action Team (BRAT) Framework, a structured approach to benefit-risk assessment developed by the Pharmaceutical Research and Manufacturer's Association. Methods: Important steps in the BRAT Framework focus on identification and definition of outcomes, selection of data sources, and display of key benefit-risk metrics. Clinical outcomes were identified from literature and consultation with clinical experts. Efficacy outcomes included relapse, CGI-S, PSP, and PANSS. Safety outcomes included EPS, prolonged QT, syncope, weight gain, lipid abnormalities, and hyperprolactinemia. All outcomes were dichotomized using clinically meaningful thresholds. Outcome rates were developed using patient-level post hoc data from 2 double-blind placebo-controlled relapse studies with comparable (1) endpoint definitions, (2) study designs (run-in/transition, stabilization, double-blind, maintenance, open-label extension phases), and (3) inclusion/exclusion criteria. An indirect comparison of the active trial arms of PP vs paliperidone ER over several time periods was performed. Results: Efficacy results from the first 8 weeks of maintenance (cases per 1000) favored PP with 214 (95%CI: 134,293) fewer cases of PSP worsening; 115 (30,199) fewer cases of relapse; 85 (22,147) fewer cases of PANSS worsening; 53 (7,98) fewer psychiatric hospitalizations; and 32 (–12,77) fewer cases of CGI-S worsening. Efficacy results from the first 40 weeks also favored PP with 98 (0,197) fewer cases of PSP worsening and showed a favorable signal toward PP with 55 (–40,151) fewer cases of relapse; 53 (–18,123) fewer cases of PANSS worsening; 37 (–12,86) fewer hospitalizations; and 25 (–31,81) fewer cases of CGI-S worsening. Safety results for the 8- and 40-week periods were similar and favored PP in all but weight gain, although CIs were wide. At 40 weeks, results were 112 (–5,230) fewer cases of lipid worsening, 92 (–57,241) fewer cases of fasting glucose worsening, 19 (-7,46) fewer cases of hypotension, 14 (–14,42) fewer cases of somnolence, 17 (–31,66) fewer cases of anticholinergic use, and 22 (–76,120) more cases of weight gain >7%. Conclusions: A benefit-risk assessment using an indirect comparison of 2 placebo-controlled clinical trials suggests a more favorable benefit-risk profile for LAI PP than for oral paliperidone ER. This could be a result of the different pharmacokinetic properties of the treatments. A larger study would be required to confirm the result of this assessment. Supported by Ortho-McNeil Janssen Scientific Affairs, LLC.

NR06-40

DYSFUNCTION OF SELF REFLECTION IN SCHIZOPHRENIA: FUNCTIONAL MRI STUDY

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SUMMARY:
Objective: The study of the neural substrates of self-related processing has become an increasingly prominent issue in cognitive neuroscience. Efforts to closely examine neural activity associated with self and other referential processing have described activity in medial prefrontal cortex (MPFC), anterior cingulate cortex (ACC), supplementary motor area (SMA) and anterior insula for self versus an other, precuneus for other versus self. Previously patients with schizophrenia showed the dysfunction of self reflection by behavioral experiments. However neural activity associated with dysfunction of self reflection in patients with schizophrenia has not been reported. Therefore, we explored differences of brain activity between patients with schizophrenia and normal controls using functional Magnetic Resonance Imaging (fMRI) in order to find the cognitive dysfunctions associated with self and other reflection of schizophrenia. Methods: Eight subjects with schizophrenia and 12 sex and age matched controls participated in this study. Images were acquired using a Siemens 1.5T scanner (TR=4s, slice thickness=6mm) and analyzed using SPM5. Two sample t-tests were performed to compare between groups (the threshold were set at $p<0.001$, uncorrected). We proceeded to a region-of-interest (ROI) analysis to investigate the difference of activity pattern of insula and precuneus between patients of schizophrenia and normal controls. Subjects were instructed to remember the presented figures on the screen in the MRI scanner. After the some or little different figures were presented, subjects were asked

whether the figure were some or different compared with first remembered figures. After answer, in only 33% of total trials the subjects were asked, "Is your answer correct?". Subjects reconsidered own answer. We calculated the brain activity in terms of make sure own answer. Result: Patients with schizophrenia showed anterior insula activation is higher than precuneus significantly. On the other hand, normal control showed the opposite pattern. Conclusion: Normal control showed higher activation of anterior insula associated with self reflection. However, patients with schizophrenia showed higher activation of precuneus associated with other reflection even if when they make sure own answer. These results indicate that patients with schizophrenia may not sense self but other in spite of self own thought.

NR06-41

FLAT AFFECT IN SCHIZOPHRENIA: ASSOCIATION WITH COGNITIVE DYSFUNCTION IN ROUTINE CLINICAL PRACTICE

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SUMMARY:
OBJECTIVE: Flat Affect (FA) is considered one of the enduring symptoms of Schizophrenia (SZ). It has been associated with Cognitive Dysfunction (CD) and both impairments may be linked to more severe forms of illness, yet their association in routine clinical practice remains relatively unstudied. The purpose of this study was to investigate the strength of the associations between FA, CD and overall Severity Of Illness (SOI). METHOD: Pooled data were taken from a clinical sample of 124 PANSS and CGI (Clinical Global Impression scale) evaluations of SZ (schizoaffective disorder excluded) out-patients. Beside PANSS item N1 (blunted affect), a five item composite score for cognition was generated (standardized alpha = 0.64). The nonparametric Spearman correlation was used for analysis.RESULTS: The prevalence rate for moderate to severe FA was 24 %. Age (median: 41 years) and gender (male: 70%) were correlated with the severity of FA. Furthermore, a significant positive correlation between FA and CD ($r=0.31$, $p<0.001$) was observed. FA was highly correlated with SOI ($r=0.35$, $p<0.0001$). However, an interaction was observed between effects of FA and CD on SOI in stratified analyses. In fact, FA was only correlated with SOI among patients who also manifested concomitant CD ($r=0.31$, $p<0.006$). CONCLUSIONS: In our sample from a general clinical practice and as reported in other studies, FA is more common in middle-aged men and is associated with CD. Our findings suggest that the contribution of FA to SOI appears to be mediated by CD.

NR06-42

CLINICAL AND FUNCTIONAL OUTCOMES IN THE 1-YEAR NATURALISTIC TREATMENT OF SCHIZOPHRENIA PATIENTS WITH OLANZAPINE IN JAPAN

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SUMMARY:
Objectives: To assess the clinical and functional outcomes in the 1-year naturalistic treatment of schizophrenia inpatients and outpatients with olanzapine in Japan. Methods: We used data of a large (N=1850) prospective observational non-interventional multi-center study of schizophrenia patients in Japan who were initiated on olanzapine. The outpatients were compared with inpatients on clinical and functional outcomes over the 1-year study using Fisher's exact test, t-tests and mixed models for repeated measures, controlling for baseline demographics. Results: At study entry, 43.2% were outpatients and 56.8% inpatients. The mean ± SD dosage for olanzapine was 11.4 ± 5.7 mg/day for overall patients. The outpatients were significantly younger and more likely to be female.The most common reason for switching to olanzapine was poor medication efficacy (72.3% for outpatients,74.3% for inpatients), followed by medication intolerability (21.6% for outpatients, 28.0% for inpatients). 63.8% of outpatients and 71.6% of inpatients completed the study. Both outpatients and inpatients experienced clinically significant and statistically significant improvements in global symptom severity, positive, negative, depressive, and cognitive symptoms, health-related quality of life, paid work, and social activities.

The outpatients (60.9%) and inpatients (50.5%) demonstrated symptom response, and 51.0% of outpatients and 32.8% of inpatients experienced symptom remission at any time. Symptomatic response and remission were defined using previously published definitions based on the CGI-SGH1,2.Overall, mean weight gain was 2.06 kg, with about one-fourth of patients (26.5%) experiencing clinically significant weight gain (= 7%). Conclusions: In this 1-year naturalistic study, inpatients and outpatients who were initiated treatment with olanzapine experienced clinically significant improvements in their clinical and functional outcomes. One-fourth of all patients experienced clinically significant weight gain. Current findings highlight the favorable benefit to risk profile of olanzapine in the treatment of patients with schizophrenia in Japan.

NR06-43

NEW STANDARDIZED CLINICO-FUNCTIONAL CRITERIA OF THERAPEUTIC REMISSION IN SCHIZOPHRENIA: DESCRIPTION AND VALIDATION

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SUMMARY:
Background. 8 PANSS symptoms were proposed for diagnosing of remission in schizophrenia by The Remission in Schizophrenia Working Group. However, these criteria ignore different courses of schizophrenia and possible effect of antipsychotic treatment. Materials and Methods. 104 outpatients were included in analysis from one district outpatient clinic of Moscow. Paranoid schizophrenia with continuous course (F20.00) was diagnosed in 25 (24%), with episodic course and progressive deficit (F20.01) – 23 (22%), with episodic course and stable deficit (F20.02) – 27 (26%), with remittent course (F20.03) – 5 (5%). 7 (7%) patients had diagnosis of undifferentiated schizophrenia (F20.3). Residual schizophrenia (F20.5) was diagnosed in 6 (6%) cases, simple schizophrenia (F20.6) - 3 (3%) and schizoaffective disorder (F25) – in 8 (8%). Assessment was done with new standardized criteria that are based on PANSS and PSP scales. They provide specific symptoms and thresholds according to ICD-10 diagnosis and contain 8 symptoms of international criteria. Episodic course with progressive deficit and remittent course of paranoid schizophrenia and schizoaffective disorder were pooled in one remission group because of possibility to achieve minimal level for all chosen symptoms. Practically all positive symptoms were excluded from remission criteria for simple and residual schizophrenia. Results. Overall, 35% of patients met international criteria of remission, while clinico-functional criteria were achievable for 56% of subjects (symptomatic criteria – 65% and functional criteria – 67%). The lowest level of remission according to new standardized criteria was among patients with continuous course of paranoid schizophrenia – 36% (symptomatic criteria – 48%, functional criteria – 60.9%) and nobody from this group met international criteria. Furthermore, the lowest proportion of patients who met functional component of clinico-functional criteria was in group of episodic course with progressive deficit of paranoid schizophrenia - 47.8%, whereas symptomatic criteria met 65.2% of patients (clinical and functional criteria – 43.5%). 21.7% of patients with episodic course and stable deficit of paranoid schizophrenia met international criteria, while clinico-functional criteria were achievable for 66.7%. On the other side, 100% of patients with schizoaffective disorder and 80% of patient with remittent course of paranoid schizophrenia met international criteria, whereas new standardized criteria met only 87.5% and 60% of patients, respectively. Conclusion. Validation of standardized clinico-functional criteria showed that they covered wider range of stable schizophrenic patients as compared to international criteria of remission and provide more realistic target for modern antipsychotic therapy according to various clinical types and courses of schizophrenia.

NR06-44

POPULATION STUDY OF VALIDITY OF INTERNATIONAL REMISSION CRITERIA AND RATIONAL FOR NEW STANDARDIZED CLINICO-FUNCTIONAL CRITERIA IN SCHIZOPHRENIA

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SUMMARY:

Background. A international consensus definition of remission in schizophrenia has been proposed (low symptom threshold in the eight core Positive and Negative Syndrome Scale [PANSS] symptoms for at least 6 consecutive months). Methods. A population study of remission rate, using a 6-month follow-up to assess symptomatic stability, was conducted in two health care districts of an outpatient service in Moscow. The key inclusion criteria were outpatients with ICD-10 diagnosis of schizophrenia or schizoaffective disorder. Remission was assessed using modern criteria (severity and time criteria), PANSS and Global Assessment of Functioning (GAF). Patients who were stable but did not meet the symptomatic criteria were included in a further 1-year pharmacotherapeutic study, with one group receiving long-acting risperidone (RLAI) and the control group continuing to receiving routine treatment. Symptoms were assessed with PANSS and social functioning with the Personal and Social Performance scale (PCP), compliance with Rating of Medication Influences scale, and extrapyramidal side effects with the Simpson–Angus scale. Results. Only 64 (31.5%) of 203 outpatients met the criteria for symptomatic remission, but at the end of the 6 month follow-up period, 158 (77.8%) were stable (irrespective of remission status). Among these only 53 (26.1%) fulfilled the remission criteria. Logistic regression model revealed that ICD-10 diagnosis (F20.01, F20.03, F25 vs. other) (OR = 5.95), GAF score (OR = 1.29) significantly predicted the outcome of symptomatic remission. The pharmacotherapeutic study had 42 stable patients in the RLAI group and 35 in the control group: 19.0% in the RLAI group and 5.7% in the control group met remission criteria after 12-months of therapy. Furthermore, reduction of PANSS total and subscale scores, as well as improvement in social functioning, was more significant in the first group. Significant correlation ($p < 0.05$) were found between symptomatic remission and PANSS total score ($r = -0.61$) and PSP score ($r = 0.48$). Analysis of covariance of RLAI group's data showed that ICD-10 diagnosis was statistically significant for achievement of symptomatic remission ($F=2.8252$, $p=0.03186$). Overall, patients with paranoid schizophrenia and progressive deficit (F20.01) had greater possibility to achieve symptomatic criteria as compared with other diagnoses. Conclusions. Criteria for remission should take in account a clinical course and level of functioning. According to findings new criteria of remission were formulated. They include symptomatic and functional criteria with special symptoms and threshold for each ICD-10 types of schizophrenia.

NR06-45

IMPACT OF LURASIDONE AND OLANZAPINE ON FRAMINGHAM TEN-YEAR CORONARY HEART DISEASE RISK ESTIMATE IN SCHIZOPHRENIA

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SUMMARY:
Introduction Patients with severe mental illness are at increased risk for coronary heart disease (CHD)-related mortality. We conducted a post-hoc analysis to test the significance of treatment effects on Framingham Risk Score (FRS). Estimates of 10-year CHD risk and their changes from baseline to Week 6 endpoint were compared in a double-blind, placebo-controlled study of lurasidone and olanzapine in acute schizophrenia patients. Methods At screening, demographics and medical history were measured. Vital sign and fasting lab measures were evaluated at baseline and over the 6-week study. Subjects were randomized to fixed doses of lurasidone 40 or 120 mg/d (LUR), olanzapine 15 mg/d (OLZ), or placebo (PBO). An analysis of covariance model, with terms for treatment, gender, treatment-by-gender interaction, and baseline value was applied. Results:The FRS analysis sample included 315 subjects aged >30 years. The CHD risk factor prevalence rates in the baseline sample were: diabetes 12%, hypertension 22%, low HDL 45%, and high total cholesterol 17%. Baseline smoking prevalence was overall 68% but significantly higher in males (75%) vs. females (47%) ($p<0.001$). The baseline mean 10-year CHD risk was higher in males (9%) vs. females (5%), per Wilson et al. (1998). Average risk ratio (10-year CHD absolute risk relative to normal reference risk) was 2.3 for males and 1.4 for females. At Week 6, changes from baseline in overall 10-year CHD risk were: for LUR, baseline 8.4% to endpoint 8.3%, for PBO, baseline 6.6% to 7.2%, and for OLZ, 8.5% to 10.3%. Changes were significantly higher in men treated

with OLZ (9.4% to 12%) vs. LUR (9.4% to 9.3%) (p<0.001) and vs. PBO (7.6% to 8.3%) (p<0.001). In contrast, no female group showed significant Week 6 differences (treatment-by-gender interaction effect, p<0.01). Changes in CHD risk factors included 23 new diabetes cases (LUR 3.8%, OLZ 14%, and PBO 6.8%) (p>0.05). There were elevations of hypertension risk in men receiving OLZ vs. PBO (p<0.05). Fasting total cholesterol levels significantly increased among males treated with OLZ (+6.8 mg/dL) vs. LUR (-9.2 mg/dL) and PBO (-10.6 mg/dL) (p<0.05). Conclusions These 6-week study results indicate that the acute effect of lurasidone on the 10-year CHD risk is comparable to that of placebo in patients with schizophrenia. Olanzapine was associated with higher risk compared to placebo or lurasidone treatment. Further investigation including longer-term exposure data is warranted to confirm these results.

NR06-46

DTNBP1, HSPS AND TAAR6 VARIATIONS INFLUENCE SCHIZOPHRENIC PHENOTYPE AND TREATMENT RESPONSE

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SUMMARY:
Objective: a pharmacogenetic approach is used to challenge the hypothesis DTNBP1, HSP-70 and TAAR6 mutations may impact the clinical presentation or treatment outcome in a sample of 240 Schizophrenic in patients. Method: a sample of 240 Schizophrenic Korean in patients was enrolled in the study. Patients were administered the PANSS test at the moment of admission and at the moment of discharge, 45 days after on average. Patients were treated with typical and atypical antipsychotics with low benzodiazepine doses as the only other treatment allowed. Sociodemographic, clinical and treatment related variables entered the analysis as covariates. Power analysis: on average, we had a power of 0.8 to detect a minimum difference of about 2% in the PANSS scores. Results: DTNBP1 haplotype A-A (rs3213207, rs1011313) haplotype was associated with lower PANSS total and positive scores at baseline (p=0.01; p=0.005) and at discharge (p=0.008; p=0.005).HSPs haplotypes A-C-G-G and G-C-C-C (rs2075799, rs1043618, rs562047, rs539689) were found to be associated with worse baseline PANSS negative scores (p=0.0001) and clinical improvement (p=0.04 and p=0.03 respectively). TAAR6 rs8192625 G/G genotype was found to be associated with worse clinical presentation (p=0.01), whilst no significant associations were found after haplotype analyses. Conclusion: variations within the DTNBP1, HSPs and TAAR6 genes seem to be associated with the psychotic symptoms' severity at the beginning of treatment. DTNBP1, HSPs variations seem to impact the antipsychotic treatment response too.

NR06-47

ASSOCIATION BETWEEN ADHERENCE AND PERSISTENCE WITH ANTIPSYCHOTICS AND OUTCOMES AMONG MEDICAID PATIENTS WITH SCHIZOPHRENIA

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SUMMARY:
Background: Patients (pts) with schizophrenia often do not take medication as prescribed, which may increase relapse risk, often leading to rehospitalization and higher use of other healthcare services. Purpose: To examine adherence and persistence rates among pts with schizophrenia experiencing >=2 relapses who were treated with second-generation oral antipsychotics (SGOAs). Methods: Using a multistate Medicaid database, adult (18–64 y) pts were identified with a diagnosis of schizophrenia and evidence of >=2 relapses (ie, inpatient admission or ER visit with primary or secondary diagnosis of schizophrenia, depression, dementia, or other psychosis) within 1 y after SGOA therapy was initiated. A dichotomous measure of persistence was used, in which pts with therapy interruption (SGOA refill gap of >60 days) or discontinuation were categorized as nonpersistent, and pts with continuous SGOA use (ie, refill gap <=60 days) were categorized as persistent. Adherence to SGOA therapy was measured using the medication possession ratio (MPR), calculated as pts' cumulative exposure to SGOAs during the 12-month period after SGOA initiation,

divided by 365 days, and was stratified as adherent (MPR>=0.80) and nonadherent (MPR<0.80). Association between adherence to and persistence with SGOA treatment and psychiatric-related relapses was assessed using a series of negative binomial and Poisson regression models. Results: The study cohort consisted of 3714 pts with mean age of 42.6 y (SD 11.63); 56% were female and 48% were black. Overall, 45% of pts were adherent to and 50% persistent with medication. Compared with older pts (mean age ~43.5 y) and pts of other racial groups (ie, white, Hispanic, and other), younger (mean age ~42.0 y) and black pts were significantly less likely to be adherent and persistent with SGOA therapy (P <0.001 for each comparison). Fewer relapses on average were noted in adherent versus nonadherent pts (3.85 vs 4.13; P<0.001) and in persistent versus nonpersistent pts (3.81 vs 4.21; P<0.001). Pts who were adherent (incident rate ratio [IRR]=0.90; 95%CI=0.86–0.94; P<0.001) or persistent (IRR=0.88; 95%CI=0.84–0.92; P<0.001) had significantly lower rates of psychiatric-related relapses. Conclusion: This analysis reinforces the need for improving treatment adherence and persistence among pts with schizophrenia, which may lower the rate of psychiatric-related relapse. Future research is needed to assess whether newer antipsychotic therapies with less-frequent dosing may improve adherence among pts with schizophrenia therapy.

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NR06-48

THE UTILITY OF MMPI-2 FOR ASSESSMENT IN PATIENTS WITH SCHIZOPHRENIA AND DEPRESSION

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SUMMARY:
This study aims to compare the symptoms of disorders in patients with schizophrenia and depression to evaluate them and calculate the effect size using MMPI-2. The study subjects analyzed were 40 male and female schizophrenia patients and 40 male and female depression patients at the age of 19 to 60 visiting the department of psychiatry at university hospitals located in countryside from January of 2006 till December of 2009 and a control group with 40 normal males and females. As a study method, first, a symptom checklist was used to conduct frequency analysis and chi-square test (?2). And as dependent variables of MMPI-2, 18 scales were utilized to verify that the profile forms of the three groups were different through MANOVA. Lastly, Pearson's correlation coefficient was used to apply it to the formula of the effect size and figure out the index of the effect size. According to the result of comparing the psychiatric group (schizophrenia + depression) and normal control group, there was significant difference in their sense of worthlessness, sense of inappropriateness, sexual difficulty, sleep disorder, eating disorder, sad/depressed, and suicide accident or trial. However, there was no significant difference in their having of much worry. When the schizophrenia group and depression group were compared, there was significant difference in their sense of worthlessness, sad/depressed, and suicide accident and trial. Meanwhile, there was no significant difference in their having of much worry, sense of inappropriateness, sexual difficulty, sleep disorder, and eating disorder. Next, according to the result of MANOVA analysis, there existed difference between the groups. And the result of calculating the effect size of MMPI-2 showed that the scale indicating the greatest effect size in the psychiatric patient group and depression patient group was LSE(d=2.34). And it was also found that the scales showing the biggest effect size in schizophrenia and depression patient groups were D (d=-1.07) and BIZ (d=1.01). In the end, this paper discusses the limitations of this research and future directions for further study.

NR06-49

EFFECT OF LURASIDONE ON WEIGHT AND METABOLIC PARAMETERS: RESULTS FROM POOLED SHORT-TERM PLACEBO-CONTROLLED AND LONG-TERM TRIALS IN SCHIZOPHRENIA

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SUMMARY:
Objective: The aim of this analysis was to evaluate the safety of lurasidone treatment of schizophrenia on weight and metabolic parameters. Methods: Data were pooled from five double-blind, placebo-controlled, short-term (6-week) treatment studies of patients who met DSM-IV criteria for schizophrenia with an acute exacerbation. The short-term safety analysis sample consisted of patients treated with lurasidone (dose range, 20-120 mg, total N=1004); olanzapine 15 mg (N=122), haloperidol 10 mg (N=72) and placebo (N=455). Long-term (3-, 6-, 9-, and 12-month) open-label treatment data were also available on a pooled lurasidone sample of 238 patients. Results: In the short-term (6 week) treatment sample, mean weight gain to LOCF endpoint was +0.75 kg for the pooled lurasidone dosage group, +4.15 kg for olanzapine, +0.02 kg for haloperidol, and +0.26 kg for placebo. The proportion experiencing =7% weight gain was 5.6% for pooled lurasidone groups, 34.4% for olanzapine, 4.2% for haloperidol, and 4.0% for placebo. Median endpoint change in lipids were: triglycerides (mg/dL), -5.0 for pooled lurasidone, +25.0 for olanzapine, -3.0 for haloperidol, and -7.0 for placebo; total cholesterol (mg/dL), -8.0 for lurasidone, +9.0 for olanzapine, -8.0 for haloperidol, and -10.0 for placebo; similar trends existed for changes in LDL. Mean LOCF-endpoint change in glucose (mg/dL) and HbA1c (%), respectively, were similar for pooled lurasidone (+1.3; +0.02), haloperidol (+1.5; -0.02), and placebo (-0.7; -0.02), but was higher for olanzapine (+10.4; +0.18). In the long-term (12-month) treatment sample, mean change in weight at Month 12 was -0.71 kg for the pooled lurasidone treatment group; and Month 12 changes in metabolic parameters were: +1.2 mg/dL for glucose (mean), +0.05% for HbA1c (mean), -3.0 mg/dL for total cholesterol (median), and -4.0 mg/dL for triglycerides (median).
Conclusions: In a pooled analysis of short-term studies, treatment with lurasidone, in doses up to 120 mg/day, was associated with changes in metabolic parameters that were comparable to placebo. Short-term olanzapine therapy was associated with clinically significant increases in weight and metabolic parameters compared to placebo. Long-term treatment (up to 12 months) with lurasidone was not associated with clinically significant effects on weight or metabolic parameters. Funded by Sunovion Pharmaceuticals, Inc

NR06-50

METABOLOMIC CORRELATES OF RESPONSE IN PATIENTS WITH SCHIZOPHRENIA TREATED WITH LURASIDONE

Chp.:Steven Potkin M.D., Department of Psychiatry and Human Behavior, University of California, Irvine, Brain Imaging Center, 5251 California Avenue, Ste. 240, Irvine, CA 92617, Co-Author(s): Robert Silva, Ph.D., Josephine Cucchiaro, Ph.D., Andrei Pikalov, M.D., Ph.D., Masaaki Ogasa, M.S., Andrea Eckhart, Ph.D., Kirk Beebe, Ph.D., Antony Loebel, M.D., Stephen Stahl, M.D., Ph.D.

SUMMARY:
Objective: Lurasidone is a new psychotropic agent with high affinity for D2 and 5-HT2A, 5-HT1A and 5-HT7 receptors that has demonstrated efficacy in the treatment of schizophrenia across multiple double-blind, placebo-controlled studies with minimal effects on weight and metabolic parameters. Lurasidone's pharmacological profile suggests the potential for increased glutamate (and related amino acid neurotransmitter) activity associated with lurasidone treatment. The aim of this analysis was to evaluate the metabolomic "signature" of lurasidone, including any potential signals for enhanced CNS availability of glutamate and related excitatory neurotransmitters. Methods: Serum samples for metabolomic analysis were obtained from a subgroup of subjects enrolled in a double-blind, placebo-controlled study of subjects who met DSM-IV criteria for schizophrenia and were experiencing an acute exacerbation of psychotic symptoms. Post-treatment samples at Day 4 and Day 42 were collected from subjects randomized to one of three groups: placebo (n=40), lurasidone 40 mg/d (n=40), and olanzapine 15 mg/d (n=40). Samples were extracted and analyzed on GC/MS and LC/MS/MS platforms. Proprietary software (Metabolon) was used to match ions to an in-house library of standards for metabolite identification and for metabolite quantitation by peak area integration. Results: In the lurasidone group at Day 42, the serum levels of 25 of a total of 732 biochemicals (3%) were significantly changed (11

were significantly increased and 14 significantly decreased). In contrast, for olanzapine the serum levels of 100 biochemicals (14%) were significantly changed (54 were increased and 46 decreased). Treatment with lurasidone was associated with significantly increased serum levels of glutamate, glycine and serine compared to placebo as well as olanzapine treatment. In contrast to lurasidone, olanzapine significantly inhibited the activity of oxidoreductases/dehydrogenases and significantly increased sugar alcohol/polyols. Olanzapine also significantly decreased serum essential, long chain fatty acids, and carnitines. Conclusion: Data obtained from serum metabolomic profiling from a lurasidone clinical trial are consistent with the hypothesis based on its pharmacological profile that lurasidone treatment may be associated with enhanced glutamate activity. These data also suggest significant differences in the metabolome exist in subjects treated with lurasidone and olanzapine.

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NR06-51

A POOLED ANALYSIS OF THE EFFECTS OF ASENAPINE ON PERSISTENT NEGATIVE SYMPTOMS OF SCHIZOPHRENIA

Chp.:Steven Potkin M.D., 101 City Drive South, Orange, CA 92868, Co-Author(s): Phillip Phiri,PhD, Jun Zhao, PhD, Larry Alphs, MD, PhD, Robert W. Buchanan, MD, Armin Szegedi, MD, PhD, John Panagides, PhD, Pilar Cazorla, PhD

SUMMARY:

Objective: Asenapine and olanzapine reduced negative symptoms of schizophrenia in 2 double-blind, randomized 26-week studies and subsequent 26-week extensions in a study population with persistent negative symptoms (PNS) that also met criteria for predominant negative symptoms. Superiority of asenapine over olanzapine was observed in 1 of the extensions but not in the other extension or in either of the core studies. To more fully explore the efficacy of asenapine on PNS of schizophrenia, we conducted post hoc analyses using pooled data from these 4 trials. Methods: The 2 core studies and their respective extensions were double-blind, double-dummy, olanzapine-controlled trials. Core study participants (n=949) were randomly assigned to sublingual asenapine (5 mg twice daily [BID] during week 1; 5 or 10 mg BID thereafter; n=485) or oral olanzapine (10 mg once daily [QD] during week 1; 5–20 mg QD thereafter; n=464); extension participants continued existing treatment without rerandomization. Of the 613 participants (asenapine, n=277; olanzapine, n=336) who completed 26 weeks of treatment, 502 (asenapine, n=220; olanzapine, n=282) entered a 26-week extension and 412 (asenapine, n=170; olanzapine, n=242) completed an additional 26 weeks of treatment. Efficacy—16-item Negative Symptom Assessment (NSA-16) scale total score changes from core study baseline to core study endpoint (treatment week 26) or extension endpoint (treatment week 52)—was assessed using a mixed model for repeated measures analysis on the pooled intent-to-treat populations. Results: Discontinuation due to lack of therapeutic effect was significantly greater with asenapine vs olanzapine for the first 26 weeks for core study participants (13.6% vs 7.3%, p=0.0016) and during the extension for extension participants (5.5% vs 2.1%, p=0.0458). After 26 weeks of treatment, the least squares (LS) mean ± SE NSA-16 total score change from core study baseline did not significantly differ for asenapine vs olanzapine among participants who entered the core studies (–11.1±0.6 vs –11.2±0.6, respectively; p=0.9457) or among participants who entered the extensions (–13.1±0.7 vs –12.2±0.6, p=0.3710). At week 52, the LS mean ± SE NSA-16 total score change from core study baseline was significantly greater for asenapine vs olanzapine among participants who entered the core studies (–14.6±0.8 vs –12.6±0.7, p=0.0497) and extensions (–16.5±0.9 vs –13.6±0.7, p=0.0083). Conclusion: These pooled post hoc analyses indicate that treatment with both asenapine and olanzapine reduced PNS of schizophrenia in adult study participants. Statistical superiority of asenapine was observed at week 52 but not at week 26. However, these results need to be interpreted in view of the fact that a large portion of participants did not enter the extension studies and those who did enter the extension continued treatment without rerandomization. (This research was supported by Merck, Whitehouse Station, NJ.)

NR06-52

DELUSIONAL SELF-MISIDENTIFICATION: A PSYCHOPATHOLOGICAL DESCRIPTION

Chp.:Jesus Ramirez-Bermudez M.D., Insurgentes Sur 3877, Mexico, 14269 Mexico, Co-Author(s): Fabian Dolores-Velasco, M.D., Alejandra Martin-Manzo, M.D., Samantha Flores-Reynoso, M.D., Daniel Crail-Melendez, M.D.

SUMMARY:
Delusional misidentification syndromes (DMS) are conventionally divided into Capgras, Fregoli, intermetamorfosis and the subjective doubles syndromes. This study focuses in the phenomenon of delusional self-misidentification, which has been scarcely documented. A large inpatient neuropsychiatric population (n= 830) was prospectively assessed, identifying 8 patients with DMS, 4 patients had delusional self-misidentification, which coexisted in all cases with a schizophrenia diagnosis (p= .029), and also with Capgras syndrome (n= 2), Cotard syndrome (n= 2) and reduplicative paramnesia (n= 2), suggesting reduplicative and/or nihilistic variants of self-misidentification. Patients with self-misidentification had no structural brain lesions. Neurobiological models, as informed by clinical disturbances including asomatognosia, somatoparaphrenia and mirrored self-misidentification, have supported a unitary and localizationist view of the self. The description of patients without structural damage, who persistently deny their identity but construct a delusional one, provides a rational basis for a shift towards multidimensional models of selfhood and personal identity.

NR6-53
CONTENT OF DELUSIONS AND HALLUCINATIONS IN SCHIZOPHRENIA

Chp: Palmira Rudaleviciene, M.D., Ph.D.

SUMMARY:
Schizophrenia has always been the top interest in psychiatry and its main challenge, and is still left with the most number of unanswered questions. One of the central purposes of cross-cultural psychiatry is to scrutinize the sociocultural influences on the phenomenology of mental disorders.Cultural competency is now a core requirement for mental health professionals. We also have chosen to evaluate the ompact of personal relogiosity on the psychotic phenomena, as Lithuania is known as a Catholic country.After long years of the Soviet occupation, along with political and economical changes, Lithuania has become a region undergoing cultural shock, what is interesting and valuable for psychiatric research. At the same time, Lithuania has become free and open for other cultures, patients' from different countries entry the local health care system. In this situation, cultural assessment should be essential in order to a better understanding of psychiatric patients. Method. We have studied the content of delusions and hallucinations in patients with schizophrenia using Fragebogen fur psychotische Symptome (FPS) - a semi-structured questionnaire developed by the Cultural Psychiatry International research group in Vienna. 295 patients suffering from schizophrenia participated in this study at Vilnius Mental Health Center in Lithuania. All items were binary coded. The statistical analysis applied a c2 test for 2x2 and 2xk tables, Fisher's exact test, Pearson and Spearman's rank correlation, and logistic regression. Continuous or ordinal data were analyzed using t test. Discriminant analysis was used to estimate the culture-sensitive proportions of the total variance of the three groups (contents of delusions, hallucinations and Schneider's FRS) of psychotic symptoms in schizophrenia. To identify existence of relatively stable paranoid-hallucinatory syndromes in schizophrenia a Principal-component analysis (PCA) was used to extract factors, the Varimax procedure to rotate factors, and the eigen value greater-than-one criterion to determine the number of factors. Results: Different content of delusions and hallucinations was defined.We present here the data of phenomenology of Religious and Apocalyptic delusions, and visual hallucinatios. 1.Personal importance of faith was not confirmed as an independent predictor of religious delusions in patients with schizophrenia, but marital status and educational level. Female patients most often considered themselves as Saints, whereas male patients most often considered themselves as being a God.2.Schizophrenia patients for whom their faith is of personal importance feel the coming end of world more often than those for whom it is not. Higher prevalence of the world end delusions was found among divorced patients as compared to those who lived in the family. Female patients reported the world end delusions with religious content (apocalyptic) more often than the male patients. Male patients as compared to female patients more often reported world end delusion with global content. 3. Patients with schizophrenia for whom their faith was of personal importance compared to patients with schizophrenia for whom their faith was not of personal importance had higher prevalence of visual hallucinations. The early onset of illness (age until 20) and personal importance of faith were independent predictors of development of visual hallucinations.

NR06-54
PATIENTS WITH FIRST-EPISODE PSYCHOSIS AND CHRONIC SCHIZOPHRENIA DIFFER IN THEIR

COGNITIVE DECLINE PROFILE: CLINICAL IMPLICATIONS

Chp.:Pedro Sanchez M.D., Calle Alava 43, Vitoria, 01006 Spain, Co-Author(s): Rafael Segarra, M.D., Natalia Ojeda Ph.D., Javier Pena Ph.D.,Inaki Eguiluz M.D., Edorta Elizagárate M.D., Jesus Ezcurra M.D., Miguel Gutierrez M.D. Ana Yoller M.D.

SUMMARY:
Abstract: The differentiation in the profile of cognitive deficits in schizophrenia has traditionally been link to the identification of clinical subgroups with various levels of success. However, the cognitive profile of the samples is relevant in both, the degree of deterioration and the areas of deficits, as they relate differentially to both functional outcome and quality of life. Purpose: To analyse the profile of cognitive decline in a broad sample of patients to identify specific profiles associated to the clinical diagnosis and phase of the illness. Method: We examined 43 patients with firs episode psychosis (FEP), 43 chronic schizophrenic patients, and 43 healthy controls matched for age, gender and years of education. Assessment included sociodemographic, clinical and cognitive variables. Confirmatory factor analysis (CFA) was used to determine the validity of the cognitive factors and the latent cognitive structure proposed a priori, according to the MATRICS initiative. CFA supported a seven-factor model of the cognitive structure, including attention, processing speed, verbal memory, visual memory, working memory and executive functioning (?2 = 98.62, ?2/df = 1.97, RMSEA = 0.07, NNFI = 0.98, CFI = 0.99). Results: As expected the healthy control group performed significantly better than chronic patients on all cognitive factors and better than the FEP group on all the cognitive factors. We found significant differences between FEP and chronic patients in processing speed ($p<0.001$), visual memory ($p<0.001$) and executive functioning ($p<0.05$), even after controlling for negative symptoms and age at onset. Data suggest that these and no other, specific domains are more sensitive to the decline with the years of evolution of the illness, increased number of hospitalizations, and treatment adherence. This decline is significantly higher than the general decline shown in normal population. Importance/ Relevance: The identification of specific domains associated to clinical variables and variables of the illness reveals targets for treatment and early interventions due to their role in functional outcomes and quality of life in schizophrenia.

NR06-55

HOW TO PREDICT DIAGNOSES IN PATIENTS WITH FIRST-EPISODE PSYCHOSIS: EVIDENCE FROM A 2-YEAR LONGITUDINAL STUDY

Chp.:Rafael Segarra M.D., Plaza de Cruces, Baracaldo, 48010 Spain, Co-Author(s): Natalia Ojeda, Ph.D., Javier Pena, Ph.D., Pedro Sánchez, M.D., Inaki Eguiluz, M.D., Jon García, M.D.,M iguel Gutierrez, M.D.

SUMMARY:
Very few studies have analysed factors that predict the ultimate clinical diagnosis in first-episode psychosis (FEP), and none has included cognitive factors. Purpose: To analyse factors which efficiently contribute to the prediction of diagnosis in first episode psychosis (FEP) longitudinally.Method: Eighty-six FEP patients were recruited at the Unit of First Episode Psychosis at the Hospital de Cruces (Spain) and followed up for two years as outpatients. Positive and negative symptoms, depression, mania, duration of untreated psychosis (DUP), premorbid functioning, functional outcome and neurocognition were assessed every 6 months over a 2 year period. Results: At baseline, 5.8% of the patients were diagnosed as having schizophrenia (vs 33.80% at follow-up), 30.2% with schizophreniform disorder (vs 18.3% at follow-up), 32.6% with brief psychotic disorder (vs 15.5% at follow-up), 22.1% with bipolar disorder with psychotic features (vs 23.95% at follow-up), 4.7% with delusional disorder (vs 2.8% at follow-up), 2.3% with drug-induced psychosis (vs 1.4% at follow-up), and 2.3% with mayor depressive disorder, severe, with psychotic features (vs 0% at follow-up). Additionally, at the two-year follow-up, 2.8% of the patients were diagnosed as having schizoaffective disorder and 1.4% with non-specified psychosis. The data indicate that the initial diagnosis was sustained in 48.7% of the patients. Seventy-one of the initial 86 patients completed the follow-up evaluation, resulting in a retention rate of 82.6%. Logistic regression models revealed that performance at the Wisconsin Card Sorting Test correctly distinguished the patients ultimately diagnosed with schizophrenia (87%) from those with bipolar disorder (80%) and those with other psychoses (85%), for an overall correct-diagnosis rate of 84.4%. The prediction was stable despite the inclusion of clinical and affective symptoms, DUP, clinical impression, and functional outcome scores in the analyzed model. Importance/Relevance:

Results highlight the importance of reconsidering neurocognition as a diagnostic criterion for psychosis and schizophrenia.

NR06-56

ANTIBODIES TO TOXOPLASMA GONDII AND CHLAMYDIA PNEUMONIAE, CHLAMYDIA TRACHOMATIS IN INDIVIDUALS WITH SCHIZOPHRENIA

Chp.:Se-Hoon Shim M.D., Bongmyoung-dong, Chonan, 330-721 Korea, Co-Author(s): Hee-Yeon Jung,MD,Ph.D., Young-Joon Kwon,MD,Ph.D., Mi-Hee Park,MD., Se-Hoon Shim, MD,Ph.D., Hee-sung Hwang,MD.

SUMMARY:
Objective: To compare the prevalence of Toxoplasma gondii, Chlamydia pneumoniae and Chlamydia trachomatis infection between the schizophrenia and the controls and to compare the clinical features between the Toxoplasma gondii, Chlamydia pneumoniae and Chlamydia trachomatis seronegative and seropositive patients with schizophrenia. Method: The rate of serum reactivity to Toxoplasma gondii, Chlamydia pneumoniae and Chlamydia trachomatis in 80 schizophrenia and 50 controls were investigated. Schizophrenia was diagnosed by experienced senior psychiatrist based on fourth edition, text revision of Diagnostic and Statistical manual of Mental disorders. Patients were hospitalized or received out-patient services at the department of psychiatry of Soonchunhyang hospital, Cheon-an. The normal controls included 50 healthy people who came to the hospital to receive routine health examinations, and did not have any physical or mental disorders according to the results of their laboratory examinations and a semi-structured psychiatric interview. Blood samples were obtained from the patients by means of venepuncture and serum samples were tested for IgG and IgM antibodies to Toxoplasma gondii, Chlamydia pneumoniae and Chlamydia trachomatis by Enzyme-Linked Immunosorbent Assay. The clinical symptoms of the schizophrenia patients were scored and compared with positive and negative syndrome scale. Results: The rate of IgG and IgM antibody of Toxoplasma gondii is 6.2%(5/80) and 2%(1/50), respectively. The rate of IgG and IgM antibody of Chlamydia pneumoniae is 40%(32/80) and 6%(3/50), respectively. The rate of IgG and IgM antibody of Chlamydia trachomatis is 17.5%(14/80) and 4%(2/50), respectively. The rate of IgG antibody, not IgM of Chlamydia pneumoniae and Chlamydia trachomatis in the schizophrenia patients, was higher than the control groups. The rate of IgG and IgM antibody of Toxoplasma gondii has no significant difference between schizophrenia and control group. The Chlamydia pneumoniae and Chlamydia trachomatis seropositive schizophrenia patients had higher scores on the positive subscale of Positive and Negative Symptoms Scale than the seronegative patients. Conclusions: This study lent further weight to the hypothesis that exposure to Chlamydia pneumonia and Chlamydia trachomatis may be a risk factor for schizophrenia.

NR06-57

EFFECT OF SHORT-TERM TREATMENT WITH LURASIDONE ON QUALITY OF LIFE IN SCHIZOPHRENIA: RESULTS FROM THE PEARL 3 TRIAL

Chp.:Robert Silva Ph.D., One Bridge Plaza, Fort Lee, NJ 07024, Co-Author(s): Josephine Cucchiaro, Ph.D., Jay Hsu, Ph.D., Andrew Sarkin, Ph.D., Cynthia Siu, Ph.D., Antony Loebel, M.D., Stephen R. Marder, M.D.

SUMMARY:
Background: The objective of this study was to evaluate the effect of lurasidone (80 mg/day and 160 mg/day) on quality of life in patients with an acute exacerbation of schizophrenia. Methods: Patients experiencing an acute exacerbation of schizophrenia were randomized to 6-weeks of double-blind treatment with once-daily lurasidone 80 mg (N=125) or 160 mg (N=121), quetiapine XR 600 mg (N=120; included for assay sensitivity) or placebo (N=122). The outcome measures included the Positive and Negative Symptoms of Schizophrenia Scale (PANSS) total and positive subscale scores, the Negative Symptom Assessment Scale score (NSA-16), and the Montgomery-Asberg Depression Rating Scale (MADRS). Quality of life was measured using the Quality of Well-being (QWB-SA) scale, which assessed community mobility, physical and social activity, somatic, cognitive, and emotional symptoms. QWB combines preference-weighted measures of symptoms and functioning to provide a numerical point in-time expression of well-being that ranges from zero (0) for death to 1.0 for asymptomatic optimum functioning. Results: At baseline, QWB-SA mean scores were similar for patients randomized to lurasidone 80 mg (0.572), lurasidone 160 mg (0.562), quetiapine XR (0.580), and placebo (0.583). At the Week 6 LOCF (last

observation carried forward) endpoint, LS mean QWB-SA scores in the lurasidone 80 mg group (0.672, p=0.049), the lurasidone 160 mg group (0.710; p<0.001), and the quetiapine XR group (0.711, p<0.001) were significantly superior to the placebo group scores (0.631). Endpoint improvement in the QWB-SA score for the lurasidone 80 mg, 160 mg and quetiapine XR groups was correlated with LOCF endpoint improvement in the PANSS total score (r=-0.176, p=0.068; r=-0.353, p<0.001; r=-0.348, p<0.001), the PANSS positive subscale score (r= -0.049, p=0.615; r= -0.280, p=0.004; and r=-0.294; p=0.003), the NSA-16 (r=-0.021, p=0.827; r=-0.200, p=0.046; r=-0.148, p=0.142) and the MADRS (r=-0.059, p=0.541; r=-0.433, p<0.001; r= -0.277, p=0.005), respectively.. In the placebo group, significant correlations were also observed between the endpoint change in the QWB-SA score and the endpoint change in the PANSS total (r=-0.387, p<0.001) and positive subscale scores (r=-0.386, p<0.001), the NSA-16 (r=-0.301, p=0.002), and the MADRS (r=-0.391, p<0.001). Conclusion: In this study, treatment with lurasidone, in once-daily doses of 80 mg and 160 mg, was associated with improvements in health-related quality of life in patients with an acute exacerbation of schizophrenia. While change in quality of life was similar across lurasidone dose groups, correlations between improvement in QWB-SA scores and schizophrenia symptoms were strongest in subjects treated with lurasidone 160 mg compared to the 80 mg dose group.

NR06-58

LONG-TERM SAFETY AND TOLERABILITY OF LURASIDONE IN PATIENTS WITH SCHIZOPHRENIA: RESULTS OF A 6-MONTH, OPEN-LABEL EXTENSION STUDY

Chp.:Stephen Stahl M.D., 1930 Palomar Point Way Ste 103, Carlsbad, CA 92008, Co-Author(s): Josephine Cucchiaro, Ph.D., Doreen Simonelli, Ph.D., Joseph Severs, M.S., Antony Loebel, M.D.

SUMMARY:
Objective: The aim of this study was to evaluate the safety and tolerability of lurasidone in the long-term treatment of schizophrenia, and to determine if improvement during the acute double-blind (DB) phase of treatment was maintained. Methods: Patients who successfully completed a 6-week, DB, placebo-controlled trial evaluating the efficacy of lurasidone 40 mg and 120 mg, and olanzapine 15 mg (included to confirm assay sensitivity), were eligible to continue in a 6-month open-label extension (OLE) phase in which patients received flexible doses of lurasidone (40, 80 or 120 mg/day). Safety and tolerability measures included adverse events (AEs), body weight, lipid parameters, and ECGs. Efficacy assessments included PANSS total score and CGI-S measures. Results: A total of 254 patients were enrolled in the open-label extension, of whom 246 received at least one postbaseline study assessment and were analyzed for safety and efficacy. The mean PANSS total score, for all patients continuing into the open-label phase, decreased from 96.6 at DB baseline to 66.6 at OLE baseline. Patients completing open-label treatment showed further improvement in the PANSS total score, with a mean score of 54.9 at the end of the extension phase. Improvement from open-label baseline to Month 8 was also observed for the PANSS positive subscore (-2.6), negative subscore (-2.5) and general psychopathology subscore (-3.6). The CGI-Severity score also continued to decrease (from 3.3 at OLE baseline to 2.7) at the end of open-label treatment. The modal dose of lurasidone was 80 mg (63%), followed by 120 mg (27%) and 40 mg (10%). Two AEs occurred with an incidence =10%: akathisia (13.0%) and insomnia (11.0%). At least one AE was rated as “severe” by 7.3% of patients; and a total of 13.0% of patients discontinued due to an AE during 6 months of treatment. There were no clinically meaningful changes in vital signs, or laboratory and ECG parameters; one patient (0.4%) reported >60 msec increase in QTcF; no patient had a QTcF interval >500 msec. There were also no clinically meaningful adverse changes, from OLE baseline to endpoint, in cholesterol (-7.1 mg/dL), LDL (-2.6 mg/dL), triglycerides (-18.3 mg/dL), insulin (-2.4 mU/L), or HbA1c (-0.06%). Among the subgroup of patients switched from DB olanzapine, OLE treatment with lurasidone was associated with a mean reduction of -3.0 kg in weight, a median reduction of -23.5 mg/dL in cholesterol, and -32.5 ng/dL in triglycerides. Discussion: Patients maintained improvement, as measured by the PANSS and CGI-S for up to 8 months of treatment with flexible doses of lurasidone in the range of 40-120 mg/day. No increases in weight, lipids, or glucose were observed over the 6.5 month extension period. Patients switched from olanzapine to lurasidone showed sustained and marked decreases in weight and lipids. Funded by Sunovion Pharmaceuticals, Inc

NR06-59
WITHDRAWN

NR06-60
META-ANALYSIS OF THE EFFICACY OF ASENAPINE FOR ACUTE SCHIZOPHRENIA: COMPARISONS WITH PLACEBO AND OTHER ATYPICAL ANTIPSYCHOTICS

Chp: Armin Szegedi, M.D, Ph.D. Co-Author(s): Pierre Verweij, PhD, Wilbert van Duijnhoven, MSc, Mary Mackle, PhD, Pilar Cazorla, PhD, Hein Fennema, PhD

SUMMARY:
Objective: Asenapine is an FDA-approved atypical antipsychotic (AAP) indicated in adults for treatment of schizophrenia. To characterize the efficacy of asenapine vs placebo in acute schizophrenia, data from all placebo-controlled 6-week trials were analyzed. To characterize the relative efficacy of asenapine vs other antipsychotics, all randomized head-to-head comparisons of asenapine to active controls from the same studies and published randomized head-to-head comparisons of AAPs in the treatment of schizophrenia were analyzed. Methods: The efficacy of asenapine versus placebo was analyzed using 4 placebo-controlled trials with treatment arms in the effective dosage range (5 or 10 mg asenapine twice daily). The primary efficacy outcome, Positive and Negative Syndrome Scale (PANSS) total score change from baseline to week 6, was assessed using last observation carried forward (LOCF) and mixed model for repeated measures (MMRM); PANSS responders were analyzed to illustrate clinical relevance. Network meta-analyses on head-to-head comparisons of AAPs (including those for which no direct comparisons are available) were conducted using a published database (Leucht et al, Am J Psychiatry 2009;166:152–166) that was updated with data from AAP-controlled asenapine trials. In the two-stage network meta-analysis, random-effects meta-analyses on PANSS total score changes were first performed for any pairwise AAP comparison; these results were then used to enter all comparisons on the PANSS change from baseline with associated variance into a weighted linear regression analysis providing maximum-likelihood–based estimates of the comparative efficacy of all AAPs. Results: PANSS total score change from baseline at week 6 was significantly greater for asenapine vs placebo (LOCF: –3.6 [95% CI: –5.8, –1.3], P=0.002; MMRM: –4.1 [95% CI: –6.6, –1.6], P=0.001), a treatment effect comparable to active controls from the same trials (LOCF: –4.0 [95% CI: –6.5, –1.5], P=0.002; MMRM: –4.8 [95% CI: –7.6, –2.0], P=0.001). PANSS responder rate analyses reported an odds ratio vs placebo of 1.9 for asenapine (95% CI: 1.4, 2.6; P<0.001) and a corresponding number needed to treat (NNT) of 10.2; this effect vs placebo was comparable to that of combined active controls from the same trials (odds ratio=1.7 [95% CI: 1.2, 2.4; P=0.002]; NNT=12.0). Head-to-head network meta-analysis reported comparable efficacy of asenapine vs other AAPs; PANSS differences for asenapine ranged from 3.9 points greater than ziprasidone (95% CI: 0.3, 7.4) to 2.9 points less than olanzapine (95% CI: –5.9, 0.1). Conclusion: These meta-analyses demonstrate the superiority of asenapine vs placebo for acute schizophrenia. The efficacy of asenapine was comparable to that of combined active controls from the same studies. The network meta-analysis suggests the efficacy of asenapine for acute schizophrenia is comparable to a group of established AAPs. (This research was supported by Merck, Whitehouse Station, NJ.)

NEW RESEARCH SESSION 07
May 16, 2011
10 – 11:30 AM
Hawaii Convention Center, Exhibit Hall, Level 1

NR07-01
THE ROLE OF HEALTH LITERACY AND PERCEIVED BEHAVIORAL CONTROL IN THE ADHERENCE OF PSYCHIATRIC PATIENTS TO OUTPATIENT APPOINTMENTS

Chp.:Aurelia Bizamcer M.D., 100 E. Lehigh Ave., Philadelphia, PA 19125, Co-Author(s): Kavita Jagarlamudi, M.D., Kenneth J. MacIntyre, D.O.

SUMMARY:
Introduction Health literacy (HL) measures the ability of an individual to use health-related information in order to make appropriate health-related decisions and to navigate the healthcare system. Research has shown that it influences medication adherence and the treatment outcome of conditions such as HIV and

diabetes. There is a paucity of data examining the relationship between HL and mental health care Hypothesis We hypothesized that patients with different health literacy levels would have different adherence to outpatient psychiatric appointments. We also tested a theoretical model for adherence to appointments grounded on the Theory of Planned Behavior (TPB) that integrates patients' normative and control beliefs and attitudes. Methods The study was conducted in the Outpatient Psychiatry Department (OPD) of Temple University School of Medicine in Philadelphia, Pennsylvania. All English- and Spanish-speaking patients of the OPD (potential N = 150) were invited to complete the short version of the Test of Functional Health Literacy in Adults. This yielded three HL groups: adequate, marginal and inadequate. We explored the demographic and clinical correlates of HL and compared the three literacy groups with respect to their adherence to appointments during a 12-month period. Thirty-eight patients also completed an adherence questionnaire that quantified theoretical variables based on TPB. A heuristic model was achieved by measuring the correlation between pairs of theoretical variables. Results We found that HL was not significantly related to any of the demographic and clinical variables included in our analysis except appointment adherence. The test of the theoretical frame for adherence yielded a number of significant correlations (at $p<0.5$) among TPB-based variables that pointed to Perceived Behavioral Control (PBC) and to HL as being the most important theoretical constructs related to adherence to appointments. PBC assesses the perceived degree of control exerted by external factors over one's behavior. PBC was negatively correlated to HL suggesting that patients with higher HL tend to attribute less control to external factors. HL was the only variable significantly correlated to both PBC and adherence. Conclusions Patients with lower HL have lower adherence to appointments. PBC plays an important connecting role between patients' expectations, attitudes and beliefs regarding adherence to appointments. HL may play a mediating role between PBC and actual adherence. Discussion These findings invite further research to explore the significance of HL and avenues for psychological interventions aimed at increasing adherence to treatment. A possible such psychotherapeutic intervention would focus on improving perceived behavioral control and on adapting the physician-patient communication to the health literacy level of the patient.

NR07-02

ADAS-COG ITEM AND SUBSCALE ANALYSIS: COMPARISON OF BASELINE IMPAIRMENT BETWEEN ALZHEIMER'S DISEASE AND PARKINSON'S DISEASE DEMENTIA PATIENTS

Chp.:Martin Farlow M.D., 541 Clinical Drive, Indianapolis, IN 46202, Co-Author(s): Dag Aarsland, M.D., Ph.D., Monique Somogyi, M.D., Xiangyi Meng, Ph.D.

SUMMARY:
Objective: Clinical trials have shown that treatment with the cholinesterase inhibitor rivastigmine is associated with significant improvements in cognition assessed using the Alzheimer's Disease Assessment Scale–cognitive subscale (ADAS-cog) in patients with mild-to-moderate Alzheimer's disease (AD) and Parkinson's disease dementia (PDD). Existing trial databases have provided a large amount of baseline ADAS-cog data, including individual item and symptom domain scores in each of these patient populations. This analysis investigated whether comparing baseline ADAS-cog total, symptom domain and individual item scores across the databases may reveal disease-specific patterns of cognitive impairment in patients with AD and PDD. Methods: This was a retrospective, post-hoc analysis of three randomized, double-blind, trial databases (ADENA [AD; rivastigmine capsule], IDEAL [AD; rivastigmine patch and capsule] and EXPRESS [PDD; rivastigmine capsule]). The ADAS-cog total, symptom domain and item scores at baseline were calculated and compared across patients included in IDEAL, ADENA and EXPRESS trial databases. Results: Total ADAS-cog, memory domain and memory item scores were higher at baseline in patients with AD compared with PDD (effect sizes = 0.09, 0.33, and 0.10–0.58, respectively). Whereas patients with PDD were notably more impaired at baseline than AD patients on the ADAS-cog language and praxis domains (effect sizes = 0.23 and 0.34), and all items that comprise these domains (based on a 0.10 effect-size threshold), except word

finding difficulty (effect size = 0.04). Conclusions: Comparative analyses of baseline impairments in the language, memory and praxis domains and the 11 items of ADAS-cog in AD and PDD patients revealed disease-specific patterns of impairment which highlight the value of these scales in the assessment of cognitive function for both disease states. Sponsor: The research reported here was supported by Novartis Pharmaceuticals Corporation.

NR07-03

RIVASTIGMINE TRANSDERMAL PATCH AND CAPSULE IN ALZHEIMER'S DISEASE: INFLUENCE OF DISEASE STAGE ON RESPONSE TO THERAPY

Chp.:Monique Somogyi M.D., One Health Plaza, East Hanover, NJ 7936, Co-Author(s): George T. Grossberg, M.D., Xiangyi Meng, Ph.D, Martin R. Farlow, M.D.

SUMMARY:
Objective: The cholinesterase inhibitor rivastigmine is approved for the symptomatic treatment of mild-to-moderate Alzheimer's disease (AD). This exploratory, hypothesis-forming analysis assessed response to rivastigmine according to severity of dementia at baseline. Methods: This was a retrospective analysis of a large, international, randomized, placebo-controlled trial (IDEAL, ENA713D2320). Community-based patients with AD were recruited from 100 centers across 21 countries. Patients treated with 9.5 mg/24 h rivastigmine patch, 17.4 mg/24 h rivastigmine patch, rivastigmine capsule (12 mg/day) or placebo were stratified according to baseline Mini-Mental State Examination (MMSE) scores: >7 to <12, >13 to <15, >16 to <18, or >19 to <25. Changes from baseline at Week 24 on AD Assessment Scale–cognitive subscale (ADAS-cog), AD Cooperative Study–Clinical Global Impression of Change (ADCS-CGIC) and AD Cooperative Study–Activities of Daily Living (ADCS-ADL) scale were assessed. Results: In summary, 141, 228, 333 and 348 patients were in the >7 to <12, >13 to <15, >16 to <18, and >19 to <25 baseline MMSE disease stage groups, respectively. Worsening of ADAS-cog, ADCS-CGIC and ADCS-ADL scores in patients receiving placebo was greater in patients with more severe dementia. Significant improvements versus placebo were seen with rivastigmine patch and/or capsule on ADAS-cog, ADCS-CGIC and ADCS-ADL scores in patients within baseline MMSE score groups: >7 to <12, >13 to <15, and >16 to <18 (all $p<0.05$). However, no significant improvements were seen in rivastigmine-treated patients in the least severe group (MMSE >19 to <25). Conclusions: Rivastigmine benefits patients with AD across dementia stages. Similar to previous cholinesterase inhibitor studies, the greatest treatment effects with rivastigmine patch and capsule were seen in patients with more advanced dementia, most likely driven by a greater decline in the placebo group. Sponsor: The research reported here was supported by Novartis Pharmaceuticals Corporation.

NR07-04

TREATMENT OF MAJOR DEPRESSION IN RESIDENTIAL SUBSTANCE ABUSE TREATMENT

Chp.:Katherine Watkins M.D., 1776 Main Street, Santa Monica, CA 90401, Co-Author(s): Sarah B. Hunter, Ph.D., Kimberly A. Hepner, Ph.D., Annie Zhou, M.S., Susan Paddock, Ph.D.

SUMMARY:
Objective: Depressive disorders are frequently complicated by co-occurring substance use and substance use disorders. The Building Recovery by Improving Goals, Habits and Thoughts (BRIGHT) study was a community-based effectiveness trial that compared the effectiveness of residential substance abuse treatment to residential treatment plus 16 sessions of a group cognitive behavioral therapy for depression. The intervention was designed to be feasible for use in residential public-sector substance abuse programs and to be delivered by typical substance abuse counselors. We report results for individuals who entered the study with a diagnosis of major depression. Methods: Using a quasi-experimental design and an intention-to-treat analysis, 135 ethnically diverse clients with major depression received either usual care (UC, N= 71) or usual care plus BRIGHT (CBT, N=64). Primary outcomes were change in depression symptoms, mental health functioning, and days of alcohol and substance use. Each outcome was modeled using mixed effects regression modeling. Results: At study entry, mean Beck Depression Inventory-II (BDI-II) scores were in the clinically severe range (mean 34.1; SD =8.8). One-hundred sixteen clients (85.9%) completed follow up surveys at 3- and 6-months. Intervention clients attended a mean of 9.8 CBT sessions (SD =5.7) and 63% attended at least half of the 16 CBT sessions. At the 3-month

follow-up, BRIGHT clients scored on average in the 'mild' range on the BDI-II (mean =17.1), while UC clients scored on average in the 'moderate' range (mean = 24.1). Symptoms continued to decrease in both conditions at the 6 month follow-up. At both 3- and 6-months, more BRIGHT clients had minimal symptoms, as compared to the UC group (3-months 56.6% vs. 23.8%; p<0.001; 6-months 64.9% vs. 40.7%, p<.0.001). The mean BDI-II score of BRIGHT clients was 34.1 at baseline and 13.5 at 6-months and UC client scores were 34.1 at baseline and 17.7 at 6-months, using the sample mean estimated from the model. Among the clients with days available, BRIGHT clients reported fewer drinking days at 6-months and fewer days of problem substance use compared to the UC clients. Conclusions: Providing group cognitive behavioral therapy for depression to clients with major depression receiving residential substance abuse treatment improves both depression and substance use outcomes. Our results provide support for a new model of integrated care, in which access to effective mental health care is increased and both mental health and substance use outcomes improved, by developing the capacity of the substance abuse treatment system to deliver evidence-based mental health care.

NR07-05

EXPECTANCY THERAPY FOR SMOKING CESSATION

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SUMMARY:
Objective: We developed a new treatment for smoking, Substance Expectations Therapy (SET) based on Social Learning Theory (SLT) approach. Expectancies can be reliably assessed, are modifiable and appear to effect treatment outcome. Recent empirically based substance abuse therapies have demonstrated some efficacy. In addition, it has been noted that some treatments may be poorly suited to particular sub-populations of smokers including those individuals with higher levels of craving, low levels of motivation, and a poor sense of self-efficacy. We compared SET to standard Cognitive Behavioral Therapy for Smoking Cessation (CBT).
Method: 40 smokers were randomly assigned to one of two 12-week, manualized interventions: Substance Expectations Therapy (SET) a new cognitive behavioral therapy designed to reduce dropout and improve outcomes, and Cognitive Behavior Therapy (CBT). Treatment retention and smoking during treatment were the major dependent variables used to explore treatment main effects. Pre hoc hypotheses were developed using three treatment matching variables: craving, motivation, and self-efficacy. Result: SET participants showed significantly less early dropout (6%), relative to CBT (34%), p<.01, and significantly greater treatment completion (94%) relative to CBT (32%), p<.01. Participants in SET had significantly lower breath carbon monoxide concentrations (Mean=11) than CBT participants (Mean=26) p<.01. Poorly motivated participants with lower self-efficacy receiving SET did better then those receiving CBT. Conclusion: (1) SET was particularly effective for individuals with higher levels of craving and lower levels of self-efficacy when compared to CBT.(2) SET was particularly effective for individuals with lower levels of motivation and higher cravings. (3) CBT and SET may be equally effective for participants high in self efficacy.

NR07-06

EQUINE AND CANINE-FACILITATED THERAPY AND VIOLENCE IN LONG TERM HOSPITALIZED PATIENTS

Chp.:Jeffry Nurenberg M.D., 59 Koch Rd, Morris Plains, NJ 07950, Co-Author(s): STEVEN SCHLEIFER, M.D., BERNADETTE MADARA, PSY.D., MARY YELLIN, OTR., PRITAL DESAI, M.D., THOMAS SHAFFER, B.A., AXEL ALLEN, B.A.

SUMMARY:
Animal assisted therapy is being used increasingly for patients with syndromes not responding adequately to traditional therapies (severe stress/anxiety reactions, interpersonal deficits, limited verbal skills, trauma, and violence). Some have suggested that larger animals, such as horses, may be more effective therapy enhancers for some patients than the more commonly employed smaller animals. We compared the feasibility and effectiveness of newly developed AAT protocols using equine (EFT) vs canine (CFT) facilitated weekly group therapy, including comparison with enhanced and standard hospital treatment groups at a 500 bed long term state psychiatric hospital in NJ. Methods:

103 patients signing informed consent, identified clinically as either at risk for violence or highly regressed (V/R), were assigned randomly to 1 of the 4 interventions (stratified by V/R), conducted by highly experienced licensed equine and canine therapists and animals (subject mean age 44.8 yrs, 38% female, 37% African American or Hispanic, 37% regressed, 61% affective/schizoaffective chart diagnoses; days hospitalized: mean1695/median 765). Psychological, behavioral, and functional measures, obtained primarily from clinical treatment teams and hospital data-bases at intake and at 3 months, were compared (GLM/SPSS). Results: Procedures were well tolerated by patients and staff. Groups did not differ in age, gender, length of hospitalization, or chart diagnosis. In initial analyses, an intervention-group effect (F 2.61; $p<0.06$), controlling V/R status, suggested that the EFT group alone reduced violence-related incidents during the 3 months following the intervention vs the 3 months preceding the study, with no differences for non-violent incidents (F 0.72, p ns). Multivariate analyses revealed interactions ($p<0.05$) suggesting larger effects for males and for patients with affective vs schizophrenic disorders. Staff-assessed Overt Aggression Scale items assessing assault against objects ($p<0.06$) and others ($p<0.02$) revealed similar EFT-related changes over 3 months, with diagnosis, V/R, and gender interactions ($p<0.02$). Clinical observations identified dramatic functional improvement with EFT in some highly regressed and violent patients. Conclusions: The findings suggest unique benefits for equine therapy compared with canine therapy and standard in-hospital treatment, with possible unique benefits for long term psychiatric patients at risk for violence.

NR07-07

COVERT PSYCHIATRIC MORBIDITIES AMONG NON-ADHERENT HYPERTENSIVE PATIENTS: NEEDS AND CHALLENGES

Chp.:Ram Jeevan Bishnoi D.P.M., Co-Author(s): Venu Gopal Jhanwar, MD

SUMMARY:
Background: Despite the availability of extensive and effective medications for hypertension, non-adherence to medication by patients is the principal obstacle in the treatment of hypertension. Identification of factors and their causal association with non- adherence will aid in improving the adherence and thus, the quality of life of the patients. The non-adherent patient population needs explicit evaluation for psychiatric morbidities for further understanding of non-adherence. Aim: This study attempts to evaluate the non-adherent hypertensive patients for presence of non-identified psychiatric morbidities and their association with non-adherence to treatments. Method: Consecutive patients attending the cardiology clinic at our affiliated hospital were assessed for adherence to medications prescribed for hypertension and who were not diagnosed or treated for any psychiatric illness. The non-adherent patients were then evaluated for psychiatric morbidity using SCID-I Research Version for DSM disorders. Results: Of the 46 patients identified for this study, 18 (39.1%) had satisfied the DSM-IV-TR criteria for psychiatric disorders. None of them were referred for psychiatric consultation as the symptoms were of internalizing disorders and patients never reported them to physician and the family members. Of the 18 diagnoses, Anxiety disorders (55.55%) were the most common diagnosis followed by depression (22.22%), dementia (11.11%) and others (11.11%). Conclusion: Non-adherent patient population harbors significant numbers of psychiatric disorders but due to their nature, most of them go undetected. They need to be managed but identification is the challenge. The study needs to be replicated.

NR07-08

THE EVOLUTION OF ASSERTIVE COMMUNITY TREATMENT IN HAWAII: ADDRESSING MEDICAL MORBIDITIES AMONG THE SEVERELY MENTALLY ILL

Chp.:Richard Chung M.D., 818 Keeaumoku Street, Honolulu, HI 96814, Co-Author(s): Deborah Juarez, Sc.D., Kenneth Luke, M.D., Jerome Vaccaro, M.D., Geri Marullo, MSN, DrPH

SUMMARY:
Objective: According to a Center for Health Care Strategies (CHCS) 2009 report, Medicaid beneficiaries with Serious Mental Illness (SMI) are more likely to have three or more chronic medical conditions than those without diagnosed mental illness. Hawaii Medical Service Association (HMSA) found that major depression was associated with a two-fold or greater rate of transition to heart disease in their population (Davis et al., 2006).

Furthermore, three out of five individuals with SMI die from preventable diseases due to deficiencies in the management of their chronic diseases (Parks, J. et al, 2006). Assertive Community Treatment (ACT) programs have shown reductions in hospital readmissions and use of emergency services, as well as improvement in global functioning and clinical psychiatric symptoms (Scott & Dixon, 1995; Lehman, et al., 1999). Yet, the impact on medical co-morbidities hasn't been as fully explored. The HMSA, which has offered a long-standing ACT program managed by APS Healthcare, was interested in studying the financial and clinical impact of medical co-morbidities and how a new approach to ACT could best serve the complex medical and psychiatric needs of highest risk members with SMI. Method: The initial analysis was performed on all medical, behavioral and pharmacy claims paid between 10/01/09 - 9/30/10 for 110,839 members continuously enrolled in HMSA's Quest Medicaid plan. The average age was 22; 48% were adults; 62% of adults were female. It is estimated that 2-3% of this group had an SMI, but amongst a group of highest risk, highest cost members, 34% had an SMI. Results: This retrospective analysis demonstrated that a disproportionate number (6.6%) of members were responsible for the lion's share of total costs (53%), four times the ER visits, and over 34 times higher inpatient admissions than the remaining group. Members in this highest cost segment had an average of 3.2 chronic conditions; more than one-third had at least one SMI diagnosis and a medical co-morbidity. Low back pain, cardiovascular disease and diabetes were the most common co-morbidities within the high-cost SMI group. The per member, per month cost of preventable inpatient care was 25 times greater than the general health plan population. On average, this group visited 16 providers (compared to 5) and filled an average of 37 prescriptions during the year (compared to 6). Conclusions: This initial analysis highlighted opportunities to better coordinate behavioral health and medical care for Quest plan members with SMI. These findings prompted HMSA and APS to evolve their existing ACT program in the fall of 2010 instead focusing on establishing effective Patient-Centered Medical Homes (PCMH) and encouraging members' to appropriately use their PCMHs. Preliminary results of the impact on utilization and clinical measures of program members will be available in April to share at the APA meeting. The research was supported by APS Healthcare.

NR07-09

POST DISCONTINUATION PATTERNS OF ATYPICAL ANTIPSYCHOTIC TREATMENT AMONG ADULTS WITH SCHIZOPHRENIA OR BIPOLAR I DISORDER

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SUMMARY:
Background: Atypical antipsychotics (AA) are generally first line treatments for schizophrenia (SZ) and are increasingly prominent in the treatment of bipolar I disorder (BD). Long-term treatment is generally recommended for the maintenance of these disorders; however, poor adherence to AA treatment, including discontinuation, is common and may be associated with poor outcomes. Objective: To evaluate post discontinuation patterns in contemporary cohorts of insured adults with SZ or BD treated with AA in the United States.Method: Adults aged 18 years or older with a diagnosis of either SZ or BD (based on ICD-9-CM) and evidence of =1 oral AA prescription were identified from 3 Thomson Reuters MarketScan Research databases (Commercial, Medicare, Medicaid). All participants had =24 months enrollment in the database, including 12 months preceding (baseline period) and 12 months following (observation period) the first (index) AA claim. The current analyses focus on new users (i.e., patients with no claims for AA during the baseline period) who discontinued their index AA during the observation period. Discontinuation was defined as =30 days without a prescription for the index AA and no evidence of either switch or augmentation. Post discontinuation patterns explored for patients who restarted therapy included the type of therapy initiated (restarting index AA, index AA in combination with another antipsychotic, another AA or typical antipsychotic [TA], etc.) and time to restarting treatment. Results: There were 31,484 new AA users (46.6% [n=14,677] with a SZ diagnosis and 53.4% [n=16,807] with a BD diagnosis). Overall, 54.6% of patients with SZ discontinued the index AA. Many who discontinued (60.8%) did not restart any antipsychotic therapy; 18.3% restarted only the index AA, while others restarted on a combination of AA and/or TA, either with (10.1%) or without (2.9%) the index AA. Few patients (5.5%) restarted another AA and only 2.4% restarted a TA. In the

63.4% of BD patients who discontinued their index AA, the majority (69.5%) did not restart any antipsychotic therapy; 18.8% of patients restarted their index AA; 7.6% restarted a different AA. However, few BD patients restarted polytherapy (with [3.5%] or without [0.3%] the index AA) or a TA (0.3%). For both SZ and BD, mean time to restarting antipsychotic treatment was approximately 3–6 months, depending on treatment type (restarting index AA, polytherapy, etc.).
Conclusions: Despite the chronic nature of both SZ and BD and the need for long-term maintenance treatment, many patients with a prescription for an AA discontinued treatment and did not restart antipsychotic therapy during the 12 month observational period. Our findings highlight the need to better understand the reasons for treatment discontinuation and suggest room for improvement in the management of patients with SZ and BD.
Sponsored by Merck& Co, Inc.

NR07-10
TRAJECTORY ANALYSIS OF HEALTHCARE COSTS FOR PATIENTS WITH MAJOR DEPRESSIVE DISORDER TREATED WITH HIGH DOSES OF DULOXETINE

Chp.:Douglas E. Faries Ph.D., Lilly Corporate Center, Indianapolis, IN 46285, Co-Author(s): Zhanglin Cui, Ph.D., Yang Zhao, Ph.D., Liyuan Niu, Ph.D., Diego Novick, M.D., Xianchen Liu, Ph.D.

SUMMARY:
Objective: To examine healthcare cost patterns prior to and following duloxetine initiation in patients with major depressive disorder (MDD), with a focus on patients whose prescribed doses were initially high or titrated to high levels. Method: This was a retrospective analysis of 10,987 patients ages 18 to 64 years treated in a real-world clinical setting and enrolled in health insurance for the 6 months preceding and 12 months following initiation of duloxetine. Repeated measures and pre-post analyses were used to examine longitudinal healthcare cost trajectories before and after initiation of low- (<60 mg/day), standard- (60 mg/day), and high- (>60 mg/day) dose duloxetine, as well as before and after treatment was titrated to high dose levels. Classification and regression tree analysis was used to identify factors influencing patient heterogeneity in cost outcomes for patients whose doses were increased to >60 mg/day. Results: Low, standard, and high doses of duloxetine were initiated for 29.6%, 60.9%, and 9.5% of patients, respectively, with 27.5% using high-dose therapy for at least 2 consecutive months. Regardless of dose, total costs increased in the months leading up to and decreased in the months following initiation of treatment. Patients whose dose was initially >60 mg/day had higher costs both prior to and throughout the course of treatment as compared to patients treated with standard-dose duloxetine. For patients whose dose was increased to >60 mg/day (n = 1476), costs were higher for medication but lower for inpatient services, resulting in total cost neutrality. Titration to high-dose therapy was cost-beneficial for the 47% of patients with a history of mental disorders and high prior medical costs. Conclusion: Patients with MDD had cost increases leading up to and cost declines following initiation of duloxetine therapy. Patients treated with >60 mg/day had higher healthcare costs both prior to and following initiation compared to those treated with =60 mg/day, consistent with previous work showing these patients are more complex, both medically and psychiatrically. Increases in pharmacy costs associated with escalation to high-dose therapy were offset by reduced inpatient costs. A cost benefit was realized by nearly half of those patients whose dose was increased to >60 mg/day. Funded by Eli Lilly and Company

NR07-11
WITHDRAWN

NR07-12
UNDERSTANDING BARRIERS TO METABOLIC SCREENING FOR PEOPLE WITH SEVERE MENTAL ILLNESS: A SURVEY OF PRIMARY CARE PROVIDERS IN SAN FRANCISCO

Chp.:Aishat Giwa B.A., 1001 Potrero Ave, San Francsico, CA 94110, Co-Author(s): Martha Shumway, Ph.D., Elena Fuentes-Afflick, M.D., Dean Schillinger, M.D., Eliseo Perez-Stable, M.D., James Dilley, M.D., Christina Mangurian, M.D.

SUMMARY:
Background: People with severe mental illnesses (SMI) die, on average, 25 years earlier than the general population. Similar to the general population, cardiovascular disease is the primary cause of death among this population (Colton et al., 2006). It has been shown that the antipsychotic

medications used to treat this population result in metabolic abnormalities that may lead to increased rates of cardiovascular disease (Newcomer 2005). In 2004 the American Psychiatric Association, in collaboration with the American Diabetes Association, published national guidelines with recommendations for how best to screen this population (ADA/APA 2004). Unfortunately, nearly seven years later, the screening rates remain low. To our knowledge there have been no studies of the primary care provider's view on the barriers to care for this vulnerable population. Objectives: 1) Evaluate the primary care providers' attitudes about the barriers to metabolic screening for people with severe mental illness. 2) Assess primary care providers' beliefs about the role both they and psychiatrists play in the metabolic screening of this population. Methods: Study Design: Descriptive Survey Study Subjects: Primary Care Providers who treat adults with schizophrenia and other SMI within the San Francisco County. Procedure: An anonymous 19-item survey, developed largely from previously validated surveys, will be administered to primary care providers working in San Francisco County community health clinics (to be collected November/December 2010).Data analysis: Most of the data will be presented as descriptive statistics. Common trends will be identified in primary care providers' beliefs about their roles in, and barriers to, metabolic screening for this population. We will compare responses from clinicians working for the San Francisco County Department of Public Health (N=199) to those working for a non-profit organization, San Francisco County Community Consortium (N=81) by using t-tests for continuous variables and chi-square tests for categorical variables. Results: Final results are pending, but primary barriers are hypothesized to include challenges associated with communication with psychiatrists, limited staff time, and severity of mental illness.

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NR07-13

NON-RESPONDERS EXPLAIN PROLONGED LENGTH OF STAY FOR ACUTE PSYCHIATRIC ADMISSIONS

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SUMMARY:
Objective: Hospital services face formidable challenges to reduce costs while maintaining quality care. Hospital administrations exert effort to reduce length of stay (LOS). This study sought to identify LOS related factors in an urban academic medical center psychiatric unit. Medical comorbidity, substance use and involuntary status are linked to increase in LOS but no recent study has examined effects of treatment failure or non-response. We hypothesized that failure to respond may account for substantial variance in LOS and sought to compare this with well-established predictors. Methods: Data were obtained by chart review of consecutive admissions at University Hospital from July through October of 2009 (N=389). The unit has 12 beds for involuntary admissions (civil commitment)subject to judicial review no later than 20 days after admission. Overall mean LOS was 11.3 days during the study period compared to an expected LOS of 9.5 days (University Hospitals Consortium). The following factors were examined: demographics; administrative (arrival method, commitment status, in hospital transfers); psychiatric; medical comorbidity; medication-related (number and class of prescribed drugs); and disposition status, community or long term care (LTC). Significant predictors of LOS were included in a forced entry hierarchical regression model. Strength of association (effect size) of each predictor was defined as the percentage of explained variance in LOS (change in R2). Results: At discharge 60% had a psychotic disorder. Nearly 34% had mood disorders while 34% had multiple Axis I diagnoses. Less than half were female (41%); 69% were African American. We identified reliable

predictors of LOS in each domain including age>60, presence of psychotic disorder, comorbid substance use, hypertension, involuntary status, and method of arrival, but no single factor explained more than 5% of the variance with the exception of treatment response (unadjusted R2=0.27; p<0.01). When grouped by domain and entered in the following fixed sequence, administrative factors explained 8.7% of the variance in LOS, psychiatric diagnosis, 3.1%, comorbid substance use, 9%, and medication-related factors, 7.5%. After controlling for these factors, treatment response (community discharge versus LTC) uniquely explained 27.6% of the total variance. Discussion: Psychiatric patients requiring continued commitment account for more variance in LOS than administrative, psychiatric or medical factors. Despite improved medications and a multidisciplinary team approach, a substantial proportion of inpatients cannot be safely discharged after an acute hospital stay (~3 weeks). This fact should inform decision making by hospital administrators and insurance adjusters who may have unrealistic expectations about LOS. Better pharmacologic treatments coupled with more intense and innovative outpatient support mechanisms may help reduce inpatient stays and costs.

NR07-14

THE DEVELOPMENT AND IMPLEMENTATION OF A PSYCHIATRIC PRACTICE-BASED RESEARCH NETWORK: INITIAL RESULTS

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SUMMARY:
Objective: To describe the formation and implementation of the South Texas Psychiatric Practice Based Research Network (PBRN) and the results of its initial efforts. Method: Funded by the Clinical Translational Science Award (CTSA), The Institute for Integration of Medicine and Science at the University of Texas Health Science Center San Antonio (IIMS-UTHSCSA) proposed developing a specialty PBRN as part of its community engagement component. After several meetings and discussions between IIMS staff and community psychiatrists, the eight psychiatrists at the initial network meeting decided on conducting a simple card study to examine the occurrence of a "negative reaction" to patients in daily practice in order to gauge network member commitment and network functionality. During four consecutive weeks, 11 Psychiatrists chose one day a week to fill out a study card that documented setting, primary diagnosis and if they had a negative reaction to their patient. Cards were filled out immediately following the visit and cards were filled out regardless of negative reaction to the patient. Results: Data on 501 patients at the 11 sites was collected. The sites turned in an average of 46 per site, with a range of 13 to 89. The most frequent primary diagnosis reported was depression (40.9%), followed by the "other" category (19.8%). The most frequently reported diagnoses in the "other" category were ADD/ADHD (30%) and alcohol drug dependence/abuse (19.2). Of the 501 cards collected, 48 (9.5%) reported a "negative reaction" to a patient. Among the patients eliciting a negative reaction the most common primary diagnosis was bipolar disorder (35.4%); depression (22.9%) was second. The most common diagnosis from the "other" category that elicited a negative reaction was alcohol and drug problems (28.6%). Conclusions: This initial small study was conducted to see if a network of busy community psychiatrists working in different clinical sites could successfully carry out a planned and coordinated study to assess "functionality" of the network. The results indicate that it was successful. Eleven participants completed the data card and had very few complaints about undue burden, albeit the study was simple and gathered a small amount of data. The second outcome of this project was the quantification of the rate of "negative reactions" to some of their patients by a group of psychiatrists. This is the first time, to our knowledge, that such a rate (9.5%) has been reported. The study reported here is the first to determine a rate of negative reactions in a variety of diagnostic groups in real life practices. In conclusion, the results of this project demonstrate the feasibility of using PBRNs in psychiatric practice to study clinical problems of interest to network members and to our field. Funding Source: NIH/NCRR Grant#U54 RR024387-01A1

NR07-15

RELATIONSHIP OF PARENTAL MILITARY DEPLOYMENT TO CHILD PSYCHIATRIC HOSPITALIZATIONS IN THE US ARMED FORCES

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SUMMARY:
Background: Members of the US armed forces have been heavily deployed in support of wars in Afghanistan and Iraq. The stress from deployments to war extends to military children through several mechanisms including loss of a parent for extended periods of time and uncertainty for the parent's safety. Objective: Determine the effect of parental military deployment in support of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) on the rates of psychiatric hospitalization in children aged 9 to 17 years. Methods: This was a retrospective cohort study. Records of children of active duty personnel during fiscal years 2008 and 2009 were linked with their parent's deployment records. Psychiatric hospitalizations were identified using ICD-10 codes. Odds ratios (OR) of a hospitalization were determined using logistic regression. Potential modifying effects of various independent variables were tested using logistic regression. Results:A total of 410,746 children aged 9 to 17 years were included along with data on their active duty parent. Mean child age was 12 years (SD: 2.5 years); 50.8% were male. Mean age of active duty parent was 37.6 years (SD: 5.2 years); 91% were male, 90% were married, 60% were white. 2,289 children in the study were hospitalized for a mental or behavioral health disorder in fiscal year 2008 and 2,770 children were hospitalized in fiscal year 2009 with an average length of stay of 27 days (SD: 47 days). 32% of the children had a parent who deployed in support of OIF and OEF during the period of study. The average cumulative length of deployment was 296 days (SD: 136 days). The OR of hospitalization for children with a deployed parent compared with an active duty parent who did not deploy was 1.12 (95% CI: 1.04-1.22; P =0.0036). The OR remained significant after adjusting for a history of prior hospitalizations (P=0.0291) or any significant prior mental health history (P = 0.0366). The OR of hospitalization among children with parents who deployed less than 180 days compared with children whose parents did not deploy was 1.095, although this was not statistically significant (P=0.2122). The OR of hospitalization among children with parents who deployed greater than 180 days was 1.132 (CI 1.039, 1.234 (P=0.0044)). A test of trend was statistically significant (P=0.0035). The risk of psychiatric hospitalization if a parent deploys increased if a child was male (OR 1.16 (P=0.0075)), the active duty parent was male (OR 1.15 (P=0.0007)), the active duty parent was Caucasian (OR 1.16 (OR (0.0022)), the active duty parent was married (OR 1.182 (P<0.0001)) or the child changed residences in the past year (OR 1.24 (P=0.0057)). The OR of hospitalization for mental or behavioral health disorders if a parent deploys is reduced if the active duty parent is single (OR 0.723 (P=0.0142)). Conclusion:The odds of psychiatric hospitalization increased by 12% among children age 9 to 17 years when a military parent was deployed. The odds of hospitalization increased with increasing length of a parent's deployment. The odds increased among children who were male or moved in the last year and children whose active duty parents were Caucasian, married or male. The odds were reduced among children with single, active duty parents.

NR07-16

COLLABORATIVE CARE FOR IMPROVING THE MANAGEMENT OF DEPRESSION - A SYSTEMATIC REVIEW AND META-ANALYSIS

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SUMMARY:
BackgroundCollaborative Care models have developed from the Chronic Care Model over the last twenty years to improve the quality of depression management. Collaborative Care is a multicomponent, healthcare system-level intervention that uses case managers to link primary care providers, patients, and mental health specialists. In addition to case management support, primary care providers receive consultation and decision support from mental health specialists (i.e.,

psychiatrists, psychologists). This collaboration is designed to 1) improve the routine screening for and diagnosis of depressive disorders; 2) increase provider use of evidence-based protocols for the proactive management of diagnosed depressive disorders; and 3) improve clinical and community support for active client/patient engagement in treatment goal setting and self-management. ObjectiveTo examine the effectiveness of Collaborative Care models in improving the management of depression via a systematic review of the literature and a meta-analysis for several depression-related outcomes. MethodsAn earlier review (Bower et al. 2006) with 37 RCTs of Collaborative Care studies was identified. This body of evidence was updated with a systematic review and a meta-analysis of Collaborative Care studies from 2004 to 2009. This systematic review of the literature and meta-analysis was conceptualized and conducted by a team of subject matter experts in mental health representing various agencies and institutions. This team worked under the guidance of the Task Force on Community Preventive Services, a non-federal, independent, volunteer body of public health and prevention experts. Methods developed at the Guide to Community Preventive Services (Community Guide) of the CDC were employed to identify, evaluate and analyze the evidence available. Results We found 32 studies of Collaborative Care models between 2004 and 2009. The results from the metaanalyses suggest robust evidence of effectiveness of Collaborative Care in improving depression symptoms [Standardized Mean Difference (SMD)=0.34], adherence to treatment [Odds Ratio(OR)=2.22)], response to treatment [OR=1.78], remission of symptoms [OR=1.74], recovery [OR=1.75], quality of life/ functional status [SMD=0.12] and satisfaction with care [SMD=0.39] for patients diagnosed with depression (all effect estimates were statistically significant). Conclusion Based on Community Guide rules of evidence, there is strong evidence that collaborative care models are effective in improving depression symptoms, adherence to treatment, response, remission, recovery, quality of life/functional status, and satisfaction with care for depressed patients. Collaborative care models seem to be applicable to a wide-range of populations and settings and organizations that implement them.

NR07-17

SYSTEMATIC APPROACHES TO FIREARMS IN MENTAL HEALTH SETTINGS (SAF-MH): ACCEPTABILITY AND FEASIBILITY

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SUMMARY:
Objectives: 52% of all suicides in the US are completed with firearms. Interventions to delay access to guns have the potential to meaningfully reduce suicide, particularly among individuals who are already at higher risk for suicide due to mental health conditions. However, little is known about the feasibility and acceptability of strategies that directly target gun-related risks among patients in mental health treatment settings. We used qualitative methods to better understand patient, family, clinician, and other stakeholders' perceptions and ideas regarding gun accessibility, safety, and interventions to voluntarily increase safety for patients in a treatment setting. Methods: We conducted, recorded and transcribed 11 focus groups: four with patients receiving mental heath treatment, three with mental health clinicians, three with family members of mental health patients, and one with members of local mental health advocacy groups. An interdisciplinary team of investigators conducted a thematic analysis of focus group transcripts, developing codes from the data, creating summaries for each code, and producing findings through a team consensus process. Results: Findings centered around screening for gun access, family involvement in delaying access, and gun-specific interventions. Although many patients have access to guns, both clinicians and patients noted the lack of systematic screening for gun access. Clinicians and patients indicated that the topic of gun access was usually broached only during suicide risk assessments. Both groups expressed mixed sentiments about the utility and feasibility of systematic screening, citing concerns about the reliability and validity of the information gathered during screening. Clinicians discussed several barriers to addressing gun access with patients, such

as the impact on the therapeutic alliance, personal feelings about gun ownership, and not being trained to ask about gun access. Most participants supported the involvement of family in safely securing firearms during high risk periods. However, both patients and clinicians noted that family involvement is not always feasible. Across groups, education on the warning signs of mental illness, suicide, and gun safety for family members and friends of mental health patients was seen as a positive intervention. The majority of participants supported offering subsidized or free gun locks. Off-site storage of keys to gun locks was spontaneously mentioned in several groups. Conclusion: Patients, clinicians, and family members were highly amenable to discussions of firearms as part of the clinical care process. Education of patients, family members, and clinicians was universally supported. Participants were also willing to consider more intensive measures during high risk periods as long as these interventions were systematically applied and perceived as judicious. This work was funded by the American Foundation for Suicide Prevention.

NR07-18

OBSTACLES TO DIAGNOSIS AND TREATMENT OF DEPRESSION IN THE PRIMARY CARE IN THE CZECH REPUBLIC

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SUMMARY:
Background: Depression places a huge emotional and physical burden on patients and their families. It is therefore essential to put more effort in order to recognize depression early and to start appropriate treatment. Despite several interventions undertaken in Czech Republic to raise awareness on this subject in the primary care physicians community, who are the initial health care contact for most patients, care for depression seems to be still suboptimal. Financial burden connected with late recognition and delayed terapeutical interventions are widely discussed. Objective: In an effort to better understand the obstacles in the early detection and treatment of persons with depression we decided to undertake a survey. Methods: A 17-item questionnaire, based on the Williams questionnaire on barriers to care was prepared. The questions were grouped into three domains; physicians, organizational and patient barriers. The questionnaire was distributed to the primary care physicians at their Czech national congress for two consecutive days. In an effort to increase the response rate, a small non-monetary incentives (chocolate) were given for the completion of the questionnaire. Results: Out of 175 primary care physicians registered at the congress 137 (78%) took part in the survey . The majority of the physicians were women (82%) with an average experience of 18 years. Most of the physicians reported a high patient volume, some even up to 300 patients per week (152 weeks on average). Physicians were more confident in recognition and treatment of the depression with medication than with counseling. Barriers to care on the physicians side were reported less frequently (incomplete knowledge of diagnostic criteria 4.4%, lack of effective treatments 9.5% and incomplete knowledge of treatment for depression 12.4%) than organizational barriers (mental health professionals not affordable 17.5%, appointment time too short for an adequate history 31.4% and inadequate time to provide counseling/education 35.1%). As the biggest obstacles physicians reported patient barriers (patient concern about medication side effects 31.4%, medical problems were more pressing 33.6% and symptoms may be explained by other medical illness 42.3%). Conclusions: Primary care physicians have unique position as the gatekeepers in the health system. Based on the reports obtained we report that primary care physicians do percieve as the most crucial barriers in recognition and management of depression, those on the patients side. Not surprisingly due to high patient volume organizational barriers do also present a major issue which needs to be addressed by responsible authorities. Physicians feel quite confident in their responsibilities, although they report better skills with the use of medication in the treatment of depression than with counseling. Stigmatization of mentaly ill persons plays according to our results still an important role in the early detection of depression.

NR07-19

SOCIODEMOGRAPHIC AND DIAGNOSTIC CHARACTERIZATION OF ECT UTILIZATION IN HAWAI'I

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SUMMARY:
Objective: Electroconvulsive therapy (ECT) has been proven as a safe and effective intervention modality for treatment resistant depression, where all medication trials have failed to achieve remission. Although ECT is available in Hawai'i, there is little data on its use and the sociodemographic and diagnostic variables which describe the current patient population which utilizes ECT in a diverse island state. It is posited that better characterization of ECT utilization may provide an opportunity for subpopulations in Hawai'i that may benefit from the treatment modality but have historically underutilized ECT. Method: This study examined sociodemographic and diagnostic variables from retrospective ECT utilization data from two sources: 1) statewide adult (18 and older) inpatient database of ECT procedures performed (n=86,610) from January 1999 to June 2010; and 2) inpatient and outpatient database of 280 ECT patients (based on unique MRNs) from January 2008 to March 2010 at a large tertiary community hospital on Oahu, Hawaii. Results: Statewide inpatient ECT procedures performed in the last decade show steady increase from 1999 to 2010. Consistent with statewide data, records of inpatient and outpatient unique patients at the primary ECT service in Hawai'i also appear to demonstrate a trend for increase in utilization from 2008 to 2009, with a continuing increase in 2010 projected from 1st quarter records. Examination of sociodemographic characteristics for patient population show more females (59%) than males (41%) receiving ECT procedures, and Japanese (36%) and Caucasian (34%) ethnic groups with the highest rates of utilization. Among age groups, the majority of utilizers were between 40 – 60 years of age (57%), followed by adolescents/adults ages 17 – 39 (23%), and elderly 70 years or older (20%). Based on diagnostic categories, major depressive disorders with psychotic features (68%) have the highest indication for ECT, followed by bipolar (13%) and schizoaffective (11%) disorders.
Conclusions: There has been a steady increase in rates of utilization of ECT in Hawai'i. ECT utilization by gender is consistent with lifetime prevalence of depression being more common in females compared to males. ECT is also likely underutilized by groups such as the geriatric population which may benefit most from the treatment. Other related factors must be further explored in examining the differences in utilization of ECT by different ethnic groups. ECT may be effective for other diagnostic populations with bipolar and schizoaffective disorders in addition to the predominant group of patients with major depression with psychoses.

NR07-20

CORRELATES OF OPIOID INITIATION AND OF LONG-TERM USE AMONG VETERANS WITH CHRONIC PAIN

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SUMMARY:
OBJECTIVES: Little is known about the correlates of initiation of prescription opioids or of initiation of chronic opioid therapy (COT), particularly among veterans. We sought to identify factors associated with opioid initiation and COT among veterans with chronic non-cancer pain. METHODS: Using VA administrative data, we identified 5,961 veterans from VISN 20 who had 3 or more NRS pain intensity scores >=4 within a 12 month period, the last score (index date) occurring in 2008, and who had not been prescribed opioids in the prior 12 months. We collected information for the 12 months following index dates. Multivariate regression was used to compare veterans not prescribed opioids over the study year to those prescribed any opioid, and to those prescribed COT (>90 consecutive days). RESULTS: During the study year, 34% of the sample received one or more opioid prescriptions, and 5% received COT. Veterans prescribed COT were younger, had greater pain intensity scores, and greater global illness severity compared to veterans not prescribed opioids or prescribed opioids <90 days. Significant differences were noted among groups in rates of comorbid psychiatric and substance use disorders (SUDs), with patients prescribed COT having the highest rates. Of patients prescribed COT, 29% were prescribed long-acting opioids, 29% were administered one or more urine drug screens, and 24% were prescribed benzodiazepines. In multivariate models, adjusting for age, sex, and baseline pain scores, major depression (OR 1.24 [1.10-1.39]; 1.48 [1.14-1.93]), nicotine dependence (OR 1.34 [1.17-1.53]; 2.02

[1.53-2.67], and SUD (OR 1.13 [0.96-1.32]; 1.42 [1.04-1.95) were associated with receiving any opioid prescription and with receiving COT, respectively. CONCLUSIONS: Initiation of opioids among veterans with chronic pain is common; however, most do not take them long-term. Psychiatric disorders including SUDs and nicotine dependence predicted initiation and continuation of opioid treatment in this veteran patient population. Many veterans prescribed COT do not receive guideline recommended care, including long-acting formulations and urine drug screening; many receive concurrent prescriptions for benzodiazepines. More research is needed about outcomes of opioid initiations as well as how providers make decisions to initiate and continue opioids.

NR07-21

A CORRELATIVE STUDY ON THE PSYCHOSOCIAL DISTRESS STATUS AND THE PHYSICAL PERFORMANCE OF INDIVIDUALS WITH COPD AND CHRONIC PAIN: CASE SERIES

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SUMMARY:
PSYCHOSOCIAL DISTRESS due to pain-related impairment (PRI) represents a significant clinical problem in about one-third of COPD patients. To minimize potential extra-pulmonary complications due to pain-related impairments, optimizing management of chronic lung disease and improving psychosocial distress status may necessitate adequate pain control with psychotherapy in these patients. The objectives were to quantify the psychosocial distress due to pain-related impairment (PRI) of individuals with COPD and chronic non-malignant pain (CNMP) using the self-reported Psychosocial Distress Status (PDS) sub-construct of the Pain Disability Questionnaire (PDQ), a quantitative assessment of PRI from the AMA Guides to Evaluation of Permanent Impairment 6th Edition, and to investigate the correlation between PDS and scores from clinician-derived Physical Performance Test (PPT). A retrospective cross-sectional study was done in a Medicare-accredited Comprehensive Outpatient Rehabilitation Facility on 29 subjects (17 women, mean age 67) with COPD & CNMP identified by the Self-Administered Co-Morbidity Questionnaire. The 15-item PDQ was sub-categorized to Functional Status (PDQ-FS) and Psychosocial Distress Status (PDS) components and was scored on a 10-point scale, for a maximum total score of 150 (high pain and low functional status) and a minimum score of 0: mild PRI (0-70); moderate (71-100); severe (101-130); and extreme PRI (131-150). The Berg Balance Scale (BBS) was used as PPT. Pearson correlation coefficients (r) examined PDS and PPT association. An alpha of .01 was used for statistical tests. Total PDQ, sub-categorized in PRI severity, resulted in: 67% mild; 27% moderate; 3% severe; and 3% extreme PRI. The PDS scores ranged from 7 to 59 out of 60 points with an average score of 19/60 points. Comparing the effect of the PDS over the FS component revealed that 33% of the total PDQ score (range 12-50%) was due to PDS of the COPD patients with CNMP. A statistically significant negative correlation was found between PDS score and BBS (r= -.356, p= .058). The majority of COPD outpatients scored in the mild PRI category, and the psychosocial distress due to the PRI had a statistically significant negative effect on PPT scores. These findings suggest that the self-reported PDS sub-construct is a reliable indicator of physical performance status, and would be valuable as an alternative to PPT in a busy clinical practice. The PDQ is a valid, subjective report and further research into its application amongst other patient populations, such as in Poly-Trauma & Chronic Fatigue Syndrome, would be beneficial.

NR07-22

DIRECT MEDICAL COSTS OF PSYCHOTROPIC MANAGEMENT, PSYCHOSOCIAL DISTRESS, AND THE PHYSICAL PERFORMANCE OF INDIVIDUALS WITH POLY-TRAUMA AND CHRONIC PAIN

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SUMMARY:
Pain is a common problem for subjects with previous Poly-Trauma (PTM) and can result in substantial medical costs, but little is known about the clinical characteristics of pain that may predict these medical costs. The study calculated the direct medical costs of psychotropic management (DMCP) of subjects with PTM (>2 year history) and chronic non-malignant pain (CNMP) and determined the

psychosocial distress (PS) using the Pain Disability Questionnaire (PDQ), a pain severity assessment from the AMA Guides to Evaluation of Permanent Impairment, 6th Edition. A retrospective survey methodology computed DMCP used in PTM from outpatient rehabilitation clinic records; average charges (internet-based and 50-mile medical service radius) were calculated for a 12-month period on 29 of 100 subjects (19 men & 10 women, age 28-62). Outcome measures used were: PDQ, Self-Administered Co-Morbidity Questionnaire (SCQ), PROMIS-Anxiety, PROMIS-Depression, and Berg Balance Scale (BBS). PRI was categorized by the PDQ, based on Functional Status (FS) and Psychosocial Distress Status (PS). Global Mental Health (GMH) was measured using the PROMIS-Anxiety & PROMIS-Depression (AD) subscales. The SCQ measured the Multi-Morbidity Burden (MMB), and physical performance status (PPS) was calculated using the BBS. Yearly DMCP ranged $0-$7,618 (average $1,832.11) and accounted for 0-55% of Total Routine Medication cost (TMC), averaging 11% TMC. Clinical scores ranged: SCQ 0-15 of 39 (average 7.0); total PDQ 6-150 of 150 (average 92); PDQ-Psychosocial (PS) 6-60 of 60 (average 36.71); PROMIS-Anxiety T-score 37-83 (average 60); PROMIS-Depression T-score 38-81 (average 59.2); and, BBS 8-56 of 56 (average 42.0). DMCP accounted for a significant portion of TMC in the routine medical care of PTM subjects, but these subjects tend to be more medically complex with moderate psychosocial distress due to pain-related impairments, high multi-morbidity burden, poor physical performance, and decreased global mental health. The study found a trend relationship of DMCP to the MMB, PS, GMH, and PPS of subjects with PTM and that the health and economic burden of Poly-Trauma care to be extensive due to the clinical complexity of these subjects. It recommends that the SCQ, PDQ, and PROMIS be part of the comprehensive clinical measures for these difficult-to-manage subjects who needs psychotropic management. Further study on the correlation of DMCP, SCQ, PDQ, PROMIS, & PPS should be done.

NR07-23

PATTERN OF CCM UTILIZATION AMONG FACULTY AND RESIDENTS IN A PRIMARY CARE PRACTICE

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SUMMARY:
Background: Collaborative care management (CCM) using care managers have been shown in several studies to be an effective model in treating patients with depression. The model involves use of a registry, validated screening tool, and collaborative management between primary care providers and care managers working under supervision of a psychiatrist. In March of 2010, the model was implemented in the division of Primary Care Internal Medicine in conjunction with a statewide initiative to improve depression management. The division has 42 staff physicians and 96 internal medicine residents conducting primary care clinics. Adults who are 18 years and older with PHQ-9 score of 10 or higher are eligible for the program. This study aimed at comparing pattern of referral to CCM among residents and faculty members during the first 5 months of its implementation. Method: Using the registry, the number of patients eligible for CCM who were seen by both faculty and residents from March 1 until end of July 2010 was identified; their referral pattern to CCM was compared. Treatment response at 5 months based on PHQ-9 score reduction of at least 50% was also determined. Results: Eighty three (64.8%) of the 128 eligible patients seen by faculty were enrolled in CCM compared to 34 (68%) of the 50 patients seen by residents. The difference in referral rate was 3.2 which was not statistically significant (chi square two-tailed p value: 0.97). Mean PHQ-9 score among patients seen by residents ranged from 12-26 and did not differ from faculty although residents saw more patients with mean score of >20. At 5 months, mean PHQ-9 of all enrolled patients was 8.6 compared to initial mean score of 13.4. Discussion: Depression is primarily diagnosed and treated in primary care practice; its recognition and appropriate management are essential skills to have for residents seeing patients in continuity clinic. While result of this study still showed inadequate utilization of an effective model for depression treatment (CCM) in primary care, resident physicians did not statistically differ in their referral pattern when compared to faculty members. At only 5 months into the program, a partial response rate of 36% was noted which is higher than the average response rate of 28-33% seen in usual care for depression. There continues to be a need for targeted educational sessions/modules for residents on CCM to improve utilization of the model. Conclusion: There was

no statistical difference in CCM utilization pattern among faculty and residents in a primary care practice. Continued education of residents to the model will help enhance utilization of this proven effective depression management strategy.

NR07-24

THE IMPACT OF CASE MANAGEMENT ON CLINICAL OUTCOMES FOR PSYCHIATRIC PATIENTS: A 6 YEAR STUDY

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SUMMARY:

Introduction: Case management is a powerful clinical service that can be utilized to promote the delivery of quality care to psychiatric patients who require constant support in the community. At the Institute of Mental Health, a large tertiary hospital in Singapore, general case management service has been provided in the various disciplines, acute care, psycho geriatrics, rehabilitation, forensic and community psychiatry. We have adopted the 'brokerage "model of case management (1). We have also utilized care strategies delineated by Stein and Diamond, namely, psychosocial needs assessment, individualized care plans, referral and linkage to appropriate community services and resources, monitoring of mental state and response to treatment, treatment compliance and side effects, establishing and maintaining a therapeutic relationship, counseling and supportive therapy and psycho-education (2). This paper combines research and survey findings of the impact of the service over a 6 year period. Method:All patients assessed and case managed (2004 to 2009) were reviewed and results analyzed using Microsoft Excel program. A research study on patient's satisfaction with the service was undertaken, with approval from the hospital's Clinical Research Committee and the Ethics Approval from the National Heatlhcare Group's Domain Specific Review Board A. The Client Satisfaction Questionnaire (CSQ-8) was used in this study (n=100) with approval from its developers, Drs Clifford Attkisson and Daniel Larson at the University of California, San Francisco (UCSF). The results were analyzed using SPSS. Results: There was >300% increase in the number of patients assessed for case management within the 6 year period from 1021 in 2004 to 3605 in 2009. Significantly too was the increasing numbers of patients accepted for case management from 185 in 2004 to 3448 in 2009 indicating a twenty fold increase. In addition to their brokerage role of service linkages (227(2004) 5934(2009)), case managers provided supportive services which included psychoeducation sessions (819 (2004) 2451(2009), counseling sessions (253(2004) 3824(2009), family sessions (90(2004) 1066 (2009) and telephonic case management (1291 (2004) 4370 (2009). These proactive strategies resulted in a decrease in patients attempting suicide (1.08% (2004) to 0.08% (2009), completing suicide (0.5%(2004) to 0.12%(2009), developing forensic complications (2.1% (2004) to 0.17%(2009), requiring crisis management (4.9% (2004) to 0.9% (2009) and requiring police assistance for admission (2.7% (2004) to 0.6% (2009). There were also significant reductions of patients being admitted within 28 days of discharge (5.9% (2004) to 5.0 %(2009) In the patient satisfaction research the findings were: 32% of the patients found the quality of the case management service excellent, 55% good and 13% fair. 39% felt that the service helped them a great deal and 56% helped somewhat to deal with their problems. 88% indicated they would seek help from the case managers again. Conclusion:The clinical outcomes have a significant positive impact on patient care

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NR07-25

HOME TREATMENT FOR THE ACUTELY MENTALLY ILL PROVIDED BY A GERMAN

UNIVERSITY MENTAL HEALTH CARE CENTER AS AN ALTERNATIVE TO INPATIENT TREATMENT

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SUMMARY:
Objective: Home Treatment (HT), a home based multiprofessional psychiatric service for the acutely mentally ill which is still in its infancy in Germany, is hypothesized to be equally effective to traditional inpatient treatment (TAU). This study aimed to compare HT to TAU in two subsequently studied patient groups with regard to clinical effectiveness. Method: We prospectively studied 60 HT patients and 58 inpatients by use of PANSS, HAMD-21 and HoNOS ratings at admission and discharge. Statistical analysis was performed by random effects regression models; significance level was set at $p<0.05$. Results: We found similar diagnostic distributions (schizophrenia n=25 HT, n=21 TAU; affective disorders n=26 each) in both groups. While decreases with regard to the PANSS were significant and flowed parallel in both groups, the clinical improvement measured by HoNOS (no significant change in the TAU group) and HAMD (significant improvement in both groups) was significantly more pronounced in the HT group. The average length of stay in the HT group was 70 days (SD 41) and 42 days (SD 44) in the inpatient group. Conclusions: In our collective, HT turned out to be a feasible and clinically effective intervention across diagnostic groups with an emphasis on schizophrenia and affective disorders, especially with regard to depression and symptom severity. This may be at least partly due to the fact that HT patients initially had significantly higher PANSS and HAMD scores and therefore had to be considered as clinically worse than the TAU group. The superior improvement of the HT patients measured by HoNOS indicates that HT may be particularly helpful in the management of a broader range of problems associated with mental illness such as impairment and social functioning. This has to be clarified in further controlled studies with larger patient collectives and longer observation periods. The significantly longer length of stay in the HT group may be explained by the fact that HT patients compared to the TAU group were initially clinically worse and that the density of therapeutic contacts was lower in patients receiving HT.

NR07-26

RECOVERY COMMUNITIES: FIRST PERSON PERSPECTIVES OF RESIDENTS WITH DUAL DIAGNOSIS

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SUMMARY:
Evidence suggests that housing is one of the most crucial community support services necessary for the recovery and rehabilitation of people living with a mental illness. Without the availability of quality affordable and stable housing, other treatment and rehabilitation approaches are jeopardized. Patients will often drop out of treatment and revolve around 'the institutional circuit' of hospital, jail and homeless shelters. The co-occurrence of substance use disorder among people with severe mental illness (SMI) is especially associated strongly with various negative outcomes including unstable housing and homelessness, particularly in urban settings and among ethno-racial minorities. To better understand the nexus of recovery, housing, and urban living, we are currently undertaking a research project entitled 'Creating Communities'. This study involves assessing how stable housing influences recovery within small communities of people living with SMI, almost all of whom are African American. These configurations are labeled 'recovery communities' (RCs). The research team is interested in understanding how the communal living situation of such supportive housing impacts people's processes of recovery and rehabilitation. Focus groups are conducted at quarterly intervals facilitating a longitudinal view of residents' experiences and perspectives on recovery and everyday life in the community. First-person narratives are used to develop a substantive grounded theory of processes of recovery among residents in RCs. Three domains strongly emerged in which residents convey the RCs playing a role in recovery. RCs appear to facilitate recovery through the confluence of (i) the security provided by the physical environment; (ii) the support of the treatment environment and; (iii) the connection to others in the social environment. 'Creating Communities' is being conducted in the

context of the Dartmouth-Howard Collaboration, a five-year research and training center grant focusing on the recovery and rehabilitation of African Americans with SMI funded by National Institute on Disability and Rehabilitation Research.

NR07-27

IMPLEMENTATION OF A STRUCTURED ADMISSION DIAGNOSTIC PROCEDURE LEADS TO MORE STABLE DIAGNOSES DURING OUTPATIENT PSYCHIATRIC REHABILITATION

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SUMMARY:
Background: Psychiatric diagnoses are important for treatment planning, particularly pharmacological interventions. Some data indicate that clinician diagnoses of some conditions, such as schizophrenia, are convergent with diagnoses generated with structured psychiatric interviews. Other data indicate that clinician diagnoses early in the course of psychiatric illnesses or of certain conditions, such as bipolar disorder, are likely to be changed after reconsideration. Methods: A structured psychiatric interview procedure for all new admissions, using the Structured Clinical Interview for the DSM (SCID), was implemented at Skyland Trail, a private psychiatric rehabilitation facility offering outpatient and residential psychiatric rehabilitation services. Diagnostic interviews were conducted by clinicians in the admissions department. The stability of diagnoses over the course of treatment (averaging 13 weeks) of one year of consecutive admissions who were all diagnosed with the SCID at admission were compared to stability of diagnoses of patients who were diagnosed by the same clinicians during the 12 month period prior to the implementation of the structured diagnostic procedure. Results: During the one-year period prior to the implementation of the structured diagnostic procedure, 74.8% (N=176 of 235) of the diagnoses made by the admission clinicians were changed or modified during course of care by the treating clinicians. After implementation of the structured diagnostic procedure, fewer than 5% (N=9 of 193) of the admission diagnoses are changed during similar courses of treatment. Implications: These results suggest that structured interviews lead to admission diagnoses that are more consistent with the longer-term impressions of patient's clinical condition. It is likely that patients whose diagnosis is decided early in the case of long-term treatment will receive treatments that are more consistent and, in the case of pharmacological interventions, more consistent with approved therapies for their illness.

NR07-28

METFORMIN FOR WEIGHT LOSS IN SCHIZOPHRENIA PATIENTS TAKING ATYPICAL ANTIPSYCHOTICS: CHALLENGE FOR WEIGHT CONTROL IN OVERWEIGHT SCHIZOPHRENIA PATIENTS

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SUMMARY:
Purposes Weight gain and glucose matabolism dysfunction have long been recognized as the side effect of antipsychotic drugs including atypical antipsychotics. This antipsychotic side effect has lately become a major concern in the treatment of psychosis because weight gain and glucose metabolism dysfunction not only influence compliance with drug treatment but also inevitably associate with substantial morbidity(diabetes, hypertension, and cardiovascular disease) and mortality. Currently, there are no medication for weight reduction and management of treatment-emergent weight gain during atypical antipsychotics including Olanzapine, Quetiapine, Risperidon. But antipsychotic induced weight gain is very serious side effect of patients being treated with antipsychotics. while life style change has been the most effective means of weight loss in obese adults, it is particularly difficult to successfully institute behavior and dietary modifications in subjects with neuropsychiatric disorders. Studies to determine safe and effective means of weight control for patients taking atypicals have been published and currently metformin demonstrated efficacy for antipsychotics induced weight gain in previous some papers. Metformin was assessed as a treatment for weight gain in schizophrenia patients taking atypical antipsychotics(olanzapine, quetiapine, risperidon). Methods 42 patients with well controled schizophrenia were included to treatment for 12 weeks with metformin 750mg /day(Increment

Schedule:1st week, 250mg. 2nd week, 500mg. 3rd week, 750mg). These non-diabetic pateints were treated with atypical antipsychotics(olanzapine, quetiapine, risperidon) and increased their baseline weight by more than 20%(mean weight before psychiatric treatment of 61.34kg, mean weight of 74.37kg after atypical antipsychotic medication) and mean body mass index(BMI) was 30.13. Planned assessments included body weght, BMI, waist circumference, waist to hip ratio, positive and negative syndrome scale(PANSS) , medical evaluation(liver and renal function tests, EKG examination, HBA1C, glucose level, Fluctosamin) and assessed 42 patients with well controled schizophrenia at 1st week, 2nd week, 4th week, 12th week. Results All 42-schizophrenia patients maintained relative stable psychiatric condition and there was no relapse or aggravation of their symptoms(mean baseline positive and negative syndrome scale(PANSS) total score of 32.4 at baseline and 33.1 at 12 weeks), no side effects of metformin(Nausea, Vomiting, Hypoglycemia). Patients with metformin medication decreased in body weight of 3.7kg(95% confidence interval(CI), 1.8-4.7) and mass index(BMI) of 1.5(95% CI, 1.1-2.3), waist circumference of 2.2cm (95% CI, 1.4-2.4) but compared with baseline weight and BMI, there were no significant changes statistically. Almost of well controled schizophrenic patients with metformin did not feel their weight loss physically and emotionally. Liver and renal function tests and EKG examination remained normal state throughout the course of the study and no treatment-emergent extrapyramidal symptoms. Conclusion Metformin was some benificial effect and safe in attenuating atypical antipsychotics induced weight gain and patients displayed good adherence to this type of weight loss intervention. But pharmacological mechanism(weight loss) of metformin is still unknown, so more clinical studies and datas are needed.

NR07-29

A NEW LOOK AT THE RISK PROFILE OF SELEGELINE HYDROCHLORIDE

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SUMMARY:
Objective: Because standard psychiatric treatment regimens may not benefit certain patients, the search for alternative efficacious and safe treatment is required [1]. MAO inhibitors are well-known to be effective for a variety of conditions [2, 3], but are infrequently used due to side effect profiles [4]. Selegiline, an MAO inhibitor, has been limited to the treatment of Parkinson's disease [5] and selegiline transdermal has been limited to treatment resistant major depressive disorder [6]. We sought to determine if dietary warnings and concerns about hypertensive crisis were valid for a select group of patients. Methods: Twenty-five patients, ages 17-66, were selected to receive selegiline hydrochloride based on clinical assessment, including EEG and qEEG data [7, 8]. Patients whose qEEG data included slow alpha rhythms were hypothesized to be selegeline responders. DSM-IV TR diagnoses were noted but not used to stratify patients. Dietary and stimulant restrictions with selegiline were not imposed. Results: One hundred percent of the 25 patients had no hypertensive crisis. Patients were followed for a mean of 9 months. Based on CGI scores 17 patients had moderate to substantial improvement. Eight patients had sub-optimal results and this medication was discontinued. No adverse effects or events were observed. Conclusion: Patients who were assessed via clinical exam and EEG criteria had no adverse effect associated with selegiline. The inclusion of EEG and qEEG data may be a variable that allows safe implementation of selegiline at doses which are thought to cause adverse effects. More study is warranted.

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NR07-30

METABOLIC SYNDROME AMONG HOSPITALIZED PATIENTS TREATED WITH ANTIPSYCHOTICS

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SUMMARY:
Background: Patients with major psychiatric disorders are at risk for developing metabolic syndrome, due to illness-related risks, lifestyle factors, and treatment with central depressant drugs, particularly antipsychotics. Objective: To compare the prevalence of obesity and metabolic abnormalities in hospitalized psychiatric patients, considering effects of selected demographic and clinical factors. Design and Methods: An IRB-approved, prospective review of McLean Hospital records yielded 350 consecutive subjects hospitalized in 2010 and treated with antipsychotic ± other psyhotropic medicines. DSM-IV diagnoses included major affective (bipolar or depression), psychotic, schizoaffective, and other (anxiety, substance-abuse) disorders. We examined associations of several factors with rates of metabolic syndrome (MetS) diagnosed by standard (NCEP) criteria. Results: The 148 women and 202 men (57.7%) averaged 36.8±12.9 (range 18–67) years-of-age. Prevalence of MetS was 25.7% among women, 38.4% in men, and 28.3% overall; their ages averaged 42.3±12.8 vs. 34.6±12.0 years, respectively (p<0.0001). By diagnosis, risk of MetS ranked: schizoaffective disorder (45.1%, with BMI=30.9±8.04 kg/m2) > bipolar disorders (25.7%; BMI=27.9±7.04) = schizophrenia and other psychotic disorders (24.4%; BMI=26.4±5.62) > major depression (22.4%; BMI=28.6±6.48) = other diagnoses (18.8%; BMI=26.0±5.72 [p=0.002]). Risk of MetS by antipsychotic exposure-time ranked: >10 years (62.1%; BMI=30.1±6.50 kg/m2) > up-to-1-year (8.42% (BMI=26.8±6.45) > without antipsychotic treatment (1.11%; BMI=23.9±4.37 [p<0.0001]). Risk of MetS following recent treatment with =2 antipsychotics ("polytherapy") was 62.1% vs. 8.42% with only one (BMI=32.0±8.51 vs. 29.1±7.34 kg/m2 [both p<0.0001]). Overweight (BMI =25 kg/m2 = 66.9%) and obesity (BMI =30 = 38.4%) were prevalent, and strongly associated with MetS (BMI = 33.0±6.60 vs. 26.4±6.02 kg/m2 with vs. without MetS [p<0.0001]). By use of antipsychotic, risk of Mets ranked: clozapine>olanzapine>haloperidol>quetiapine (dose>150mg) >aripiprazole> risperidone (p=.0003). Conclusions: MetS and obesity were strikingly prevalent, far more among antipsychotic-treated patients than in untreated patients, especially those diagnosed with a DSM-IV schizoaffective disorder, and with longer or greater drug-exposure. The study is limited by the paucity of knowledge of past clinical history and details of treatment. The findings underscore the need for early and explicit medical monitoring and intervention for patients treated with antipsychotic drugs and the need for novel treatments with lower risks of weight-gain and of MetS.

NR07-31

PSYCHIATRIC DISORDERS AND PSYCHOTROPICS IN 100 TERMINAL CANCER PATIENTS

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SUMMARY:
Background: Psychiatric disorders, including delirium, are described as very prevalent in terminal cancer patients. However, few studies analyzed the actual prevalence of psychiatric disorders and the use of psychotropics in this population, where the psychiatrist could play a significant role. Psychiatric disorders have a major impact on quality of death. Objective: To describe the prevalence of psychiatric disorders and the use of psychotropics in a cohort of terminal cancer patients. Methods: The charts of a cohort of 100 patients admitted in a 15-bed hospice in Canada, during a 5-month period (May to September 2008), were reviewed from admission until death (average survival= 14 days; average age= 68.7 years) for the presence of psychiatric disorders and prescription of psychotropics. Doses of benzodiazepines and antipsychotics were converted into equivalent units (mg of lorazepam and haloperidol). The Nursing Delirium Screening Scale (Nu-DESC) was used for delirium assessment. Results: Seventy-six percent of patients developed significant delirium symptoms during stay (as measured by a Nu-DESC score of 2 or higher). From admission until death, 94%, 84%, and 17% of patients used, respectively, at least one antipsychotic (all indications, including nausea/vomiting), one benzodiazepine, or one antidepressant. Haloperidol (average dosage= 2 mg) and Methotrimeprazine (average dosage= 12.5 mg) were the most frequently used antipsychotics (60 and 33 % in patients-days respectively) whereas Lorazepam (average dosage= 1 mg) and Midazolam (average dosage= 7.5 mg) were the most frequently used benzodiazepines (74 and 30% of patients-days respectively). Lung metastases and liver metastases were respectively associated with a higher and a lower dosage of benzodiazepines ($p<0.05$). Anxiety disorders were diagnosed in 17 % of patients whereas major depression was diagnosed in 4 % (4 patients). Citalopram (average dosage= 20 mg) was used in all of these patients. Sixteen percent of patients were referred for a psychiatric consultation, two-third during the first half of the stay, and the most frequent request was for complicated delirium management. Conclusions: Delirium was the most frequent diagnosis, with significant symptoms in three-forth of patients, whereas major depression was lower than the prevalence reported previously. Benzodiazepines and antipsychotics, mainly haloperidol, were the most prescribed antipsychotics, in dosage usually recommended in this population.

NR07-32

AN OPEN LABEL STUDY TO ASCERTAIN THE EFFECT OF A TRADITIONAL JAPANESE MEDICINE, YOKUKANSAN, SHORT-TERM TREATMENT ON THE BPSD IN PATIENTS WITH AD.

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SUMMARY:
OBJECTIVE: The aim of this study was to investigate the short-term efficacy and safety of yokukansan (YKS) on the behavioral and psychological symptoms of dementia (BPSD) in patients with Alzheimer's disease (AD). METHODS: Twenty-nine patients with AD were registered, and three patients were excluded from efficacy analysis. The efficacy analysis set included 26 patients (15 men and 11 women, mean +/- SD age = 74.8+/-9.2 years). Treatment with YKS was given for 4 weeks. The Mini-Mental State Examination (MMSE) was used for the assessment of cognitive function. BPSD were evaluated using the Neuropsychiatric Inventory (NPI). The Disability Assessment for Dementia (DAD) Index was used to assess disability in daily life. These assessments were administered at baseline and the end of treatment. RESULTS: Twenty-six patients completed the trial. After 4 weeks' treatment with YKS, significant improvement in the mean NPI score was observed. The MMSE results did not change between baseline and the end of the treatment. The DAD index did not change significantly. No serious adverse effects were observed. CONCLUSIONS: Four weeks of YKS short-term treatment significantly improved BPSD in patients with AD. The 4-week YKS treatment did not cause any decline in cognitive function or ADL and no serious adverse effects were observed. The present study suggests that YKS is beneficial in the treatment of BPSD and that it can possibly reduce the burden of care on patients with AD. Further studies with larger patient populations using a double-blind placebo-controlled design over longer periods should be performed.

NR07-33

A DOUBLE-BLIND STUDY OF DULOXETINE VS. PLACEBO IN CHRONIC DEPRESSION

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SUMMARY:
Introduction: Numerous double-blind studies have assessed the efficacy of a variety of classes of antidepressants in treating various forms of chronic depression, in particular dysthymic disorder (DD) (1), low-grade chronic depression. However, the serotonin-norepinephrine reuptake inhibitor duloxetine (2) has not been studied in double-blind placebo-controlled treatment of chronic depression. Method: Outpatients with chronic depression (including SCID-diagnosed dysthymic disorder (DD) or depression NOS), but without concurrent major depression (MDD), were randomly assigned to prospective double-blind duloxetine (beginning at 30 mg/d increased to a maximum dose 120 mg/d) vs. placebo for 10 weeks. Inclusion criteria included age 18-75 years and Hamilton Depression Rating Scale (HDRS) score >12. HDRS, Cornell Dysthymia Rating Scale, CGI, BDI and other assessments were done at each visit. We hypothesized that duloxetine would be superior to placebo in: 1) HDRS-24 item total score; 2) the percentage of subjects classified as (a) responders and (b) remitters; and 3) secondary measures (CDRS, BDI, CGI). Response was defined as >50% decrease in HDRS and CGI-Improvement score of 1 or 2 (very much or much improved). Remission was defined as HRDS-17 item score <4 and 0 on item 1 of the HDRS (depressed mood). Results: 55 subjects, age 19-70 years (m+SD=41.38+11.27 years) were enrolled, including 23 women and 32 men. Baseline HDRS-24 averaged 20.53+4.74. After 10 weeks of treatment, duloxetine-treated subjects had significantly lower HDRS-24 scores than placebo-treated subjects (7.74+5.29 vs. 14.82+7.92 ; t=47.26,df=53, p=.000). Responder and remitter analyses demonstrated significant differences favoring duloxetine treatment. Response rate was 66.7% for duloxetine vs. 25.0% for placebo (chi sq=9.62, df=1,p=.002); and remitter rate was 55.6% for duloxetine vs. 14.3% for placebo (chi sq=10.34, df=1, p=.001). Conclusions: HDRS=24 ratings suggest that duloxetine is superior to placebo in treatment of DD. Response and remission rates also differed significantly, favoring duloxetine treatment.

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NR07-34

COMPARISON OF THE CHRONIC EFFECTS OF ZIPRASIDONE AND OLANZAPINE ON BODY COMPOSITION, AND ENERGY EXPENDITURE IN RATS AND ADULTS WITH NEW PSYCHOTIC EPIS

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SUMMARY:
Introduction Weight gain is a commonly observed adverse effect of antipsychotic drug therapy in patients with psychotic episodes. Despite an increased awareness of the metabolic hazards of atypical antipsychotics, the causes of weight gain induced by this group of medications are yet to be revealed. Ziprasidone possesses significant advantages with regard to potential metabolic effects and effect on patient weight compared to other atypical antipsychotic agents. The aim of the present study was to evaluate and measure the metabolic effects associated with the use of ziprasidone and olanzapine in rat and patients with psychotic episodes. Methods Each ten female Sprague-Dawley rats were given ziprasidone 48mg/kg or 5mg/kg olanzapine orally every day for 7 weeks. Weight, daily food intake and water intake were measured every week for 7 weeks. Body energy expenditure were measured by indirect calorimetry.

Cold exposure method and movement distance were also measured after 7 weeks. Twenty subjects who came to psychiatric unit of Asan Medical Center experiencing new psychotic episode with psychotropic drug naïve state more than 3 months participated in this study. Each ten subjects were prescribed ziprasidone or olanzapine for 12 weeks. Body weight, energy expenditure and metabolic parameter were measured on 0 week and 12th week. Results Body weight increase of rats with ziprasidone was lower than those with olanzapine by 31% at 7th week. Energy expenditure and body temperature after cold exposure were indeed higher in rats given ziprasidone than rats given olanzapine. However movement of rats given ziprasidone were much lower than those with olanzapine. After approximately 12 weeks of medication in patients with psychotic episodes, the mean increase in body weight in olanzapine treated patients were 6.7 kg which is much higher than 2.6kg in ziprasidone treated patients. Resting energy expenditure and respiratory quotients measured by indirect calorimetry were not significantly different between two groups in interim analysis. Change of appetite and metabolic parameters such as insulin, leptin level will be compared between two groups. Conclusions Ziprasidone treatment significantly increase energy expenditure and beneficial metabolic effects than olanzapine treatment in rat. However, increase of energy expenditure in human with ziprasidone is not clear, even though less weight gain is clear in ziprasidone treatment.

NR07-35

IMPROVING SELF-RATED HEALTH IN ADOLESCENT GIRLS WITH DANCE INTERVENTION: A RANDOMISED, CONTROLLED TRIAL

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SUMMARY:
Background: Recent research has found an increasing prevalence of psychological health problems among children and adolescents, especially girls. In Sweden, mental illness such as stress and psychosomatic symptoms in adolescent girls is one of the most urgent health problems we face. Knowledge of beneficial effects of regular physical activity on mental health are widespread. Dance is a popular form of exercise also known to increase a sense of self-control which can contribute to reduce stress. The purpose of this study was to evaluate whether an intervention with dance could influence psychosomatic health in adolescent girls. Methods: A randomised, controlled trial with a long-term follow-up, carried out in central Sweden. A total of 160 adolescent girls with low self-rated health, psychosomatic problems and recurrent feelings of stress were enrolled. The subjects were randomised to either a dance intervention or control group. The dance intervention was carried out twice a week for a period of 8 months. The focus was on the joy of movement and not on performance. Data collection was by questionnaire. The primary outcome was self-rated health and psychosomatic symptoms. Results: In spite of the dance interventions' long duration of 8 months, compliance was high; consistency 70%. The questionnaire response rate was 84%. The increase in self-rated health at the one-year follow-up was significantly higher in the dance intervention group compared to the control group (p=0.001). One of the explanations to this improvement can possibly be that the dance group rated an increase in energy and decrease in fatigue. The dance intervention group also had significant fewer visits to the school nurse compared to the control group (p<0.03). Conclusion: The current findings suggest that an intervention with dance twice weekly for 8 months can have high compliance and improve self-rated health in adolescent girls.

NR07-36

EFFECT OF DULOXETINE ON CHRONIC TENSION-TYPE HEADACHE IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER

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SUMMARY:
Objectives Somatic pain is frequently associated with major depressive disorder. It is reported that major depressive disorder may increase risk of severe

medical conditions like cardiovascular illness and cerebrovascular illness. One of the most frequent comorbidities is that of depressive symptoms and pain including headache. Tension-type headache is the most common form of headache. A wide variety of antidepressants have been used to treat tension headache in patients with major depressive episode. Tricyclic antidepressants (TCAs) are the only antidepressants that have demonstrated their effectiveness in treating chronic tension-type headache, amitriptyline being the drug of choice. Selective serotonin reuptake inhibitors (SSRIs) and other families of antidepressants have not shown conclusive results up to date. Alterations in noradrenergic and serotonergic neurotransmitter systems have been implicated in the pathophysiology of major depressive disorder and chronic pain. So the newer antidepressant, duloxetine acting on both noradrenergic and serotonergic neurotransmitter systems is expected to be more effective in pain management in major depressive disorder than selective serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants (TCAs). The purpose of this study was to investigate the clinical therapeutic effects of duloxetine treating tension-type headache in major depressive disorder patients. Methods Thirty three outpatients diagnosed with major depressive disorder according to the Diagnostic and Statistical manual version IV (DSM-IV) diagnostic criteria, complaining of tension-type headache were included in this study. Exclusion criteria included severe cognitive impairment, substance abuse or dependence, bipolar or schizoaffective disorder, suicidal behavior, and other severe mental or medical illness. The duloxetine dose was adjusted when required. The dose range was 30-60 mg/day. Simple self-rating questionnaire about somatic pains including headache, Hamilton Depression Rating Scale (HDRS), Mongomery-Asberg Depression Rating Scale (MADRS), and Beck Depression Inventory (BDI) were administerd at baseline and repeated after eight weeks of duloxetine trial. Results Thirty three patients had fulfilled this clinical trials. Eighteen were female and fifteen subjects were male. Their mean age (± SD) of this group was 37.50 ± 8.50. Mean duration of their current depressive episode (± SD) at baseline was 2.78 ± 1.42 months. After 8 weeks of duloxetine trial, twenty seven patients (81.8%) reported that their daily headache was absent or improved and twenty five patients (75.8%) remained free of analgesics. All patients who reported improvement in headache, also showed improvement in depressive symptoms. The remaining six patients (18.2%) reported no improvement in headache. However, two of them showed some improvement in mood states, both subjectively and objectively. Conclusions These data suggest that duloxetine may be effective in reducing tension-type headache in patients with major depressive disorder. As this was an open clinical trial, the effect and saftey profile of duloxetine on tension-type headache in patients with major depressive disorder requires validation via well-designed double-blind placebo controlled trials or comparative researches with other antidepressants including tricyclic antidepressants (TCA).

NR07-37

PHARMACOKINETIC STUDY OF DOSE CORRESPONDENCE BETWEEN ORAL RISPERIDONE AND PALIPERIDONE EXTENDED-RELEASE TABLET IN PATIENTS WITH SCHIZOPHRENIA

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SUMMARY:
Objective: This study aimed to prospectively investigate the stready-state plasma levels of risperidone and 9-OH-risperidone and assessed clinical response and extrapyramidal side effects while switching from oral risperidone to paliperidone ER tablets in patients with schizophrenia. Method: Nine patients (M:F=5: 4, mean (SD) age =32.4 (9.3) years) with schizophrenia were included. Mean age of onset was 28.2(8.5) years and mean illness of duration was 14.0(4.2) years. The mean (SD) baseline scores of total PANSS and CGI-S were 101.8(24.7) and 4.9(0.9) respectively. Following a 1-week screening period with the stable dose of risperidone, a 6 week open-label switch study from risperidone to paliperidone was conducted. Mean oral dose of risperidone before the switch to paliperidone ER was 4.1(1.5) mg. All of

patients took 6 mg of paliperidone ER throughout 1 week. After then, the dosage was freely adjusted, according to the observation of clinical response and tolerability. Mean oral dose of paliperidone ER at the end point (Week 6) was 10.0(2.6)mg. Clinical assessments were performed on week 0, 1, 2, 4, and 6 after the switch to paliperidone ER. The efficacy was assessed with positive and negative syndrome scale (PANSS) and the clinical global impressions scale (CGI) at every study visit. Adverse events and the extrapyramidal symptoms(EPS) were also evaluated. Plasma level of the pharmacologically active fraction of risperidone and paliperidone ER were estimated on week 0 (the stready-state risperidone and 9-OH-risperidone for oral risperidone) and 1(the steady-state 9-OH-risperidone for paliperidone ER). Results:Significant clinical improvements in PANSS total score were observed during the assessment period. The mean PANSS total score at the end point was 77.7(30.5) and significant reduction from baseline was observed [-24.1(30.82), p=0.047]. In particular, significant reduction were shown in positive symptom [-6.7(7.8), p=.033] and general psychopathology scale [-11.3(13.7), p=0.038], but not in negative scale [-6.1(11.2), p<0.139]. In terms of tolerability, no one dropped out due to significant adverse events and only one patient taking 12mg of paliperidone ER experienced EPS.No difference exists between the plasma level of active moiety (risperidone plus 9-OH risperidone) while taking risperidone and that of 9-OH risperidone while taking paliperidone 6mg [22.89(8.74) ng/ml vs. 22.03(6.07) ng/ml respectively; t = .41, p = .693]. Conclusions: In this pharmacokinetic study, we revealed that the plasma level of active moiety (risperidone plus 9-OH risperidone) for oral risperidone 4.1(1.5) mg and that of 9-OH risperidone for paliperidone 6mg was comparable. Using this switching schedule, patients with schizoprhenia showed significant additional improvement in their clinical symptoms without significant adverse effect after 6 weeks.

NR07-38

HOW ARE UNCONTROLLED STUDIES CONDUCTED AND FOLLOWED UP ON?

Chp.:Rajnish Mago M.D., 833 S Chestnut St East, Suite 210 E, Philadelphia, PA 19107, Co-Author(s): Alexandra Lane, B.A., Rajeev Mahajan, M.B.B.S.

SUMMARY:

Introduction Uncontrolled clinical trials (UCTs) are of limited validity but are essential in early stages of assessing a potential treatment. When UCTs suggest that a new intervention may be effective and safe, confirmation in RCTs is essential. We aimed to describe how UCTs are being conducted and to put them in the context of previously and subsequently published studies. Methods Using a systematic search strategy, we identified UCTs published during a one-year period (2000) and then determined whether or not previous or subsequent UCTs or RCT's had been published. Results 131 published UCTs with data on 5,116 subjects were included. As many as 93.1% were "positive," i.e., found the treatment efficacious. This may be due to high placebo response in UCTs or due to publication bias. 100% of industry-funded studies and 89.3% of others were "positive" (Fisher's exact test p=0.058). Zero to 100% subjects "responded" (as defined by each study) with a median of 63.6%. An independent blinded rater is hypothesized to strengthen the design of UCTs, but only 6.1% of UCTs used this strategy. None of these was industry-funded. 20.6% of UCTs had 10 or fewer subjects, making their utility questionable. 46.6% of UCTs did not mention source of funding. Of UCTs where the source of funding was identified, 54.3% were industry-funded. Sample size was significantly greater in industry-funded UCTs (Wilcoxon ranksum p=0.03) potentially increasing their impact. For 30.5% of UCTs, one or more similar UCTs had been previously published. For 16% of UCTs, a previous RCT assessing that intervention, or in 7.6% of cases, more than one previous RCTs, had already been published. Thus, UCTs are being conducted and published even when multiple UCTs or even RCTs have already been published, which is scientifically and ethically questionable. Unacceptably few (35.9%) UCTs were followed by at least one published RCT. The reason(s) for this are unknown reasons (lack of funding, publication bias, etc). 74.5% of these follow up RCTs were "positive." Overall, only 26.7% of UCTs were followed by a "positive" RCT. 39.7% of index UCTs had a published follow-up UCT (including 19.1% with > 1). 94% of follow up UCTs were "positive." Conclusions Prior to conducting a UCT, absence of

multiple UCTs and any RCTs should be determined by search of the literature and clinical trial registries. Positive UCTs must be followed up by an RCT, or the published literature is left with many "positive" but unconfirmed UCTs. If some follow up RCTs were negative but not published, the situation is even more problematic. Funding source should be clearly stated but this is often not done. Multiple potential associations of funding source with study design and outcome (e.g., significantly greater sample sizes, all published UCTs were "positive," none used a blinded rater) should be further evaluated. Further study and guidelines regarding conduct of UCTs and their subsequent confirmation are needed.

NR07-39

TREATMENT OF SEROTONIN SYNDROME

Chp.:Abid Malik M.D., 455 West Warren Ave, Longwood, FL 32750

SUMMARY:
Abstract: Selective Serotonin re-uptake inhibitor (SSRI) medications are one of the commonly prescribed medications. One of the rare but life threatening side effect of SSRI is serotonin syndrome. Exact incidence of Serotonin syndrome is not known partly because more than 85% of physicians are unaware of diagnosis of serotonin syndrome (1). Serotonin syndrome is estimated to occur at 0.4 cases per 1,000 patient months for the patient's taking nefazodone (1) , but is more common in overdose, where it occurs in approx 14 to 16 % of cases (2). Currently there is no DSM IV diagnostic criteria for serotonin syndrome and serotonin syndrome can be included under the diagnosis of (995.2) adverse effects of medication not otherwise specified. Several criteria for serotonin syndrome have been used for diagnosis in literature such as Sternbach criteria and Hunters serotonin toxicity criteria. This review is an effort to summarize the treatment options from literature which include withdrawal of suspected medication, supportive measure such as cooling, intravenous fluids, medications such as benzodiazepine and the antihistamine cyproheptadine, admission to intensive care unit and more aggressive measures in severe case and at least one report of lipid therapy for the treatment of serotonin syndrome. There is a need for developing widely accepted and validated criteria for serotonin syndrome and creating more awareness of serotonin syndrome so that it can be recognized early thus minimizing delay in treatment and chances of complications.

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NR07-40

ANTIPSYCHOTIC SWITCHING AND INSULIN RESISTANCE IN NONDIABETIC, STABLE PATIENTS WITH SCHIZOPHRENIA

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SUMMARY:
Background: Data support the concept that metabolic benefits can occur with antipsychotic switching, but the impact on insulin sensitivity (SI) has not been quantified with gold standard methods, and many switch studies lack a control arm to examine relative psychiatric outcomes. Method: This was a randomized, 6-month, open-label trial of switching to ziprasidone (n=30) or staying on current antipsychotic medication (n=25) for nondiabetic, stable schizophrenia patients on olanzapine or risperidone treatment. After study conclusion, nonswitch subjects were offered a switch to ziprasidone and followed for an additional 26 weeks. Insulin-modified frequently sampled intravenous glucose tolerance testing with minimal model analysis was performed at baseline and week 26 of all study periods, along with clinical and imaging measures of adiposity. Results: Significant improvements from baseline were seen in acute insulin response to glucose for both groups, but only the switch group had significant improvement from baseline in SI, although the between group difference for change in SI was not significant. Using data from all switch episodes, the effect size for improvement in SI was 0.425 among switchers, compared to 0.075 in the nonswitch cohort.

Imaging measures of adiposity did not offer any greater predictive power for SI change among switchers compared to that from clinical variables and 2-hour post-load glucose result from oral glucose tolerance test. Psychiatric hospitalization rates were comparable in both cohorts (nonswitch 16% vs. switch 16.7%), yielding a number needed to harm of 143 for psychiatric hospitalization. Conclusions: Metabolic benefits may occur from lifestyle modification or antipsychotic switching. Careful switching of stable schizophrenia patients to ziprasidone does not entail significant psychiatric risk.

NR07-41

DOES RISPERIDONE LONG ACTING INJECTABLE DEPOT(RLAI) REDUCE NUMBER OF ADMISSIONS TO HOSPITAL

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SUMMARY:
Background: Adherence to treatment is a major issue in relapse prevention in schizophrenia. Injectable depot has been claimed to improve covert and overt non-adherence. A study in the North of England has shown that risperidone long acting injectable form has reduced number of admissions and number of days stayed in hospital. Our study aimed to replicate the previous study in the South of England. Methods: A reterospective study was conducted in South Essex Foundation University NHS trust which selected every fifth patient who is on the Hospital Pharmacy list for RLAI. The following information was collected. Age, sex, diagnosis and medication ,regular follow up, investigation of each patient which included weight, FBS, S. lipid and hormones at the start of treatment, at three months and six months intervals. Reasons for starting RLAI were recorded.Number of antipsychotics before RLAI, chronicity of the illness. Number of admissions and days stayed in each episode before and after RLAI. Patients were included if they stayed for one year or on RLAI. Mirror image analysis was carried out. Results: 65 notes were reviewed. 70% males. 70% between 18-50 years. 80% had the illness more than 5 years and 50%more than 10 years. 50% had comorbidity with physical illness. Non-adherence to oral medication was the most common reason for starting on RLAI. Number of admission and number of days stayed in each admission were reduced after RLAI in a statistically significant manner. Conclusions: RLAI has reduced number of admission and number of days stayed in hospital in a statistically significant manner. Adherence has improved and it may be the causer of preventing relapse in these patients.

NR07-42

COMPARISON OF DULOXETINE AND DESVENLAFAXINE IN AN OUTPATIENT PSYCHIATRIC CLINIC

Chp.:Suhayl Nasr M.D., 2814 S Franklin St, Michigan City, IN 46360, Co-Author(s): Anand Popli, MD, John Crayton, MD, Burdette Wendt

SUMMARY:
Objective: Duloxetine and Desvenlafaxine have different potency in inhibiting 5HT and NE uptake. This raises the possibility that they could have a different level of clinical efficacy. There is only one published Wyeth sponsored study reporting the efficacy of a placebo controlled, Duloxetine referenced comparison of 50 mg and 100 mg Desvenlafaxine. Methods: The outpatient records of all patients who were ever prescribed either Duloxetine (N=378) or Desvenlafaxine (N= 142) were included in this study. The outcome measures were the QIDS, and the medicine's effectiveness as the only antidepressant in use.Results: 62% of Duloxetine patients took it for more than 6 months compared to 66% of Desvenlafaxine patients. The mean QIDS for the 144 patients currently on Duloxetine is 8.2 (down from 13.6) with 35% in remission. The mean QIDS for the 74 patients currently on Desvenlafaxine is 9.2 (down from 12.7) with 34% in remission (p=0.22, NS). 83% of all patients were on additional psychotropic medications. Patients on Desvenlafaxine were on significantly more additional antidepressants (Bupropion or Mirtazapine) than those on Duloxetine (42% vs.26%, p=0.012). There was no difference in the frequency of use of other psychotropic medications (antipsychotics, mood stabilizers, stimulants, sedatives). 47 patients tried

both medications, 11 stayed on Duloxetine but not Desvenlafaxine, 7 stayed on Desvenlafaxine but not Duloxetine and 21 stayed on both for at least 6 months each. Conclusion: Duloxetine and Desvenlafaxine are equally effective in treating depression in this outpatient private practice. Patients on Duloxetine needed less augmentation with an additional antidepressant than patients on Desvenlafaxine.

NR07-43

BIPOLAR MODULE PROJECT AS A PART OF THE PSYCHOPHARMACOLOGY CURRICULUM

Chp.:Nirupama Natarajan M.D., 3152 Berry Lane SW #67, Roanoke, VA 24018, Co-Author(s): Shabnam Sood, M.D., Amit Chopra, M.D., Shiva Srinivasan, M.D., Danielle Martin, M.D., Arman Danielyan, M.D., Reshmi Saranga, M.D., Kristina Deligiannidis, M.D., Ragy Girgis, M.D., Richard Balon, M.D., Tony Rostain, M.D., Sid Zisook, M.D., Michael Jibson, M.D.

SUMMARY:
Purpose: Teaching psychopharmacology requires the effective transfer of an ever-changing information base to maximize effectiveness, adherence and satisfaction. At the 2006 American Association of Directors of Psychiatric Residency Training (AADPRT) annual meeting, an ad hoc committee was formed including individuals from the American Society of Clinical Psychopharmacology (ASCP) curriculum committee to help make the ASCP's Psychopharmacology Curriculum more 'resident-friendly". A workshop presented at the 2007 AADPRT meeting introduced the multifaceted schizophrenia module. As a next step the ASCP formed the Committee on Residency and Fellowship, comprised of AADPRT and ASCP leadership and psychiatry trainees . The Committee received nominations from psychiatry residency training directors nationwide, selected 15 members and formed 2 sub-groups in order to work on the development of multi-model training modules for bipolar disorder and depression. This presentation highlights the progress of the bipolar curriculum group. Methodology: Monthly conference calls have been held since August 2008. Each resident was assigned a specific topic to research and develop. A google group was set up for residents to update their work on the module. Content: The Bipolar group has developed a list of topics including Epidemiology, Co-morbidities (including ADHD, Substance Use Disorders and Borderline Personality), Bipolar Depression, Atypical Antipsychotics & Mood Stabilizers, Psychosocial Aspects of Treatment . A variety of teaching modalities such as Jeopardy-type game, podcasts, case presentations and team based learning exercises were used. Importance: The bipolar module is an innovative tool for teaching psychopharmacology which enables psychiatric trainees and other psychiatrists to master a large volume of information.

NR07-44

INFLUENCE OF TPH2 VARIANTS ON DIAGNOSIS AND RESPONSE TO TREATMENT IN PATIENTS WITH MAJOR DEPRESSION, BIPOLAR DISORDER AND SCHIZOPHRENIA

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SUMMARY:
Background: Several tryptophan hydroxylase 2 (TPH2) variants have been suggested to be involved in the aetiology and response to treatment in many psychiatric disorders, particularly major depression (MD) and bipolar disorder (BD). However a large degree of overlap is present in the genetic liability factors for major psychosis occurrence and response to treatment. Accordingly, the present study is aimed to exploring whether some single nucleotide polymorphisms (SNPs) variants within TPH2 could be associated with MD, BD and schizophrenia and whether they could predict clinical outcomes in such groups of patients treated with antidepressants, mood stabilizers and antipsychotics respectively in a sample of Korean psychiatric inpatients. Methods: One hundred forty five patients with MD, 132 patients with BD, 221 patients with schizophrenia and 170 psychiatrically healthy controls were genotyped for 6 TPH2 SNPs (rs4570625, rs10748185, rs11179027, rs1386498, rs4469933, rs17110747). Baseline and final clinical

measures, including the Montgomery Asberg Depression Rating Scale (MADRS), Young Mania Rating Scale and Positive and Negative Symptoms Scale for patients with MD, BD and schizophrenia respectively as well as response and remission rates were recorded. Results: None of the SNPs under investigation was associated with MD, BD and schizophrenia. However, in patients with MD, rs4570625-rs10748185 G-A haplotype was associated with higher endpoint MADRS severity (p=0.006). No further significant association was observed. Conclusion: rs4570625-rs10748185 G-A haplotype could predict response to antidepressants in Korean in-patients with MD. However taking into account that neither the genotype nor the allelic analyses confirmed such association as well as several limitations including the use of different drugs and the moderately small sample size of our study, further research is needed to draw more definitive conclusions.

NR07-45

SAFETY OF SELEGILINE TRANSDERMAL SYSTEM IN CLINICAL PRACTICE: ANALYSIS OF ADVERSE EVENTS FROM POSTMARKETING EXPOSURES

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SUMMARY:
Objective: Despite consistent evidence for efficacy, the clinical use of monoamine oxidase inhibitors (MAOIs) has declined because of safety concerns about food and drug interactions. Selegiline transdermal system (STS), FDA approved for major depressive disorder, was developed to overcome some limitations of oral MAOIs--in particular, dietary restrictions. Labeling for STS 6 mg/24hr requires no restrictions, while 9-mg/24hr and 12-mg/24hr doses necessitate dietary modifications. In clinical trials without dietary modifications, there were no reports of hypertensive crisis associated with STS. The objective of this analysis is to present the safety profile of STS in clinical practice post-FDA approval, by analyzing postmarketing adverse events (AEs). Method: We obtained de-identified data on adverse events (AEs), regardless of causality, as collected by the manufacturer after the launch of STS in the United States. We carefully examined all reports of hypertensive crisis, suicide attempts, and STS overdoses to independently determine relation of the AE to STS. Results: From April 2006 to June 2010, 29,141 patients were exposed to STS. A total of 3154 AEs in 1516 patients (5.2% of the exposed population) were reported, regardless of causality. The most frequently reported categories of AEs were general disorders (n=1037, 32.9%), psychiatric disorders (n=575, 18.2%), and central nervous system (CNS) disorders (n=381, 12.1%). Among general disorders, application site reactions (n=577, 55.6%) were most frequent. Cardiac and vascular AEs accounted for approximately 4% of reported AEs (n=127), with palpitation (n =28, <1%) and hypotension (n =25,<1%) being most common. Insomnia (4.4%) was the most frequent psychiatric AE. There were 16 reports (<1%) of manic/hypomanic AEs. There were 13 (0.9%) drug-drug interactions reported, 5 of them classified as serious. There were 266 (8.4%) reports classified as serious AEs (SAEs); psychiatric disorders (n=71, 2.3%), cardiac and vascular disorders (n=44, 1.4%), and CNS disorders (n=40, 1.3%) were most common. There were 5 self-reports of possible hypertensive crisis or hypertension, though objective clinical data were not submitted in any case. There were 28 (0.9%) reports of suicidal ideation, 4 (0.1%) suicide attempts, and 5 (0.2%) completed suicides; no causal role was apparent for STS based on available follow-up information. Conclusions: To date, the AE profile for STS from postmarketing exposures resembles that observed in clinical trials. The most common AEs were application site reactions and insomnia. Very few reported a hypertensive event, and there were no objectively confirmed reports of hypertensive crisis with food at any STS dose. Serious drug-drug interactions were rare. Therapeutic doses of STS appear to have an excellent safety profile in clinical practice. However, given the relatively modest exposure numbers, continued safety monitoring is recommended. This study was funded by Dey Pharma, L.P.

NR07-46

RATE OF OCCURRENCE OF ACUTE AKATHISIA IN HOSPITALIZED FIRST-EPISODE PATIENTS TREATED WITH FIRST AND SECOND GENERATION ANTIPSYCHOTICS

Chp.:Michael Poyurovsky M.D., POB 9, Tirat Carmel, 30200 Israel, Co-Author(s): Yael Barnea M.D., Michael

Poyurovsky, M.D.

SUMMARY:
Objective: Acute antipsychotic-induced akathisia (AIA) is one of the most distressful adverse effects that portend poor treatment response, non-adherence, and tardive dyskinesia. Compared to first-generation antipsychotics (FGAs), second generation antipsychotics (SGAs) are associated with a lower propensity to induce extrapyramidal side effects, however, this may not apply to akathisia (Poyurovsky, 2010). The aim of this investigation was to compare the rate of occurrence of acute akathisia induced by FGAs and SGAs.
Method: We performed a retrospective chart review of 348 patients hospitalized from January 2009 to January 2010 in the department of first-episode psychosis at Tirat Carmel Mental Health Center (Israel), and for whom antipsychotic treatment was indicated. The department specializes in akathisia studies (Poyurovsky et al, 2006). The diagnosis of akathisia was established following a consensus diagnosis procedure, based on the clinical description of akathisia and/or evidence for the administration of antiakathisia agents (beta-blockers, serotonin-2A receptor antagonists). Results. A total of 675 courses of treatment were initiated with FGAs or SGAs. Haloperidol (5-10mg/day) was associated with the highest rate of acute AIA 19.9% (38/191 courses of treatment), followed by risperidone (2-4mg/day) 13.5% (5/37), perphenazine 5.5% (4/73), ziprasidone (80-120 mg/day) 4% (1/25) and olanzapine (5-20mg/day) 3.3% (9/272). Quetiapine (400-800mg/day) was associated with the lowest rate 1.5% (1/67) (?²=13.1, p=0.0003 vs. haloperidol; ?²=6.3, p=0.0l vs .risperidone). Conclusion. This naturalistic study underscores the notion that in the era of SGAs, acute AIA “may be forgotten but not gone”, and confirms that SGAs are a heterogeneous group with regard to the propensity to induce AIA. Physicians and caregivers should continue to be aware of this clinically significant adverse effect of antipsychotic therapy. Poyurovsky M. Acute antipsychotic-induced akathisia revisited. Br J Psychiatry. 2010;196(2):89-91. Poyurovsky M, Pashinian A, Weizman R, Fuchs C, Weizman A. Low-dose mirtazapine: a new option in the treatment of antipsychotic-induced akathisia. A randomized, double-blind, placebo- and propranolol-controlled trial. Biol Psychiatry. 2006;59(11):1071-7.

NR07-47

INCREASED PERSPIRATION: AN UNPLEASANT SIDE EFFECT OF ANTIDEPRESSANT MEDICATION IN THE TREATMENT OF DEAF AND HARD OF HEARING PATIENTS

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SUMMARY:
Iatrogenic increased perspiration is an unpleasant side-effect of antidepressant medication which can happen immediately after the start of the medication or later in treatment. Selective Serotonin Reuptake Inhibitors as well as Tricyclic Antidepressants can cause a increased hyperhidrosis. The exact pharmacological mechanism of this side effect is unknown, as no research data are available. Literature about hyperhydrosis as a side effect as well as the treatment possibilities is mainly based upon case histories or an overview of small groups of patients. Beside busperidone and seldomly carbamazepine other psychopharmacological medication has no such effect. An review of the literature about the psychopharmacological aspects of hyperhidrosis in antidepressant and other psychopharmacological medication will be described. In two case-histories the patients showed an increased perspiration caused by the use of SSRI’s. In both cases the causality of drug induced hyperhydrosis was assessed with the Naranjo adverse drug reactions probability scale. The negative effect of increased perspiration as a side effect of antidepressant medication on the life of deaf people will be illustrated. The excessive fluid on the head of the patient can damage the hearing aid or can make it impossible to wear the hearing aid. Important specific psychopharmacological aspects in the treatment of deaf and hard of hearing patients with mood disorders and other non-pharmacological advices will be described.

NR07-48

ZIPRASIDONE AND THE QTC INTERVAL: A COMPREHENSIVE REVIEW

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Elizabeth Pappadopulos Ph.D., John Kane, M.D.

SUMMARY:
Background Ziprasidone's effects on QTc have been studied in phase 1-4 randomized, controlled trials (RCTs). A comprehensive review of this extensive database may serve as a useful reference on this critical safety issue. Methods Phase I pharmacokinetic (PK) analyses are presented, followed by analyses of pooled QTc data (Fridericia correction) from phase 2-4 ziprasidone RCTs: categorical summaries of QTc prolongation (increases of =30, =60, and =75 msec) and peak measured QTc (cutoffs of =450, =480, and =500 msec); QTc change from baseline to end of study; maximal QTc prolongation as a function of baseline QTc, and modeling of QTc change from baseline as a function of ziprasidone concentration. Lastly, results of the Ziprasidone Observational Study of Cardiac Outcomes (ZODIAC, a phase 4 large simple trial designed to detect potential QTc-related mortality) are reported. Results PK analyses in adults receiving oral ziprasidone demonstrated dose-dependent mean increase in QTc over the range of 40-160 mg/d (4.5-19.5 msec) with small incremental increase at 320 mg/d (22.5 msec); no subject reached a QTc = 450 msec. In a comparative study vs 5 antipsychotics, mean QTc increase at steady state Cmax was 15.9 msec. Results of PK analyses using IM ziprasidone were similar; no subject reached a QTc = 480 msec. A total of 3787 adults received ziprasidone in placebo- and active-comparator RCTs and had evaluable QTc data. No subject reached a QTc = 480 msec; 20 (0.5%) had a QTc = 450 msec. QTc prolongation = 30 msec was observed in 337 subjects (8.9%); = 60 msec in 22 (0.6%); and = 75 msec in 5 (0.1%). Change in QTc from baseline to end of study (Mean ±SD, median [min, max]) was 3.1±20.31 msec, 2.7 (-105.9, 109.4) msec. Comparable QTc change in the pooled placebo group was -0.6 ±20.50 msec, -0.5 (-98.2, 105.7) msec. Data from pediatric studies, IM studies, and bipolar studies in which ziprasidone was used adjunctively with lithium, valproate, or lamotrigine, demonstrated similar QTc effects. A plot of peak QTc prolongation as a function of baseline QTc showed QTc prolongation =60 msec exclusively in subjects with baseline QTc = 400 msec. The final concentration-response analysis model, comprising 2966 data points from 1040 subjects, estimates an increase in QTc of ~0.06 msec for each 1 ng/mL increase in ziprasidone concentration. In ZODIAC, the incidence of non-suicide mortality within one year of initiating ziprasidone (n = 9,077) or olanzapine (n = 9,077) was 0.91 and 0.90, respectively; the relative risk (95% CI) was 1.02 (0.76, 1.39). Discussion These analyses provide the first comprehensive analysis of QTc changes associated with ziprasidone, based on RCTs from phase 1-4, across age and diagnostic groups, routes of administration and adjunctive use. The results demonstrate a modest mean increase in QTc, infrequent QTc prolongation =60 msec (<1.0%), and rare observation of QTcF =480 msec. ZODIAC trial results showed no increase in mortality vs olanzapine.

NR07-49

EFFECT OF SUBJECTIVE SATISFACTION OF THE COMPENSATION ON CHANGE IN HEALTH STATUS FOLLOWING FLOOD DISASTER

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SUMMARY:
Objective: This study aims to observe longitudinal change of general health status in an agricultural population affected by a massive flood and to examine the relationship between general health status and disaster exposure, post-disaster compensation and other related variables Method: Eighty-three of 160 residents of Garisan-ni, Inje-gun, Gangwon-do, were evaluated agricultural safety management status using the SF-36, PWI-SF, and AUDIT between April and June 2006, just prior to a massive flood. Among those initially assessed, 57 residents were available for follow-up 18 months and 24 months after the flood. Participants completed the SF-36, BDI, MMPI-PTSD, AUDIT, and IES-R to detect depression, alcohol use and PTSD. Subject's subjective satisfaction about the compensation was measured for following-up 24 months after the flood. result: Subjective satisfaction of the compensation was not associated with sex, marital state, education level, socioeconomic status, and smoking. Non-problem drinking group (AUDIT<16) compared with problem drinking group were more satisfied with compensation. Initial mean SF-36 score in the group of high compensation satisfaction was 52.1 (SD; 6.9), and in the group of low compensation satisfaction

was 57.8(SD; 8.4). No significant difference was found between two groups. After 18month of disaster, mean SF-36 score in the group of high compensation satisfaction was 60.0(SD; 11.0), however in the group of low compensation satisfaction was 54.3(SD; 8.4). And significant difference was between two groups. (P< .001) discussion: There is difference in the mental health status depending on the compensation satisfaction. Health related quality of life after disaster was higher in the group of high compensation satisfaction than low compensation satisfaction.

NR07-50

FORUM ON HEALTH AND NATIONAL SECURITY STIGMA AND BARRIERS TO CAREMARCH 24-26, 2010 EXECUTIVE SUMMARY RECOMMENDATIONS

Chp.:Mark Brown M.D., 5005 N. Piedras Street, El Paso, TX 79918

SUMMARY:
Convening a conference of experts is one mechanism for synthesizing knowledge and developing a scheme for dissemination of this knowledge so that it may inform further research, clinical practice and policy development. Under the guidance of Robert J. Ursano, MD, and supported by a team of talented organizers from the Center for the Study of Traumatic Stress, Uniformed Services University, the presenter assembled a diverse group of experts in order to discuss the topic of barriers to mental health care, including stigma, applied across the domains of war, disaster and trauma. Presenters and attendees enriched the discussion, or "cross talk," by sharing expertise in Psychiatric Epidemiology, Disaster Mental Health, Tri-Service Military Mental Health, Public Policy, Veterans' issues, Public Health, Social Science, Child and Family Mental Health, Stigma Research, Program Development, Posttraumatic Stress Disorder, Traumatic Brain Injury, History, Education and Research Methodology. The international group of expert speakers included Ron Kessler, Charles Hoge, Simon Wessely, Bruce Link, Bernice Pescosolido, Sandro Galea, Thomas Bornemann, Doug Zatzick, Arieh Shalev, Matt Friedman, Brian Flynn, Dori Reisman, Paul Hammer, Dean Kilpatrick, Stevan Hobfoll, Patrick Corrigan, Sue Estroff, C. Hendricks Brown, and Wendi Cross. The proceedings of the 2-day conference in March 2010 were recorded and transcripts were edited. The poster presentation will briefly outline the organizational process for preparing and executing such a conference, highlight prepared comments from selected speakers, and summarize key recommendations across the areas of research, education, policy, and mitigating barriers to mental health care. A full transcript of the conference will be available for review.

NR07-51

WITHDRAWN

NR07-52

EVALUATION OF WORK PRODUCTIVITY AMONG EMPLOYED OUTPATIENTS WITH MAJOR DEPRESSIVE DISORDER TREATED WITH DESVENLAFAXINE

Chp.:Sean Nicholson M.S., 123 MVR Hall, Ithaca, NY 14853, Co-Author(s): Matthew Sweeney, MS, Jennifer Whiteley, EdD, MSc., MA, James Harnett, PharmD, MS

SUMMARY:
Objective: To assess the impact of Desvenlafaxine (DVEN) on reducing work impairment, medical services use and improving health related quality of life (HRQoL) among employed patients with major depressive disorder (MDD). The study also estimated the financial impact to an employer of reducing antidepressant (AD) drug cost sharing. Method: Gainfully employed MDD patients were randomly assigned to 12 weeks of blinded treatment with DVEN or placebo (PBO). The Work Productivity and Activity Impairment questionnaire was self-administered to evaluate the percent of work time missed, impairment while working, and overall work impairment due to health problems. Medical service use was measured via the Utilization and Cost (UAC) questionnaire, and the Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q) assessed HRQoL. Analyses were performed with the patient reported data from the intent-to-treat (ITT) population; data from a predefined modified ITT (mITT) population (baseline Hamilton Rating Scale for Depression = 20) provided supportive information. A predictive model was constructed from the self-insured employer perspective based on peer-reviewed literature and results from the DVEN trial to estimate the financial impact of promoting the use of

AD therapy via reduced cost sharing among MDD employees and covered adult dependents (CAD). Results: The difference in adjusted mean changes between PBO (n=142) and DVEN (n=285) at week 12 was 0.55% (P=0.69) of work time missed, 5.11% (P=0.045) impairment while at work, and 5.09% (P=0.054) overall work impairment. For the mITT population, the respective productivity differences were 2.00% (P=0.24), 7.40% (P=0.015), and 7.30% (P=0.021). HRQoL significantly improved for those receiving DVEN in both cohorts (ITT: P = 0.014 and mITT: P=0.006); there were no significant differences in medical service use. A 5,000 employee company is predicted to have 161 employees and CAD with MDD receiving AD therapy. Reduced AD cost sharing from the average $16.20 per prescription to $0 would be associated with a15.7 percentage point increase in AD adherence, increase in annual MDD drug spending per patient of $320, decrease in other medical spending by $978 for each newly-adherent patient, and a decrease in cost associated with work impairment by $4,511 for each newly-adherent employee. Across all employees and CAD's, the total annual MDD costs are predicted to decrease by $46,700. Conclusion: These data demonstrate the potential impact of DVEN in reducing work impairment and improving HRQoL. By reducing patient cost sharing for AD medications, employers can generate productivity benefits and reduce non-prescription medical costs by more than the resulting increase in drug spending. Funding: The current study was conducted by Dr. Nicholson; Pfizer Inc funded the study.

NR7-53

GR 2 RECEPTOR ANTAGONISTS PREVENT WEIGHT GAIN AND INCREASE INSULIN SENSITIVITY

Chp: Joseph K. Belanoff M.D.

SUMMARY:
Glucorticoid Antagonist Attenuates Olanzapine-Induced Weight Gain in Rats Antipsychotic medications have been consistently associated with weight gain and metabolic abnormalities. Previous research suggests that glucocorticoid receptor antagonists can block weight gain caused by antipsychotic medications. Animal studies, and two randomized clinical trials in humans have shown that mifepristone prevented weight gain caused by the commonly-used antipsychotics, olanzapine and risperidone (Beebe, 2006; Gross, 2009; Gross, 2010). More recently, a selective glucorticoid antagonist with properties similar to mifepristone but without progesterone activity, was demonstrated to mitigate olanzapine-induced weight gain in rats (Belanoff, 2010). The current study tested whether two similar compounds could prevent olanzapine-induced weight gain. Female Sprague-Dawley rats (n=60) were fed a normal chow diet. Rats (n=10 per group) received 18 days of: vehicle, olanzapine (1.2 mg/kg), olanzapine + CORT 112716 (20mg/kg), olanzapine + CORT 112716 (60mg/kg), olanzapine + CORT 113083 (20mg/kg), and olanzapine + CORT 113083 (60mg/kg) or olanzapine plus mifepristone (60/mg/kg). Rats receiving concomitant treatment of 112716 (60mg/kg) or 113086 (60mg/kg) gained significantly less weight than rats receiving olanzapine alone (p's<.01). Both compounds tested herein significantly attenuated the weight gain induced by the antipsychotic medication olanzapine. Ultimately, this line of research could lead to discovery of novel treatments for the prevention and treatment of significant weight gain among persons using antipsychotic medications.

NR07-54

CLINICAL AND POLICY IMPLICATIONS OF A STATEWIDE TELEPSYCHIATRY INITIATIVE

Chp.:Meera Narasimhan M.D., Department of Neuropsychiatry and BehavioralScience, 3555 Harden Street Extension,, Columbia, SC 29203, Co-Author(s): Benjamin Druss, M.D., Steve Marcus

SUMMARY:
Persons with mental disorders account for a large and growing portion of Emergency Department (ED) visits in the United States. Because of the wide geographic distribution of EDs, telemedicine holds particular promise for increasing access and improving outcomes of mental health care. However, almost no existing research has examined the potential of telepsychiatry services as a means of treating mental health consumers seen in emergency departments. In March 2009, South Carolina began implementing an ambitious statewide telepsychiatry initiative designed to improve care for persons seen in its Emergency Departments. Psychiatrists in this telepsychiatry consultation system, provide around-the-clock coverage for consultation with hospital emergency departments. The program will be rolled out to all emergency rooms in the State over a two-year period. In an Ro1 awarded by the National Institute of Mental Health the

effectiveness of this telepsychiatry initiative is being studied by comparing access and quality of care for persons with mental illness following an emergency department visit to a set of matched controls. Generalizability is assessed by examining the individual, the ED, and community-level moderators of the telepsychiatry program's impact. Financial sustainability will be examined using a budget impact analysis from multiple state perspectives. Data is being comprehensively tracked for treatment contacts for individuals across the mental health, health, and social service systems. Preliminary Results: 4200 patients with mental illness have been seen at 17 emergency rooms in the state both rural and urban. The wait time for mental health consultation in the emergency department is reduced in many cases from days to hours, initial treatment is offered earlier, the length of stay in the ED is reduced from an average of six to three days and discharge planning to community service follow up is strengthened. In short, the patient receives a higher quality of care and the hospitals have reduced costs.

NR07-55

THE IMMEDIATE EFFECT OF COMPUTER-ASSISTED CBT ON MOOD

Chp.:Dale D'Mello M.D., Department of Psychiatry, Michigan State University, St Lawrence/Sparrow Hospital, 1210 W Saginaw Lansing, MI 48915, Co-Author(s): Suma Cherukuri, DO, Rachel Young, Katie Martin, Maqsood Jafri, MD

SUMMARY:
Computer technologies offer a cornucopia of user-friendly CBT devices: ranging from interactive PC-based DVD ROM software, to internet-based interactive programs and apps for PDAs and smart phones. Objective: The purpose of the present study was to examine the immediate effect of a single session of computer-assisted CBT on mood. Method: Patients who were hospitalized for depression, on the university service of an adult inpatient psychiatry unit in mid-Michigan, between May and November 2010, were invited to participate in the study. Following informed consent the patients completed the Patients Health Questionnaire (PHQ-9) and the Profile of Mood States Depression questionnaire. They then completed a single 60 minute session of computer-assisted CBT, using the Good Days Ahead DVD-ROM software program. Following this, they completed the POMS Depression Questionnaire. Finally, they completed a satisfaction survey, which explored the helpfulness and usability of the device and the patients' likelihood of utilizing CBT strategies in the future. Results: The 26 patients who participated in the study included 18 women and 8 men. The mean PHQ-9 score of the cohort was 16 (SD=6). The mean POMS Depression Subscore decreased from 19 (SD=10) to 8 (SD=7); $t=10.99$, $df=31$, $p<0.001$. Eighty-seven percent of the patients rated the Good Days Ahead software program as "very easy" to use. Sixty-nine percent of the patients stated that they were "very likely" to use CBT techniques in the future. Conclusions: Computer-assisted CBT produced a rapid improvement of mood, is a cost-effective adjunct to more traditional face-to-face therapeutic approaches. Even a single session of computer-assisted CBT may increase patients' knowledge of the modality, and enhance compliance.

NR07-56

A FOUR-YEAR PROSPECTIVE LONGITUDINAL STUDY OF THE COURSE OF BODY DYSMORPHIC DISORDER

Chp.:Katharine Phillips M.D., Coro West, 1 Hoppin Street Suite 2.030, Providence, RI 02903, Co-Author(s): William Menard, B.A., Eugene Quinn, Ph.D., Elizabeth R. Didie, Ph.D., Robert L. Stout, Ph.D.

SUMMARY:
Objective: This study prospectively examined the four-year course of body dysmorphic disorder (BDD), a common and often-severe disorder that consists of distressing or impairing preoccupation with imagined or slight defects in physical appearance. To our knowledge, this is the only prospective observational follow-up study of the course of BDD. Method: The interviewer-administered Longitudinal Interval Follow-Up Evaluation (LIFE) obtained data on weekly BDD symptom status and treatment received over four years for 166 broadly ascertained adults and adolescents who met current DSM-IV criteria for BDD at study intake. Probabilities of full remission, partial remission, and relapse over four years were examined. Full remission was defined as minimal or no BDD symptoms—and partial remission as less than full DSM-IV criteria—for at least 8 consecutive weeks. Full relapse was defined

as meeting full BDD criteria—and partial relapse as an increase of 2 points on the LIFE's 7-point BDD-PSR scale—for at least 2 consecutive weeks after attaining full or partial remission from BDD. BDD severity at study intake was assessed with the reliable and valid Yale-Brown Obsessive-Compulsive Scale Modified for BDD (BDD-YBOCS); other variables were assessed with reliable and valid measures. Kaplan-Meier life tables were constructed for time to remission and relapse. Cox proportional hazards regression examined predictors of remission and relapse. Results: Over four years, the cumulative probability of full remission from BDD was only .20, and the cumulative probability of full or partial remission was .55. A lower likelihood of partial or full remission from BDD was predicted by more severe BDD symptoms on the BDD-YBOCS at intake (p=.001), a longer lifetime duration of BDD (p=.040) and being an adult (p=.031). Among subjects who partially or fully remitted from BDD, the cumulative probability of subsequent full relapse was .42, and the cumulative probability of full or partial relapse was .63. Predictors of full or partial relapse were more severe BDD symptoms at intake (p=.036) and earlier age at BDD onset (p=.048). Gender and ethnicity did not significantly predict the probability of full or partial remission or relapse. Nearly all subjects (88.0%) reported receiving mental health treatment (nearly all in the community) at some time during the four years of follow-up. Psychotropic medication was received by 82.5% of subjects, and psychosocial treatment was received by 72.3%. Conclusions: In this observational study, BDD tended to be chronic, with a low probability of remission and a high probability of relapse. Remission probabilities were lower than those reported for mood disorders, personality disorders, and nearly all anxiety disorders in studies using very similar methodology to ours. More severe BDD symptoms at intake predicted both a lower probability of remission and a higher probability of relapse.

NEW RESEARCH SESSION 08
May 16, 2011
1 – 3 PM
Hawaii Convention Center, Exhibit Hall, Level 1

NR08-01
ACUTE URINARY RETENTION PRECIPITATED BY BUPRENORPHINE/ NALOXONE

Chp.:Adekola Alao M.D., 750 East Adams Street, Syracuse, NY 13210, Co-Author(s): Katherine Walia, M.D.

SUMMARY:
Case Report The patient is a 40 year-old veteran who has a history of PTSD as well as polysubstance dependency (alcohol dependency in sustained remission and prescription pain killer oxycodone dependency) who presented to the Emergency Department one day after being started on sublingual buprenorphine/naloxone at a dose of 8mg bid for treatment of opiate dependence. In addition, he was being treated with venlafazine XR 37.5mg, meloxicam 15mg po q daily, sertraline 100mg po q daily and trazodone 50mg po qhs prn for insomnia. The next morning, the patient awoke with a rash on his chest and inability to urinate. He subsequently took a dose of Benadryl 50mg which relieved the pruritus associated with the rash. However, he continued to experience lower abdominal discomfort due to the urinary retention. He later presented to the emergency department where he had a onetime urethral catheterization. He was observed in the Emergency Room for a period of time and was later discharged after he successfully voided. Following discharge, he discontinued his buprenorphine/naloxone treatment, continued his other medications with no recurrence of the urinary retention. The patient also refused a re-challenge with buprenorphine/naloxone. Discussion Buprenorphine / naloxone is FDA approved to treat chronic opiate addiction. Unlike methadone, buprenorphine/naloxone can be prescribed in doctors' offices. A significant advantage of this medication is that its physiologic and subjective effects are reported as having a ceiling effect for cardiovascular, respiratory, and subjective effects. This does make it attractive for treatment of opiate addiction as it has a lower potential to developing respiratory and cardiovascular depression. The reported adverse effects of buprenorphine/naloxone include respiratory depression, CNS depression,

dependence, hepatitis, allergic reactions such as bronchospasm, angioneurotic edema, anaphylaxis and the potential to increase intracholedocal pressure (Ref). In addition, asthenia, chills, headaches, constipation, diarrhea, nausea, vomiting, insomnia, rhinitis, sweating, fevers and flu like syndromes have been reported (Ref). However, acute urinary retention has not been described with the use of buprenorphine/naloxone. There has been a report of the effects of the opiate antagonist naloxone on urinary tract function (Murrat and Feneley year). In a single blind trial of the effect of opioid blockade on lower urinary tract function assessed urodynamically, twenty patients were studied by filling and voiding cystometry and urethral pressure profilometry before and after the administration of the opioid antagonist, naloxone. The authors found a significant rise in subtracted detrusor pressure throughout bladder filling. Conclusion Buprenorphine/naloxone is a partial mu agonist that has the advantage of effectiveness and minimal sedation which has been approved to treat opiate addiction in the United States. While clinicians should be aware of these possible benefits of buprenorphine/naloxone, they should also know about the presence of uncommon but potentially dangerous adverse effects such as acute urinary retention.

NR08-02

BACLOFEN REDUCED ETHANOL INTAKE IN "LOSS OF CONTROL" MICE WITH THE HIGHEST CONSUMPTION IN AN ADDICTION MODEL

Chp.:Roseli Boerngen-Lacerda Ph.D., Rua Barao dos Campos Gerais 524 ap 42, Curitiba, 80030-400 Brazil, Co-Author(s): Gustavo Villas Boas, Master Student

SUMMARY:
In the search for medications to treat drug addiction, many animal models have been developed. We adapted and validated an addiction model for mice which allows the characterization of different ethanol intake patterns. This model is based on a three bottle free-choice paradigm that allows studying alcohol-intake when ethanol solutions are made less palatable through the addition of quinine, a bitter, presumably aversive taste stimulus. It has face validity (long-term high ethanol intake, heightened anxiety during ethanol withdrawal and persistent intake despite adulteration of ethanol solutions with quinine); predictive validity when tested with naltrexone and also, reliability (the model has been replicated in several studies). In one of these studies we observed that mice characterized as "addicted" had different level of transcription for the Gabbr1 and Gabbr2 genes in several brain areas related to addictive behavior. As these genes are related to GABAB receptor, we decided to study the effect of an agonist of this receptor on the ethanol consumption in this model. Sixty adult male Swiss mice were individually housed and were offered ethanol (5% and 10%) and water in a free choice paradigm consisting of four phases: acquisition (AC: 10 weeks), withdrawal (W: 2 weeks), re-exposure (RE: 2 weeks) and quinine-adulteration (AD: 2 weeks). Control mice (n=10) had access only to water. Mice were characterized as: addicted (A, n=14: preference for ethanol during all phases and no reduction in ethanol intake when adulterated), heavy drinker (H, n=15: preference for ethanol during AC phase and reduction in ethanol intake when adulterated) and light drinker (L, n=19: preference for water and low ethanol intake during all phases). After the classification, ethanol was withdrawn during 4 days and then, half of the A, H and L groups received i.p. baclofen (0; 1.25; 2.5 and 5.0 mg/kg, randomly administered to each mouse with 4 days of abstinence among each dose) and the others received saline. Thirty minutes later, ethanol and water were offered. The control group received the 3 doses of baclofen and 30 minutes later had access to water (to verify the baclofen effect on consumatory behavior). The baclofen effect on ethanol or water consumption was evaluated 90 minutes and 24 hours after the injection. Baclofen did not reduce ethanol intake when we analyzed the groups comparing the means, but correlation analysis showed that mice with the highest consumption during the AC phase were those that showed the lowest intake after baclofen treatment only in A and L mice (r= -0.51 and r=-0.39, respectively) but not in H mice (r=0.08). These data suggest that baclofen may be useful to treat addictive behavior only in some individuals with specific profile, maybe related to some genetic differences.

NR08-03

REDUCED ACTIVITY OF ANTICIPATORY

REWARD SYSTEM IN PATHOLOGICAL GAMBLING: AN EVENT-RELATED FMRI STUDY

Chp.:Jung-Seok Choi M.D., 425 Shindaebang-dong, Dongjak-gu, Seoul, 156-707 Korea, Co-Author(s): Young-Chul Shin, M.D., Ph.D., Wi Hoon Jung, M.S., Myung Hun Jung, M.D., Ph.D., Joon Hwan Jang, M.D., Do-Hyung Kang, M.D., Ph.D., Jungsu S. Oh, Ph.D., Ji Yeon Han, B.A., Chi-Hoon Choi, M.D., Ph.D., Sam-Wook Choi, M.D., Ph.D., Jun-Young Lee, M.D., Ph.D., Jun Soo Kwon, M.D., Ph.D.

SUMMARY:
Objective: The reward system has been considered involved in the pathophysiology of pathological gambling (PG). We examined the functional brain activity specific to the anticipation phase of situations involving rewards using event-related functional magnetic resonance imaging (fMRI) in patients with PG. Method: Ten drug-naive patients with PG and 14 age-, and IQ-matched healthy controls participated in a modified monetary incentive delay task, in which visual cues predicted that a rapid button-pressing response during a brief target presentation would result in monetary gain, monetary loss, or no consequences during fMRI scanning. Symptom severity was assessed with Yale-Brown Obsessive Compulsive Scale for pathological gambling and the South Oaks Gambling Screen. Results: Patients with PG showed reduced activation in the ventromedial caudate nucleus and the anterior cingulate cortex and increased activation in the posterior cingulate cortex when anticipating gain, and decreased activation in the anterior insula when anticipating loss. Conclusions: Our findings show that patients with PG might be less sensitive to anticipating positive and negative consequences and indicate functional abnormalities in the anticipatory reward system among patients with PG.

NR08-04

PSYCHOSOCIAL TREATEMENT TO ENHANCE OUTCOMES AFTER RESIDENTIAL TREATMENT FOR SUBSTANCE USE DISORDERS

Chp.:Kathleen Decker M.D., 101 Emancipation Dr., Hampton, VA 23607, Co-Author(s): Whiting, William L, D.O.

SUMMARY:
Objective: To examine the factors associated with outcomes of psychosocial treatments for substance use disorders and factors associated with aftercare compliance. Method: MEDLINE, Embase and Cochrane databases were used to create a literature review from 2005 through 2010. This window was chosen as a recent prior meta-analysis of outcome of residential substance use treatment interventions excluded alcohol use disorders and 12-step programs from analysis of treatment outcomes (Dutra) or focused specifically on alcohol use disorders (Agosti, Apodaca). The current study utilized search words in the databases aimed to generate new research articles (English language only) which included keywords such as treatment outcome, abstinence, follow-up, psychosocial treatment, aftercare compliance, etc. Results: Twenty-three articles were retrieved which focus on substance abuse treatment outcomes and aftercare compliance. Many of the articles were not directly comparable as they utilized different outcome intervals or measured outcome by methods that were quite specific to each investigation. However, several articles describing psychosocial methods of substance use treatment utilized similar enough follow-up intervals and outcome measure to permit comparison (DeMarce, Godley, Gossop, Johnson). The results show that participation in Assertive Community Treatment (ACC), Contracting, Prompting, Reinforcement (CPR) or 12-step groups during aftercare increased abstinence rates at 12 months for individuals with polysubstance dependence (alcohol and drug use), marijuana, opiates and alcohol (Godley, Gossop) and for those with comorbid psychiatric disorders and mixed substance use (DeMarce). One study (Gossop) included a 48-60 month follow-up and found continued statistically significant improvements in abstinence with 12-step group attendance for alcohol and opiates (but not stimulants). Aftercare compliance measured by attendance at aftercare sessions was improved at 3 months following treatment with CPR versus usual care for those with dual psychiatric diagnoses but this effect was lost at longer time points and for those without dual diagnoses (DeMarce). Attendance at 12-step groups after residential treatment was significantly improved in those participating in 12-step oriented residential treatment programs in comparison to residential treatment programs with a cognitive-behavioral orientation (Johnson). Attendance at 12-step groups during the aftercare

phase was associated with improved abstinence at all time points for all substance use disorders (Gossop). Conclusions: The articles reviewed demonstrate that residential treatment programs which include techniques to enhance aftercare participation such as reminders, prompts, incentives and other outreach techniques result not only in better rates of aftercare participation, but also in improved abstinence rates. In addition, residential programs which include a 12-step component also lead to increased participation in 12-step groups during the aftercare phase. Disclosures: This study was not funded by any institution or commercial organization. Neither author has a financial or ethical conflict of interest. The opinions and conclusions herein are strictly those of the authors and do not represent those of the Department of Veterans Affairs nor those of the U.S. Navy.

NR08-05

ALEXITHYMIA IN RELATION TO FRONTAL LOBE FUNCTIONING, EMOTIONAL INTELLIGENCE, PARENTAL ALCOHOLISM AND ALCOHOL CONSUMPTION IN A NON-CLINICAL SAMPLE

Chp.:Michael Lyvers Ph.D., University Drive Robina, Gold Coast Qld, 4229 Australia, Co-Author(s): Roy Onuoha, M.A., Fred Arne Thorberg, Ph.D.

SUMMARY:
Recent studies have indicated that 45-67% of alcoholics in treatment suffer from alexithymia, a multifaceted personality trait characterized by difficulties identifying and describing emotions, a lack of imagination and an externally oriented cognitive style (see Thorberg et al., 2009). The high reported prevalence rates of alexithymia among alcoholics has led to the speculation that alexithymia is a personality dimension that strongly predisposes to problematic alcohol use. This notion was examined in 314 community adults (54% female) aged 18-45 years (M = 27.6 years), all of whom reported at least occasional alcohol consumption, who completed online surveys assessing alexithymia (Toronto Alexithymia Scale, or TAS-20), problematic alcohol use (Alcohol Use Disorders Identification Test, or AUDIT), parental alcoholism (Children of Alcoholics Screening Test, or CAST), everyday frontal lobe related functioning (Frontal Systems Behavior Scale, or FrSBe), and Emotional Intelligence (Trait Emotional Intelligence Questionnaire, or TEIQ). TAS-20 scores were significantly positively correlated with the index of frontal lobe dysfunction FrSBe ($r = .53$, $p < .0001$) as well as the index of alcohol-related problems AUDIT ($r = .15$, $p < .01$) and the measure of parental alcoholism CAST ($r = .16$, $p < .01$). TAS-20 scores were significantly negatively correlated with the measure of emotional intelligence TEIQ ($r = -.75$, $p < .0001$), as expected. Chi-square test showed a significant association between TAS-20-defined alexithymia and being the offspring of an alcoholic parent as defined by CAST, $p < .001$. Risky drinking as defined by AUDIT was associated with significantly higher scores on the TAS-20 subscale Difficulty Describing Feelings ($p < .05$) as well as the FrSBe Disinhibition subscale ($p < .01$) according to multivariate analysis of covariance (MANCOVA) controlling for gender and age. The findings suggest that alexithymia is related to deficiencies in frontal lobe functioning and emotional processing that may reflect a heritable predisposition to alcohol problems. Alternatively, poor childhood care due to parental alcoholism may result in attachment deficits in that theoretically underpin alexithymia and which promote risky drinking in adulthood.

NR08-06

CO-OCCURRING PSYCHOLOGICAL PROBLEMS AND ALCOHOL MISUSE IN A HIGH RISK MILITARY POPULATION

Chp.:Andrew MacGregor Ph.D., 10555 El Comal Drive, San Diego, CA 92124, Co-Author(s): Kevin J. Heltemes, MPH, Sonya B. Norman, Ph.D., Amber L. Dougherty, MPH, Michael R. Galarneau, MS.

SUMMARY:
Objective: Individuals with dual disorder have both a substance abuse problem and a co-occurring mental health disorder, and represent a high risk subgroup in need of targeted intervention. Deployed military personnel face a variety of stressors, including combat experiences and physical injury, which can result in psychological and substance abuse problems. The aim of this study was to identify the prevalence and associated health complaints of persons with dual disorder among a high risk military population. Methods: US military personnel who sustained a confirmed combat injury and who endorsed moderate-high levels of combat exposure were identified from the

Expeditionary Medical Encounter Database (n = 633). The Post-Deployment Health Re-Assessment (PDHRA), completed within a year after overseas deployment, was utilized to identify personnel who screened for alcohol misuse and other mental health disorders (e.g. post-traumatic stress disorder, depression). Outcome groups were classified as dual disorder (screening for alcohol misuse and other mental health disorder) or mental health disorder only (screening for mental health disorder without alcohol misuse). Outcome groups were compared on frequency of the following 11 self-reported health complaints: headache, dizziness, memory problems, sleep disturbance, tinnitus, numbness, back pain, joint pain, muscle pain, weakness, and irritability. Results: Overall, 16.4% (n = 104) screened for dual disorder and 31.1% (n = 197) screened for mental health disorder only. Distribution of rank differed by outcome group, with dual disorder having more junior enlisted service members compared with mental health disorder only (52% vs. 37%, p-value = 0.04). Compared with mental health disorder only, those with dual disorder had a higher rate of self reported health complaints, particularly memory problems (57% vs. 34%, p-value < 0.001), irritability (61% vs. 40%, p-value < 0.001), sleep disturbance (67% vs. 48%, p-value = 0.001), and tinnitus (61% vs. 43%, p-value = 0.003). Additionally, those with dual disorder reported a higher mean number of symptoms than mental health disorder only (4.44 vs. 3.17, p-value < 0.001), and were significantly more likely to endorse 5 or more symptoms (51% vs. 31%, p-value = 0.005). Conclusions: Alcohol misuse and other mental health disorders occur at high rates following combat deployment. Among this high risk military population, approximately 1 in 3 service members screening for a current mental health disorder also screened for current alcohol misuse. Those with dual disorder had a greater burden of overall health complaints compared to service members with mental health disorder alone. This study highlights the importance of understanding the consequences of dual disorder in order to fully address the treatment needs of these patients. More research is warranted to elucidate correlates of dual disorders in order to guide screening and clinical management.

NR08-07

GENETIC VARIATION AT ALPHA 4 AND ALPHA 7 CHOLINERGIC RECEPTORS PREDICTS SMOKING-INDUCED DOPAMINE RELEASE

Chp.:Karyn Mallya B.A., 760 Westwood Plz, 48-256B, Los Angeles, CA 90024, Co-Author(s): Thomas M. Levin, Erika L. Nurmi, MD, PhD, Karen Ta, Jaime La Charite, James T. McCracken, MD, Arthur L. Brody, MD

SUMMARY:
Objective: The reinforcing effects of cigarette smoking likely result from dopamine release in the ventral striatum. Individual differences in risk for nicotine dependence, smoking histories, and success in achieving abstinence are poorly understood, but conceivably are moderated by differences in dopamine release triggered by cigarette smoking. We previously reported genetic variants in dopaminergic systems that predict smoking-induced dopamine release measured by positron emission tomography (PET). Given that nicotinic cholinergic receptors are the direct nicotine targets mediating downstream effects on dopamine signaling, we tested the role of key candidates in this pathway as additional moderators of interindividual variation in smoking-induced dopamine release. Methods: In 102 tobacco-dependent smokers, we measured the smoking-induced change in 11C-raclopride binding in the ventral striatum by PET and association with complete common genetic variation at six cholinergic receptor genes (CHRNA3, CHRNA4, CHRNA5, CHRNA7, CHRNB2, and CHRNB4). Results: Homozygotes for the common allele (GG) at an intron 2 variant in the alpha 7 cholinergic receptor (CHRNA7, rs12915695) had a >3X reduction in radiotracer binding compared to carriers of the minor A-allele (-10.8% vs. -3.0% respectively), indicating significantly greater smoking-induced dopamine release (p=0.002). Similarly, CC homozygotes at a variant in the promoter of the alpha 4 cholinergic receptor (CHRNA4, rs755203) had almost twice the reduction in radiotracer binding (-10.7% vs. -5.7%) as carriers of the minor T-allele (p=0.047). Interestingly, this risk allele is in modest linkage disequilibrium (LD) with a published variant associated with nicotine dependence. Conclusions: These data are consistent with animal and in vitro studies implicating the alpha 4 and alpha 7 nicotinic receptors in dopamine-mediated reinforcement associated with smoking. Common variants appear to exert significant effects on dopamine release. Genetic moderation of dopamine release with smoking may be relevant to clinical aspects of

smoking, including success with smoking cessation. Further investigation is warranted to determine whether these polymorphisms have direct functional effects on the encoded receptor, or are in LD with a functional variant. A more detailed elucidation of moderators of the pathways involved in nicotine reward and risk for dependence may facilitate the development and matching of successful treatment strategies.

NR08-08

QUETIAPINE FOR THE TREATMENT FOR CANNABIS DEPENDENCE: AN OPEN-LABEL TRIAL

Chp.:John Mariani M.D., 1051 Riverside Drive, Unit 66, New York, NY 10032, Co-Author(s): Patrick Roebke, MA, Daniel Brooks, MA, Edward V. Nunes, MD, Frances R. Levin, MD

SUMMARY:
This dose-finding study assessed the safety and tolerability of quetiapine for the treatment of cannabis dependence. The primary goals of the study were to determine if quetiapine was a safe and tolerable treatment for cannabis dependence and the ideal dosing range. Fifteen cannabis-dependent daily marijuana smokers (11 males) were administered quetiapine under open-label conditions over an eight-week period, with a titration over the first six weeks to a maximum dose of 600 mg per day. The mean study retention was 6.5 weeks (SD 2.3), with 67% of participants completing all eight weeks of the trial. The mean maximum dose achieved was 197 mg/day (range: 25-600 mg/day). End of study measures of marijuana use, craving, insomnia, mood and anxiety decreased significantly from baseline. The mean daily dollar value of marijuana used averaged over a one-week period decreased from $33.56 (SD $34.28) at baseline, to $8.05 (SD $7.68) at the end of the study. On average, these values decreased by $25.51 (SD $33.10; p=.01) per day; a 66% (SD 29%) decrease from baseline. The mean abstinent days per week increased from 0.0 at baseline to 2.7 (SD 2.69; p=.001) at the end of the study. Creatinine-corrected urine THC levels averaged over a two-week period decreased by 20% (SD 37%; p=.04) from baseline. Mean Marijuana Craving Scores decreased 35% (SD 43%; p=.006); Hamilton Anxiety scores decreased 36% (SD 108%; p=.01); Hamilton Depression scores decreased 19% (+ 82%; p=.03); and Medical Outcomes Study Sleep Scale scores decreased 17% (SD 97%; p=.01). There were no serious adverse events and no participants were discontinued from the trial due to adverse effects. The most common reported adverse effects were fatigue (80% of participants) and somnolence (47%). During the trial, 11 participants gained weight and four participants lost weight; the mean weight gain was 1.6 lbs. (range: -5.0 to 11.5 lbs.). However, no participants gained more than 7% of their baseline weight, developed a BMI greater than 30, developed persistently elevated glucose levels, or developed hypercholesterolemia or hypertriglyceridemia. The average tolerated quetiapine dose in this study was approximately 200 mg per day, although that value is likely depressed by participant drop-out during the titration phase for reasons other than tolerability and is likely an underestimate of tolerability. Only two of the 15 participants were able to achieve a dose of 600 mg daily. Participants who requested dose reductions generally preferred to reduce or eliminate the morning dose. Future studies should set a target daily dose of 300 mg, achieved after a three-week titration, and administered in a single evening dose. While this pilot study was not designed to evaluate the efficacy of quetiapine treatment for marijuana dependence, these preliminary results are promising in that quetiapine treatment was associated with reductions in marijuana use and adverse symptoms associated with marijuana withdrawal.

NR08-09

RISK FACTORS FOR REPETITION OF DELIBERATE SELF HARM (RDSH) IN A SAMPLE OF EMERGENCY DEPARTMENT (ED) PATIENTS ADMITTED FOR DSH BY SELF POISONING

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SUMMARY:
A major risk factor for completed suicide is attempted suicide or deliberate self harm (DSH). Patients who self harm are generally admitted to Emergency Departments. This should be considered an opportunity for evaluation and prevention, Suicide being a rare event, studies on the population of DSH patients need huge cohorts to evaluate risk factors prospectively. This study evaluated risk factors associated with the repetition

of deliberate self harm METHODS:465 patients admitted for self poisoning were included from 3 ED's and one intensive care unit in Toulouse and Brive (South West France).Inclusion criteria were being at least 18 years old, in capacity of giving signed informed consent, having a Glasgow level of 15, having received emergency care, and standard psychiatric evaluation. Individuals excluded from the study were those who were unable to give their consent for prescribed psychiatric treatment, under curatorship or tutorship, or suffering from visual disabilities preventing them from reading the study materials. Patients were evaluated by trained psychologists, who interrogated them on their socio-demographic variables, psychiatric history and screened them with the following instruments: Suicide Intent Scale (SIS), the Beck Depression Inventory (BDI,), the Hopelessness Scale (H), the Toronto Alexithymia Scale(TAS), the Alcohol Use Disorders Identification Test (AUDIT) and the MINI for other psychiatric disorders: including addictions to substances other than alcohol. One year after the initial interview, each patient's hospital record was examined in order to assess the number of readmissions to the three EDs, whether following a RDSH regardless of the modality, or for other reasons. The collected data were analysed using SPSS 15.0. The models used were cross analysis and logistic regression. RESULTS: Our sample was of 465 patients, of which 67.5% were women, and the mean age 37.5 (SD =13) years. 56% had psychiatric history and 43% had a history of self harm. 24.9 % of the participants were readmitted to the ER for a RDSH in the year following their initial admission. Of these 116 patients, 31% were readmitted in the first month.11.6% of the total sample committed multiple acts of self harm. For the overall sample, the most important risk factor was alcohol addiction: 39.1% of those patients with a diagnosis of alcohol addiction were readmitted vs 20.9% of those patients without. (OR=2.5 (95%CI 1.5-4.3), p=.001). The other main risk factor in the overall sample was a history of deliberate self harm (OR=1.7 (CI 95% 1-2.8), p=.001). CONCLUSION: Alcohol addiction in patients presenting for deliberate self harm in the ED should not be overlooked, as they constitute a major risk factor for repetition of DSH.

NR08-10

AN EVALUATION OF THE PROPOSED DSM-5 ALCOHOL USE DISORDER CRITERIA USING AUSTRALIAN NATIONAL DATA

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SUMMARY:
Objective: To evaluate the proposed revisions to the DSM-IV alcohol use disorder criteria using epidemiological data. Methods: Data came from the 1997 Australian National Survey of Mental Health and Well-Being. The sample consisted of 10641 participants aged 18 years and over. Alcohol use disorders were assessed using a revised version of the CIDI 2.0. Alcohol use disorders were assessed in all respondents who indicated that they had used alcohol more than twelve times in the previous twelve months (n=7746). Results: The proposed introduction of a single alcohol use disorder was supported by CFA. DSM-5 criteria were all indicators of a single underlying disorder. Under DSM-5, the prevalence of alcohol use disorders would increase by 61.7% when compared with those diagnosed under DSM-IV. When investigating the most appropriate diagnostic threshold, the 3+ threshold maximised agreement between DSM-IV and DSM-5 diagnoses, and produced similar prevalence estimates to those yielded by DSM-IV. IRT analyses supported the removal of the Legal criterion whilst provided equivocal results for the Craving criterion. Conclusions: Under DSM-5, the prevalence of alcohol use disorders in the general population would increase substantially. The results indicate that whilst available empirical evidence supports some of the DSM-IV revisions such as the recognition of a single underlying disorder, others such as the 2+ threshold for diagnosis of alcohol use disorder and the inclusion of a Craving criterion may be problematic. These findings need to be taken into consideration before any future revision to the DSM system.

NR08-11

ANDROGEN RECEPTOR CAG REPEAT AND METHYLATION STATUS OF THE POMC PROMOTER ARE INVERSELY CORRELATED DURING CRAVING AND ALCOHOL WITHDRAWAL

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SUMMARY:
As recently shown both the functional relevant CAG repeat within exon 1 of the androgen receptor gene and the crucial player of the HPA-axis POMC influence craving in alcohol dependence. Aim of the present work was to investigate a possible link between these parameters influencing craving. We sequenced the POMC gene promoter using bisulfite modified DNA from 110 male patients with a diagnosis of alcohol dependence according to ICD-10 and DSM IV to display its methylation status. Furthermore we sequenced the CAG repeat within exon 1 of the androgen receptor gene to obtain the number of CAG repeats. Afterwards these results were correlated with the OCDS results obtained from these 110 patients. Moreover the results of androgen receptor length polymorphism and POMC gene promoter methylation were screened for a possible link. Both methylation status of the POMC gene promoter and the length of CAG repeat of androgen receptor are significantly associated with craving in alcohol dependence. Interestingly we found an inverse correlation between the length polymorphism of androgen receptor and the POMC methylation status. The shorter the analysed CAG repeat the higher was the methylation status within a defined region of the POMC promoter. For the first time these results reveal that the transcription factor androgen receptor and the POMC gene might mediate craving in alcohol dependence in a common way.

NR08-12

COMPARISON OF THE SUICIDE ATTEMPTS WITH AND WITHOUT ALCOHOL USE

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SUMMARY:
University/Hospital Setting for Conduct of Research Department of Psychiatry, Wonju College of Medicine, Yonsei University, Wonju Christian Hospital, 162, Ilsan-dong, Wonju-si, 220-701, South Korea Objective: Alcohol use disorder and acute alcohol use are known to be associated with the suicidal behaviors, and the studies have been conducted on the demographical and clinical characteristics of the suicide attempters related to drinking. However, the researches on the intent and lethality o the suicide attempters which were classified according to different drinking patterns have been almost close to none. Thus, in this study, we have intended to examine the impact of alcohol use on the suicide intent and the lethality of the suicide attempts. Method: The subjects of the study were 345 suicide attempters who have paid visits to the emergency center of Wonju Christian Hospital between March of 2009 to October of 2010. On the basis of the time of their suicide attempt, the sample was divided into first, alcohol use disorder group(AUD), second, acute alcohol use group(ACU) and third, nondrinking group(NA). In addition, through semi structured interviews, we have assessed the sociodemographic data and psychiatric symptoms and used the two questionnaires with proven validity, suicide intent scale(SIS) and risk rescue rating scale(RRR) for the suicide intent and lethality. Results: With the exception the unknowns (5 subjects) in response to the question whether they have drank, among 340 subjects, 16.8% (n=58) of them were AUD group, 39.7%(n=137) belonged to ACU group(n=137) and 42%(n=145) belonged to NA group. The average age of the suicide attempters was 46.9 of age, and there was no significant difference in gender and economic status. Compared to AUD group, more subjects were high educated with college degrees from ACU group and NA group. Risk-Rescue score average was 0.38±0.14for AUD group, 0.35±0.14 for ACU group and 0.36±0.15 for NA group. In terms of risk score, 22.4% were classified as high moderate to high risk in AUD group compared to 17.4% for ACU group and 13.2% for NA group. In particular, the statistically significant difference was found between the three groups in the categories, 'Person initiating rescue', 'Accessibility to rescue' and 'Delay until discovery' ($P<0.05$). The average score on SIS to assess the suicide intent was 10.64±6.7 for NA group, the highest in the study as opposed

to 9.7±5.0 for AUD group and 10.5±6.2 for ACU group. However no statistical significance was found. As for the question asking for the subject's plan for suicide attempt, 30.7%(16 out of 52 subjects) from NA group has reported to have responded to having the suicide 'planned' compared to 9%(3 out of 31 subjects) for AUD group and 11.6%(8 out of 69 subjects) for ACU group. (P<0.05). Discussion/Significance: The study was the first of its kind which have divided the subjects into three groups based on the drinking patterns and did the comparison using RRR and SIS, the questionnaires with the proven validity From the study, it was observed that NA groups tended to plan and attempt at the suicide whereas AUD groups show higher lethality of the suicide due to impulsivity and aggression. It has been speculated that through these findings would potentially contribute to devise future preventive strategies.

NR08-13

CHRONIC ROBOTRIPPING: A CASE REPORT OF DEXTROMETHORPHAN DEPENDENCE

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SUMMARY:
Background: Dextromethorphan is a readily available and easily obtained over the counter cold medication which is commonly used an antitussive in the United States and around the world. It is one of the most frequently found ingredients in non-prescription cold medications, and it is currently estimated that it is included in over 75 different products. The pharmacology of dextromethorphan is complex and involves agonist effects on opioid receptors (which are associated with antitussive action) as well as antagonism of the N-methyl-D-aspartate (NMDA) receptor. It is the latter property which can, in a fashion similar to the stronger NMDA antagonists PCP and ketamine, produce dissociative effects and other changes in mental status, including euphoria, hallucinations, and CNS excitation or depression. These effects occur in a dose dependent manner, with users describing specific "plateaus" or changes in mental status and perception which occur at various levels of ingestion and use. However, CNS effects are often unpredictable and dysphoria, bizarre behavior, and even psychosis are not uncommon at higher dosages. It is for this reason that dextromethorphan is generally used only episodically or sporadically in a pattern more closely identified with abuse than dependence. Despite this and other dangers of dextromethorphan, abuse has grown increasingly common over the last few years, and has perhaps been fueled by recognition in the music industry where "sippin syrup" use, slang for a mixture of dextromethorphan, alcohol, and occasionally codeine, has been the subject of several popular rap songs. Case Presentation: In this report we describe the case of a 24 year old male with dextromethorphan dependence marked by daily use for over 18 months. This individual would take from between 300 – 1000 mg of dextromethorphan daily. He was highly intelligent and through study, observation and meticulous record keeping, he was able to modulate his dose to obtain the specific mental status changes he was seeking, from increased alertness and euphoria at lower dosages to sedation and dissociative and hallucinogenic effects at higher amounts. He generally found the higher dosages to be unpleasant, however, and adjusted his intake accordingly. After several dysphoric dissociative episodes, including one in which he intentionally cut his wrists, he was admitted to the inpatient psychiatric service, where he was detoxified without difficulty and later transferred to an extended inpatient drug treatment program incorporating supportive care and 12-Step Recovery principles. Results and Conclusions: To our knowledge, this is only the third reported case of chronic dextromethorphan dependence, and the second involving extended use in a younger individual. It is unique in that specific "plateaus", or levels of intoxication associated with increasing dosages, are so clearly described and delineated. As dextromethorphan use has become popularized in rap culture and use has increased, it is important for physicians to be aware of the potential addictive nature of this substance and to be aware that the development of true dependence can occur.

NR8-14

ALEXITHYMIA AND ALCOHOL EXPECTANCIES IN ALCOHOL DEPENDENT OUTPATIENTS

Chp: Fred Arne Thorberg, Ph.D., M.A. , Co-Author(s) Ross McD. Young, Ph.D., Karen A. Sullivan, Ph.D., Michael Lyvers, Ph.D., Jason Connor, Ph.D., Gerald Feeney, M.D.

SUMMARY:
Between 45-67% of those with alcohol dependence report having alexithymia, a multifaceted personality trait associated with emotion regulation and functioning. Other factors such as alcohol expectancies related to affective change, assertion and tension reduction are also considered key factors associated with alcohol misuse. The present study investigated the relationship between alexithymia and alcohol expectancies in an alcohol dependent sample. Three hundred and seventy eight patients aged between 18-71 years (M = 38.92) undertaking outpatient Cognitive-Behavioral Therapy treatment for alcohol dependence were recruited. Participants with a diagnosis of a co-morbid major psychiatric disorder (for example schizophrenia), organic brain syndrome, alcohol-related medical complications or heavy sedation were excluded. Participants were detoxified prior to assessment and completed the Toronto Alexithymia Scale (TAS-20) and the Drinking Expectancy Questionnaire (DEQ) as part of a larger study. TAS-20 total score, Difficulties Identifying Feelings (DIF) and Difficulties Describing Feelings (DDF) were significantly positively associated with affective change expectancy, r = .29, p< .0001; r = .37, p< .0001; r = .21, p< .0001, respectively. TAS-20 total score, DIF and DDF were significantly associated with assertion expectancy, but not with Externally Oriented Thinking (EOT). MANCOVA controlling for age and gender indicated that alexithymic alcoholics reported significantly higher levels of affective change and assertion expectancies compared to non-alexithymic alcoholics, Wilks' Lambda F(3, 268) = 10.78, p = .0001, power = .99 (comparisons significant by Tukey HSD post-test). Taken together, these findings suggest that alexithymia and difficulties identifying and describing feelings are associated with the self-reported experiences of stronger emotions and social enhancement from drinking.

NR08-15

DIFFERENCES IN UTILIZATION OF PSYCHIATRIC EMERGENCY SERVICES BETWEEN METHAMPHETAMINE USERS AND METHAMPHETAMINE NON-USERS IN HAWAII

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SUMMARY:
Objective: Despite declining national trends of United States emergency department visits involving methamphetamine, use of methamphetamine in Hawaii continues at a high rate and methamphetamine users present to our emergency rooms as much as ever. Data on how methamphetamine users impact psychiatric emergency rooms is limited. The authors examined how positive methamphetamine urine toxicology (meth +) patients differed in utilization of the psychiatric emergency room compared to negative methamphetamine urine toxicology (meth -) patients. Method: This was a retrospective chart review of the records of 14,399 patient encounters at the largest psychiatric emergency room in Hawaii from January 2007 through June 2010. Charts were examined to determine whether meth + patients differed from meth - patients in length of stay in the emergency department, need for injectable chemical restraints, need for physical restraints in the emergency room, and rate of admission. Results: Yearly data trends demonstrate that the number of meth + patients presenting to the psychiatric emergency room has increased significantly from 2008 to 2009 (p<0.01). Meth + patients remained in the psychiatric emergency room on an average of 90 minutes longer than meth – patients (p<0.01). In addition, meth + patients required physical restraints statistically more often than meth - patients. Other outcome measurements such as need for chemical restraints and rates of admission are currently being analyzed. Conclusions: Methamphetamine-related presentations to the psychiatric emergency room are on the rise in Hawaii. Meth + patients have a longer length of stay in the psychiatric emergency room and require physical restraints more often then meth - patients. Based on this data, meth + patients require a higher level of care in the psychiatric emergency room compared with meth – patients. This trend appears to be worsening in Hawaii.

NR8-16

TRAIT ANXIETY AS A RISK FACTOR FOR MENTAL HEALTH OF BURN PATIENTS

Chp: Boung Chul Lee, M.D., Ph.D. Co-Author(s): Bong-Ki Son, M.D., Do Hoon Kim, M.D.,Ph.D., Sang-Kyu Lee, M.D., Kyu-Ho Kim, M.D.

SUMMARY:
Burn injury is a trauma which leaves severe psychological sequela. Especially facial burn wound

cause interpersonal difficulties in burn patients. We observed facial burn injury and related psychological factor affecting quality of life after burn wound recovery. The study subject consisted of 36 patients who administered in Hangang Sacred Heart Hospital burn center after burn injury. Twenty severe facial burn(total burn face surface 5%<) and non-severe facial burn were compared. All participants were instructed to complete the State and Trait Anxiety Inventory of Spielberger, the Beck Depression Inventory after admission and 1 year follow up period. The assessment of quality of life was performed using clinical administered SF-36 scale 1 year after burn. There were no difference between anxeity, depression and mental health between two group(p=0.491, p=0.386, p=0.848). However interaction between trait anxiety and facial burn were observed. One year after mental health score of SF-36 with severe burn patient with high trait anxiety were different from those with low trait anxiety(F=11.52, p=0.000). These difference were not observed with non-severe facial burn patients. We think severe facial burn with high trait anxiety could be a risk factor for decrease mental health after 1 year after burn injury and need special attention.

NR08-17

ANNUAL HEALTH CARE COSTS FOR PATIENTS WITH SCHIZOPHRENIA EXPERIENCING MULTIPLE RELAPSES AFTER INITIATION OF A SECOND-GENERATION ORAL ANTIPSYCHOTIC

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SUMMARY:
Background: Patients with schizophrenia who initiate second-generation oral antipsychotic (SGOA) therapy and have 2 or more relapses within a year continue to utilize health care services and incur additional costs. However, to the best of our knowledge, studies assessing the economic burden among these patients are not available. Purpose: This study examined schizophrenia-related health care utilization and costs among patients experiencing more than 1 psychiatric-related relapse (defined as an inpatient admission or emergency department [ED] visit with a primary or secondary diagnosis of schizophrenia, depression, dementia, or other psychosis) in comparison with those with fewer than 2 relapses. Methods: Patients with schizophrenia initiating SGOA therapy were identified using a multistate Medicaid database between July 1, 2004, and December 31, 2007. Patients were stratified by the number of relapses experienced (ie, <2 versus >=2) during the 12-month period following SGOA initiation. Health care utilization and costs were estimated for each group during 12 months following SGOA initiation for various service settings (ie, inpatient, outpatient, ED, physician office, pharmacy, ancillary care). Differences in health care costs between the 2 groups were assessed with Student t tests and no adjustment was made for multiplicity. Results: The cohort consisted of 19,813 patients, of whom 3,714 had >=2 psychiatric-related relapses and 16,099 had <2 psychiatric-related relapses during the follow-up period. Compared with patients with <2 relapses, patients with >=2 relapses were younger (mean age, 42.6 years [SD 11.6] vs 44.2 years [SD 11.6] P<0.001) and had significantly higher health care costs across all service settings except pharmacy: inpatient (P<0.001), outpatient (P<0.001), ED (P<0.001), physician office (P=0.023), and ancillary care (P=0.009). No significant difference in psychiatric-related pharmacy costs was found. Overall, mean psychiatric-related total health care costs (medical plus pharmacy) for patients with >=2 relapses were $17,910 (SD $19,577) compared with $10,319 (SD $11,840; P<0.001) for those with <2 relapses. Conclusion: This analysis suggests that patients receiving SGOA who experience >=2 psychiatric-related relapses within the first year of treatment incur significantly greater health care costs. Treatment strategies should be reevaluated for this high-risk group.

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NR08-18

EMERGENCY DEPARTMENT

EVALUATION OF YOUTH SENT FROM SCHOOLS FOR SUICIDAL OR DISRUPTIVE THOUGHTS AND BEHAVIORS: CONSEQUENCES OF INAPPROPRIATE REFERRALS

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SUMMARY:
Objective: School-initiated referrals account for a significant number of pediatric emergency department (ED) psychiatric evaluations. Previous studies and clinical experience suggest that most of these referrals are not urgent and, thus, unnecessary. The objective of our study is to evaluate the impact of inappropriate school-initiated referrals, to describe the characteristics of children and adolescents so referred, and to make recommendations for more effective screening and mental health care administration. Method: Consecutive records of psychiatric consultations performed at the pediatric ED at a large urban hospital between July 1, 2009 and June 30, 2010 were retrospectively analyzed. Records of children and adolescents referred from schools were given particular attention. Each record was assessed for appropriateness of the ED psychiatric evaluation by two researchers independently evaluating data from each encounter. Data was analyzed for 342 encounters. Results: Assessments of youth referred from schools accounted for 46% of the psychiatric evaluations performed in the pediatric ED. All referrals involved youth exhibiting self-injurious or dangerous behavior, and/or making concern-provoking statements. However as many as 75% of those referrals were somewhat/very inappropriate, 17% were neutral/somewhat appropriate, and only 8% were appropriate for ED level of care. In at least 30% of cases the trigger for a statement or behavior of concern was reported as "bullying" or "being teased" by peer(s). Only 20% of referred youth were evaluated by school's nurse, social worker, or other healthcare professional prior to requiring "clearance." Inappropriate referrals resulted in over 130 student-days lost and as many as 6 days for some children. Additional cost to Medicaid of an unnecessary ED visit for a psychiatric evaluation is at least $104 per child per visit. Conclusion: Significantly higher fraction of referrals to our ED was inappropriate, as compared to data from previous studies that used similar methodology. While schools are tasked with the important responsibility of initial triage of youth that exhibit concerning thoughts or dangerous behaviors, they employ ineffective methods and follow policies that are not evidence-based, at best, and arbitrary at their worst. Schools routinely require "clearance" for victims of bullying, who have acted out, unable to cope otherwise; these and many other referrals are preventable. Inadequate school assessments lead to lost school days, lost working days for the caregivers, misuse of limited ED resources, and higher insurance costs. Community awareness, educational programs for school employees, and evidence-based evaluations of students may minimize inappropriate ED visits. The study was not funded.

NR08-19

PARENTAL REPORTS OF EARLY PSYCHOPATHOLOGY IN CHILDREN AND ADOLESCENT WITH BIPOLAR DISORDER

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SUMMARY:
Objectives: Early psychopathology in children diagnosed with Bipolar Disorder (BD) remains poorly characterized. Parental retrospective reports provide helpful details on the earliest manifestations and their evolution over time, occurring early in the course of BD and often before a formal diagnosis is made and/or treatment is implemented. Background: It has been proposed that brief and extended periods of elevated mood differentiated BD from ADHD cases as early as age three: severe irritability, decreased sleep and inappropriate sexual behaviors were also considered early discriminators. We tested the hypothesis that these disabling symptoms occur early in children with BD and can help diagnose this condition well before a full syndromal presentation is clinically observed. Methods: Retrospective ratings of 37 activation/withdrawal symptoms were obtained from the parents of children diagnosed with BD attending an outpatient specialty clinic. Diagnoses were established using DSM-IV criteria following K-SADS-PL interviews. Demographic, socio-economic and adoption status, comorbid lifetime diagnoses and family history of mood Disorder were assessed. Previously reported early

symptoms of BD were only rated in each subject for the earliest occurrence causing impairment. Results: Consistent with the findings of previous reports, three symptoms, decreased sleep, irritability and temper tantrums were found frequently (>20%) and from a very early age (>3 y/o) in children who later developed BD. Five additional symptoms, increased crying, anxiety, short frustration tolerance, hyperactivity and aggression were found in more than 10% before the age of 3 years of age, and represent further early psychopathology in children with BD. Before age 7, parents reported high rates of temper tantrums (56%), aggression (52%), anxiety (47%), decreased attention span (45%), hyperactivity and irritability (43%), or decreased sleep (41%); somewhat less common, but perhaps more specific for BD were poor frustration tolerance (31%), brief elevated mood (28%), pressured speech (25%), hypersexual behavior (16%), grandiosity and racing thoughts (12%); bedwetting and somatic complaints occurred in 17% and 16 % respectively. The mean age of onset of psychiatric symptoms was significantly lower in bipolar children with comorbid ADHD compared to children without comorbid ADHD ($F=5.04$, $p<0.05$), indicating that attention symptoms precede mood symptoms in cases with comorbid ADHD. We found no significant differences between groups when most severe manic or depressive episodes were compared ($F=1.67$, $p>0.05$), suggesting that bipolar patients with and without comorbid ADHD may present with similar symptoms' severity profiles during episodes. Conclusions: Retrospective reports of early psychopathology in children with BD revealed a very early onset of symptoms of sleep disturbances, irritability and temper tantrums preceding sometimes by several years the syndromal onset of BD. These results are consistent with previous reports a progression of symptoms from atypical and non-specific psychopathology towards syndromal BD.

NR08-20

CHILD AND ADULT ADHD IMPULSIVITY NEED FOR A DAY LONG EFFECTIVE TREATMENT: AN OPEN PILOT STUDY WITH 2 ADULT AND 5 CHILDREN HAS BEEN PERFORMED

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SUMMARY:
BACKGROUND AND OBJECTIVES ADHD has a great impact on academic outcome but often more so in global adjustment (in personal, family and psychosocial areas), of both adult and children. The usually accepted treatment being mainly psycho stimulants as a first choice, is in our opinion an insufficient tool in the sense of full time (day and night, 24 h) . Hence we have designed a rather simple combination of Methylphenidate (MPH) and Valproate (VAL) (or Valpromide available in Europe with a similar profile and a common metabolite) to determine in a long-standing follow up study, weather this strategy could improve the overall global adjustment of ADHD pts. (Mainly impulsivity in: the irritability, low frustration tolerance, temper outbursts, fights, and their consequences, etc.; spectrum). METHOD 2 ADULT ADHD, MIXED TYPE males were accepted, ages 18 and 23, Caucasian, middle class university students. 5 children all males, ages 7 to 12, middle class (2 upper)(with co morbidities): All patients were treated trough the school year with MPH at adequate dosages and all year round with VAL, according to their blood levels (lower range). Clinical interviews and Conners Questionnaires among other tools were used to assess their clinical course. RESULTS The 2 adults were followed for 12 m and 17 m, and besides a satisfactory academic year, they both referred much less conflicts and mood swings. The 5 children were followed at least 12 months and achieved a good school year and there were less oppositional behaviors, fights or temper tantrums. Families referred a more mature child, which came back to normal much faster than before. The MPH evening rebound was milder as well. CONCLUSIONS For the purpose of simplicity patient's complexities have not been fully stated. However, it is our impression that, the improvement of their behavior has to be accounted for, mainly to the synergy of MPH and VAL. Larger and methodologically sound studies are needed to better the long-term course of ADHD, at all ages.

NR08-21

SLEEP DURATION AND BODY MASS INDEX IN KOREAN CHILDREN

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SUMMARY:

BMI), in Korean children. Methods:We performed a cross-sectional analysis of data collected on 3,639 boys and girls (aged 7-12) in Daegu,Korea. The data included each child's age, sex, weight, height, extracurricular activities, bedtime, wake-up time, sleep latency,total sleep duration, parents' occupations, and parents' educational levels. The relationship between sleep duration and each variable was examined via analysis of variance (ANOVA). Results:The analysis showed an association between short sleep duration and high BMI. Boys showed a graded inverse relationship between sleep duration and BMI. However, there was no significant corresponding result for girls. In the total sample, hours of computer use, time when the computer was turned off, time when the television was turned off, mother's bedtime, and hours of extracurricular activity were associated with longer sleep duration. No association was found between sleep duration and hours of watching television, child's wake-up time, or educational level of the parents. Conclusion:The results of this study show an inverse relationship between a child's sleep duration and BMI;thus, children with shorter sleep duration tend to have higher BMIs. KEY WORDS:Sleep Duration·Body Mass Index·Children.

NR08-22

Metabolic Effects of Antipsychotics in Children (MEAC): Primary Endpoint Results

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SUMMARY:

Background: Rates of prescription of antipsychotic medications in children have increased in recent years, largely driven by use for disruptive behavior disorders. Mental health conditions are associated with higher risk for obesity and diabetes, in part related to adverse effects of psychotropic treatment. The effect of antipsychotic treatment on metabolic risk in antipsychotic naïve children has received limited study. The NIMH-funded MEAC study (PI Newcomer, MH 072912) characterized the effects of 12 weeks of randomized treatment with either aripiprazole, olanzapine or risperidone on direct measures of adiposity and insulin sensitivity in previously antipsychotic-naive children with disruptive behavior disorders. Methods: Antipsychotic-naive participants aged 6-18 with clinically significant aggression and irritability (score of > 18 on Aberrant Child Behavior Checklist Irritability Subscale) with one or more DSM IV diagnosis indicating a disruptive behavior disorder were enrolled. Participants were randomized to specific antipsychotic treatments following baseline assessments. Baseline and 12 week measures include body composition analysis with Dual Energy X-ray Absorptiometry (DEXA) and abdominal MRI, as well as metabolic testing including hyperinsulinemic euglycmic glucose clamps with stable isotopomer tracing. Primary endpoints were change in whole body and abdominal adiposity, and whole-body and tissue-specific insulin sensitivity. ANCOVA was used to test effects of time and treatment condition on adiposity and insulin sensitivity. Results: Antipsychotic treatment was associated with adverse changes in adiposity and insulin sensitivity in all treatment groups. Differential effects of treatment were observed on measures of adiposity and other endpoints. For example, time by treatment condition effects were detected on DEXA %fat ($F[2,119]=8.98$, $p<0.0001$). Importantly, treatment resulted in marked improvement in Aberrant Behavior Checklist irritability/aggression subscale scores, with a mean decrease of 16.64 points ($p<0.005$). Conclusions: Results from the MEAC study indicate rapidly detectable adverse effects of antipsychotic treatment on adiposity and insulin sensitivity, detectable within the initial 12 weeks of treatment, in the context of significant clinical benefit. The results underline the importance of careful attention to the balance of potential risks and benefits during use of antipsychotic treatment in pediatric populations.

NR08-23

THE METABOLIC EFFECTS OF ANTIPSYCHOTICS IN CHILDREN (MEAC) STUDY: BASELINE CHARACTERISTICS OF STUDY PARTICIPANTS

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SUMMARY:
Background: Atypical antipsychotics are increasingly used in children and adolescents to treat aggression and disruptive behavior, common presenting symptoms of many mental disorders in this patient population. Antipsychotic medications can cause adverse changes in body weight and increase cardiometabolic risk in adults. Increasing rates of antipsychotic prescription in children in the context of a national epidemic of childhood obesity puts children with mental disorders at increased risk to develop early signs of cardiometabolic dysregulation. The NIMH-funded study, Metabolic Effects of Antipsychotics in Children (MEAC), is the first to use state-of-the-art techniques to measure the effects of aripiprazole, olanzapine and risperidone on adiposity, glucose and lipid metabolism in children. Methods: A diagnostically heterogeneous group of antipsychotic-naive subjects ages 6-18 with clinically significant target symptoms of irritability and aggression (score of > 18 on the irritability subscale of the Aberrant Behavior Checklist) were randomly assigned to 12 weeks of treatment with olanzapine (n=46), risperidone (n=49) or aripiprazole (n=49). At baseline and endpoint, subjects undergo body composition analysis with dual energy X-ray absoprtiometry (DEXA) and abdominal MRI as well as metabolic testing, including frequently sampled oral glucose tolerance tests (fsOGTT) and hyperinsulinemic, euglycemic glucose clamps with stable isotopomer tracing. DEXA, clinical anthropomorphic and fasting laboratory measures were obtained at baseline, 6 and 12 weeks. Symptoms of irritability and aggression were assessed at baseline and endpoint using the Child Behavior Checklist and the ABC. Results: Baseline characteristics of the MEAC sample (N=144) are as follows: mean age 11.3 +/-2.8 years, with 68.1% male (n=98). Treatment groups were balanced at baseline for gender, age and ethnicity, with approximately half in each group treated with stimulants. The most common primary diagnosis was Attention Deficit/ Hyperactivity Disorder (n=80, 55.6%, all with prior stimulant treatment), followed by Oppositional Defiant Disorder (n=31, 21.5%). This antipsychotic naive pediatric sample entered the MEAC study with a baseline prevalence of overweight or obesity of 34% (13% overweight, 21% obese), compared to the established 32% prevalence (15% overweight, 17% obese) in the general population. Children with elevated or at-risk fasting triglyceride (> 150 mg/dl) accounted for 1.8% of the total MEAC sample, compared to 13.2-14.2% prevalence in the general population. At the 12 week endpoint, pooled treatment groups had a prevalence of overweight and obesity of 48% (22% overweight, 26% obese). Conclusions: The MEAC study is the first practically designed clinical trial to assess for metabolic changes associated with antipsychotic treatment using gold-standard measures, providing data regarding treatment-associated increases in adiposity and insulin sensitivity in a uniquely at-risk patient population. Baseline demographic, diagnostic and cardiometabolic risk characteristics of the study population are consistent with those in the general population, making final results broadly generalizable to the real-world treatment population.

NR08-24

TO ESTIMATE THE PREVALENCE AND DISTRIBUTION OF METABOLIC SYNDROME IN PEDIATRIC POPULATION AND ESPECIALLY ITS ASSOCIATION WITH SECOND GENERATION

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SUMMARY:
Objective/Hypothesis: We hypothesized that metabolic syndrome is far more common among children and adolescent than reported and its prevalence increases with the use of SGA's.In pediatric population SGA's are frequently used for wide variety of psychopathology e.g. impulsive aggression etc. Childhood conduct problems predict significantly increased likelihood of adult obesity (Goodwin et al, 2009. Childhood impulsive aggression and Conduct disorder predict significantly increased adult mortality risk by age 46 years (Markus, Ferrie, Kivmaki, 2009). SGA's usage in pediatric population has been linked with

metabolic syndrome i.e. weight gain, prolactin elevation, glucose deregulation and dyslipidemia. These changes seem to be preventable and reversible in most cases. Only few case reports and studies available regarding the prevalence of metabolic syndrome in pediatric population. Method: Current study is a retrospective case study series with a sample of 100 patients, all of them were admitted to a psychiatric hospital in a university affiliated hospital from January 2009 until October 2010. The sample is divided into two groups, treatment group (68 subjects) and control group (32 subjects). Data is collected for age, gender, race, height (cm), weight (kg), systolic and diastolic blood pressure (mm of hg), fasting lipid profile (mg/dl) and fasting blood glucose (mg/dl). Participants: Male and female age 9 to 19 years (n=100) Main Outcome Measures: The prevalence and distribution of a metabolic syndrome in child and adolescent in psychiatric hospital, using definition given by Ram Weiss, MD and his colleague(2004) Result There is no significant difference in the incidence rate of metabolic syndrome by gender (Fisher's test=0.1701). For females: 28%.For males: 15%. However it differed significantly by ethnicity. The likelihood of metabolic syndrome is higher among whites(28%)than among African American(10%). The difference is statistically significant(Fisher's test=0.0198).The prevalence of metabolic syndrome is significantly higher among case (25%) than control (6%) (Fisher's test, p=0.0202) with an increased prevalence of the following components respectively: elevated BMI Z score (49.1 vs. 17.9% p<0.0001); hypertriglyceridemia (42.6 vs. 22.4% p=0.015); impaired fasting glucose (16.1 vs. 2.6%; p=0.005); and hypertension (54 vs. 18%; p<0.0001). In addition, low HDL-cholesterol was seen in 16% of SGA's treated group compared to 11% SGA's-naïve youth; however, this result was not statistically significant (Panagiotopoulos, Davidson, Weiss, 2009). The highest rate of metabolic syndrome noted in quetiapine subgroup (9.5%) Conclusion: Mood disorder, post traumatic stress disorder, oppositional defiant disorder and conduct disorder (most common axis I diagnosis in our study) are associated with increased prevalence of metabolic syndrome and this phenomenon is secondary to high rate of SGA's prescription. Limitation of the study: This is retrospective study and sample size is small (n=100). Discussion: Our Study shows that aggression is associated with high rate of SGA's priscription independently of diagnosis or comorbidy in inpatient children and adolescents. We concluded that extreme cautions should be exercised while priscribing SGA's in this population. We have use BMI z score as a measure of central obesity in our study.Our study is approved by internal board, university of south Alabama.

NR8-25

IMPACT OF LONG-TERM GUANFACINE EXTENDED RELEASE TREATMENT ON QUALITY OF LIFE

Chp: Floyd R. Sallee, M.D., Ph.D. Co-Author(s): Timothy Wigal, Ph.D., Sharon Youcha, M.D., Carla White, B.Sc., C.Stat., Jonathan Rubin, M.D., M.B.A

SUMMARY:
Objective: To characterize quality of life (QoL) changes associated with guanfacine extended release (GXR) treatment in a long-term study. Methods: Subjects aged 6 to 17 years with attention-deficit/ hyperactivity disorder (ADHD) who participated in either of 2 antecedent short-term double-blind randomized placebo-controlled trials were eligible to enroll in this open-label extension study of GXR (1, 2, 3, or 4 mg/d) for <= 24 months. Dose escalation occurred within the first month. Spontaneously reported adverse events (AEs) were collected at all visits. The Child Health Questionnaire-Parent Form 50 (CHQ-PF50), a validated QoL measure yielding physical and psychosocial summary scores, was included as a secondary efficacy measure. The CHQ-PF50 assesses domains such as behavior and family functioning. Results: Of the 262 subjects enrolled in the current study, 54 had received GXR coadministered with a psychostimulant and 208 had received GXR monotherapy in an antecedent study. Safety results were analyzed for the 259 subjects (monotherapy: n=206; combination therapy: n=53) who took >=1 dose of study medication. Efficacy results were analyzed for the 257 subjects (monotherapy: n=204; combination therapy: n=53) who received GXR and contributed >=1 postbaseline efficacy measure. Overall, 87.3% of subjects (226/259) reported treatment-emergent AEs (TEAEs). TEAEs led to discontinuation in 12.0% of subjects (31/259). A total of 47.1% of subjects (97/206) reported TEAEs of sedation, somnolence, or hypersomnia (SSH). Most were mild to moderate in severity, resolved prior to the dose-tapering period, and did not result in discontinuation. The incidence of these events was highest in the first month of the study (29.3%). Mean (SD) improvements in CHQ-PF50 psychosocial summary scores were observed from baseline to endpoint for all subjects (9.2 [11.91], P<0.001), for subjects receiving GXR alone (9.3

[12.81], P<0.001), and for subjects receiving GXR coadministered with a psychostimulant (9.0 [8.58], P<0.001). Statistically significant changes from baseline to endpoint in CHQ-PF50 physical summary scores were not observed. Conclusion: Long-term treatment with GXR was associated with significant improvements in the psychosocial summary score of the parent-rated CHQ-PF50 for children and adolescents treated with GXR alone or in combination with a psychostimulant. This open-label study suggests improvement in QoL in the areas of behavior and family functioning with GXR treatment. Most treatment-emergent SSH events were mild to moderate in severity, and did not result in discontinuation, with the highest incidence occurring in the first month of the study. Supported by funding from Shire Development Inc.

NR08-26

ADOLESCENTS WITH SUBSTANCE ABUSE ARE OFTEN MISDIAGNOSED AS BIPOLAR DISORDER

Chp.:Anoosh Salman M.D., 1707 Mullikin Drive, Champaign, IL 61822, Co-Author(s): Sandra Vicari,Ph.D.

SUMMARY:

Abstract: Among adolescent patients who are using substances, unstable mood and impulsivity may suggest the presence of bipolar disorder. When adolescents are actively using substance, the diagnosis of bipolar disorder is more difficult to determine due to similar symptomology of mood states.In adolescents,the diagnosis of Bipolar disorder is more difficult as the symptoms overlap with other disorders such as ADHD,PTSD and MDD. Accurate diagnosis of bipolar disorder is imperative for determination and optimization of the most effective and benign treatment plan.Method: Retrospective review of 102 patient charts from Gateway Rehab Facility in the setting of inpatient rehab unit that were diagnosed with bipolar disorder with comorbidities of substance abuse admitted over two year period(2008 to 2010). Age, gender, race, duration of bipolar disorder diagnosis and duration of substance use was assessed. The validity of bipolar disorder diagnosis will be assessed using DSM-IV criteria. If the patient's substance use duration is greater than bipolar disorder duration then they will be considered as overdiagnosis. Results: Results indicated 81/102 were overdiagnosed with bipolar disorder and 21/102 were correctly diagnosed according to DSM-IV criteria.Result indicated that out of 81 who were misdiagnosed 42 had mania and 38 had hypomania.Further study between dual diagnoses of bipolar disorder and substance induced mood disorder is necessary in order for a correct treatment course to be identified.

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NR08-27

SAVING AND EMPOWERING YOUNG LIVES IN EUROPE (SEYLE)

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SUMMARY:

SEYLE is a health promoting programme for adolescents in European schools. Its main objectives are to lead adolescents to better health through decreased risk taking and suicidal behaviours, to evaluate outcomes of different preventive programmes and to recommend effective culturally adjusted models for promoting health of adolescents in different European countries. It will be de- veloped by a consortium of 12 countries: Austria; Estonia; France; Germany; Ireland; Hungary; Italy; Israel; Romania; Slovenia; Spain and Sweden. SEYLE coordinator is Prof. Danuta Wasserman at NASP (National Prevention of Suicide and Mental Ill-Health), Karolinska Institutet, Stockholm. The project manager of SEYLE is Dr. Vladimir Carli, NASP at Karolinska Insitutet, Stockholm. In this health promotion programme, a pilot intervention study will be implemented to assess the effects of three different health promoting/suicide preventing programmes in 11,000 students across 12 European countries (identified above). The key risks identified in adolescents include mental-ill health, self-harm behaviours, motor vehicle acci- dents, violence, substance or alcohol abuse, pro- miscuous sexual behaviours, poor diet, lack of exer- cise and smoking. The three interventions are: 1) a gatekeeper?s program, training all adult staff at schools (teachers, counselors, nurses etc) on how

to recognize and refer a student with risk-taking be- haviours or those suffering from mental illness to mental-health help resources; 2) an awareness in- creasing health promotion program targeting stu- dents awareness on healthy/unhealthy behaviors and students self-efficacy in diminishing unhealthy behaviors; 3) screening by professionals of at-risk students through a questionnaire. For adolescents identified as high risk, the program includes referral to mental health treatment and measures ensuring compliance. Each program has a different active component, respectively: empowering teachers and school staff; increasing self-efficacy in students; empowering mental health professionals. Key objectives of the study are to gather informa- tion on health and well-being in European adoles- cents, to perform interventions on adolescents leading to better health through decreased risk taking and suicidal behaviours by comparing the three intervention strategies; to recommend effec- tive culturally adjusted models for promoting the health of adolescents. Wasserman, D., et al., Saving and Empowering Young Lives in Europe (SEYLE): a randomized controlled trial. BMC Public Health. 10(1): p. 192.

NR08-28

MAINTAINING INVOLVEMENT AS AN EFFECTIVE METHOD FOR THE TREATMENT OF THE CRIMINALLY INSANE WITH DRUG DEPENDENCE.

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SUMMARY:
In 2005, the Medical Treatment and Supervision Act was enacted in Japan to hospitalize the criminally insane and to promote a self-supporting lifestyle after deinstitutionalization. As of October 2010, 490 patients remain hospitalized in highly secure forensic hospitals. The increased prevalence of the combination of criminal insanity with alcohol or volatile organic solvents dependence is a serious issue, as it may be an obstacle for treatment and rehabilitation after discharge because alcohol or the paint thinner can be easily purchased everywhere. On the other hand, as presented at annual meeting in 2010, we established a strategy that can maintain patients in a well-adjusted condition in the community through comprehensive and supportive activities by a multidisciplinary team comprising staff members of the hospital, the public health center, and other local municipal officials. This strategy named as maintaining involvement is performed inside the hospital first and then in the community after discharge and, consequently, patients can live in the community without treatment interruption or repetition of similar criminal acts. Therefore, we used this strategy for the patients with drug dependence because they are often deteriorated by treatment interruption. The aim of this treatment is that patients can maintain the insight into drug dependence. As a result, patients who have been successfully deinstitutionalized lead a self-supporting lifestyle without treatment interruption or symptoms of drug dependence. We believe that maintaining involvement is an effective method for the treatment of the criminally insane with drug dependence.

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NR08-29

CHARACTERISTICS OF PATIENTS IN COMMUNITY BEHAVIORAL HEALTH ORGANIZATIONS RECEIVING TWO INJECTABLE FORMS OF ATYPICAL ANTIPSYCHOTIC MEDICATIONS

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SUMMARY:
Objective: The aim of this study is to provide information on the characteristics of patients receiving treatment with atypical injectable antipsychotics paliperidone palmitate and risperidone long-acting therapy (RLAT) at community behavioral health organizations (CBHOs) in the United States. Methods: A longitudinal, noninterventional observational registry, Research and Evaluation of Antipsychotic Treatment in Community Behavioral Health Organizations, OUTcomes (REACH OUT), is

collecting information on paliperidone palmitate and RLAT use by patients with schizophrenia or bipolar type I disorder receiving their primary treatment at CBHOs. Patients are followed for up to 1 year with assessments at baseline, 6 months, and 12 months. Sites use a Web-based data collection tool to enter data from patient self-reports, interviewer assessments, and medical records abstractions. Results: At the time of the analysis for this ongoing study, baseline patient interview data had been collected from 102 patients at 7 sites. Of these 102 patients, 37 (36.3%) received paliperidone palmitate injections, 25 (24.5%) received RLAT injections, and 40 (39.2%) received other antipsychotics at the time of enrollment. Patients receiving treatment with paliperidone palmitate or RLAT injections were on average older than patients receiving other antipsychotics: paliperidone palmitate, 40.2 (SD 13.4) years; RLAT, 42.4 (SD 11.0) years; other antipsychotics, 35.4 (11.8) years. Mean age at first psychiatric hospitalization was similar across the 3 cohorts: paliperidone palmitate, 22.6 (SD 8.1) years; RLAT, 24.7 (SD 8.7) years; other antipsychotics, 20.6 (12.2) years. Patients receiving the two injectable antipsychotics were more likely to be male (paliperidone palmitate, 75.7%; RLAT, 68.0%; other antipsychotics, 55.0%) and single or never married (paliperidone palmitate, 83.8%; RLAT, 72.0%; other antipsychotics, 55.0%). Patients treated with atypical antipsychotic injections were less likely to have private health insurance (paliperidone palmitate, 2.7%; RLAT, 0.0%; other antipsychotics, 27.5%) and more likely to have Medicare (paliperidone palmitate, 64.9%; RLAT, 60.0%; other antipsychotics, 35.0%) and Medicaid (paliperidone palmitate, 81.1%; RLAT, 76.0%; other antipsychotics, 35.0%). Conclusions: These preliminary results suggest that patients receiving paliperidone palmitate and RLAT may differ from patients receiving other antipsychotics in CBHOs in demographics such as age, gender, marital status, and health insurance type. Once target enrollment is reached, this study will allow for comparison of antipsychotic therapies across a series of clinical, functional, and economic outcomes. Study funded by Ortho-McNeil Janssen Scientific Affairs, LLC.

NR08-30

PREDICTING SIMULATED FIREARMS PERFORMANCE IN PSYCHIATRIC PATIENTS

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SUMMARY:
Objectives: Psychiatrists are sometimes asked to make recommendations as to if a patient should be allowed to carry a firearm. Unfortunately, there are no established criteria for how such a determination is to be made. The objective of this study was to establish what factors predict aspects of firearms performance, and lay the groundwork for more evidence-based methods of screening Methods: Subjects between the ages of 18 and 65 were recruited from military bases and clinics in San Diego. Both psychiatric patients and controls were included. Participants were excluded if they were suicidal, homicidal, psychotic, bipolar, or owned the video game being used. Participants who gave informed consent were asked about demographics, psychiatric symptoms, psychiatric medication and treatment. They were then given a traditional, computerized assessment (the Automated Neuropsychological Assessment Metric) and asked to engage in simulated target shooting and firefights using a video game and a light gun (Lethal Enforcers). Performance in the video game was measured with overall "score," and by recording target accuracy, number of times a person reacted too slowly and got shot, and the number of times that an incorrect (civilian) target was hit. Correlations were examined among firearms performance, psychiatric symptom scores, and traditional measures of neuropsychological function. T-tests were used to examine firearms score between patients and controls, as well as those who were, and were not, taking psychiatric medication. Finally, stepwise linear regression models were constructed to best predict firearms score, and safety (civilian targets hit), based on available information. Results: Eighty participants, including 65 patients and 15 controls, enrolled in the study. Firearms score was significantly correlated with reaction time ($R=0.41$, $p<0.01$), and tendency to shoot an incorrect target was correlated with go/no-go testing ($R=.31$, $p<0.01$). Psychiatric patients, as a whole, did not score worse with firearms performance than controls, and depression, anxiety and PTSD symptom severity did not correlate significantly with firearms performance (all $p>0.05$). In linear regression modeling, gender and simple reaction time were the best predictors of firearms score.

Go/no-go testing, hand steadiness, and procedural reaction time predicted safety. Conclusions: Being identified as a mental health patient, or self-report of symptoms for depression, anxiety or PTSD did not predict performance in a simulated firearms exercise. Gender and reaction time were the best predictors of simulated combat firearms performance, and go/no-go testing was the best predictor of firearms safety. Psychiatrists may be better served to use neuropsychological testing rather than symptom severity in determining who should carry weapons. Further work is needed to establish norms, and examine real world performance.

NR08-31

PEOPLE'S ATTITUDES TOWARDS PROCEDURES AND MEASURES OF COERCION IN COMPULSORY HOSPITALIZATION IN TAIWAN

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SUMMARY:

Introduction After the recent revision of Taiwan's mental health act, ambivalence persists on the roles of legal courts therein in a still communitarian society such as Taiwan. Also, to project future directions of legal coercive measures, it is necessary to know whether people from different standpoints and ages have different attitudes towards coercive procedures and measures. Therefore, it is important to collect the above information which is yet lacking in Taiwan. Methods We conducted a nationwide and multi-centered survey between June and September 2008. Recruited by convenient sampling in 11 psychiatric facilities and a random telephone sampling of the public, subjects (N=2179) comprised of four groups: psychiatric inpatients, their family members, medical staff and the general population in Taiwan. Across groups, we inquired about and compared their attitudes towards conditions, measures and procedures of compulsory hospitalizations. Within each group, we also examined age differences. We used Chi-2 tests or Fisher's exact test to calculate statistical significance ($p<0.05$). Results The patient or the staff group was less likely than the other groups to agree with more coercive conditions of compulsory hospitalization. Among family members, the middle aged people (30-50) were less likely than others to accept less coercive commitment conditions. Among the general population, the elderly paradoxically tended to favor all kinds of the surveyed coercive conditions and measures of compulsory hospitalization. A majority of subjects (>90%) across groups did not deem the legal court the best decision maker of compulsory hospitalizations. However, the staff members were least resisting to court interventions therein. Conclusions In Taiwan, psychiatric staff group is no longer the most coercive figures in the process of hospitalization. It seemed that perhaps due to care burden and fear, the family and general population groups were more in favor of coercion. In the general population group, old age, representing the ethos of community tradition, predicted the acceptance of all surveyed coercive measures. Currently, direct legal court intervention with compulsory hospitalization is not yet well accepted. It is necessary to build up people's trust in the legal court before adopting a more individualized and legalistic approach to compulsory hospitalization.

NR08-32

SELF-DISCLOSURE OF MALINGERING PSYCHOSIS IN A MILITARY SERVICE MEMBER

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SUMMARY:

BACKGROUND: Malingering is a diagnosis of exclusion. Misdiagnosing a patient as malingering can lead to significant adverse medical, legal, and social consequences. Alternatively, misdiagnosing malingerers as having a mental or medical illness can expose them to treatments with potentially dangerous side effects and lead to abuse of the medical, and other, systems. Therefore, the diagnosis is best made when the patient discloses that he or she is malingering. OBJECTIVE: The author reports a case of feigned psychosis in which, after 4 psychiatric admissions, the patient admitted to

malingering. METHOD: This is a case report of a 49-year-old male hospital corpsman man reported feigning psychosis. The author reviews methods used to detect malingering and to facilitate its disclosure. RESULTS: On the basis of inconsistencies between reported symptoms and mental status exam, atypical response to treatment, and self-disclosure of malingering, the patient was diagnosed with malingering as well as narcissistic personality disorder and returned to his military command for legal adjudication. DISCUSSION: A variety of techniques can be used to help detect malingering, but none of them are fool-proof. From both an ethical and medical perspective, the best outcomes result from self-disclosure of malingering. This case report will explain how such disclosure may be facilitated by caregivers.

NR08-33

IS APOE E4 STILL A RISK FACTOR FOR DEMENTIA IN THE OLDEST OLD? FINDINGS FROM THE GOTHENBURG 95+ STUDY

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SUMMARY:
Background: Apolipoprotein E (APOE) exists in three different alleles: e2, e3 and e4. APOE e4 is associated with an increased risk for cardiovascular diseases and Alzheimer's disease. It has been suggested that APOE e4 carriers develop dementia earlier than those without this allele, and that the risk for dementia in e4 carriers diminishes after age 90. The frequency of one or two e4 alleles is approximately 40% in the general population and it has been suggested that this frequency decreases with age. Objective: To study APOE e4 frequency and its relation to dementia in a population-based sample of individuals aged 99 years. Methods: A representative sample of 263 99-year-olds was examined with comprehensive neuropsychiatric examinations as part of the Gothenburg 95+ Study, a longitudinal population study in Gothenburg, Sweden. Dementia was diagnosed according to the DSM-III-R criteria. Blood samples were collected and APOE genotyping was performed by solid-phase minisequencing. Results were compared with a sample of 85-year-olds (N=412) examined with similar methods (H-70 Study in Gothenburg). Results: The prevalence of carrying at least one APOE e4 allele was 16% (n=43) among 99-year-olds and 43% (n= 179) among 85-year-olds. Only two individuals in the 99-year-old sample (<1%) were homozygotic for e4 (both had dementia), compared to 19 of the 85-year-olds (5%). Among the 99-year-olds, 77% (n=33) of e4 carriers had dementia, compared to 33% (n=60) of 85-year-olds. The OR for dementia in e4 carriers was 2.51 (95% CI 1.18-5.34 p=0.017) among 99-year-olds, and 1.9 (95% CI 1.2-2.9: p<0.01) among 85-year-olds. In the 99-year-old sample, 21% (n=33) of the demented and 9.5% (n=10) of the non-demented carried at least one e4 allele; while 55% (n=60) of demented and 39% (n=119) of non-demented had at least one e4 allele among the 85 year olds. Conclusions: The frequency of APOE e4 carriers was lower among 99-year-olds than in 85-year-olds, suggesting a survival effect, and APOE e4 was still a risk factor for dementia among the oldest old. Aknowledgement: This study was supported by grant from The Alzheimer's Association (IIIRG-03-6168)

NR08-34

EFFECT OF INTERNET USE ON THE QUALITY OF LIFE IN COMMUNITY DWELLING KOREAN ELDERS

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SUMMARY:
Objectives : The aims of this study were to reveal current status of internet use, to identify influencing factors on using internet, and to know association of quality of life with internet use among Korean elderly.Methods : Social demographic data and information related to internet use were obtained using questionnaires for one hundred Korean elderly living in Seoul with age over 60. Patterns of internet use and the quality of life also measured using the Internet Addiction Scale (IAS) and the Geriatric Quality of Life-Dementia (GQOL-D). Results : 1) Among Korean elderly, 31% had been using internet, and 36% had personal computers. Main purpose of using internet was for emailing

(67.7%), information surfing (54.8%) and enews (45.2%) in order. About 87.1% of old internet users experienced such physical symptoms as eye sign, fatigue, and hand or neck stiffness in order. Almost half of internet non-users recognized need of learning internet (56.5%) and wanted to learn internet (52.2%). 2) The mean (SD) IAS score of elderly internet users was 22.58(SD 10.62). They were in the range of score 2~47, all of whom were classified into non-internet addictors. 3) Internet use among Korean elderly was influenced on gender ($p<0.05$), age ($p<0.01$), educational level ($p<0.001$), economic status ($p<0.001$), having job ($p<0.05$), marital status ($p<0.005$) and having personal computer ($p<0.001$). 4) The mean (SD) GQOL-D score of elderly internet users (mean 38.26, SD 7.17) was significantly ($p<0.05$) higher than those of elderly internet non-users (mean 34.86, SD 8.49). There was statistically significant positive correlation between IAS scores and GQOL-D scores ($r=0.428$, $p<0.05$). Conclusions : Nearly one third of Korean elderly had been using internet. Their internet use pattern seemed to be healthy. Using internet among Korean elderly might improve their quality of life. KEY WORDS : Korean elderly, Internet use status, Internet Addiction Scale, Quality of life.

NR08-35

PHARMACOLOGICAL TREATMENT PRESCRIBED AT THE EMERGENCY PSYCHIATRIC PATIENTS OVER 80 YEARS

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SUMMARY:

Introduction Due to the increasing elderly population in our country, the presence of elders is more prevalent in the emergency department of psychiatry. These patients have specific characteristics (comorbidity, difficulty in communication ...) The reason for consultation, the presentation and therapeutic options are different. The elderly with mental disorders are an important subset of the elderly population. Up to 50% of the hospitalised for medical problems have psychiatric disorders. It is widely accepted that the elderly are no well served by mental health services. Attitudes toward aging and related diseases influenced. Geriatric psychopharmacology points out the problems of overdosing and polipharmacy, the therapeutic use of the side effects of drugs but it is also frequent use of lower doses. Objectives The aim of this study is to describe the main differences and psychopharmacological treatment of elderly patients visited at the emergency department of a general hospital in Barcelona. Methodology We compared general population (N= 226) with patients older than 80 years (N=200) that went to the emergency department of psychiatry. The protocol included the collection of sociodemographic data, clinical and therapeutic management. We used SPSS 16.0 package to compare groups. Results: Diagnose for older than 80 years: Psychosis: 7.0%, Affective disorder: 31.2%, Anxiety disorder: 14.6%, Drug use disorder: 0.5%, Personality disorder: 3.5%, Cognitive Impairment: 34.2%. Chi-square results: (% <80 years, % >= 80 years, p); Male: 44.7%, 37.0%, p=0.107; Previous psychiatric history: 75.7%, 44.0%, p<0.001; Social problems: 1.8%, 8.0%, p<0.005; Hospitalization: 13.3%, 23.7%, p<0.005; Use of physical restraint: 5.8%, 18.1%, p<0.001; No treatment added: 42.6%, 30.2%, p<0.05; Anxiolytics: 34.6%, 21.5%, p<0.05; Antidepressants: 9.9%, 14.1%, p=0.251, Antipsychotics: 9.3%, 32.2%, p<0.001. Conclusions: We want highlight a tendency that can be observed towards a more interventionist pharmacological therapy among the elder patients. These differences should be highlighted in the administration of antipsychotic drugs in old people. Our results are consistent with the existing literature on the subject. Recent studies raise questions about the usefulness and safety of antipsychotics in behavioural problems in dementia patients. There are discrepancies between the recommendations of clinical guidelines and actual practice every day and we cannot explain these differences as a matter of local operating assistance. Further studies are needed to determine the cause of this clinical practice.

NR08-36

MEDROXYPROGESTERONE ACETATE TREATMENT FOR SEXUALLY INAPPROPRIATE BEHAVIOR IN A VETERAN WITH SCHIZOAFFECTIVE

DISORDER AND DEMENTIA: A CASE REPORT

Chp.:Antony Fernandez M.D., McGuire VAMC (116A),1201 Broad Rock Blvd., Richmond, VA 23249, Co-Author(s): Leslie Kryzanowski, M.D., Antony Fernandez, M.D.

SUMMARY:
The aim of this poster is to present treatment findings of a challenging case of inappropriate sexual behaviors in a patient with schizoaffective disorder and vascular dementia. We also review the published literature on pharmacotherapy for inappropriate sexual behaviors in dementia. Few available case reports suggest efficacy of a number of medications including antidepressants, antipsychotics, mood stabilizers, and hormonal agents. Mr. X a 55 year-old white male was admitted following a 1 week history of sexually inappropriate behavior towards the staff and residents and wandering away from the nursing home. These problems started insidiously and progressed gradually but the precipitating cause for his admission was the repeated sexually inappropriate behaviors in the nursing home. Nursing home staff was unable to redirect him and had to resort to police intervention a few times. Over 5 weeks in hospital the veteran was treated with antipsychotics and mood stabilizers and although his mood stabilized his sexually inappropriate behaviors persisted. SSRI's as a treatment option was ruled out due to the possibility of activating an episode of mania. Thus a second line treatment had to be considered. Medroxyprogesterone acetate has been used for treatment of sexual inappropriate activity in other sexually aggressive populations. Depo-Provera injections were added to his medication regimen. This treatment intervention proved successful and client showed significant improvement within a week of treatment. Our patient had a successful outcome and was discharged to an Adult Home. We report that after 6 months of follow up our patient has been maintained in the community without any evidence of sexually inappropriate behaviors.

NR08-37

INCREASED MORTALITY ASSOCIATED WITH SOCIAL ISOLATION IN OLDER MEN: ONLY WHEN FEELING LONELY?

Chp.:Tjalling Holwerda M.D., Van der Boechorststraat 7, Amsterdam, 1015VD Netherlands

SUMMARY:
Objective: The association between both somatic conditions and psychiatric disorders such as depression and increased mortality has been investigated in clinical as well as community studies. Although individual and social factors have been found to be related to illness onset and course, few studies have investigated possible associations with mortality risk. The current study seeks to establish whether social isolation and feelings of loneliness in older men and women are associated with increased mortality, while controlling for potentially confounding factors. Method: The association between social isolation, feelings of loneliness and increased mortality in men and women was assessed in a prospective cohort study (AMSTEL) incorporating 4,004 community- dwelling older persons aged 65-84 years with a ten-year follow-up of mortality data. Cox proportional hazard regression analysis was used to test whether social isolation factors and feelings of loneliness predicted increased mortality, controlling for psychiatric disorders and medical conditions, cognitive functioning, functional status and sociodemographic factors. Results: At ten year follow-up, significantly more men than women with feelings of loneliness at baseline had died; after adjustment for explanatory variables including social isolation, the mortality hazard ratio for feelings of loneliness was 1.30 (Confidence Interval (CI) 1.04 - 1.62) in men, and 1.01 (CI 0.87 – 1.17) in women. After adjustment no higher mortality was found in socially isolated older men and women. Conclusions: In this large study of community-dwelling older individuals, feelings of loneliness independently increased the risk of death in older men. Feeling lonely, rather than social isolation was found to be a major risk factor for increased mortality in older men. The biological, psychological, individual and social mechanisms underlying this association merit further exploration. Developing a better understanding of the nature of this association may also help us improve quality of life and longevity, especially in older men.

NR08-38

PRELIMINARY EVALUATION OF SWITCHING TO GALANTAMINE AFTER NONRESPONSE TO DONEPEZIL IN ALZHEIMER'S DISEASE

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SUMMARY:
Objective: The purpose of this study is to investigate the benefits of switching treatment with galantamine in patients with mild-to-moderate Alzheimer's disease (AD) who showed a lack of efficacy to other cholinesterase inhibitor (ChEI). Design, Setting, and Participants: 52-week, naturalistic prospective study with blinded outcome evaluation of 66 Korean outpatients with probable AD of mild-to-moderate severity at an academic psychiatry service. Outcome Measures: Primary outcome measures were the response rate after 26 weeks of treatment and the change on the Korean version of the Alzheimer's Disease Assessment Scale-cognitive subscale (K-ADAS-cog). Secondary outcomes were measured using a Korean version of the Mini-Mental State Examination (K-MMSE), Seoul-Instrumental Activities of Daily Living (S-IADL), Seoul-Activities of Daily Living (S-ADL), and Korean version of the Neuropsychiatric Inventory (K-NPI). Methods: Two patient groups were compared, the galantamine first tried group (n= 42) and the switched group (n= 24). The switched group comprised patients who had shown a lack of efficacy after at least 6 months of treatment with donepezil. Results: There were no significant between-group differences in the response rate to galantamine at 26 weeks (71.4% for the naïve group vs. 58.3% for the switched group; ?2= 1.178, df= 1, p= 0.277) and in the change of the score on the cognitive scales (K-ADAS-cog, K-MMSE) and non-cognitive scales (S-IADL, S-ADL, and K-NPI) at each point of evaluation. Conclusions: This finding suggests that switching from donepezil to galantamine may benefit patients with mild-to-moderate AD who have not responded to an initial trial of donepezil.

NR08-39

RELATIONSHIP BETWEEN FIVE SYMPTOMS OF STROKE AND COGNITION IN THE ELDERLY

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SUMMARY:
Background: We aimed to investigate the relationship between five symptoms of stroke and cognition in the elderly. Methods: Data from 2137 subjects (492 men and 1645 women) aged 60 years old and above was collected from the Suwon geriatric mental health community center. All subjects completed the study questionnaire including demographic characteristics, history of current and past illnesses, drug history, K-MMSE(Korean version of Mini Mental State Examination), SGDSK(Korean version of Geriatric Depression Scale-Short Form), and five symptoms of stroke presented by the Korean Stroke Society. Results: Mean age was 76.6±6.5 and mean educational level was 5.2±4.4. We divided the subjects into 6 groups based on the number of symptoms of stroke(no symptoms (K-MMSE = 24.2), 1 symptom (K-MMSE = 24.0), 2 symptoms (K-MMSE = 23.9), 3 symptoms (K-MMSE = 23.3), 4 symptoms (K-MMSE = 23.5), 5 symptoms (K-MMSE = 21.4)). There were significant differences in estimated marginal means of K-MMSE score among the 6 groups after adjusting for age, sex, educational level, and SGDSK using ANCOVA (F=5.8, df=5, p<0.0001, adjusted R2=0.384). Multiple regression analysis revealed that the number of symptoms of stroke was associated with cognition (K-MMSE score) in the elderly after adjusting for age, sex, educational level, and SGDSK (ß=-0.089, p<0.0001, adjusted R2=0.384). Conclusion: These results suggest that the number of symptoms of stroke may be associated with cognition in the elderly. Key words: elderly, cognition, five symptoms of stroke

NR08-40

WITHDRAWN

NR08-41

MORTALITY IN MILD COGNITIVE IMPAIRMENT: RESULTS FROM THE KOREAN LONGITUDINAL STUDY ON HEALTH AND AGING (KLOSHA)

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SUMMARY:
OBJECTIVE: To assess mortality associated with mild cognitive impairment (MCI) overall and by its'

subtypes among elderly Korean METHODS: 811 community dwelling Korean elders aged 65 years or older who participated in the KLOSHA had been followed 45 months. At baseline, 307 subjects were diagnosed with MCI (68 amnestic MCI single domain type, 103 nonamnestic MCI single domain type, 136 MCI multiple domain type) according to the revised diagnostic criteria for MCI proposed by the International Working Group on MCI. Data were analyzed with the Cox proportional hazards model having adjusted for age, gender and medical comorbidites. RESULTS: During a 45 months follow up period, 67 individuals died (8.3%). In a Cox proportional hazard model, MCI was associated with increased mortality (HR = 1.71, 95% CI = 1.06 – 2.76). However, this association disappeared when age, gender and comorbidities were added to the model (HR = 1.05, 95% CI = 0.63 – 1.76). Mortality was highest in the MCIm subtype (HR = 0.45 95% CI = 0.11 – 1.87 for aMCIs, HR = 1.51 95% CI = 0.75 – 3.07 for nMCIs, HR = 2.54, 95% CI = 1.47 – 4.38 for MCIm). However this association also disappeared after adjusting age, gender, and comorbidites (HR = 0.32, 95% CI = 0.08 – 1.35 for aMCIs, HR = 0.98, 95% CI = 0.47 – 2.01 for nMCIs, HR = 1.44, 95% CI = 0.80 – 2.60 for MCIm). CONCLUSION: MCI was not an independent risk factor for mortality in Korean elders.

NR08-42

INCREASED PSYCHIATRIC EMERGENCY DEPARTMENT UTILIZATION BY THE ELDERLY IN HAWAII: A REFLECTION OF THE MENTAL HEALTH CRISIS FACING OUR NATION'S ELDERLY

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SUMMARY:
Introduction: In United States, the number of older subjects (65 years of older) is expected to double in two decades as a result of the ever-aging population. However, mental health resources available to this rapidly growing population have lagged further and further behind, with many predicting an imminent crisis. In Hawaii, a growing number of older patients, many with dementia, have found it difficult to access interventions needed to address their behavioral and placement needs. These patients, often brought in by family members or caretakers in desperation, are increasingly relying on the emergency department (ED) for these unmet interventions. We hypothesize that there is a trend of increased psychiatric ED visits by the elderly and that they are likely to have longer length of stay (LOS) due to the shortage of community resources required to effect a safe disposition plan. Methods: LOS and the age of patients (total n =14402, n of age 65 or greater = 787) triaged to the psychiatry section of the Queen's Medical Center ED in Honolulu were tracked from 2007 to the present. The ED at Queens' Medical Center is the largest and highest-volumed in Hawaii. Results: Year-by-year analysis showed an increasing percentage of psychiatric ED visits by older subjects (p=0.01), with the largest increase (30%) from 2008 to 2009. In addition, LOS for older subjects was longer (p < 0.01), with a median of 403 minutes compared to a median of 357 minutes for younger patients. Conclusion: These results suggest that the expected mental health crisis in the elderly is increasingly salient in their growing psychiatric ED utilization, reflecting the difficulty in securing needed services elsewhere and placing an even greater strain on limited ED resources.

NR08-43

THE CURRENT STATUS OF GERIATRIC DEPRESSION IN SOUTH KOREA

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SUMMARY:
Geriatric depression is the most important mental illness in the elderly . To investigate the treatment status of geriatric depression in Korea, We examined treatment prevalence, prescriptions patterns using Korea national insurance data We performed retrospective analysis of computerized medical claims data in 2004. The Inclusion criteria was 60-85 year outpatient diagnosed by depressive disorder. The patients with schizophrenia and bipolar disorder were excluded. The patients number was 221.888 among total adult patients (648,237). the yearly treated incidence rate for depression was found to be 69.6 per 100,000. The prevalance was twofold higher in women(158,061) than men(63.827). The average prescription days per visit were 14.1 days. Average antidepressant prescription number per claim was

1.4, concomitant psychotropic medication was 1.9. The ratio of antidepressant per claim was 70%. According to antidepressant class, TCA only(29%.)was the most prescribed medication,followed by SSRI only(18.6%), SSRI+other(8.6%), Other(10%), and SNRI(2%).The concomitant psychotropic medications were prescribed 84% per claim. Anxiolytics(91%) were the most common, followed by hypnotics(23.1%),antipsychotics(20.8%). The ratio of psychotherapy per claim was 70% The health insurance system in Korea has covered whole population since 1989. Although the limitation of diagnostic accuracy, This data included nearly all service utilizations of geriatric depression patients of Korea in 2004. Specialized guideline is recommended for The Geriatric depression patients. The use of new antidepressants in elderly depression patients should be increased

NR08-44

THE EFFICACY OF TREATMENT OF ADDITION IN ALZHEIMER'S DISEASE: RATIONALE FOR COMBINATION THERAPY WITH GALANTAMINE AND MEMANTINE

Chp.:Julio Zarra Ph.D., Calle 14 Nº 151 esquina 35, La Plata, 1900 Argentina, Co-Author(s): Luisa Schmidt, M.D.

SUMMARY:
Introduction: Considering the moderate clinical state the Alzheimer´s Disease, without therapeutic response or poor therapeutic response with an anti dementia agent, we try improvement the therapeutic response with 2 drugs association. Hypothesis: The efficacy, safety, and tolerability of cholinergic agent: GALANTAMINE (with a dual mechanism of action on the cholinergic a system) and moderate affinity NMDA- receptor antagonist: MEMANTINE, were assessed taking into account the profile of patients with neurocognitive disorder: Alzheimer's disease, from the clinical aspects and the different classifications. Methods: The experience included 428 patients who were enrolled in a prospective, observational, multicenter, and open-label study to receive 16 mg/day of galantamine and 30 mg/day of memantine for 12 months of treatment of addition. Results: The therapeutic response was measured using the Mini Mental State Examination (MMSE), Clinical Dementia Rating (CDR), Alzheimer's Disease Assessment Scale (ADAS-GOG), Functional Activities Questionnaire (FAQ) the Clinical Global Impression Scale (CGI) and the UKU scale of adverse effects. Taking into account the efficacy, safety and adverse events of the treatment, the final results of the study showed that galantamine with addition memantine improve cognition, behavioural symptoms, and the general well-being of patients with cognitive impairment: Alzheimer's disease. The incidence of adverse events was not significant and a very good profile of tolerability and safety was observed. Conclusion: At the conclusion of this session, we should be able to demonstrate with use the association memantine - galatamine in neurocognitive disorder: Alzheimer's disease, improve cognition, behavioural symptoms, and the general state recognized as neurocognitive disorder. Discussion: Suggest that before Alzheimer´s Disease continues evolution to a severe state, the pharmacological use this association to slowing or stopping the dementia process.

NR08-45

THE EVOLUTION OF MEMORY DISORDER IN THE ELDERLY PEOPLE: DO YOU RECOVER, WILL REMAIN STATIONARY OR DEMENTIA?

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SUMMARY:
Introduction: Even though most than a hundred years have passed since we know Alzheimer's disease today it's considered as the human's frightful flagellum. While most of mental disease seem to be losing its evilness, the neurocognitives disorders caused by Alzheimer's disease, far from attenuating has duplicated it's appearance every each five years. And its symptoms are still being more depriving. So, in opposition to the rest of the illness that affects the nervous system and the psychic apparatus, which due to the new treatments has been attenuated the clinical forms' Alzheimer. With its severe pronostic and the illness evolution, haven't been soften. Hypothesis: Our intention is firstly, share some concepts to consider Alzheimer's disease as a cruel illness that can reach all the elderly people around the world. Secondly, to analyze the different forms of presentation than can mask a clinical state. Which many times could end-up in dementia? And will soon destroy the whole psychic

apparatus of a person. Methods: present our study group in the four institutional medical centers, with ambulatory patients, who consult about a cognitive disease. We describe the evolution trough time, taking into account the pharmacological treatments. We included 850 patients with diagnosis the Mild Cognitive Disorder and 348 patients with diagnosis the Alzheimer`s Disease (DSM IV-TR criteria) Results: the importance of the early detection of memory disorder, as one of the first signs of alarm which give us the opportunity to intervene therapeutically in on time. Conclusions: We can recognize the Mild Cognitive Disorder as a clue which reveal a first therapeutic instance probably in efficacy in this cruel evolution towards dementia. Discussion: In the presence of a disorder of memory in the elderly people, with the possibility of evolving towards dementia, we prefer to begin drug therapy early, preventive character.

NR08-46

MENTAL HEALTH SCREENING IN A SUBSPECIALTY MEDICAL CLINIC FOR INDIVIDUALS WITH PHENYLKETONURIA

Chp.:Deborah Bilder M.D., 650 Komas Drive, Suite 200, Salt Lake City, UT 84105, Co-Author(s): Bridget Lundy, C.S.W., Hilary Coon, Ph.D., Nicola Longo, M.D.,Ph.D.

SUMMARY:
Objective: Phenylketonuria (PKU) is an inherited metabolic disorder affecting approximately 1:12,000 people. PKU results from the defective activity of phenylalanine hydroxylase, the enzyme converting phenylalanine (phe) to tyrosine. If not treated in the newborn period, PKU can cause profound intellectual disability. Affected individuals are identified at birth by newborn screening and started on a phe restricted diet that prevents intellectual disability. Yet, patients with PKU remain at increased risk for executive functioning impairments and emotional disturbance. In this study we (1) determine the willingness of children, adults, and families to participate in mental health screening as a component of the PKU clinic follow-up visit and (2) identify the rate of psychiatric distress in children and adults with PKU. Methods: 51 of the 54 children and adults who were seen in the outpatient PKU genetics clinic during the first 10 months of 2010 agreed to participate in mental health screening. Parents of children 4 to 17 years of age (n=37) completed the Pediatric Symptoms Checklist (PSC). 14 adults completed the Brief Symptom Inventory (BSI). Concurrent phe levels, the two preceding phe levels, gender, and age were also recorded. Results: Of the 51 patients screened, 33% overall screened positive (24% of children, 57% of adults). The mean concurrent phe levels were significantly higher (p=0.022) in the group that screened positive (780±492 µmol/L, n=17) compared to the group that screened negative (500±345 µmol/L, n=34). Conclusion: The inclusion of mental health screening into the routine PKU follow-up visit was largely accepted among patients and families. The incidence of clinically significant co-morbid psychiatric symptoms was high in both children and adults with a correlation found between metabolic control and screening results. This work was funded in part by a grant from Biomarin.

NR08-47

RELATIONSHIP BETWEEN A HOPEFUL ATTITUDE AND CELLULAR IMMUNITY IN PATIENTS WITH BREAST CANCER

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SUMMARY:
Objectives: To evaluate the relationship between hopefulness and immune function in patients with breast cancer.Methods: A total of 196 patients with breast cancer were enrolled. The subjects were divided into two groups using the abbreviated version of the 7-item Beck Hopelessness Scale (BHS-7). Five types of circulating lymphocytes were assessed in peripheral blood samples: CD3+, CD4+, CD8+, CD19+, and CD56+. The Beck Depression Inventory (BDI), Montgomery–Asberg Depression Rating Scale (MADRS), and European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire Core 30 (QLQ-C30) were administered. Results: 104 patients (53.6%) showed a hopeful attitude, with a score of 0 on the BHS-7. No significant differences were observed between the hopeful and non-hopeful groups for cancer stage, tumor size, time since the cancer was diagnosed, presence of other physical illnesses, concomitant medications, or family history

of cancer. Scores on the MADRS and BDI were significantly higher in non-hopeful group, whereas global and total functioning scores on the EORTC QLQ-C-30 were significantly higher in the hopeful group. The hopeful group showed significantly higher CD8+ T cell percentage and counts and significantly lower CD4+ T cell percentage and CD19+ B cell percentage and counts compared with the non-hopeful group. All statistically significant differences between the two groups were maintained after adjusting for age, BDI, and global and total functioning scores on the EORTC QLQ-C-30 as covariates, except for CD 19+ B cell counts. Conclusion: The results suggest that hopefulness may be associated with strong cellular immunity in patients with breast cancer independent of depression and quality of life.

NR08-48

FIBROMYALGIA: EFFICACY OF QUETIAPINE COMPARED WITH PLACEBO

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SUMMARY:
In this double-blind placebo-controlled crossover study, participants were aged 18–60 years, met American College of Rheumatology fibromyalgia criteria, and had not satisfactorily responded to their previous treatment. Quetiapine XR 100 mg daily was added to current treatment for one week, and increased to 200 mg for 11 weeks. After one week of washout, active and placebo treatment were switched for the next 12 weeks. The primary outcome measure was the Fibromyalgia Impact Questionnaire (FIQ). Secondary measures were the Pittsburgh Sleep Quality Index (PSQI), Beck Depression Inventory (BDI), State-Trait Anxiety Inventory (STAI), Short Form Health Survey (SF-12) and Clinical Global Impressions Scale (CGI). Changes between appointments for the first 10 participants were tracked, using ANOVA within subjects. Quetiapine was significantly superior, as measured by the primary measure FIQ (p=0.002), and two of the secondary measures PSQI (p=0.025) and CGI (p=0.019). Another secondary measure BDI (p=0.056) almost reached significance, while two other secondary measures STAI (p=0.142) and SF-12 (p=0.151) did not differ from placebo.

NR08-49

PSYCHOSOCIAL FACTORS PREDICTING ADVANCED STAGE OF BREAST CANCER AT DIAGNOSIS IN KOREA : THE ROLE OF MARITAL SATISFACTION

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SUMMARY:
Objective Breast cancer has become the most common cancer in women throughout the world. Similar to worldwide pattern, breast cancer became the most common cancer in Korea. However, the age distribution pattern in Korea differs from that of western countries. In Korea, more than 60% breast cancer patients are under 50 years old, while in western countries incidence rates continue to increase with age, along with high incidence after menopause. The ripple effect of cancer itself and cancer-related psychosocial problem could be significant, because women in this age group play the important role in their family and society became cancer patients. Therefore, an effective treatment and prevention is very important. Among the management of cancer, early detection and treatment improve survival rate. However, in Korea, more than half of all women newly diagnosed breast cancer patient turned out to be advanced state. In this situation, identification of individuals at high risk of advanced stage diagnosis must precede other steps for improving cancer treatment Although, several demographic factors have been well known as risk factors for advanced diagnosis, psychosocial factors which also could have a considerable impact on diagnosis delay have been undervalued. The aim of this study is to examine the relationship between psychosocial factors and advanced stage diagnosis and identify the possible predictors of advanced stage diagnosis Methods Newly diagnosed breast cancer patients who were admitted for breast surgery to the Kyungpook National University Hospital were interviewed. The target population comprised all female breast cancer patients aged 18-80 years, with histologically confirmed breast cancer diagnosed Between March 2008 and July 2009. 219 of 280 eligible women could be enrolled. The remaining 61 patients refused to be interviewed.

Face-to-face interviews were administered. Structured interview contained detailed questions about disease history from first perception of her symptoms to starting treatment, health promoting behavior, marital satisfaction and family support, overloaded economic and family burden and demographic factors. Results A logistic regression model was used to assess possible predictors of advanced stage diagnosis. Marital satisfaction, health behavior (regular mammography screening), older age, BMI =25 kg/m2 were strongly associated with advanced stage. In these factors, regular mammography screening was most influential predictor of stage of diagnosis. In additional analysis, good marital satisfaction was correlated with positive health promoting behavior, especially, regular mammography screening behavior. Conclusion This study explored the determinants of advanced stage diagnosis of breast cancer among Korean women. Consistent to the preexisting researches, the advanced diagnosis of breast cancer is associated with the frequency of screening behavior, age, and obesity. Among the psychosocial factors, marital satisfaction has significant impact on early detection of breast cancer. It means that good marital relationship could enhance health promoting behavior. Therefore, we should pay attention to psychosocial factors including marital satisfaction as well, for early detection of breast cancer and improving treatment outcomes. KEY WORDS: Korean breast cancer, marital satisfaction, advanced diagnosis, predictor.

NR08-50

DETECTING DEPRESSION IN HEPATITIS C: THE UTILITY OF THE CLINICIAN-RATED AND SELF-REPORT DEPRESSION SCALES

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SUMMARY:
Background: Pegylated interferon-alpha (IFNa) will remain a mainstay of treatment for hepatitis C (HCV), even in the approaching era of protease inhibitors. Treatment associated psychiatric symptoms are a significiant barrier to effective care and a serious clinical concern for patients and treating physicians. We aimed to confirm previous studies demonstrating an association between depression and physical symptoms in patients with HCV, and in particular studied the accuracy of a clinically simple and brief office rating scale for depression, the 7-item Hamilton Depression Rating Scale (HAM-7). Methods: We compared the performance of one self-report (Patient Health Questionnaire-9 [PHQ-9]) and 2 clinician administered depression screening scales (Hamilton Depression Rating Scales 7 and 17), and looked at the possible associations between depression and increased somatic and fatigue symptoms in 116 individuals with chronic HCV (CHC) assessed in an ambulatory office setting. Results: Currently depressed CHC patients had significantly higher scores on all the scales compared to non-depressed patients. HAM-17 and HAM-7 scores were highly correlated, and both had greater accuracy than PHQ-9 in predicting a current depressive episode. Both HAM-17 and HAM-7 were significantly correlated with physical symptoms and fatigue. Conclusions: In patients with CHC, we confirm an association between depression and fatigue and physical symptoms, and support efforts aimed at early diagnosis and treatment of depressive symptoms in this patient population. We provide validation of a simple, easy and quick office tool, the HAM-7, in screening for depression in HCV, and demonstrate that it provides greater accuracy than self-reported scales, such as the PHQ-9. The resultant clinical efficacy of routine application of this tool should be prospectively evaluated in future studies.

NR08-51

PATTERNS OF EMOTION PROCESSING IN PSYCHOGENIC NON-EPILEPTIC SEIZURES

Chp.:Gaston Baslet M.D., 912 S. Wood Street, Chicago, IL 60612, Co-Author(s): Amanda Uliaszek, Eric Prensky, Ph.D.

SUMMARY:
Objective: Psychogenic non-epileptic seizures (PNES) are seizure-like paroxystic events facilitated by a dysfunction in emotion processing. PNES patients are heterogenous in their psychiatric presentation. Specific patterns of emotion processing have not been identified in PNES. Our objective is to investigate if subgroups of PNES patients

can be defined based on their emotion processing style. Methods: Sixty-seven patients diagnosed with PNES completed a formal neuropsychiatric clinical interview and the Difficulties in Emotion Regulation Scale (DERS) as well as other clinical measures. The DERS is a scale that measures diverse aspects of emotion processing. Cluster analysis was utilized to determine how PNES subjects were grouped based on their responses on the DERS and independent sample t-tests were used to establish clinical differences between the identified clusters. Results: A hierarchical cluster analysis revealed two distinct clusters among the patients. Cluster 1 (n = 16) was characterized by high scores on the DERS total score (m = 3.69, sd = .41) and all of the DERS subscales. Cluster 2 (n = 51) was characterized by low scores on the DERS total score (m = 1.98, sd = .57) and subscales. Independent sample t-tests revealed that Cluster 1 subjects had significantly higher scores on all the DERS subscales when compared to Cluster 2 subjects. In addition, the mean DERS total scores for Cluster 1 and Cluster 2 are both significantly different from the average DERS total score of the total sample (m = 2.38, sd = .89). This may be indicative of a bimodal distribution of the DERS, as opposed to a normal distribution. The results of independent sample t-tests also revealed that the Cluster 1 group had significantly higher scores on several measures of psychopathology symptoms, including the Beck Depression Inventory, all subscales of the Depression, Anxiety and Stress scale and the Dissociative Experiences Scales. Finally, additional qualitative information from our interview data further demonstrated differences between the clusters. For example, 73.33% of Cluster 1 patients had been in psychiatric treatment, compared to 33.33% of Cluster 2. Also, 66.67% of Cluster 1 patients report a history of panic attacks, compared to 23.53% of Cluster 2. Conclusions: This study shows two distinct patterns of emotion processing in PNES subjects and establishes different clinical profiles based on the analysis between the two identified clusters. The subgroup with more difficulties in emotion regulation presents with higher depression, anxiety, stress and dissociation ratings and is more familiar with psychiatric treatment. The subgroup with less difficulty in emotion regulation reports significantly lower ratings in those clinical scales. Subgroups of PNES patients with different emotion processing styles might represent diverse mechanisms in emotion processing that can lead to a similar symptomatic expression.

NR08-52

STOP SMOKING EFFORTS OF THE MINISTRY OF HEALTH IN TURKEY IN 2010-2011: REFLECTIONS ON THE DAILY PRACTICE

Chp.:Derya Iren Akbiyik M.D., Bulbulderesi Cad. 50/5, Ankara, 6660 Turkey, Co-Author(s): Haldun Soygur, M.D., Tijen Sengezer, M.D.

SUMMARY:
Objective: Stop smoking programs occupied a big percentage in the last year's agenda of the Turkish Ministry of Health. The cigarette industries were so powerful and hard working that creating new ways with remarkable decisions was a must. Method: All new official decisions and applications between 2009 and 2010 to support stop smoking programs were listed by screening the webpage of "Tobacco Control Unit" of the Ministry of Health and the inventories were inspected. The reflections of those in daily practice of Stop Smoking Units in Ankara was evaluated and discussed by the responsible physicians. Conclusion: Stop smoking programs were strongly supported by Ministry of Health in Turkey for long years. However, active programs established primarily by the ministry came later in 2009 and 2010. The regulation of the establishment of Stop Smoking Centers, prohibition of smoking inside of the buildings, supporting medical treatment of the addiction, establishing a quit-line with officially assigned staff had important positive motivating effect.

NEW RESEARCH SESSION 09
May 18, 2011
10 – 11:30 AM
Hawaii Convention Center, Exhibit Hall, Level 1

NR09-01

EFFICACY OF LISDEXAMFETAMINE DIMESYLATE IN ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER PREVIOUSLY TREATED WITH AMPHETAMINES

Chp.:Thomas Babcock D.O., 725 Chesterbrook Blvd, Wayne, PA 19087, Co-Author(s): Bryan Dirks, M.D.,

Ben Adeyi, M.S., Brian Scheckner, Pharm.D.

SUMMARY:
Objective: To examine the efficacy of lisdexamfetamine dimesylate (LDX) in adults with attention-deficit/hyperactivity disorder (ADHD) who remained symptomatic (ADHD Rating Scale IV [ADHD-RS-IV] total score >18) on amphetamine (AMPH) therapy (mixed AMPH salts and/or d-AMPH formulations) prior to enrollment in a 4-week placebo-controlled LDX trial, compared with the overall population. Methods: In this post hoc analysis of data from a multicenter, randomized, double-blind, forced-dose titration study, the clinical efficacy of LDX (30, 50, and 70 mg/d) vs placebo in adults (18-55 years) with ADHD receiving AMPH treatment at screening relative to the overall study population was evaluated. ADHD symptoms were assessed using the ADHD-RS-IV with adult prompts at screening, baseline (after washout of prior treatment), and endpoint. Safety assessments in the overall study population included treatment-emergent adverse events (TEAEs), vital signs, laboratory findings, and electrocardiogram. Results: Of 414 participants (352 receiving LDX, 62 placebo) included in the efficacy evaluation for the overall study population, 41 were receiving AMPH therapy at screening (39 were randomized to LDX, 2 to placebo); mean (SD) AMPH dose was 34.1 (17.4) and 35.0 (7.1) mg/d for participants in LDX and placebo groups, respectively. Of the 41 participants, 36 remained symptomatic (ADHD-RS-IV >18) at screening despite receiving AMPH. For these 36 participants taking LDX (n=34) or placebo (n=2), mean (SD) ADHD-RS-IV total scores were: 36.7 (8.50) and 33.0 (5.66) at screening, 39.6 (6.74) and 41.0 (5.66) at baseline, and 21.9 (11.28) and 27.5 (10.61) at endpoint, respectively. At endpoint, mean (SD) change from screening ADHD-RS-IV total scores were -14.8 (12.39) and -5.5 (16.26) and change from baseline scores were -17.8 (10.20) and -13.5 (4.95) for LDX and placebo, respectively. For the overall study population, mean (SD) ADHD-RS-IV total scores at baseline were 40.8 (6.52) and 39.4 (6.42) and endpoint were 23.3 (12.15) and 31.6 (11.24) for LDX and placebo, respectively. At endpoint, mean (SD) change from baseline ADHD-RS-IV total scores were -17.5 (12.07) and -7.8 (9.28) for LDX and placebo, respectively. For the safety population (n=420), 282/358 (79%) receiving LDX and 36/62 (58%) receiving placebo reported any TEAE; 22 (5.2%) adults withdrew due to TEAEs. TEAEs with >/=5% incidence in adults receiving LDX were decreased appetite, dry mouth, headache, insomnia, nausea, diarrhea, irritability, anxiety, upper respiratory tract infection, anorexia, initial insomnia, and fatigue. Conclusion: In this post hoc analysis, adults with significant baseline ADHD symptoms despite adequate mean AMPH treatment dose showed similar improvements in their ADHD symptoms as the overall study population with LDX treatment. The safety profile of LDX in the overall study population was consistent with long-acting stimulant use. Clinical research was funded by the sponsor, Shire Development Inc.

NR09-02

LONG-TERM SAFETY AND EFFICACY OF CLONIDINE EXTENDED-RELEASE TABLET MONOTHERAPY OR COMBINATION THERAPY IN PEDIATRIC PATIENTS WITH ADHD

Chp.:Samantha Bostrom M.D., 1792 West 1800 North, Clinton, UT 84015, Co-Author(s): Nicole Forman, MD, Mija Yoon, PharmD, Chao Wang, PhD, Rakesh Jain, MD

SUMMARY:
Objective: The primary objective was to evaluate the long-term safety of clonidine extended-release tablets (CLON-XR) alone or in combination with other medications for the treatment of attention-deficit/hyperactivity disorder (ADHD) in pediatric patients for up to 1 year; the secondary objective was to assess the long-term efficacy of CLON-XR. Methods: Patients aged 6 to 17 years with ADHD who previously completed a phase 3 efficacy trial of CLON-XR alone or in combination with stimulants or who discontinued from these studies for reasons other than safety were enrolled in this 12-month, open-label safety and efficacy study. Patients received flexible-dosing of CLON-XR (0.1-0.4 mg/d; twice daily for doses >0.1 mg/d) alone or in combination with other ADHD medications. Safety assessments (treatment-emergent adverse events [TEAEs], vital signs, lab values, and ECG data) and efficacy measurements (eg, ADHD Rating Scale–IV [ADHD-RS-IV] total score, Clinical Global Impression of Severity, and Clinical Global Impression of Improvement) were assessed throughout the study. Results: The safety population comprised 301 patients. 33% received CLON-XR monotherapy, and 67% received CLON-XR in combination with other therapies. 73% of patients

received combination therapy with stimulants. TEAEs were reported in 81% and 84% of patients in the CLON-XR combination and CLON-XR alone groups, respectively. The most common TEAEs (incidence =5%) were somnolence (32%), headache (16%), URI (13%), upper abdominal pain (12%), and fatigue (12%). Seventeen patients (6%) discontinued because of a TEAE (12 patients who received CLON-XR alone and 5 patients who received combination therapy) No cardiac-related serious adverse events occurred. Changes from baseline in systolic blood pressure after 12 months ranged from -18 to 28 mm Hg (mean, 2.9 mm Hg), -20 to 31 mm Hg (mean, -0.2 mm Hg), and -24 to 18 mm Hg (mean, -3.4 mm Hg) in the CLON-XR + AMP, CLON-XR + MPH, and CLON-XR alone groups, respectively. Diastolic blood pressure changes were -16 to 16 mm Hg (mean, 1.9 mm Hg), -21 to 20 mm Hg (mean, -0.6 mm Hg), and -4 to 18 mm Hg (mean, 5.2 mm Hg) in the CLON-XR + AMP, CLON-XR + MPH, and CLON-XR alone groups, respectively. QRS interval changes were -13 to 16 msec in both the CLON-XR + AMP and CLON-XR + MPH groups and -8 to 6 msec in the CLON-XR alone group. Mean change from baseline in ADHD-RS-IV total score was -13.7, and improvement was sustained throughout the 12-month study (mean at 12 months, -14.6). Conclusions: Flexible dosing of CLON-XR 0.1 to 0.4 mg/d (twice daily for doses >0.1 mg/d) as monotherapy or in combination with other ADHD medications for up to 1 year was safe and well tolerated. No discontinuations due to vital sign–related TEAEs occurred. Mean change in ADHD-RS-IV score was markedly improved at 1 month, and efficacy was maintained through month 12. Safety was comparable in patients receiving CLON-XR alone or in combination with other ADHD medications.

NR09-03

ADVERSE EVENT PROFILES ASSOCIATED WITH DOSE ESCALATION/ MAINTENANCE AND DOSE TAPERING OF CLONIDINE HYDROCHLORIDE EXTENDED-RELEASE TABLETS

Chp.:Rich Bowen Ph.D., 100 Campus Drive, Florham Park, NJ 07932, Co-Author(s): Mija Yoon, PharmD, Paul F. Cavanaugh, PhD, Chao Wang, PhD, Nicole Forman, MD

SUMMARY:

Objective: To examine the relationship between treatment-emergent adverse events (TEAEs) and dose-escalation/maintenance and tapering protocols from two phase 3 randomized controlled trials of clonidine hydrochloride extended-release tablets (CLON-XR) in children and adolescents with attention-deficit/hyperactivity disorder (ADHD). Methods: Patients aged 6 to 17 years with ADHD (N=428) participated in one of two phase 3, 8-week, multicenter, randomized, double-blind, placebo-controlled trials. Patients received CLON-XR versus placebo in a fixed-dose monotherapy trial (0.2 or 0.4 mg/d; CLON-301) or flexible-dose CLON-XR (0.1-0.4 mg/d) as adjunctive therapy to a stable regimen of stimulant medication (STM) compared with placebo plus STM (CLON-302). In both studies, CLON-XR dose was escalated for up to 3 weeks to reach each patient's assigned dose. This dose was maintained for at least 2 weeks before gradually being tapered in decrements of 0.1 mg/d weekly to reach a dose of CLON-XR 0.1 mg/d by week 8. If study medication was discontinued prematurely, dose was tapered 0.1 mg/d every 2 to 7 days. Results: In both CLON-301 and CLON-302, the overall incidence of TEAEs was numerically higher during the first 21 days of treatment (ie, the upward-titration phase) than during the maintenance phase or the tapering phase. In CLON-301, the most common TEAEs with a notably higher incidence in the CLON-XR group than in the placebo group did not appear to be dose related and included somnolence (7%, 40%, and 31% of patients in the placebo, CLON-XR 0.2-mg/d, and CLON-XR 0.4-mg/d groups, respectively), fatigue (1%, 16%, and 13%), irritability (4%, 9%, and 8%), insomnia (1%, 5%, and 6%), and emotional disorder (1%, 4%, and 5%). In CLON-302, the most common TEAEs with a higher incidence in the CLON-XR + STM group were somnolence (8% and 20% of patients in the placebo + STM and CLON-XR + STM groups, respectively), fatigue (4% and 16%), increased body temperature (2% and 5%), and dizziness (2% and 5%). Twenty-one of 230 patients (9.1%) in CLON-301 had TEAEs that resulted in discontinuation compared with 5 of 198 patients (2.5%) in CLON-302. The most common TEAEs resulting in discontinuation were somnolence and fatigue, and the majority of these TEAEs resolved either during the tapering phase or within 1 week of the last day of study drug administration. There were no clinically meaningful electrocardiogram-related TEAEs. In CLON-301, blood pressure changes

were small and dose related. In CLON-302, mean systolic and diastolic blood pressures decreased by 4 to 5 mm Hg and 1 to 4 mm Hg, respectively, in the CLON + STM group compared with =1-mm-Hg increase in the placebo + STM group during weeks 2 through 5. In CLON-301, mean heart rate decreased by up to 6 bpm in the CLON-XR groups but varied between increases of 0.5 bpm to decreases of 1.5 bpm in the placebo group during weeks 2 through 5. In CLON-302, mean heart rate decreased by 4 to 5 bpm in the CLON + STM group compared with increases of 1 to 3 bpm in the placebo + STM group. Conclusions: Overall, the incidence of TEAEs with twice daily doses of CLON-XR up to 0.4 mg/d was slightly higher during the initial dose-escalation phase. In those patients necessitating discontinuation of CLON-XR because of intolerance, gradual tapering of the dose in 0.1-mg/d decrements within 1 to 2 weeks was generally associated with symptom resolution.

NR09-04

Maintenance Of Efficacy Of Lisdexamfetamine Dimesylate In Adults With ttention-Deficit/ Hyperactivity Disorder: Randomized Withdrawal Design

Chp.:Mathew Brams M.D., 550 Westcott St 520, Houston, TX 77007, Co-Author(s): Richard Weisler, M.D., Robert Findling, M.D., Maria Gasior, M.D., Ph.D., Mohamed Hamdani, M.S., M. Celeste Ferreira-Cornwell, Ph.D., Liza Squires, M.D.

SUMMARY:
Objective: To evaluate maintenance of efficacy of lisdexamfetamine dimesylate (LDX) using a double-blind randomized withdrawal design in adults with attention-deficit/hyperactivity disorder (ADHD) on stable treatment. Method: This multicenter trial enrolled adults (18-55 y) with ADHD on LDX (confirmed for >=6 months; 30, 50 or 70mg/d final dose at entry), with acceptable tolerability, ADHD Rating Scale IV with adult prompts (ADHD-RS-IV) total score <22, and ratings <=3 on the Clinical Global Impressions-Severity (CGI-S) scale. In a 3-week open-label phase (OLP), participants continued treatment with the prior dose of LDX. Those continuing to meet entry criteria at the end of the OLP were eligible to enter a 6-week double-blind randomized withdrawal phase (RWP). Participants assigned to LDX in the RWP continued on the same dose used to confirm response in the OLP. The primary efficacy outcome was the proportion of adults having ADHD symptom recurrence (both a >=50% increase in ADHD-RS-IV score and a >=2 rating-point increase in CGI-S, both vs RWP baseline). Efficacy assessments also included ADHD-RS-IV and CGI-S. Safety assessments included treatment-emergent adverse events (TEAEs) and vital signs. Results: Of 123 enrolled adults, 122 were included in the OLP; 116 were randomized (LDX 56; placebo 60) and included in the efficacy analysis. Overall, 56.9% (66/116) of randomized adults were female, 91.4% (106/116) were white, and 7.8% (9/116) were Hispanic. At RWP baseline, mean (SD) ADHD-RS total score for LDX and placebo groups were 10.6 (4.96) and 10.6 (4.82), and CGI-S ratings were 2.1 (0.80) and 2.2 (0.78), respectively. At endpoint, a significantly (P<.0001) smaller proportion of adults taking LDX met criteria for ADHD recurrence and were withdrawn (8.9%; 5/56) vs placebo (75%; 45/60). Of 56 participants taking LDX and 60 taking placebo, 4 taking LDX and 26 taking placebo met ADHD recurrence criteria after 1 week of treatment in the RWP; at 2 weeks, no additional participants taking LDX vs 10 of the remaining participants taking placebo met criteria. During the OLP, 20.5% (25/122) had a TEAE; 1 resulted in withdrawal. During the RWP, 38.8% (45/116 [LDX 27; placebo 18]) had a TEAE; 1 TEAE (placebo group) was a serious AE. No TEAEs had incidence >=5% in the OLP; TEAEs during the RWP with incidence >=5% in adults taking LDX vs placebo were headache (14.3% vs 5.0%), insomnia (5.4% vs 5.0%), and upper respiratory tract infection (8.9% vs 0%). Mean changes in vital signs were small and clinically insignificant in the open-label and RWP phases. Conclusion: In participants receiving long-term treatment, LDX demonstrated maintenance of efficacy vs placebo upon randomized withdrawal. ADHD symptom recurrence tended to occur early following discontinuation of LDX, mostly by 2 weeks, in the RWP. The safety profile of LDX was consistent with previous studies and long-acting stimulant use. Clinical research was funded by the sponsor, Shire Development Inc.

NR09-05

EFFICACY AND SAFETY OF MORNING OR EVENING ADMINISTRATION OF GUANFACINE EXTENDED RELEASE AS ADJUNCTIVE THERAPY TO PSYCHOSTIMULANTS IN ADOLESCENTS WITH

Chp.:Oscar Bukstein M.D., BBS second floor, 1941 East Road, Houston, TX 77054, Co-Author(s): John M. Turnbow, M.D., Sharon Youcha, M.D., Carla White, B.Sc., C.Stat., Jonathan Rubin, M.D., M.B.A.

SUMMARY:
Objective: Examine the efficacy and safety of guanfacine extended release (GXR) with psychostimulants in adolescents with ADHD. Methods: A double-blind, placebo-controlled, dose-optimized study of GXR in subjects aged 6-17 years (N=461) with suboptimal response to psychostimulants. Suboptimal response was defined a priori as treatment with a stable dose of a psychostimulant for >=4 weeks with at least mild ADHD symptoms remaining, as measured by an ADHD Rating Scale IV (ADHD-RS-IV) total score >=24 and a Clinical Global Impression-Severity score >=3 as well as investigator opinion. Subjects who did not show evidence of response to their current psychostimulant medication were to be excluded from the study. Subjects were randomized to GXR in the morning (AM), or evening (PM), or placebo in addition to their stable psychostimulant dose over 5 weeks of dose optimization and 3 weeks of dose maintenance. Efficacy measures included the ADHD-RS-IV, assessed at baseline and each study visit. Safety assessments included adverse event (AE) reports, vital signs, electrocardiograms, and physical examinations. Results: The safety population/FAS included 455 subjects aged 6 to 17 years: 20.7% were adolescents aged 13 to 17 years (n=94). In this subpopulation of adolescents, significantly greater improvements from baseline in ADHD-RS-IV total scores compared with placebo + psychostimulant were observed from treatment week 2 through endpoint in the GXR AM + psychostimulant group (placebo-adjusted least squares [LS] mean change from baseline to endpoint: -8.2, P=0.003) and from treatment week 3 through endpoint in the GXR PM + psychostimulant group (placebo-adjusted LS mean change from baseline to endpoint: -6.3, P=0.033). Treatment-emergent AEs (TEAEs) were reported by 68.8% of adolescent subjects receiving GXR + psychostimulant and 73.3% of subjects receiving psychostimulant + placebo. Most TEAEs were mild or moderate in severity. The most common TEAEs in these adolescent subjects were headache (25.0%) and somnolence (15.6%) in subjects receiving GXR + psychostimulant and headache (13.3%) and upper respiratory tract infection (13.3%) in subjects receiving psychostimulant + placebo. Conclusion: Similar to the results from the overall study population, this analysis found that adolescents receiving GXR + psychostimulant had significantly greater reductions in ADHD symptoms than adolescents receiving psychostimulant + placebo. In adolescents, overall TEAE incidence was similar when GXR was added to a psychostimulant compared with a stimulant + placebo. Supported by funding from Shire Development Inc.

NR09-06

NONMEDICAL USE AND DIVERSION OF SPECIFIC ADHD STIMULANTS AMONG U.S. ADULTS AGED 18-49: A NATIONAL INTERNET SURVEY

Chp.:Theresa Cassidy M.P.H., 320 Needham St Suite 100, Newton, MA 02464, Co-Author(s): Thomas A Eaton, Ph.D, Stephen F Butler, Ph.D., Simon H Budman, Ph.D., Sajan Varughese, Pharm.D., M.B.A., Leo Russo, Ph.D.

SUMMARY:
Objective: We surveyed adults representative of the U.S. population to measure nonmedical use (NMU; e.g., abuse) and diversion of prescription stimulants (RxS). Specifically we: (a) measured the level of NMU of ADHD RxS and compared rates across specific products, (b) described the diversion of ADHD RxS, and (c) identified reasons for NMU of ADHD RxS. Methods: An Internet survey was used to assess several domains including: ADHD diagnosis, illicit drug use, NMU of RxS, route of administration (ROA), drug sources, and reasons for NMU. Participants (N=10,000) aged 18 to 49 were selected from an online opt-in Internet panel to be representative of the U.S. general population using proximity matching to reflect demographics of the U.S. Census–American Community Survey (ACS; 2008). The opt-in Internet panel is a community of subjects recruited by web advertising, permission-based email, and telephone- or mail-to-web recruitment, ensuring diverse populations are represented. Results: Lifetime NMU for prescription drugs was reported by 35.1% of respondents. By prescription drug class, lifetime NMU for pain medications was 24.6%, for sedatives/tranquilizers was 15.6%, and 9.9% for sleep medications. Lifetime NMU of RxS was reported by 8.1% (n=814), of which 21.3% had ever been prescribed a stimulant (n=173). The greatest frequency of past year NMU of RxS was reported for immediate-release mixed amphetamine salts (MAS IR; 1.2%), followed by mixed amphetamine

salts extended-release (MAS XR 0.6%), immediate-release methylphenidate (MPH IR; 0.4%), OROS MPH (0.2%), and lisdexamfetamine dimesylate (LDX; 0.07%). After accounting for product availability per 100,000 prescriptions (year 2009), the highest rates of past year NMU were for MAS IR (1.61; 95%CI=1.31, 1.90), and MPH IR (1.62; 95% CI=1.10, 2.13), followed by MAS XR (0.62; 95%CI=0.46, 0.78), OROS MPH (0.19; 95%CI=0.10, 0.31) and LDX (0.13; 95%CI=0.05, 0.27). Diversion of RxS was mainly from family/friends without any differences between specific products. Swallowing was the highest reported ROA for all RxS products (e.g., 94.7% for OROS MPH). MAS XR was the RxS most used nonmedically for wakefulness (61.2%) and performance (57.1%). MPH IR was the RxS used most often to get high (31.7%). Conclusions: For adults, lifetime NMU for RxS was less than prescription pain medications, sedatives/tranquilizers, and sleep medications. Within the RxS category, past year NMU was highest for MAS IR. There was no difference between the rate of past year NMU between OROS MPH and LDX when taking product availability into account. Sponsored by Shire Development, Inc.

NR09-07

DIFFUSE TENSOR IMAGING STUDY OF FEMALE ADOLESCENTS WITH ATTENTION DEFICIT HYPERACTIVE DISORDER

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SUMMARY:
Objective: White matter (WM) abnormalities had been reported both in volume and in DTI studies within ADHD patients. Female patients usually have different manifestations from males, more inattentive type in females and more combined type in males. Most past studies have included males with combined-type of ADHD predominantly. Whether these results extend to females is largely unknown. The aim of this study is to investigate the WM abnormalities in adolescent females with ADHD. Methods: Female adolescents with ADHD and healthy female adolescents, both aged 12-15 years, are recruited. ADHD is diagnosed with MINI-Kid and DSM-IV. Patients with mental retardation, other significant medical or psychiatric disorders were excluded. All were drug-naive at the time of scan. Diffusion tensor magnetic resonance imaging (DTI) is used to examine. Subsequent voxelwise analysis investigating regional differences of fractional anisotropy (FA) between ADHD and control groups were analyzed. Results: 12 ADHD drug naive adolescent females (13.82 ± 1.01 years), and 16 healthy females (14.76 ± 0.93 years) were recluded for study. Significant lower FA were found in several regions within left hemisphere including middle and inferior temporal regions; anterior cigulate of limbic lobe; Cuneus, lingual and subgyral of occipital lobe; as well as the precuneus of parietal lobe in female patients with ADHD comparison with their healthy control ($T > 3.43$, $p < 0.001$). Some differences in FA between ADHD and health control were also observed in regions of right hemisphere including fusiform gyrus of temporal lobe; insula of sublobar lobe; anterior cingulated of limbic lobe; and precuneus of parietal lobe. Abnormality in structure may relate to abnormal function. These areas have been found involving in a number of processes related to posterior attention network, visual association, language, mathematics, long term memory, recognition and object representation. Conclusion: These findings that lower FAs over temporal, parietal and occipital regions present in drug naive adolescent females with ADHD than the controls suggest some pathophysiology or delay maturation of white matters over these regions.

NR09-08

LONG-TERM SAFETY AND EFFECTIVENESS OF LISDEXAMFETAMINE DIMESYLATE IN ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

Chp.:Ann Childress M.D., Center for Psychiatry and Behavioral Medicine 7351 Prairie Falcon Road Suite 160, Las Vegas, NV 89128, Co-Author(s): Andrew J. Cutler, M.D; Keith Saylor, Ph.D; M. Celeste Ferreira-Cornwell, Ph.D.; Mohamed Hamdani, M.S; Maria Gasior, M.D., Ph.D: Robert L. Findling, M.D.

SUMMARY:
Objective: To assess long-term safety and effectiveness of lisdexamfetamine dimesylate (LDX) for improving core symptoms of attention-deficit/hyperactivity disorder (ADHD), inattention and hyperactivity/impulsivity, in adolescents. Methods:

In an open-label multicenter extension study, eligible adolescents (13-17 years inclusive for prior study) with ADHD, enrolled from a randomized, double-blind, placebo-controlled, 4-week study, were dose-optimized (30, 50, or 70 mg/d LDX) for 4 weeks, then maintained for approximately 48 weeks. Safety assessments included laboratory evaluations, treatment-emergent adverse events (TEAEs), vital signs, electrocardiograms (ECGs), and responses to the Columbia-Suicide Severity Rating Scale. Primary and secondary effectiveness measures were the ADHD Rating Scale IV: Clinician Version (ADHD-RS-IV) and the Clinical Global Impressions-Improvement (CGI-I). Results: In this study, 269 participants were enrolled, 265 participants were included in the safety and efficacy populations, and 156 participants completed the study. The primary reason for discontinuation was refusal to participate further in the study (11.5%). Additionally, discontinuation due to AEs occurred in 6.7% of participants. Most common TEAEs (>=5%) with LDX included upper respiratory tract infection (21.9%), decreased appetite (21.1%), headache (20.8%), weight decreased (16.2%), irritability (12.5%), insomnia (12.1%), nasopharyngitis (7.2%), influenza (6.8%), dizziness (5.3%), and dry mouth (5.3%). Most TEAEs were mild to moderate in severity. Ten participants (3.8%) reported 15 serious AEs (SAEs). The most frequently reported SAEs included syncope or vasovagal syncope (4 participants) and aggression (2 participants). Mean blood pressure and pulse slightly increased and there were no clinically meaningful ECG parameter changes observed. Mean (SD) ADHD-RS-IV total score change from baseline (from the prior short-term study) was -26.2 (9.75) at endpoint with LDX treatment (P<.001 vs baseline using a 2-sided 1-sample t test). Additionally, mean (SD) change from baseline with LDX treatment was -15.1 (6.05) and -11.1 (5.89) in ADHD-RS-IV inattention and hyperactivity/impulsivity subscale scores (P<.001 vs baseline for both), respectively. With LDX, 87.2% of participants were improved (1 or 2 on the CGI-I) at endpoint. Conclusions: LDX at doses of 30, 50, or 70 mg/d demonstrated a long-term safety profile consistent with previous LDX studies and was effective in improving core ADHD symptoms in adolescents. Clinical research was funded by the sponsor, Shire Development Inc.

NR09-09

IMPACT OF ADJUNCTIVE GUANFACINE EXTENDED RELEASE AND A PSYCHOSTIMULANT ON OPPOSITIONAL SYMPTOMS IN CHILDREN AND ADOLESCENTS WITH ADHD

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SUMMARY:
Objective: To assess the effects of guanfacine extended release (GXR) + psychostimulant on oppositional symptoms in children and adolescents with attention-deficit/hyperactivity disorder (ADHD).Methods: A multicenter, double-blind, placebo-controlled, dose-optimization study of GXR (1 to 4 mg/d) in subjects aged 6-17 years with suboptimal response to a psychostimulant. Suboptimal response was defined as treatment with a stable dose of a psychostimulant for >=4 weeks with at least mild ADHD symptoms remaining, defined as an ADHD Rating Scale IV total score >=24 and a Clinical Global Impression-Severity score >=3 as well as investigator opinion. Those with no evidence of response to their current psychostimulant medication were excluded. Subjects continued their stable morning psychostimulant dose and were randomized to receive GXR administered in the morning (AM) or evening (PM), or placebo. Efficacy measures included the Conners' Parent Rating Scale-Revised: Long Version (CPRS-R:L). Baseline scores on the oppositional subscale of the CPRS-R:L >=14 (for boys) and >=12 (for girls), representing approximately 1.5 standard deviations above age/gender norms, indicated significant oppositional symptoms. Safety measures included adverse events (AEs), vital signs, and physical examinations. Results: At baseline, 60.2% (n=274/455) of subjects met criteria for significant oppositional symptoms. Significant improvement from baseline to endpoint on the CPRS-R:L was seen with GXR + psychostimulant compared to placebo + psychostimulant both in the overall study population (placebo-adjusted least squares [LS] mean change from baseline to endpoint: AM, -2.4, P=0.001; PM, -2.2, P=0.003) as well as in the subgroup of subjects with significant baseline oppositional symptoms (placebo-adjusted LS mean change from baseline to endpoint: AM, -3.6, P=0.001; PM, -2.7, P=0.013). Most treatment-emergent AEs (TEAEs) were mild or moderate in severity and were reported by 77.3% (116/150), 76.3% (116/152), and 63.4% (97/153) of subjects in the GXR AM + psychostimulant, GXR PM +

psychostimulant, and placebo + psychostimulant groups, respectively. The most commonly reported TEAEs were headache (21.3%) and somnolence (14.0%) in the GXR AM + psychostimulant group, headache (21.1%) and somnolence (13.2%) in the GXR PM + psychostimulant group, and headache (13.1%) and upper respiratory tract infection (7.8%) in the placebo + psychostimulant group. No unique TEAEs were reported with coadministration compared to those reported with either treatment alone. Conclusions: In subjects with ADHD and suboptimal response to a psychostimulant, addition of GXR to a psychostimulant significantly improved oppositional symptoms compared to placebo + a psychostimulant in both the overall cohort and the subgroup with a high baseline level of oppositional symptoms. No unique TEAEs were reported with coadministration compared to those reported with either treatment alone. Supported by funding from Shire Development Inc.

NR09-10

BEHAVIOR RATING INVENTORY OF EXECUTIVE FUNCTION-ADULT VERSION (BRIEF-A) EFFECTS WITH ATOMOXTINE

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SUMMARY:
Objective: To evaluate the effect of atomoxetine (ATX) treatment on the Behavioral Rating Inventory of Executive Function - Adult Version Self Report (BRIEF-A) vs. placebo in young adults with ADHD. Methods: In this Phase 4, multi-center, double-blind, placebo-controlled trial, young adults (18-30 years) with ADHD were randomized to receive ATX (20-50 mg BID, N=161) or placebo (N=167) for 12 weeks. The BRIEF-A consists of 75 self-report items within 9 nonoverlapping clinical scales measuring various aspects of executive functioning. It yields an overall score (Global Executive Composite, GEC), which is a composite of 2 index scores (Behavioral Regulation Index, BRI, and the Metacognitive Index, MI). It also includes 3 validity scales: Negativity, Infrequency, and Inconsistency. Patients rated behavior on a 3 point Likert scale (1=behavior is never observed to 3=behavior is often observed). Mean changes from baseline to 12-week endpoint on the BRIEF-A were analyzed using an ANCOVA model (terms: baseline score, treatment, investigator). Results: There were no significant differences in the percentage of patients with GEC, BRI, or MI T-scores =60 at baseline (p>.556). Statistically greater improvement was seen in the ATX vs. placebo group for the inhibit, shift, self monitor, initiate, working memory, plan/organize and task monitor subscales (p<.05), while organization of materials and emotional control subscales were not statistically significant. In addition, statistically greater improvement was seen in the ATX vs. placebo group in GEC, BRI, and MI composite scores. Conclusion: Statistically significantly greater improvement in executive function was observed in the ATX vs. placebo group, measured by changes in the BRIEF-A subscales.

NR09-11

ATOMOXETINE AN ADJUNCTIVE TO SSRIS OR SNRIS IN THE TREATMENT OF ADULT ADHD PATIENTS WITH, COMORBID PARTIALLY RESPONSIVE GENERALIZED ANXIETY: AN OPEN

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SUMMARY:
Objectives: to examine changes in partially responsive anxiety symptoms utilizing adjunctive treatment with atomoxetine in the treatment of adult ADHD patients, with comorbid partially responsive anxiety symptoms. Method: consenting adult patients (n=24) with confirmed diagnosis of generalized anxiety (GA) and comorbid (ADHD) participated in this open label study. All patients had significant comorbid anxiety symptoms (HAM-A >7), and failed to respond to 8 week trials of Serotonin Reuptake Inhibitors (SSRIs) or Norepinephrine Reuptake inhibitors (SNRIs). All patients were treated with atomoxetine, as adjunctive to SSRIs or to SNRIs and were followed for at least 12 weeks. The primary effectiveness measure was the Clinical Global Impression severity subscale (CGI-S). Other scales included the Hamilton Anxiety Scale (HAM-A), the adult ADHD Self Report Scale (ASRS-v1.1) symptom checklist, and Sheehan's disability scale. Baseline measures prior to the treatment with atomoxetine, were compared to those at 4, 8, and at 12 weeks of treatment. Monitoring for pulse, blood pressure and weight changes was carried out at baseline and at

end point. Results: Twenty two patients completed this open label trial. There was significant and robust resolution of symptoms of all effectiveness measures, including the symptoms of anxiety, as shown by changes from baseline in HAM-A, ASRS-v1.1, and CGI at 12 weeks at (p< .001). Also there was significant reduction in the disability score at 12 weeks. Patients who completed the study tolerated the treatment and there were no significant cardiovascular changes at 12 weeks. There were no significant changes in the weight, blood pressure or pulse measured at 12 weeks. Conclusion: Atomoxetine can be used in adult patients with ADHD, and co-morbid anxiety symptoms. Larger controlled studies are needed to support the effectiveness of atomoxetine in patients with co-morbid anxiety symptoms.

NR09-12

STABILITY AND UTILITY OF PREDOMINANT ADHD SYMPTOM CLUSTERS IN LISDEXAMFETAMINE DIMESYLATE AND PLACEBO NONRESPONDERS AND RESPONDERS

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SUMMARY:
Objective: To assess the stability and utility of ADHD symptom clusters of predominantly inattentive (I/A), hyperactive/impulsive (H/I), or combined (Cmb) subtype in adults in clinical trials of lisdexamfetamine dimesylate (LDX) using DSM-IV-TR criteria. Methods: Post hoc analyses from a 4-week placebo-controlled parallel-group study (study 1) and a 1-year open-label study (study 2) of LDX in adults with ADHD used symptom ratings from the ADHD Rating Scale IV (ADHD-RS-IV) to classify ADHD subtypes. ADHD-RS-IV item scores at baseline (4-week study for both) and at endpoint of each study were used to assign subtypes as predominantly I/A or H/I (participants with >/=6 symptoms with item scores >/=2 on either respective scale) or predominantly Cmb (participants with >/=6 symptoms with item scores >/=2 on both scales). Participants were also categorized as nonresponders or responders (>/=30% reduction in ADHD-RS-IV total scores and Clinical Global Impressions-Improvement of 1 or 2). Kappa coefficients assessed stability of predominant subtype symptoms over time. Safety evaluations included treatment-emergent adverse events (TEAEs). Results: At study 1 baseline, for participants receiving LDX (n=352) and placebo (n=62), respectively, predominant symptoms were I/A in n=81 and n=27; were H/I in n=19, and n=2; were Cmb in n=249 and n=33; 3 were unassigned. The proportion retaining I/A, H/I, and Cmb classifications at endpoint for LDX were 37.0%, 15.8%, and 25.7%; Kappa=0.2439, 0.1284, and 0.1317; for placebo, 59.3%, 0%, and 57.6%; Kappa=0.5246, -0.0403, and 0.4617, respectively. In study 1, 196 adults were classified as nonresponders with I/A, H/I, and Cmb classifications retained at endpoint by 74.5%, 20.0%, and 62.5%; Kappa=0.5261, 0.1336, and 0.4343, respectively. Of 345 participants in study 2, baseline predominant symptoms were I/A in n=93, were H/I in n=13, and were Cmb in n=236; 3 were unassigned. Overall, 60 adults were nonresponders and 285 were responders. The proportion retaining I/A, H/I, and Cmb classifications at endpoint were 57.9%, 0%, and 37.5%; Kappa=0.0779, not assessed, and 0.2136, respectively, for nonresponders. Most responders in both studies (86.2% for study 1 and 95.1% for study 2) were unassigned at endpoint. For participants taking LDX in study 1, 282/358 (78.8%) reported TEAEs and 21 (5.9%) discontinued due to TEAEs. For those taking placebo, 36/62 (58.1%) reported TEAEs and 1 (1.6%) discontinued due to TEAEs. In study 2, 306/349 (87.7%) participants reported TEAEs and 28 (8.0%) discontinued due to TEAEs. Conclusions: For predominant inattention and combined ADHD symptom clusters, short-term stability was medium over 4 weeks from baseline to endpoint and poor over 1 year to endpoint. These findings suggest that symptom subtypes may have short-term utility but the longer-term utility of symptom subtypes is questionable. Clinical research was funded by the sponsor, Shire Development Inc.

NR09-13

AN INDIRECT COMPARISON OF GUANFACINE EXTENDED RELEASE VS. ATOMOXETINE FOR THE TREATMENT OF ADHD IN CHILDREN AND ADOLESCENTS

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SUMMARY:

Objective: To conduct an indirect comparison of guanfacine extended release (GXR) vs. atomoxetine (ATX) for the treatment of ADHD in children and adolescents (6-17 years).Methods: In the absence of a head-to-head trial, randomized placebo-controlled trials of GXR and ATX with similar trial designs, equivalent dosing and identical outcome measures were identified. Individual patient data from GXR trials and published summary data from ATX trials meeting pre-specified criteria were used. Individual subjects from the GXR trials were subject to inclusion/exclusion criteria reported for the ATX trial. Matching-adjusted indirect comparison analysis was conducted by reweighting individual patients from the GXR trials to match the average placebo arm baseline characteristics and efficacy reported for the ATX trial: age, gender, baseline ADHD-RS-IV total and subscale scores, and ADHD subtypes. Weights were based on a linear function of the baseline characteristics available from the two trials, and were selected to maximize the effective sample size while minimizing baseline differences between GXR and ATX trials. After matching, changes from baseline to end of study in the ADHD-RS-IV total score and its inattentive and hyperactivity/impulsivity subscale scores were compared between balanced populations treated with GXR and ATX via weighted t-tests. The base case analysis considered equivalent target doses (from product labels: GXR 0.09-0.12 mg/kg/day and ATX 1.2 mg/kg/day). Sensitivity analyses were conducted for lower per kg doses of GXR and higher per kg dose of ATX. Results: Two placebo-controlled trials of GXR and one of ATX, respectively, met inclusion criteria for the base-case analysis. 82 patients were assigned to GXR 0.09-0.12 mg/kg/day and 84 patients to ATX 1.2 mg/kg/day. After re-weighting, mean baseline characteristics and placebo arm outcomes were exactly matched. In the balanced populations, compared to ATX, GXR treatment was associated with significantly greater reductions in ADHD symptoms: 7.0 points on the ADHD-RS-IV total score (95% confidence interval: 2.6-11.3, P<0.01); 3.2 points on the inattentive subscale score (0.7-5.8, P=0.01) and 3.8 points on the hyperactivity/impulsivity subscale score (1.5-6.2, P<0.01). In sensitivity analyses, GXR 0.090-0.110 and 0.075-0.090 mg/kg/day doses were associated with a significantly greater reduction in ADHD-RS-IV total score compared to the ATX base-case dose. The same direction was observed for GXR 0.046-0.075 mg/kg/day with borderline significance (P=0.0699). The GXR base-case dose was associated with significantly greater reductions in total and subscale scores compared to ATX 1.8 mg/kg/day. Conclusions: This analysis found that GXR 0.09-0.12 mg/kg/day was calculated to provide significantly greater ADHD symptom reduction than ATX 1.2 or 1.8 mg/kg/day. Due to the homogenous population of this comparison, these results have high internal validity but limited external generalizability.

NR09-14

CLONIDINE HYDROCHLORIDE EXTENDED-RELEASE TABLETS FOR TREATMENT OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN PEDIATRIC PATIENTS: A RESPONDER ANALYSIS

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SUMMARY:
Objective: To examine response rates from two phase 3 trials of clonidine hydrochloride extended-release tablets (CLON-XR) in children and adolescents with attention-deficit/hyperactivity disorder (ADHD) using conventional definitions of response in a post hoc analysis. Methods: Patients aged 6 to 17 years with ADHD received CLON-XR twice daily (0.2 or 0.4 mg/d) as monotherapy or placebo for 8 weeks (N=236; Study 1). In a flexible-dose combination trial (N=198; Study 2), ADHD diagnosed patients with an inadequate response to stimulant therapy for =4 weeks received either CLON-XR twice daily (0.1-0.4 mg/d) in combination with stimulants or a placebo plus stimulant medication for 8 weeks. CLON-XR and stimulant doses were allowed to be adjusted in Study 2 to achieve optimal efficacy and safety. In both studies, the CLON-XR dose was escalated by 0.1 mg/d each week during the first 3 weeks until patients reached their assigned dose (0.2 mg or 0.4 mg/d) or maximum tolerated dose (up to 0.4 mg/d). This dose was maintained for at least 2 weeks before the dose was gradually tapered down to 0.1 mg/d (at week 8) during the last 3 weeks. The primary efficacy endpoint was mean change in ADHD Rating Scale-IV total score (ADHD-RS-IV) from baseline to week 5. The last observation carried forward method was used for discontinued patients. Secondary endpoints included improvements in

Clinical Global Impression of Improvement (CGI-I). For this analysis, response was defined as a reduction from baseline to week 5 of ADHD-RS-IV =30% and a CGI-G of "very much improved/much improved" at week 5. Results: A significantly greater percentage of patients receiving CLON-XR than patients receiving placebo in the monotherapy trial had a =30% reduction from baseline in ADHD-RS-IV total score and a CGI-I evaluated as "very much improved/much improved" at week 5 (47.3% and 44.9% for CLON-XR 0.2-mg/d and 0.4-mg/d groups, respectively, vs 13.2% for placebo; P<0.0001 for both comparisons). The addition of CLON-XR to a stable stimulant regimen in Study 2 was also associated with significant improvements using this response criteria. At week 5 in the flexible-dose combination trial (Study 2), 52.0% of patients receiving CLON-XR plus stimulants had a =30% reduction from baseline in ADHD-RS-IV total score and a CGI-I evaluation of "very much improved/ much improved" compared with 31.6% of patients in the placebo plus stimulants group (P=0.0041). Significant improvements in ADHD-RS-IV were also observed in both studies when response was defined as a reduction from baseline to week 5 of ADHD-RS-IV =40% (P=0.0439 for Study 1 and P<0.0001 for Study 2). Conclusions: CLON-XR (up to 0.4 mg/d) given twice daily was associated with significant ADHD symptom improvements for patients aged 6 to 17 years across different levels of response when administered as monotherapy or as adjunctive therapy to those with an inadequate response to a stimulant regimen.

NR09-15

NEURO-EVOLUTIONARY PERSPECTIVES COMPARING NEANDERTHAL TO HUMAN: IMPLICATIONS FOR HUMAN COGNITIVE FUNCTION AND EMOTIONAL REGULATION

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SUMMARY:
Background: Cranial volume of modern humans and the extinct Neanderthals has been recognized to be equivalent. Consequently, one can assume that the brain sizes in both species were also equivalent. As absolute brain size may reflect intelligence, the basis for the purported superior intelligence of Humans vis-à-vis Neanderthals was addressed. Moreover, differences in putative neurobehavioral and advanced cognitive processes were explored. Methods: Using Magnetic Resonance (MRI) images and endocranial measures from the literature, the human brain was "morphed" into a Neanderthal brain and a comparison between frontotemporal and frontal-occipital distance was performed. Results: The dorso-ventral frontolimbic distance in the morphed Neanderthal was 87.5% of that observed in humans whereas the rostro-caudal white matter distance in Neanderthals was 105% of that observed for the equivalent distance in Humans. Conclusion: In comparison to Neanderthal, the Human brain appears relatively well equipped to handle cortico-cortical connectivity but may be relatively less adapted to maintaining frontal restraint of limbic and subcortical structures.

NR09-16

RAT BRAIN AUTORADIOGRAPHY WITH SELECTIVE 5-HT7 RECEPTOR RADIOLIGAND [3H]SB-269970 SHOWS LIMBIC SYSTEM AS A TARGET OF A NOVEL ANTIPSYCHOTIC LURASIDONE

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SUMMARY:
Background: We have previously demonstrated that a novel antipsychotic lurasidone has potent binding affinity for human 5-HT7 receptors [1]. To explore the brain target region on which lurasidone may take effects, in this study, we have performed autoradiography using a selective 5-HT7 receptor radioligand [3H]SB-269970 and the displacement experiments with lurasidone in rat brain slices. Methods: Frozen coronal sections (20 µm) from male Sprague-Dawley rats were incubated for 2 hrs at room temperature with 4 nM [3H]SB-269970, either in the absence or presence of lurasidone, a selective 5-HT7 receptor antagonist SB-656104-A (10-1000 nM) or 10µM 5-HT for non-specific binding. After incubation, sections were washed and exposed to imaging plates (BAS-TR2025, Fuji Photo Film, Co., Ltd.) for 2 months. The imaging plates were scanned and analyzed using Fuji Bio-Imaging Analyzer System (BAS-2500) and the software

(ImageGauge V3.12). Results: The [3H]SB-269970 binding was found to be high in the limbic regions such as septum, thalamus, hypothalamus, hippocampus, and amygdala, intermediate in the cortex, and low in caudate-putamen. The distribution pattern appears to be consistent to those found in the previous studies with in situ mRNA expression and autoradiography with different radioligands for 5-HT7 receptors. Lurasidone (10-1000 nM) concentration-dependently inhibited the binding in all of these brain regions as potently as SB-656104-A. Conclusion: The [3H]SB-269970 autoradiography demonstrated a predominant distribution of 5-HT7 receptors in the limbic structures. Lurasidone showed potent binding to these receptors. Thus, 5-HT7 receptor antagonism in the limbic system may explain anxiolytic, anti-depressant-like, and pro-cognitive effects of lurasidone as previously shown in rats [1-3].

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NR09-17

EFFECTS OF PHARMACOLOGICAL TREATMENT ON THE USE OF EPISODOC MEMORY STRATEGIES IN PATIENTS WITH BIPOLAR DISORDER I

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SUMMARY:

Introduction Previous studies have found euthymic patients with Bipolar Disorder I (BD-I) present with difficulties in verbal episodic memory. In the literature, there have been contradictory results reported with respect to the effect of treatment with lithium carbonate or valproic acid on memory. Some studies suggest that there is no impact on memory and the drugs may in fact be neuroprotective while others suggest that these medications might be causing a reduction in memory function. Objectives To assess the effect of regular treatment with lithium or valproic acid on memory strategies deployed during different verbal episodic memory tests. Method 80 euthymic patients with a diagnosis of BD-I were evaluated, 27 treated with lithium, 20 treated with valproic acid, and 33 who were not taking medication. The study also included 30 healthy controls. Euthymic patients were defined as having scores on the Hamilton Depression Rating Scale (HAM-D) and Young Mania Rating Scale (YMRS) equal or less than 6. There were no significant differences in scores on these the HAM-D and YMRS between patients and controls. All participants were assessed with the Wechsler Memory Scale (WMS) and the California Verbal Learning Test (CVLT). General cognitive functioning was assessed with a brief version of the Weschsler Adult Intelligence Scale (WAIS). Results Differences were found in the use of memory strategies between patients and the healthy control group. Patients scored significantly less on semantic verbal fluency ($p = <0.001$). No significant differences were found between groups on language tests. There was no significant correlation between scores on the Test of Semantic Memory and the number of episodes or duration of illness in patients. Discussion Significant differences were found between verbal episodic memory but these are not explained by the effect of treatment nor by differences in IQ. The findings of the study indicate neurocognitive dysfunction associated with verbal learning which could be potential markers for the risk of Bipolar Disorder.

NR09-18

BIOGENIC AMINES ARE VARIABLY AFFECTED BY CHRONIC FATIGUE IN A GENERAL MEDICAL OFFICE PATIENT POPULATION

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SUMMARY:
Objective: Behavioral disorders severely impact many facets of life and pose a large economic problem to both affected individuals and society. Alterations in biogenic amines and other neurotransmitters are known to be associated with a wide array of neuropsychiatric diseases and depression. While chronic fatigue (CF) is known to contribute to the modulation of stress responsiveness, the role of the biogenic amines histamine, dopamine and norepinephrine as intermediaries in the processes operative in stress has been poorly understood. We, therefore, sought to investigate the relationships among and between histamine, dopamine and norepinephrine in patients with and without biochemical evidence of chronic fatigue. Method: We studied 137 patients with CF (n=94, age 48±14 years, mean±SD) and without CF (NF) (n=43, age 50±18 years, mean±SD). The biogenic amines dopamine, histamine and norepinephrine were measured by competitive indirect enzyme-linked immunosorbent assay. Biochemical evidence for chronic fatigue was determined by measuring salivary cortisol in intraday quadruplicate series. Then, the area under the curve was calculated for the cortisol response in both the CF and NF populations by performing linear regression followed by evaluating the integral of the regression function. Results: While the NF population exhibited a direct association between urinary dopamine and epinephrine levels (Pearson coefficient, r=0.52, p<0.05), this association was completely lost in the chronically fatigued population (Pearson coefficient, r=0.28, p<0.05). However, epinephrine was more directly and tightly correlated to both histamine (Pearson coefficient, r=70, p<0.05) and, incidentally to the inhibitory neurotransmitter GABA (Pearson coefficient, r=60, p<0.05) in the CF population than in the normal, NF population for histamine, for which the correlation was blunted (Pearson coefficient, r=55, p<0.05) while the correlation for GABA remained statistically unchanged (Pearson coefficient, r=62, p<0.2). Conclusions: These data suggest a role for chronic stress on a cortisol-excitatory neurotransmitter process involving at least dopamine and histamine but not GABA. The notion that chronic fatigue syndrome overlaps clinically with excessive daytime sleepiness may not be supported biochemically if GABA levels in both NF and CF patients are unchanged. Conversely, centrally acting histamine regulation by cortisol or other mediators of CF ought to be further examined as a mechanism for satiety and eating behaviors in the chronically fatigued patient.

NR09-19

NEUROCHEMICAL MARKERS OF COGNITIVE PERFORMANCE AND AGGRESSIVE BEHAVIOR IN ACUTE NEUROPSYCHIATRIC PATIENTS

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SUMMARY:
PURPOSE OF THE STUDY: The neurochemical basis of aggressive behavior in humans is not fully understood. We explored the relationship between aggressive behavior, cognitive performance, and biochemical markers of neurotransmission obtained from the cerebrospinal fluid (CSF) of acute neuropsychiatric patients. METHODS: An observational, comparative, and transversal study was done at the National Institute of Neurology and Neurosurgery of Mexico, after approval from the Institutional Committee. All patients attended from 2005-2009, with acute neurological or psychiatric disturbances, who underwent diagnostic lumbar puncture (i.e. to rule out a brain infection) were included in the study after informed consent. We measured aggressive behavior (Overt Aggression Scale) and cognitive performance (Mini Mental State Examination). We measured several markers of neurotransmission in the cerebrospinal fluid, including dopamine metabolism (homovanillic acid, HVA), nitric oxide synthesis and pathway (nitrite plus nitrate, NOx; arginine and citruline), serotonin metabolism (5-HIAA), and amino acids (glutamate, glutamine, aspartate, glicine, GABA), with use of high-performance liquid chromatography (HPLC). We made descriptive and inferential

statistical analysis. SUMMARY OF RESULTS: 164 neurological patients were included in the study. The mean age was 35.28 years. 86 were female (52.4%). Aggressive behavior was related to acute viral encephalitis (p <0.01 *), and DSM-IV diagnosis of delirium (p <0.01 *). Several significant correlations were observed: an inverse relationship between cognitive performance and aggressive behavior (r= -.523, p <.001 , **), a direct relationship between HVA concentrations and aggressive behavior (r= .226, p= .001 , **), an inverse relationship between arginine concentrations and aggressive behavior (r= -.309, P= .004 , **), a direct relationship between cognitive performance and NOx concentrations (r= .239, p= .048 , **). NOx/HVA ratio was inversely correlated to aggressive behavior (r= -.419, p <.001 , **), and positively correlated to cognitive performance (r= .377, p= .003 , **). No significant relationships were found between other biochemical markers and the clinical measures. These results were confirmed in a sub-analysis with drug-naïve patients. CONCLUSIONS: An imbalance between dopaminergic and nitric oxide systems could underlie aggression in acute neurological patients. As our sample is heterogeneous regarding etiology, the proposed imbalance could be a common final pathway associated to aggressiveness. Dopaminergic hyperactivity may diminish the signal to noise ratio regarding sensory filtering, leading to perceptual distortion, and it could also increase the emotional amygdala response to internally or externally generated neural signals; by either mechanism it might trigger fight-or-flight responses. The nitric oxide pathway is related to glutamatergic hipocampal signaling, and also to the regulation of cortical blood flow, and thus participates in the prefrontal cognitive analysis and control of internally generated impulses; the dysfunction in this system could be related to a lack of capacity to inhibit aggressive impulses generated by the basolateral limbic system.

NR09-20

FREQUENCY OF HYPONATREMIA AND CARDIOMYOPATHY IN CLOZAPINE-TREATED SUBJECTS IN VENEZUELA

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SUMMARY:
Background: clozapine is one of the most effective drugs in treatment-resistant schizophrenia; however it is associated with important side effects. In this study, we assessed the frequency of hyponatremia and cardiomyopathy in clozapine-treated subjects, which are unintended effects of clozapine with potential lethality. Methods: we quantified in fasting conditions the serum sodium levels (mEq/L) in 76 subjects (28 women; age: 41.6 ± 11.9 years) and conducted an exhaustive cardiovascular evaluation (electrocardiogram and echocardiogram) in 117 patients (44 women; age: 39.1 ± 8.1 years) who received clozapine for at least for 3 consecutive months. Results: We detected 2 subjects with hyponatremia (serum sodium levels = 123 y 129 mEq/L respectively) which comprised 2.6% of the total sample. The clozapine dose was 200 and 500 mg/day respectively. A significant negative correlation was observed between the clozapine dose and the blood sodium levels (p<0.04). We did not find any case of cardiomyopathy, defined as a subject with a ventricular ejection fraction lower than 50% and/or type II or III diastolic dysfunction. Discussion: When considering these side effects in Venezuelan patients, clozapine appeared to be a safe agent. However, we recommend a careful clinical and laboratory evaluation, since myocarditis, which is another potentially lethal clozapine side-effect, only can be detected in the acute phase, and displays its maximal incidence in the first 4 weeks of treatment. Key words: antipsychotic drugs, cardiac dysfunction, electrolytes, toxicity
Funding: FONACIT, Caracas, Venezuela, grant G-2005-000-384.

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NR09-21

VON ECONOMO NEURONS IN AUTISM: A STEREOLOGIC STUDY OF THE

FRONTOINSULAR CORTEX IN CHILDREN

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SUMMARY:
The presence of von Economo neurons (VENs) in the frontoinsular cortex (FI) (1,2) has been linked to a possible role in the integration of bodily feelings, emotional regulation, and goal-directed behaviors. They have also been implicated in fast intuitive evaluation of complex social situations (3). Several studies reported a decreased number of VENs in neuropsychiatric diseases in which the "embodied" dimension of social cognition is markedly affected (4-7). Neuropathological analyses of VENs in patients with autism are few and did not report alterations in VEN numbers (8,9). In this study we re-evaluated the possible presence of changes in VEN numbers and their relationship with the diagnosis of autism. Using a stereologic approach we quantified VENs and pyramidal neurons in layer V of FI in postmortem brains of young patients with autism and age-matched controls. We also investigated possible autism-related differences in FI layer V volume. Patients with autism consistently had a significantly higher ratio of VENs to pyramidal neurons ($p = 0.020$) than control subjects. This result may reflect the presence of neuronal overgrowth in young patients with autism, and may also be related to alterations in migration, cortical lamination, and apoptosis. Higher numbers of VENs in the FI of patients with autism may also underlie a heightened interoception, described in some clinical observations.

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NR09-22

EFFICACY AND SAFETY OF EB-1010, A TRIPLE REUPTAKE INHIBITOR, IN THE TREATMENT OF PATIENTS WITH MAJOR DEPRESSIVE DISORDER

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SUMMARY:
Background: EB-1010 (formerly known as DOV21,947) is a novel, unbalanced triple monoamine uptake inhibitor with a relative potency to inhibit serotonin, norepinephrine, and dopamine uptake of ~1:2:8, respectively. The present study tested the hypothesis that the broad spectrum mechanistic profile of EB-1010 also translates into

unique antidepressant activities in humans, with perhaps enhanced efficacy such as improvement of anhedonia (a core symptom of depression), presumably linked to a deficit in mesocorticolimbic dopaminergic function, as well as a reduced liability to induce sexual dysfunction, weight gain, and cognitive dysfunction, adverse events typically associated with selective serotonin reuptake inhibition. Methods: The study was a 6-week, multicenter, randomized, double-blind, parallel, placebo-controlled study of 63 patients with Major Depressive Disorder (MDD). Eligible patients (HAMD-17>=22 at Baseline) were randomized to receive either EB-1010 25 mg BID. for 2 weeks and then 50 mg BID. for 4 weeks or placebo. Key outcome measures included the MADRS (primary), the HAMD-17 (administered via IVRS), the CGI-I, the CGI-S, and the Derogatis Interview for Sexual Functioning Self-Report (DISF-SR). Results: The modified intent-to-treat population (MITT, n=56) showed the following combined (placebo and EB-1010) mean baseline scores on the main outcome measures: MADRS (31.4) (primary); HAMD-17 (29.6) (secondary); and DISF-SR (25.38). At the end of the double-blind treatment (Week 6), the estimated LS mean change from baseline (MMRM or mixed model repeated measures) in the MADRS total scores was statistically significantly superior for EB-1010 when compared to placebo (18.16 vs. 21.99; p=0.028), with an overall statistical effect size of -0.63 (Cohen's d). When assessed with the CGI-I, a global impression scale sensitive to clinically relevant changes in improvement status, treatment with EB-1010 was also statistically significantly superior to placebo (p=0.03; Week 6; MMRM). An anhedonia factor score grouping Items 1 (apparent sadness), 2 (reported sadness), 6 (concentration difficulties), 7 (lassitude), and 8 (inability to feel) of the MADRS demonstrated a statistically significant difference in favor of EB-1010 in comparison to placebo (p=0.049). EB-1010 was relatively well tolerated. Two patients in each treatment group discontinued the study early due to AEs but no serious AEs were reported. No statistically significant difference was observed between EB-1010 and placebo when assessed with the Derogatis Interview for Sexual Function – Self Report Scale (DISF-SR). Conclusion: The results of this small Phase 2 study demonstrate that EB-1010, at a titrated dose of 50 mg/day then 100 mg/day, was efficacious and well-tolerated in the treatment of patients with MDD. Treatment with EB-1010 was not associated with weight gain or sexual dysfunction. These encouraging results support further development of EB-1010 for the treatment of MDD.

NR09-23

A COMPARISON OF THE P3 AMPLITUDE ACROSS ALCOHOLISM AND DEPRESSION SPECTRUM

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SUMMARY:
Background: Depression is strongly associated with alcohol/substance dependence, presenting both before and as a sequel of substance dependence, and with a higher incidence in females. Common genetic factors have been linked with both alcoholism and Major Depressive disorder (MDD). Event-related potential (ERP) studies have shown that reduced P3 amplitude to visual oddball stimuli is a well recognized phenotypic marker of alcoholism, while results of P3 changes in MDD have been inconsistent. Aim: The objective of this study was to determine if the P3 amplitudes are similarly impacted in individuals with alcoholism and depression, and if this effect is additive in subjects with both diagnoses. Methods: The subjects in this study were recruited from multiplex alcoholic families and control families belonging to the Collaborative study on the Genetics of Alcoholism (COGA). The visual oddball P3 amplitudes from three parietal electrodes were compared across four groups (age range 18-55 years). Subjects with positive diagnoses of alcohol dependence, MDD, alcoholism + MDD (with no other co-morbid diagnosis) and unaffected controls were compared using MANOVA, with age as a co-variate. Results: The clinical groups had significantly lower P3 amplitude than unaffected controls. Overall, the mean P3 amplitude was highest for controls, followed by alcohol dependence with MDD, MDD alone and finally alcohol dependence alone. In keeping with the literature, females always had slightly higher P3 amplitude than males across all groups. There was no significant interaction effect of gender and group. Conclusion: A diagnosis of alcoholism or MDD was significantly associated with lower P3 amplitude at parietal electrodes than controls. The presence of both diagnoses

simultaneously, was also associated with reduced P3 amplitude without an additive effect, suggesting a common psychophysiological basis for low P3.

NR09-24

AUGMENTATIVE REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (RTMS) IN DRUG-RESISTANT DEPRESSION: A 4 WEEK RANDOMIZED OPEN TRIAL

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SUMMARY:
Objective RTMS is a non invasive neuromodulation technique used to treat Major Depression and Treatment-Resistant Depression (TRD). It allows the electrical stimulation of the cerebral cortex by means of coil-generated magnetic fields (1). The present study was aimed to assess the efficacy of augmentative rTMS in patients with TRD (2) in a current moderate-severe Major Depressive Episode. Method Eleven outpatients (M=9, F = 2; mean 53.00 ± 13.89 years) with TRD (HAM-D = 18) with a diagnosis of Major Depressive Disorder (n=6) or Bipolar Disorder (Type I: n=3; Tipe II: n=2), were treated with 4 weeks of open-label randomized rTMS. Subjects were randomly assigned to receive one of the following treatments: right dorsolateral prefrontal cortex (DLPFC), 1 Hz, 110% of motor threshold (MT), 420 stimuli/day; right DLPFC, 1 Hz, 110% of MT, 900 stimuli/day; left DLPFC, 10 Hz, 80% of MT, 750 stimuli/day, according to Safety Guidelines for rTMS (3). Results Two subjects dropped out in the first week of treatment and were not included in the analyses. Nine subjects completed the trial showing a statistically significant improvement on the HAM-D, MADRS, HAM-A and CGI-S ($t=7.18$, $p<0.0001$; $t=6.04$; $p<0.0001$; $t=6.39$, $p<0.0001$; $t=5.71$, $p<0.0001$, respectively). In addition, stimulation response, defined as an endpoint HAM-D score reduction of = 50% compared to baseline, was achieved by 2 out of 9 subjects, 1 of whom considered remitter (HAM-D endpoint score = 8). Partial response (endpoint HAM-D score reduction between 25% and 50%) was achieved by 3/9 patients. The overall response rate was around 44%. Side effects were minor and limited to the first days of treatment (headache, insomnia). Conclusions Preliminary data suggest that augmentative low- and high-frequency rTMS, of the DLPFC were effective and well tolerated in a small sample of TRD patients in acute treatment, despite the lack of a sham-controlled group.

NR09-25

DEVELOPMENT OF A SHORT QUESTIONNAIRE FOR THE ASSESSMENT OF THE ONSET AND LATENCY TO TREATMENTS IN PSYCHIATRIC DISORDERS.

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SUMMARY:
OBJECTIVE: Psychiatric disorders are prevalent and disabling conditions which often remain undiagnosed and untreated for years (1). Nevertheless, little is known about causal mechanisms that determine different latency to treatments (2-3). To date, most information related to the onset and latency to first treatments is not specifically investigated by any diagnostic/psychometric instrument and is mostly retrospectively derived. The Dept. of Mental Health of the University of Milan has developed and validated a specific short questionnaire for assessing the onset of illness and latency to treatments in psychiatric disorders (psychopathological onset and latency to treatment questionnaire, POLQ).The aims are 1) to develop a specific, short questionnaire for the assessment of the onset and the latency to treatments; 2) to assess the ability of the questionnaire to reliably collect information about the psychopathological onset and latency to treatments; 3) to collect and compare latency to treatments, unravelling major determinants of latency, nature of first contact

with clinicians and type of first interventions; 4) to create a novel instrument for collaborative studies. METHOD: The questionnaire is intended to be a clinician-administered instrument with two sections, focused on the psychopathological onset (age, type, duration, relationship with life-events) and on the first treatments (latency to medications, type of first contact, duration). In this preliminary study, the POLQ was administered to 108 patients with any psychiatric disorders and descriptive analyses on demographic and clinical variables were performed through the SPSS, 17th version. RESULTS: The average age of the sample was 48.47 + 1.5 years and the sample was equally distributed in terms of sex and social status. The 55.6% of these patients showed a positive familiar history for a psychiatric disorder. The average age of onset was 29.65 + 1.41 years, while the average age of the first diagnosis was 35.79 +1.28 years. Of note, the first pharmacological treatment was administered at the age of 34.89 + 1.32year. Onset symptoms were mostly related to the anxiety spectrum (40.7%), mood spectrum (24.5%) or both (25.5%). Most of the onset (62%) were elicited by a stressfull live event (e.g., 11.1% of the sample experienced familiar problems, 13.9% had work problems). Only 24.8% of the patients was diagnosed at the onset and, of clinical interest, the 36.6% had to wait from 7 months to several years before receiving the correct diagnosis. First diagnosis was mostly a depressive episode (44.6%) or an anxiety disorder (38%). A great latency among first symptoms and the decision to see a clinician was reported: only 50.5% of the patients received a psychiatric assessment at 6 months from the onset, mostly due to poor insight (29.6%) or social stigma (20.4%). The first contacted clinician was a psychiatrist only in the 52.8% of the cases (15.7% general physician, 12.0 % psychologist); 72.2% of the patients received a pharmacological treatment, 14.8% a psychotherapy while 11.1% was initially treated with both. Three major pharmacological treatments were prescribed: 52.8% antidepressants, 18.2% antipsychotics and 6.5% mood stabilizers. This first treatment was maintained for an average of 19.22 +3.36 months, it was interrupted because of lack of efficacy (30.9%) or major side effects (17.3%). CONCLUSIONS. In a first group of 108 patients suffering from various

NR09-26

THE CHANGE OF BRAIN ACTIVITY IN RESPONSE TO WORKING MEMORY TASK DURING THE ABSTINENT PERIOD OF ONLINE GAME

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SUMMARY:
Objective Neuroimaging studies have suggested that brain activation in patients with excessive online game play is similar to that observed in patients with substance dependence. Especially, the deficit of working memory has been thought to be one of critical cognitive errors in patients with substance dependence. Interestingly, the deficit of working memory is reported to be associated with the dysfunction in prefrontal cortex. We hypothesized that excessive online game playing would be associated with the deficit of prefrontal cortex. Moreover, recovery from excessive online game playing would improve the activity of prefrontal cortex in response to working memory stimulation. Method Thirteen adolescents who with excessive online game playing (AEOP) (more than 4 hours per day / 30 hours per week) and ten healthy comparison adolescents (HC) who use internet less than 1 hour/ day were agreed to participate in the research. Brain activity in response to working memory stimulation (simple and complex calculation) at baseline and 4 weeks of abstinence period was assessed by 3.0 Tesla magnetic resonance imaging (MRI). In addition, the severity of online game play and playing time also were evaluated by Young Internet Addiction Scale (YIAS) at baseline and 4 weeks of abstinence period. Results On an interaction between group (AEOP vs HC) and stimuli (Complex vs Simple) with specific contrast (Complex stimuli in AEOP > Complex stimuli in HC), four clusters of activity were identified at baseline (FDR<0.05, p<0.002): right middle occipital gyrus, Brodmann area (BA) 19; left cerebellum posterior lobe, left frontal precentral gyrus, BA 6; left middle temporal gyrus. On an interaction between group (AEOP vs HC) and stimuli (Complex vs Simple) with specific contrast (Complex stimuli in baseline AEOP >

Complex stimuli in 4 weeks AEOP), three clusters of activity were identified in AEOP group (uncorrected p<0.002): right superior frontal gyrus, BA 10; Left corpus callosum, left occipital fusiform gyrus, BA 19. The baseline YIAS scores (r=0.64, p<0.01) and total playing game time (r=0.50, p<0.02) in all subjects were significantly correlated with the mean ß values of CL3 (r=0.64, p<0.01) in response to difficult stimulation. In addition, during 4 weeks follow up period, the change of YIAS was negatively correlated with the changes of the mean ß value of CL9 (r=-0.74, p=0.02) in response to difficult stimulation. Conclusion Over a 4 week period of abstinence, the severity of online game play and brain activation in response to working memory stimulation in prefrontal cortex of adolescents with excessive online game play were increased. These findings are similar to those observed in patients with substance dependence after stopping substance abuse. We suggest that the effect of online game addiction on working memory may similar to observed in patients with substance dependence.

NR09-27

ADVERSE EXPERIENCES AND BRAIN STRUCTURES AMONG DEPRESSED ADOLESCENT PSYCHIATRIC OUTPATIENTS

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SUMMARY:
Background: Early adverse events (AE)have been linked with brain structural alterations. AE could be an etiological factor related to specific brain structural findings observed across diagnostic categories. Hypothesis: Prepubertal or pubertal AE experienced in interpersonal relations are linked with brain structural alterations (whole brain volume, hippocampus, amygdala, anterior cingulate cortex). Subjects: Subjects are derived from a larger cohort of consecutive depressed adolescent psychiatric outpatients (n=218) and their controls (n=200) at 8 year follow-up of the cohort (mean age 25 years). Three groups comprising only females are compared: 1) subjects with adolescent depressive disorder and (pre)pubertal AE (e.g. violence, sexual abuse, severe emotional neglect as defined by a K-SADS-PL diagnostic interview PTSD screening questions), 2) subjects with depressive disorder and no AE, 3) healthy controls with no AE. Comorbid psychiatric diagnoses are allowed with the excepetion of current or recent substancse use disorders. Medication and other treatments are recored in detail and lifetime course of psychiatric disorders is assessed by diagnostic interviews during the follow-up. Brain imaging is performed by using 3T MRI and volumetric analyses by using the region of interest (ROI) analyses and Voxel-Based Morphometrics. Results: The target is to recruit 20 subjects in each category. The results of the volumetric analyses will be presented in the poster as the analyses can be initiated in the beginning of 2011.

NR09-28

SEROTONIN TRANSPORTER (SERT) RECEPTORS IN ADHD

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SUMMARY:
Background: The investigation of the 5HT-system among patients suffering from ADHD is of special interest, because 1) some of the symptoms (e.g. poor impulse control and concentration) presented by the patients point towards the possible involvement of the serotonin system, and 2) some previous studies have shown that serotonin system is linked with ADHD, but 3) no direct imaging on the serotonin system has been previously performed. Hypothesis: Serotonin transporter (SERT) receptor density is altered in ADHD patients in comparison with healthy controls. Subjects: Drug-free ADHD patients (n=8, age 18-27 years, all females)with no psychiatric comorbidity and healthy female controls (n=10, age 20-36 years) were studied using PET. The ligand, with which the densities of SERT was assessed was 11C-MADAM. The analyses were based on a priori definded brain areas. The regions of interest (ROIs) of these brain areas were drawn on individual MR images. Results: The statistical analyses are intiated in the beginning of 2011 and the results will be presented in the poster.

NR09-29

DIFFERENCES IN FMRI BRAIN ACTIVATION FOUND IN PATIENTS WITH BIPOLAR DISORDER AND HEALTHY

CONTROLS DURING A WORKING MEMORY TASK

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SUMMARY:
Introduction Neuropsychological studies have found working memory deficits in patients with bipolar disorder. However, it's still not clear how these deficits relate to differences in functional brain activity, for example, as measured by functional magnetic resonance imaging (fMRI). Such an approach could provide important information with regard to neurocognitive risk markers that would help inform early detection and intervention for neuropsychological rehabilitation. Objectives The study applied a new method of neurocognitive evaluation to identify potential differences in brain activity in patients with BD using working memory tasks. Cerebral activation measured by fMRI was analysed for changes in the intensity of the BOLD signal in euthymic patients with a diagnosis of bipolar disorder and healthy controls. Method Participants included 12 euthymic patients with a diagnosis of bipolar disorder I (4 treated with lithium, 4 with valproic acid y 4 without medication for at least two months previous to evaluation) and 4 controls. Inclusion criteria were participants who were right-handed, 18-60 years old, with between 5 and 16 years of education, and without a history of brain lesions, epilepsy, electroconvulsive therapy treatment, other diagnoses including substance abuse, or the use of benzodiazepines during the month before the study or other psychiatric medication in the previous six months. Euthymic patients were defined as having scores on the Hamilton Depression Rating Scale (HAM-D) and Young Mania Rating Scale (YMRS) equal or less than 6. Blood samples were taken to measure current therapeutic levels of lithium or valproic acid for those patients taking them. There were no significant differences in demographic variables between the participant groups. Description of the experimental paradigm A paradigm is an experimental task designed to study the relation between cognitive functions and cerebral function. It was designed to evaluate working memory for numbers that combined blocks with related events. They were presented in visual form and participant responses were entered via a fMRI compatible response box. Response times were recorded and analysed, along with the synchronised cerebral activity. Results Cerebral activation in the control group was significantly greater than in patients with BD. However, there was no significant difference when activation was compared during the patient groups ($p>0.05$). Discussion The studied paradigm has proved useful in studying cerebral activation in working memory. Confirmation of the differing activation in bipolar patients compared to controls requires replication in a large sample of participants to investigate other associated deficits and specific effects of medication.

NR09-30

STAGES OF DEMENTIA OF ALZHEIMER TYPE EVALUATED BASED ON STATISTICAL IMAGE ANALYSIS

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SUMMARY:
In recent years, close attention has been paid to mild cognitive impairment (MCI), a condition in which the patient can lead his or her life without assistance, as a precursor of dementia of Alzheimer type (DAT). Reports on diagnostic imaging in the early stages of various neurodegenerative diseases are available for the use of statistical image analysis such as the easy Z score imaging system (eZIS) with brain perfusion single photon emission tomography (SPECT) and the voxel-based specific regional analysis system for Alzheimer's disease (VSARD) with magnetic

resonance imaging (MRI), and have demonstrated their clinical usefulness in early detection of DAT. Although reports on early detection of DAT and MCI using statistical image analysis are available, few published reports have compared clinical cases of progression to DAT from MCI or cases continuing to exhibit DAT or MCI by means of statistical image analysis using Z scores. The present study was a retrospective study designed to divide patients into three groups on the basis of clinical diagnosis (a group continuing to exhibit MCI, a group exhibiting progression from MCI to DAT, and a group continuing to exhibit DAT) and to compare Z scores determined with eZIS and VSRAD before the start of donepezil hydrochloride therapy in these three groups. The subjects of this study were 24 patients (22 women and 2 men; mean age, 75.9±6.4 years) who visited the Department of Neuropsychiatry of our hospital with chief complaints of disorientation and impairment of cognitive function. Clinical diagnosis of DAT was based on the DSM-IV. MCI was clinically diagnosed, with reference to the concept proposed by the Mayo Clinic. Treatment with donepezil hydrochloride (5 mg/day) was started immediately after clinical diagnosis and diagnostic imaging. Six to twelve months later, individual patients were clinically diagnosed again with one of the tests. On the basis of the clinical diagnosis during outpatient management and the findings at follow-up, the patients were divided into the following groups: a group continuing to exhibit MCI (MM group), a group exhibiting progression from MCI to DAT (MD group), and a group continuing to exhibit DAT since the first examination (DD group). Before the start of treatment with donepezil hydrochloride (5 mg/day), all patients underwent brain SPECT with technetium-99m-ethyl cysteitate dimmer (99mTc-ECD) and brain MRI. Analysis of eZIS Z score revealed significant differences between the MM group and DD group and between the MD group and DD group. Significant differences were also noted between the MM + MD group and DD group. Analysis of VSRAD Z score revealed no significant inter-group differences.

NR09-31

CYTOCHROME P-450 ENZYMES AND THEIR INFLUENCE ON THE EFFICACY AND SAFETY OF CHOLINESTERASE INHIBITOR TREATMENT FOR ALZHEIMER'S DISEASE

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SUMMARY:
Introduction: Donepezil, rivastigmine and galantamine are all cholinesterase inhibitors (ChEIs) used in the treatment of Alzheimer's disease (AD), but they differ in terms of metabolic pathways. Donepezil and galantamine are metabolized by cytochrome P-450 (CYP) enzymes encoded by the CYP3A4 and CYP2D6 genes, while rivastigmine is metabolized by acetylcholinesterase and butyrylcholinesterase. The CYP family of enzymes is involved in the metabolism of many commonly used drugs, and the metabolism of donepezil and galantamine may be altered by some concomitant medications and genetic polymorphisms in the CYP genes. Patients with AD tend to be elderly with a high likelihood of coexisting conditions and concomitant medications, and so it is important to consider the effects of other drugs and genetic polymorphisms on the efficacy and safety of ChEIs. Objective: To review the effects of different metabolic pathways on the efficacy and safety of ChEIs. Method: A systematic search of literature indexed by PubMed during the past 10 years was conducted, using combinations of the terms: cytochrome P-450, Alzheimer's disease, Parkinson's disease dementia, drug interactions, donepezil, rivastigmine and galantamine. Results: Overall, 300 articles were retrieved by the systematic literature search and 112 of these articles were relevant to this study. In summary, the metabolism of donepezil and galantamine was reported to be affected by concomitant medications that influence the activity of CYP2D6 and CYP3A4 enzymes. There were also reports of drug–drug interactions between donepezil and galantamine and CYP inhibitors. Genetic polymorphisms in CYP2D6 have been reported to affect enzymatic activity and drug metabolism, and have been significantly associated with clinical response to donepezil treatment. Approximately 5–10% of Caucasians are poor metabolizers and 1–3% ultra-fast metabolizers of CYP2D6 substrates. Due to the consequent high likelihood of adverse effects in response to high plasma concentrations of CYP2D6 substrates or low clinical effect because of low plasma concentrations of CYP2D6 substrates in these individuals, respectively, genetic polymorphisms present a real clinical problem. Conclusions: ChEIs have had a good safety record over the past decade, but physicians should be

aware that the differences between them can affect the risk of drug–drug interactions and that genetic polymorphisms may influence their efficacy and safety. Rivastigmine is not metabolized by the CYP system, and so has reduced potential to interact with the many medications that affect CYP2D6 and CYP3A4. Genetic testing for CYP2D6 functional polymorphisms may be important before prescribing donepezil and galantamine to ensure patients are up-titrated to an appropriate dosage.

NR09-32

DOSAGE FORM PREFERENCE AMONG NON PROFESSIONAL CAREGIVERS OF PATIENTS WITH ALZHEIMER'S DISEASE (AD): RESULTS OF A GEOGRAPHICALLY REPRESENTATIVE SURVEY

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SUMMARY:
Objective: The aim of this study was to examine the relationship between patient and caregiver characteristics, caregiving, and treatment experience with caregivers' dosage form preference for an AD medication. Methods: Data were taken from a geographically representative, cross-sectional study of non-professional caregivers conducted in 2009. Data were obtained through internet-administered self reported questionnaires. Data collected included demographics and health characteristics of caregivers and patients, treating physician specialty, caregiver preference of oral or patch formulation for Alzheimer's medications, level of involvement in patient's care, and caregiving experience. Multivariate logistic regression was used to assess the relationship between these factors and formulation preference for Alzheimer's medications. Results: A total of 494 caregivers completed the survey. Sixty percent were female with a mean age of 49 years (SD=14.9) and 69% were white. The mean age of AD patients was 79 years (SD=9.3); 67% were female. Factors associated with preference for a patch included prior experience administering pills to the patient (OR=3.89), concerns about the side effects of oral therapy (OR=2.29), frequent physician visits (>1 visit/month; OR=1.68), longer time caring for the patient (> 1 yr; OR=1.15), and if the patient is currently taking patch therapy (OR=9.24); they were less likely to prefer a patch if the patient was being treated by a neurologist (OR=0.42, p<0.05 in all cases). Conclusion: Caregiver experiences are strong predictors of dosage form preference; specifically, prior experience administering oral treatments and concern over the side effects associated with them. Treating physician specialty strongly influences formulation preference. Further research is needed to clarify mediators and moderators of caregiver preference, and the consequences of these choices. The fielding of this study was conducted by Knowledge Networks and funded by Novartis Pharmaceuticals.

NR09-33

COMPARARISON DARTEL AND CONVENTIONAL VOXEL-BASED ANALYSIS ON MRI AND FDG-PET IN MILD COGNITIVE IMPAIRMENT (MCI)

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SUMMARY:
PURPOSE: The Diffeomorphic Anatomical Registration Through Exponentiated Lie Algebra (DARTEL, Ashburner 2007) is a high dimensional warping process for more precise inter-subject alignment, which results in more accurate localization and better group analysis. The aim of this study was to compare the results of conventional voxel-based analysis and DARTEL on (18)F-fluorodeoxyglucose (FDG) positron emission tomography (PET) and magnetic resonance imaging (MRI) in the same group of patients with mild cognitive impairment (MCI). METHODS: 24 patients with MCI (mean age 67.8 years; MMSE score more than 24) and 26 normal volunteers underwent both FDG-PET and three-dimensional MRI. Statistical parametric mapping and DARTEL was used to conduct voxel by voxel analysis. DARTEL-Template of 3D-MRI was created from normal volunteers. FDG-PET images were anatomical warped with DARTEL-template. RESULTS: In MRI analysis, DARTEL showed more significant decrease in hippocampal grey matter volume in MCI patients than the conventional Voxel-based Morphometry (VBM). In FDG-PET, DARTEL indicated significant reductions in glucose metabolism in the bilateral temporal lobes with hippocampus, posterior cingulate gyri and the parietotemporal area, while

conventional analysis showed less decrease in temporal lobes. CONCLUSION: DARTEL in MRI provided more accurate results, and DARTEL in FDG-PET suggest more extensive functional damage in very mild Alzheimer's disease than conventional analysis. The new technique will yield a higher diagnostic accuracy in AD by making full use of morphological information.

NR09-34

EFFECT OF APOLIPOPROTEIN E GENOTYPE ON SURVIVAL IN COGNITIVELY NORMAL KOREAN ELDERLY

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SUMMARY:
Objectives: The apolipoprotein(APOE) polymorphism is a candidate gene for longevity in human. APOE e4 allele has been associated with an increased mortality and greater risk of death and severe illness such as Alzheimer's disease(AD), cardiobrovascular disease. But whether it affects mortality in patients with the disease is not consistently confirmed. This study aimed to assess the effect of APOE e4 allele on mortality in cognitively normal elderly. Methods: APOE genotyping had been performed on 1244 older adults(aged = 60) recruited from cognitively normal elderly registered in the Dementia and Age-associated Cognitive Decline Clinic of an university hospital and in a service program for the early detection and management of dementia in the community between 1996 and 2006. All the subjects had been examined according to the protocol of the Korean Version of the Consortium to Establish a Registry for Alzheimer's Disease Assessment Packet (CERAD-K) at baseline. Subjects were classified into 221 with and 1023 without at least one e4 allele. Cox's proportional hazards regression models were used to assess the relative risk of the e4 allele on mortality. Results: Eight with and 81 patients without the e4 allele were had died by December 2006. Median survival from baseline did not differ by the e4 allele carrier status(9.4 years in the e4-positive group, 8.4 years in the e4-negative group). There were no differences between e4-positive and e4-negative group in age at baseline, sex and education. Adjusting for age at baseline and age at onset, there was no relationship between APOE e4 allele and mortality (RR = 0.52, 95% CI = 0.24-1.13). Conclusions: This study provide the first information about the effect of the e4 allele on mortality in Korean elderly with normal cognition. The APOE e4 allele was not associated with mortality in cognitively normal Korean elderly.

NR09-35

ASSOCIATION BETWEEN APOLIPOPROTEIN E E4 AND SURVIVAL FOLLOWING ONSET OF ALZHEIMER'S DISEASE IN KOREAN ELDERLY

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SUMMARY:
Objectives: The e4 allele of apolipoprotein(APOE) has associated with an increased risk and earlier onset of Alzheimer's disease(AD), but whether it affects mortality in patients with the disease is not consistently confirmed. This study aimed to assess the effect of APOE e4 allele on mortality in patients with AD.
Methods: APOE genotyping had been performed on 200 patients recruited from patients with probable AD registered in the Dementia and Age-associated Cognitive Decline Clinic of an university hospital and in a service program for the early detection and management of dementia in the community between 1996 and 2004. All the subjects had been examined according to the protocol of the Korean Version of the Consortium to Establish a Registry for Alzheimer's Disease Assessment Packet (CERAD-K) at baseline. Subjects were dichotomized into 88 patients with and 112 patients without at least one e4 allele. Cox's proportional hazards regression models were used to identify the effect of the selected variables including the e4 allele on mortality. Results: Forty patients with and 49 patients without the e4 allele were had died by December 2008. Median survival from onset of AD did not differ by the e4 allele carrier status(10.2 years in the e4-positive group, 9.1 years in the e4-negative group). There were no differences between e4-positive and e4-negative group in age at baseline, sex, education, age at onset, duration of AD, severity of dementia. Significant factors that

affects mortality during the follow-up included age at baseline and age at onset. Adjusting for age at baseline and age at onset, the presence of an e4 allele did not show increased risk of mortality (RR = 0.98, 95% CI = 0.64-1.49) and the risk of effect of the e4 allele not vary by age, sex, education in this sample. Conclusions: This study provide the first information about the effect of the e4 allele on mortality in oriental elderly with AD. The APOE e4 allele was not associated with mortality in patients with AD.

NR09-36

USEFULNESS OF INFORMANT QUESTIONNAIRE OF COGNITIVE DECLINE OF THE ELDERLY(IQCODE)FOR EVALUATION OF THE RISK OF DELIRIUM

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SUMMARY:
Objectives: Cognitive dysfunction is one of the important risk factors of the post-operative delirium in the elderly people. But the measuremenr of the cognitive function by the objective screeinng tests such as Mini-Mental State Examination is biased by the age and education of the subjects. The Informant Questionnaire of Cognitive Decline of the Elderly(IQCODE)is less biased by these factors. This study was to investigate the usefulness of IQCODE for evaluation of the risk of delirium in the elderly patients with hip fracture. Methods: 134 patients over 60 years with hip fractures participated in this study. They completed the preoperative evaluation which covered cognitive functions, depressive symptoms, demographic characteristics and other various factors. Results: The incidence of delirium was 20.9%. Compared to the patients without delirium, those with delirium showed higher age and higher scores of IQCODE(p=0.04, p=0.02). The sex, comorbidities, and the laboratory test scores did not show significant differences between the two groups. On logistic regression analysis, high IQCODE score(>3.46) was independently associated with the incidence of delirium(OR 4.60(1.80-11.75), p=0.001). Conclusion: The cognitive impairment evaluated by IQCODE were associated with the postoperative delirium. The study suggests that the IQCODE may be useful for predicting post-operative delirium in elderly patients with hip fracture. Key Words: delirium, hip Fracture, cognitive impairment, IQCODE

NR09-37

EPIDEMIOLOGICAL SURVEY OF INFLUENCES OF LONG-TERM TREATMENT WITH A TRADITIONAL JAPANESE MEDICINE, YOKUKANSAN, ON BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS

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SUMMARY:
[Objective] BPSD (Behavioral and Psychological Symptoms of Dementia) may give marked influences on the care burden, and the treatment of BPSD is equally important to the treatment of the core symptoms of dementia. In recent years, many researches including us reported the effect of yokukansan (YKS) on BPSD, but almost none of the reports referred to long-term treatment exceeding 6 months. Thus we conducted an epidemiological survey of the influences of long-term treatment with YKS (up to 78 weeks) on BPSD. [Method] Among the patients who visited this hospital and were diagnosed with dementia accompanied by BPSD in the period from April 2006 to March 2010, those who were being treated with YKS for over 6 months (26 weeks) were evaluated. Epidemiological evaluation was performed by extracting, from the medical records, the data related to serum potassium level, adverse reactions, for safety evaluation and the data related to NPI / MMSE / Zarit Burden Interview (ZBI) / CDR for efficacy evaluation. On conducting this survey, we complied with the "Ethical Guideline for Epidemiological Survey" issued by the Ministry of Health, Labour and Welfare in Japan. [Result] Among a total of 558 dementia patients in the period concerned, 163 patients to whom YKS was prescribed for more than 6 months were targeted. The diagnosis was AD, DLB, VD and mixed type in 124, 23, 5 and 3 patients, respectively. A serum potassium value lower than the lower limit of the standard range specified

at this hospital was seen in about 5% of the patients at Week 26 (excluding the patients whose baseline value was lower than the lower limit of the standard range), but the adverse reactions noted were only edema and hypokalemia (both noted in one patient each). NPI was evaluated in 108 patients with baseline data (data at Week 0 of YKS treatment), and a significant decrease was seen at Week 26 and Week 52. The ZBI score decreased significantly at Week 26. A decrease in MMSE was noted at Week 52 and Week 78, but no changes were seen in CDR. [Discussion] No serious adverse reactions were recognized, and the safety of long-term treatment with YKS could be confirmed. However, since a decrease in serum potassium level was seen in some of the patients, periodic examinations are necessary. A significant decrease was seen in NPI and ZBI score, and it was confirmed that the improvement of NPI by long-term treatment would lead to reduction of caregiver's burden.

NR09-38

TREATMENT WITH ASSOCIATION BETWEEN GALANTAMINE AND ESCITALOPRAM IN MILD COGNITIVE DISORDER AND DEPRESSION

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SUMMARY:
INTRODUCTION: To evaluate the efficacy of galantamine and escitalopram association in patients with Mild Cognitive Disorder and Depression. So there is a possible relation between the deficit in executive and cognitive cerebral function and depression or relation between the serotonin system and cholinergic system in relation with disease comorbidity cognitive-depression. HYPOTHESIS: To evaluate the therapeutic response in patients with comorbility between Mild Cognitive Disorder and Depression in treatment with Galantamine (acetylcholinesterase inhibitor) with Escitalopram (Selective serotonin reuptake inhibitors) and the two drugs associated. METHODS: A group of 705 patients with symptoms of Mild Cognitive Disorder and Depression (DSM IV-TR criteria) were separated in 3 groups of 235 patients. Each group received different treatment in a 12 months period: Group 1: Galantamine 16 mg/day. (Extended release capsules: 16 mg.) Group 2: Escitalopram 10 mg/day. Group 3: both drugs, same dose. RESULTS: The therapeutic response evaluated in Hamilton Scale for Depression (HAM-D), Montgomery and Äsberg Depression Rating Scale (M.A.D.R.S.), Mini Mental State Examination (M.M.S.E.) and Global Clinical Impression (G.C.I.) scores during 12 months. In the third group who received the two drugs associated, had much better response than the others and "brain enhancer". CONCLUSION: The group who received the association of the cholinergic agent Galantamine with antidepressant (SSRIs) Escitalopram had a relevant satisfactory therapeutic response: the best result, so there is a possible relation between the deficit in cholinergic systems and depression. DISCUSSION: Could be cerebral cholinergic systems deficit a generator of Depressive Disorder?

NR09-39

REDUCED BRAIN FUNCTIONAL CONNECTIVITY IN MIDDLE-AGED CHILDREN OF ALZHEIMER PATIENTS CARRIERS (CAPS) OF THE APOE4 GENE: A RESTING STATE F-MRI STUDY

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SUMMARY:
Objective:Apolipoprotein e-4 (APOe-4) has been proven to be a major genetic risk for Alzheimer's disease (AD). In APOe-4 carriers, cerebral glucose metabolic decline in the posterior cingulate cortex (PCC) was detected with positron emission tomography (PET); and reduced hippocampus activation was found with task activated f-MRI. In the present study,we examine the resting state functional connectivity between the hippocampus and the rest of the brain in the group of APOe-4 carriers in comparison to non-APOe-4 carriers. Methodology:A total of 46 neurologically normal 45- to 65-year-old subjects participated in this study.20 subjects carried APOe-4 and 26 subjects did not.The two groups of APOe-4 carriers and non-APOe-4 carriers showed no significant difference in age, education level, and neuropsychological performances. All subjects received fMRI scans at a GE 3T scanner. For each subject, FC between the hippocampus and PCC was obtained with cross-correlation of the spontaneous

low-frequency fluctuations in the resting-state dataset for each subject. Group analysis was then performed using student t-test to determine the difference in the FC between the groups of APOe4 carriers and non-APOe-4 carriers.All the behavior data were analyzed with SPSS 16.0 software (http://www.spss.com.Chicago, Illinois). Demographic and clinical characteristics were documented by using counts for categorical variables, means ± SD for continuous variables.To determine the functional connectivity network Patterns within and between Groups of Study Subjects, for each group (APOe4 carriers versus non-APOe4 carriers), the pattern of HFC map was generated by applying a voxelwise one-sample t-test within a group of subjects against a null hypothesis of no connectivity with a cluster-corrected analysis (AlphaSim, cluster size > 490 mm3, p<0.001). For between group comparison, a two-sample voxelwise t-test was performed with a cluster-corrected analysis (AlphaSim, cluster size > 4048 mm3, p<0.05).Results:Demographic and cognitive testing was similar in the APOe carriers and non carriers. The regional functional connectivity between the hippocampus and PCC was significantly lower in the APOe4 carriers than non-APOe4carriers.The first analysis with a one sample t-test was corrected with a P< 0.005 for multiple comparisons. This analysis was used to define which brain areas of the brain correlated with the hippocampus in the APOe4 carriers and non carriers.The results showed the Enthorinal cortex and the PCC areas to have a positive correlation with the hippocampus while the frontal premotor areas showed a negative correlation. With a second analysis to measure a difference between the carriers and non carriers of the APOe4 allele showed the APOe4 carrier group to have a significant decrease in bilateral caudate, lenticular nuclei and thalamus with z scores spanning from 3.34 for the lenticular nuclei to 4.77 for the caudate.Conclusion:The reduced functional connectivity in AD-related brain networks in the middle-age APOe4 carriers may provide a neural mechanism for the increased risk for AD. Among subjects with a family history of AD, APOe4 carriers have an increased risk for development of AD than non-carriers. The fMRI technology may be a useful and practical marker for pre-symptomatic AD.

NR09-40

PARANEOPLASTIC SYNDROME-COGNITIVE DECLINE-POST-TREATMENT IMPROVEMENT

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SUMMARY:
Poster is decribing an interesting patient who was preliminary diagnosed with encephalitis. He was observed as having persistent unmenanageable delirium and rapid decline of all cognitive functions. Upon diagnosis of lung carcinoma accompanied by limbic encephalitis he was treated for his primary disease. Interestingly enough, delirium regressed and cognitive functions considerably improved; short memory loss, however, persists.

NR09-41

COGNITIVE TRAINING IN THE ELDERLY WITH NORMAL AGING AND COGNITIVE IMPAIRMENT WITH NO DEMENTIA

Chp.:Charles Wilber M.Ed., 200 Retreat Avenue, Hartford, CT 06106, Co-Author(s): Jaclyn Cmero, M.S.,OTR/L, Karen Blank, M.D., Keera Bhandari, M.A.

SUMMARY:
Objective: This study tested the effects of cognitive rehabilitation on a community sample of older adults with complaints of cognitive decline. Two different models of cognitive rehabilitation for older adults were combined and tested: an interactive group model emphasizing general strategic abilities for cognitive decline, and an innovative computer-based cognitive training program emphasizing improvement in neuroplasticity. Cognitive training interventions have demonstrated to be effective and durable in improving targeted cognitive abilities in older adults particularly reasoning related to activities of daily living and also in reducing functional decline in activities of daily living. Method: This study tested the effects of a treatment combining two cognitive rehabilitation models in comparison to (TAU) on a community sample of 30 adults over age 60 with subjective complaints of decreasing cognition consistent with "Cognitive Impairment, No Dementia" (CIND). Participants in the experimental condition received 10 weeks of combined cognitive remediation.

The data determined the efficacy and feasibility of cognitive remediation treatment. Result: Participants randomized to the experimental 'combined model' showed significant changes in attention, concentration, and memory when compared to Treatment as Usual (TAU) (p<.045), and also reduced functional decline in activities of daily living (p<.03). Conclusion: 1. We predicted that participants who received cognitive training demonstrated larger improvements in memory skills, goal management, and psychosocial skills than those participants who received TAU. 2. We predicted that participants who receive cognitive training would demonstrate larger improvements in functioning and quality of life measures than those receiving TAU. 3. We predicted that these improvements would persist over a one-year period.

NR09-42

GALANTAMINE IN LONG-TERM TREATMENT FOR MILD COGNITIVE IMPAIRMENT

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SUMMARY:
INTRODUCTION: To evaluate the efficacy of galantamine in patients with Mild Cognitive Impairment. So there is a possible benefit in the deficit in executive and cognitive cerebral function (cholinergic system) with treatment with Galantamine. HYPOTHESIS: galantamine is a reversible, competitive cholinesterase inhibitor that also allosterically modulates nicotine acetylcholine receptors. Cholinesterase inhibitors inhibit (block) the action of acetylcholinesterase, the enzyme responsible for the destruction of acetylcholine. Acetylcholine is one of several neurotransmitters in the brain, chemicals that nerve cells use to communicate with one another. Reduced levels of acetylcholine in the brain are believed to be responsible for some of the symptoms of Alzheimer's disease. By blocking the enzyme that destroys acetylcholine, galantamine increases the concentration of acetylcholine in the brain, and this increase is believed to be responsible for the improvement in thinking seen with galantamine. To evaluate the efficacy, safety and tolerability of galantamine in long-term in Mild Cognitive Disorder. METHODS: a multicenter, open label , prospective, observational study enrolled 1028 patients, more 55 years old with Mild Neurocognitive Disorder (DSM IV criteria), during 36 months of treatment with galantamine 16 mg./day. (Extended release capsules: 16 mg.) Assessments included the MMSE, CDR, ADAS-GOG, Trail making test, Raven Test, GO-NO-GO test, FAQ, Global Deterioration Scale, GCI and UKU scale of adverse effects. RESULTS: a total 1028 outpatients were treated with 16 mg. /day galantamine during 36 months, the therapeutic response evaluated with CDR, MMSE and the tests and scales of function cognitive measuring, GCI and UKU scale of adverse effects, comparing the baseline to final scores. CONCLUSIÓN: Mild Cognitive Disorder is being examined, so there isn't enought treatment for this. A long-term treatment (36 months) galantamine improves cognition and global function, behavioural symptoms and the general state well being of patients with Mild cognitive Disorder. With incidence of adverse effects not significant and a very good profile of safety, the final results of the study suggest that galantamine may be particularly appropiate in the Mild Cognitive Disorder. DISCUSSION: We can recognize the Mild Cognitive Disorder as a clue which reveal a first therapeutic instance probably in efficacy in this cruel evolution towards dementia.

NR09-43

VALIDITY OF THE KOREAN VERSION OF CORE

Chp.:Youngmin Choi M.D., Sanggye-dong Nowon-gu, Seoul, 139-707 Korea, Co-Author(s): Lee DW.,M.D.,Ph.D. Kim MS.,M.D

SUMMARY:
Specific purpose : Parker et al. have developed the CORE, a scale assessing retardation, agitation and non-interactivity by behavioural observation which is able to distinguish melancholia from other depressive disorders. The aim of this study is to evaluate the validity of Korean version of CORE(CORE-K). Content : The CORE is an 18-item scale which assesses features of melancholic depression such us retardation, agitation and non-interactivity by behavioural observation. Each sign is rated on a 4-point scales (0-3) by clinicians or a trained observer. The CORE distinguish melancholia from other residual depressive

disorders. Depressed patients will be allocated to the CORE-defined melancholic group if they score 8 or more. Method : Total 45 out-patients, age between 28-72 years, who met DSM-IV criteria for major depressive disorder were entered into the study. The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) was administered by a clinician, and the patients were divided into two groups: 31 melancholic depressive patients and 14 non-melancholic depressive patients. And CORE-K, Hamilton Depression Rating Scale (HAM-D), and Korean version of Mini Mental Status Exam (MMSE-K) were administered. Results : Internal consistency(a=0.729) and test-retest reliability(r=0.859) were psychometrically approvable. The CORE-K and the HAM-D were found to be highly correlated(r=0.877) The Pearson correlation coefficiency between The CORE-K and the HAM-D was 0.877(p<0.001), and That of the CORE-K and SCID was -0.37(p<0.01). In Receiver Operating Characteristics(ROC) analysis, Area Under the Curve(AUC) of the CORE was 0.762(95% CI 0.624-0.901)and that of HAM-D was 0.727(95% CI 0.582-0.782). Optimal cut-off score of CORE-K was 6/7, and the sensitivity and the specificity at that score were 0.618 and 0.857. Conclusion :The CORE-K is a valid and reliable sign-based rating tools that can identify patients with melancholia among clinical populations in Korea.

NR09-44
WITHDRAWN

NR09-45
THE USE OF MULTIPLE TESTS TO IMPROVE SCREENING FOR BIPOLAR DISORDER

Chp.:Burdette Wendt Other, 2814 S Franklin St, Michigan City, IN 46360, Co-Author(s): Suhayl Nasr, M.D., Anand Popli, M.D., John Crayton, M.D.

SUMMARY:
Objective: The Mood Disorder Questionnaire (MDQ) is widely used to screen for Bipolar Disorder (BD). It has been reported to have a sensitivity of between .58 and .73 and a specificity of between .67 and .97 among psychiatric patients. Improvement in the sensitivity and specificity of the available screening tools is needed for wider use in the identification of BD patients. Methods: 411 consecutive outpatients admitted to a rural psychiatric practice were screened for BD using the SCL90, MiniSCID, and TEMPS-A on the same day. 104 of these patients also took the MDQ. The clinical diagnosis of BD was made by the psychiatrist following an extended clinical diagnostic interview with access to the screening tools results. Results: The sensitivity and specificity of the tests were as follows: SCL90 subscale of hostility (.73, .64), the TEMPS-A cyclothymia score>4 (.73, .64) and irritability score >2(.64, .75), the MiniSCID (.65, .76), and the MDQ (.42, .89). Among patients who completed all of the tests, when 1 test was positive the likelihood of a diagnosis of BD was 17%. The likelihood of a BD diagnosis increased with every additional positive test to 27%, 41%, 75%, and 86% when 5 tests were positive for BD. None of the patients who tested negative on all 5 tests were diagnosed with BP. Using a cutoff of 2 positive tests yielded a sensitivity of .92 and specificity of .61. A cutoff of 3 positive tests had a sensitivity of .76 and specificity of .79. Conclusion: There is evident variability in the sensitivity and specificity of the screening tools for BD. The combined use of several tests to screen for BD improves the likelihood of identifying BD patients.

NR09-46
AN INDIAN PERSPECTIVE OF FAMILY CHARACTERISTICS AND TREATMENT ADHERENCE IN SCHIZOPHRENIA

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SUMMARY:
OBJECTIVE: The study examined the unique and combined contributions of size, composition and family structure in achieving adherence to treatment in patients with schizophrenia. Families provide social support to patients with schizophrenia and lead to better prognosis but it is necessary to find out characteristics of families, favorable to treatment adherence. METHOD: Analyses were based on the longitudinal study of patients who consulted a tertiary mental health facility at Varanasi, India. Consecutive patients (n = 350) who met the DSM-IV-TR criteria for a schizophrenia spectrum disorder were evaluated monthly for 12 months regarding their adherence to medications. For all

the patients, we assessed locality, structure and size, nature of relations and income of their families. RESULTS: Two hundred and sixteen patients (61.71%) were adherent (76% to 100% of doses taken) and 134 (38.28%) were non-adherent (less than 76% of doses taken). Non-adherent patients were more likely to belong to families from urban locality than semi-urban or rural locality (Fisher's exact test, P = 0.011). Joint & extended families were more likely to be associated with non-adherence rather than adherence when compared to single unit families (Fisher exact test, two tailed P = 0.004). Patients who are part of conjugal families are more adherent to treatment advices than who are from consanguine families (P = 0.24, not statistically significant). Income group and families with predictable income were significant predictors of adherence. CONCLUSION: These results suggest that certain family characteristics were strongly related over time in achieving adherence to medications, understanding of illness and acceptance or rejection of medication. Non-adherence was significantly associated with an increased risk of relapse, hospitalization and suicide attempts. Assessment of families may allow strategies to improve adherence and reversal of some risk factors may improve adherence.

NR09-47

A THREE-GENERATIONAL STUDY OF RISK FACTORS FOR CHILDHOOD EXTERNALIZING BEHAVIOR

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SUMMARY:
This prospective study of three generations of urban African Americans and Puerto Ricans assessed a community cohort with data collected over four time waves using structured interviews. We assessed the interrelationships of generation 1 and generation 2 parenting behaviors, generation 2 depressive mood and illicit drug use, and generation 2 perceptions of neighborhood crime, and their effects on generation 3 childhood externalizing behavior. According to our conception of family interactional theory, child outcomes are influenced by factors from several domains operating within a mediational framework. Structural equation modeling revealed that aspects of the parent-child relationship were linked with depressive mood and illicit drug use, which were associated with childhood externalizing behavior across generations. The findings suggest intervention programs should address parental attributes and parenting skills, as well as neighborhood factors, to decrease risk factors for the intergenerational transmission of externalizing behavior.

NR09-48

A MULTICENTER STUDY OF BIPOLAR DISORDER AMONG EMERGENCY DEPARTMENT PATIENTS IN LATIN-AMERICAN COUNTRIES

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SUMMARY:
Objectives: This multicenter study estimated the prevalence of bipolar disorder (BPD) among emergency department (ED) patients in Latin America. Methods: To identify patients with BPD, a combination of DSM IV- criteria interview and a questionnaire screen including the Mood Disorder Questionnaire (MDQ) was used. Data from consecutive 1,505 patients from hospitals in Argentina, Brazil, Chile, Colombia, and Mexico was analyzed to calculate prevalence and to describe the demographic and health status differences between BPD and non-BPD patients. Results: The prevalence of BPD in this population was 5.2% (95% CI= 4.5% to 6.9%). The mean age was 37 years, with response rate of 83.0%. Compared to non-BPD patients, BPD patients were more likely to report a diagnosis of asthma (16.7% vs. 9%), thyroid problems (12.8% vs. 5.8%), seizures (23.1% vs. 3.0%), and to suffer of obesity (39.7% vs. 26.9%, all p =0.05). BPD patients versus those without BPD were also differentiated in their psychiatric comorbidity as follows: higher rate of alcohol abuse (30.8% vs. 10.0%), attention deficit hyperactivity disorders (50.0% vs. 12.0%), depression (81.6% vs. 45.7%), obsessive compulsive disorder (20.1% vs. 3.0%), panic disorders (23.1% vs. 12.3%), phobic

disorders (11.2% vs. 3.1%), and any anxiety disorder (82.1 %vs. 41.8%). Compared to non-BPD, suicidal plans and attempts were also significant higher in the bipolar group (11.5% vs. 2.8% and 10.3% vs. 1.8% respectively). Multivariate analysis identified ADHD, depression, alcohol abuse, anxiety disorder and last month suicide plans and attempts to be independently associated with BPD. Conclusion: Our study supports that BPD is prevalent in ED in Latin-American countries and that comorbidity is the rule, not the exception. Also provides further evidence that the burden of chronic medical conditions in persons with BP is substantial. Patients presenting at ED with irritability, anxiety, pressure speech, euphoria, with suicidal tendencies, involved in risky behaviors, alcohol abuse, dependence or those with history of mental health hospitalization in the past 12 months must be assessed for comorbid BPD.

NR09-49

LIFETIME RISK AND AGE OF ONSET DISTRIBUTIONS OF PSYCHIATRIC DISORDERS IN SOUTH KOREA

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SUMMARY:
Background: The present study represents the first attempt at examining variation across Korean cohorts with respect to lifetime risk of DSM-IV psychiatric disorders. Aims: To present data on lifetime prevalence and projected lifetime risk, as well as age of onset (AOO) and demographic correlates of DSM-IV psychiatric disorders as assessed in the nationwide survey of a representative sample of Korean adults. Method: The survey was based on a multistage area probability sample of non-institutionalized Koreans aged 18-64 years. The Korean version of the Composite International Diagnostic Interview 2.1 (K-CIDI 2.1) was administered by lay interviewers.Results: Lifetime prevalence of any disorder was 24.6%. Alcohol abuse (9.2%), alcohol dependence (7.0%), major depressive disorder (5.6%), specific phobia (3.8%), and GAD (1.6%) were the most common disorders. The median AOO was earliest for anxiety disorders (age 29), latest for mood disorders (age 47), and intermediate for alcohol use disorders (age 31). Compared to observed lifetime prevalence (24.6%), 35.0% of Koreans will eventually experience one of these disorders. Further, half of the population who present with a psychiatric disorder do so by the age of 32 and younger cohorts are at greater risk for most disorders. Conclusions: About one-third of the Korean adult population will meet the criteria for a DSM-IV psychiatric disorder at some time during their life. The median age of onset varies from disorder to disorder and more recent birth cohorts appear to be at a higher risk of developing psychiatric disorders.

NR09-50

FINNBRAIN BIRTH COHORT STUDY - FOCUS ON STRESS AND THE DEVELOPING BRAIN

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SUMMARY:
Background: There is increasing evidence that psychosocial factors, especially childhood disadvantage and maltreatment are strong predictors for adverse psychiatric and somatic health outcomes. Early (adverse) life events also play a crucial role in the psychobiological programming of the developing brain (Eg. Gunnar & Quevedo, 2007). Among the mechanisms through which life events and other environmental factors associate with increased risk of later morbidity is an altered regulation

of stress-evoked responses (eg. the HPA-axis). Attachment patterns, quality of care, and social support are reportedly significant mediators and moderators of stress regulation (Gallo & Matthews 2006) The aim of our ongoing study is to collect a large (N=10.000) birth cohort starting at pregnancy and combining data from genetic analyses, functional and structural brain research, child psychiatric and adult psychiatric assessment, attachment research, assessment of life events, registers and biological parameters in order to understand the determinants of child wellbeing, brain development and later emergence of depression, cognitive decline and cardiovascular disease. The follow-up of both children and their parents will continue for several decades. The main hypothesis of the study is that the pre- and postatal environment of the child programmes some of the structures and functions of the brain, eg. HPA-axis, oxytocin-vasopressin system and emotion processing. We have now collected a pilot sample (200 families) and the first results of the data from these families will be presented. In this poster the focus is on the study design, participation rate, attrition analysis and preliminary results on parental psychiatric symptoms during pregnanacy and delivery experiences.

NR09-51

THE PHARMACOEPIDEMIOLOGY OF ANTIPSYCHOTIC MEDICATIONS FOR ADULTS WITH SCHIZOPHRENIA IN CANADA, 2005 TO 2009

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SUMMARY:

Objective: To describe the frequency and trends in use of antipsychotic medications for adults with schizophrenia in Canada from 2005 to 2009. Methods: Analyses were performed on the Canadian Disease and Therapeutic Index (CDTI), a data product from IMS Health Canada. The CDTI is a national physician panel study in which participating physicians consist of a representative sample both geographically and by physician specialty, with weighting adjustments made to estimate national drug recommendations by year. Physicians in the panel complete a record of all therapeutic recommendations written during a two day period, including details of patient age, sex, and indication. Trends in the use of antipsychotics for adults with schizophrenia from 2005 to 2009 were estimated using CDTI data in which schizophrenia was listed as the therapeutic indication. Results: Analysis of data from the CDTI showed that first generation antipsychotic drug recommendations for adults with schizophrenia increased by 30% between 2005 and 2009, from 291,830 to 380,250 recommendations. There were notable increases in drug recommendations for chlorpromazine (134%), loxapine (130%), zuclopenthixol (190%), and flupentixol (85%). Second generation antipsychotic drug recommendations for adults with schizophrenia increased to a much lesser extent, with an overall increase of 7%, which was mainly attributable to an increase in recommendations for clozapine of 46%. Drug recommendations for olanzapine decreased 14%, from 422,350 to 361,690 recommendations. The number of drug recommendations for quetiapine and risperidone remained constant. Conclusion: After years of increasing second generation antipsychotic medication use for the treatment of schizophrenia, it appears that the rate of increase of first generation antipsychotic use is now greater than that of second generation antipsychotics. We suspect this may due to data from recent comparative trials, which found that clinical efficacy in the treatment of schizophrenia and the rate of neurological side effects was similar between first and second generation agents. The decreasing use of olanzapine in this patient population is likely due to metabolic adverse effects related to its use, Food and Drug Administration and Health Canada warnings regarding the risk of type II diabetes, and class action law suits against the makers of olanzapine. The increased use of clozapine is likely attributable to emerging data on its superiority in patients who are treatment resistant, and an increase in assertive community treatment teams ensuring that proper lab monitoring can be performed.

NR09-52

IMPACT OF FINANCIAL BARRIERS TO

MEDICAL CARE ON THE PREVALENCE OF ADULT DEPRESSIVE DISORDERS IN THE U.S.

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SUMMARY:
Background: Depression is a common illness with an associated functional impairment that may rank higher than most chronic diseases. We sought to describe the demographic and clinical characteristics of patients reporting financial barriers to medical care and determine if these financial barriers were predictive of prevalence of depressive disorders in this adult population. Methods: The 2008 Centers for Disease Control's Behavioral Risk Factor Surveillance Survey was utilized to identify a cohort of 46,260 patients that reported the presence or absence of a diagnosed depressive disorder. Demographic data and clinical history were recorded in these patients. The primary outcome of interest was diagnosis of a depressive disorder. Results: Among 46,260 patients studied, a total of 8,025 (17.3%) patients reported being diagnosed with a depressive disorder (including while 38,235 (82.7%) reported no such diagnosis. Patients with a depressive disorder tended to be younger (53 vs 55 years, p<0.001), female (75% vs 60%, p<0.001), non-Hispanic, unmarried (53% vs 41%, p<0.001), more educated, and be unemployed with lower salaries. They were more likely to be uninsured with financial barriers to medical care (21% vs 9%, p<0.001). They also had higher rates of obesity (36% vs 26%, p<0.001), smoking (45% vs 34%, p<0.001), high-risk sexual behavior (4% vs 2%, p<0.001), diabetes (15% vs 11%, p<0.001), prior heart attack (8% vs 6%, p<0.001), prior stroke (6% vs 4%, p<0.001), and anxiety (46% vs 5%, p<0.001). In multivariate analysis, financial barriers to medical care (OR 1.92, 95%CI 1.71-2.16) was independently associated with presence of a depressive disorder. Other independent determinants of presence of a depressive disorder included female gender, the strongest predictor (OR 2.18, 95%CI 1.99-2.39), obesity, non-Hispanic ethnicity, marital status, education, employment, annual income, and presence of comorbidities. Conclusions: Financial barrier to medical care is independently associated with higher rates of depressive disorders among adults.

NR09-53

THE PHARMACOEPIDEMIOLOGY OF SELECTIVE SEROTONIN REUPTAKE INHIBITOR MEDICATIONS FOR CANADIAN CHILDREN, 2005 TO 2009

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SUMMARY:
Objective: To describe the frequency and trends in use of selective serotonin reuptake inhibitors (SSRIs) for Canadian children from 2005 to 2009. Methods: This study analyzed pharmacoepidemiological data on SSRI prescriptions and drug recommendations from the IMS Health Canada databases. The number of prescriptions for SSRIs by pediatricians was described by year from 2005 to 2009 using the Canadian Compuscript database. The Canadian Disease and Therapeutic Index (CDTI) was used to quantify drug recommendations for SSRIs for children. The CDTI is a national physician panel study. The CDTI database provides information concerning the frequency with which physicians make SSRI recommendations, as well as the diagnosis of the child. The IMS Health Canada Longitudinal database creates a longitudinal individual-level record of SSRI use by linking prescriptions together over time. With this longitudinal prescription data, we can estimate the average length of SSRI medication use in children between 2005 and 2009. Results: SSRI prescriptions written by pediatricians increased by 39% between 2005 and 2009, from 42,066 to 58,579. The most common SSRI prescribed was fluoxetine (31% of prescriptions), followed by citalopram (29%), and sertraline (23%). The frequency of prescriptions for each of the SSRIs increased over the 5 year period, with the exception of paroxetine, which decreased (-43%). Fluoxetine displayed a notable increase of 111%. SSRI drug recommendations for Canadian children increased by 44% from 2005 to 2009, from 360,200 to 518,230. The most commonly recommended SSRI was fluoxetine (32%), followed by citalopram (29%) and sertraline

(14%). The most common reason for a pediatric SSRI recommendation was mood disorder (50%), followed by anxiety disorder (25%). Between 2005 and 2009, SSRI drug recommendations for anxiety disorder increased by 139%, from 74,850 to 178,900. The average duration of SSRI intake by children in Canada from 2005 to 2009 differed by drug type and age. Average duration was less than one year for all drugs and all patient age groups. Generally, the duration of medication intake increased with increasing patient age. The two most frequently prescribed SSRIs – citalopram and fluoxetine – were prescribed to 13-18 year olds for an average of 222 and 241 days, respectively. Treatment duration for all SSRIs was less than 30 days in 24% of children, 30 days to 6 months in 43%, 6 to 12 months in 15%, and over one year in 19%. Conclusion: SSRI use in children has increased moderately over the past five years. Of the SSRIs, fluoxetine and citalopram are used most commonly. Paroxetine use has decreased, likely due to concerns of an increased risk of suicidality in pediatric patients. In contrast, fluoxetine use has increased, perhaps due to the larger number of controlled trials demonstrating evidence for efficacy in pediatric mood and anxiety disorders.

NR09-54

EVIDENCE-BASED CROSS-SECTIONAL STUDY OF THE DIFFICULT PATIENT IN PSYCHIATRIC PRACTICE: A SOUTH TEXAS PSYCHIATRIC PBRN STUDY

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SUMMARY:
General practitioners (GPs) are usually the first contact person for patients suffering from psychological and physical problems and therefore play a central role in the detection, prevention, and management of mental disorders. Adequate detection and management of these disorders pose a challenge to the health care system. Not only do these disorders have a high prevalence, but patients suffering from them make up a disproportionately large portion of GPs`s workloads and are often considered difficult and draining to treat. This study shows once more how fundamental research partnerships are coming together: the partnership of academic researchers with community psychiatrists and their patients to solve one question: The Difficult Patient, Psychiatry vs. Primary Care Setting, Are they Different? Objective: To determine the patient and physician practice characteristics that are associated with the difficult patient in psychiatric practice. Methods: Using a validated scale in primary care, the Difficult Doctor-Patient Relationship Questionnaire (DDPRQ-10), and a network created 7-item Likert scale (PBRN), we collected independent data from a total of 935 physician-patient interactions from 20 psychiatrists in different settings (Private, Public, and Federal Hospitals;Rural and Urban;Inpatient and Outpatient;and telephone interactions) and practice interests (General, Forensic, Psychosomatic, Geriatrics, and Child), using a card study. Systematic sampling with multivariate analysis with p-value from Kruskal-Wallis, Chi-Square, and Fishers Exact test were used. Results: Of the 935 physician-patient interactions, 905 were available for analysis under the DDPRQ-10 scale. Of the 933 patients with PBRN difficulty scale responses, 184 (20%) were classified as difficult patients (A response of Markedly, Severe, or Amongst the Most were considered “Difficult”). Of the 905 patients with DDPRQ-10 difficult scale scores, 133 (15%) were classified as difficult patients (A score greater than 30 was considered “Difficult”). Scale comparison (McNemars Test p-value= 0.0002, Simple Kappa Coefficient= 0.49, 95% CI=0.42, 0.57). Median DDPRQ-10 was increased for patients with diagnosis of Schizophrenia, Personality Disorder, Cognitive Disorder, and Bipolar Disorder (All $p < .001$), when compared to patients without these diagnosis. Additionally, appointments less than 19 minutes, bills payed by the government, and patients who had languages issues also had increased median DDPRQ-10 scores ($p < .001$). The percentage of difficult patients diagnosed with Major Depression was 10.6% when compared to 17.5% for patients without these diagnosis ($p < 0.004$), followed by Anxiety (9.2% vs 16.3%, $p < 0.01$) Conclusions: “Difficult” patients are present in primary care and psychiatric practices with same prevalence of 15%.

Somatization, as unexplained physical complaints, is a significant source of difficulty for primary care patients, but not psychiatric patients. Median DDPRQ-10 scores did not differ for patients with PTSD, ADHD, or any Axis III diagnosis compared to patients without these diagnoses, as well as for age,gender, and patient status (New/established). Decreased median DDPRQ-10 scores were seen for patients with depression and anxiety disorders, patients in psychotherapy, and in psychotherapy with psychiatrist. Having a diagnosis of depression or anxiety was identified as less likely to be difficult. Funding Source: NIH/NCRR Grant#U54 RR02

NR09-55

BASELINE RESULTS AND VALIDATION METHODS OF A 10 YEAR LONGITUDINAL STUDY OF THE OHIO ARMY NATIONAL GUARD

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SUMMARY:
Objective:To explore lifetime prevalence of mental disorders and report reliability and validity findings from the baseline year in an ongoing study of the Ohio Army National Guard (OHARNG). Method:2616 randomly selected OHARNG soldiers received an hour-long structured telephone survey including the PTSD Checklist (PCL-C) and Patient Health Questionnaire – 9 (PHQ-9); a subset (N=500) was randomly selected to participate in 2 hour clinical reappraisals, using the Clinician-Administered PTSD Scale (CAPS) and SCID. Interviews occurred between Nov. 2008 and Dec. 2009, and there was an overall 43% participation rate. Results: The baseline sample was comparable to the OHARNG overall where the majority were male (85%), white (88%) and enlisted personnel or cadets (87%). The most commonly reported lifetime conditions for the telephone sample were: alcohol abuse 24%, alcohol dependence 23.5%, "any depressive disorder" 21.4%, and PTSD 9.6%. Compared to the CAPS, the telephone survey assessment for PTSD was highly specific (92% (SE 0.01)) with moderate sensitivity (54% (SE 0.09)). The telephone assessment (PHQ-9) of "any depressive disorder" also was very specific (83% (SE 0.02)) and moderately sensitive (51% (SE 0.05)) compared to the clinical reappraisal using the SCID. Other psychopathologies assessed on the telephone included alcohol abuse (sensitivity 40%, (SE 0.04) and specificity 80% (SE 0.02)) and alcohol dependence (sensitivity, 60% (SE 0.05) and specificity 81% (SE 0.02).Conclusions: Validity and reliability statistics for the telephone assessments indicated the methods performed well as research instruments. This ten year longitudinal study is expected to advance knowledge of the trajectories of post-deployment psychopathologies among OHARNG members.

NR09-56

EXCLUSIONARY PSYCHIATRIC DISORDERS AND PSYCHIATRIC COMORBIDITIES IN PATIENTS WITH CHRONIC FATIGUE SYNDROME

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SUMMARY:
Objective Literature reports high rates (56-82%) of psychiatric comorbidities in patients with chronic fatigue syndrome (CFS). The 1994 CFS case definition lists several exclusionary psychiatric disorders due to their persistent nature, including substance abuse, bipolar disorder, schizophrenia, depression with psychotic or melancholic features and eating disorders. We conducted a population-based retrospective, case-control chart review in Olmsted County, MN, to determine prevalence of CFS and medical and psychiatric comorbidities. This report focuses on exclusionary psychiatric diagnosis and prevalent psychiatric comorbidities in this cohort Method We utilized the Rochester Epidemiology Project to examine records of 686 patients seen between1998-2002 who received a physician diagnosis of chronic fatigue, CFS or had a symptom constellation of fatigue along with muscle and/or multi-joint pain, sleep

and memory/concentration problems. Patients meeting the 1994 case definition were classified as CFS, patients not meeting all criteria were classified as insufficient fatigue (ISF), and patients with exclusionary psychiatric and medical disorders were excluded. Age- and sex-matched controls were identified for each case. The proportion of exclusionary psychiatric disorders was calculated as percentage of the total study population. Comparison of proportions of comorbid psychiatric disorders between CFS, ISF and controls was calculated using parametric tests (chi-square), with alpha set at the 0.05 level. Results 100 (14.5%) patients were excluded for exclusionary psychiatric disorders. Of these substance abuse (7%) within 2 years prior to CFS diagnosis and bipolar disorder (4%) were the most common followed by schizophrenia (1%), depression with psychotic features (1%), melancholic depression (1%) and eating disorders (<1%). An additional 510 (74.3%) were excluded for medical comorbidities or failure to meet case definition. Overall, 52 cases of CFS and 24 cases of ISF were identified. Depression and anxiety were more common in the cases compared to age-and sex-matched controls (depression: CFS=67%, ISF=42%, Controls=33%, p=0.001; anxiety: CFS=52%, ISF=58%, Controls=21%; p<0.001). Somatoform disorder and dysthymia did not differ significantly between CFS/ISF cases and matched controls (p=0.25 and p=0.40, respectively). Conclusion Results of our retrospective study confirm earlier reports of high psychiatric comorbidities in patients with CFS. This highlights the importance of a thorough psychiatric evaluation at the time of diagnosis so that clinical management can focus on identification and treatment of psychiatric disorders and decrease the overall symptom burden. A unique finding in our study is the high proportion of exclusionary psychiatric and medical conditions in this cohort. This speaks to the knowledge deficit among providers and complexity associated with the presence of exclusionary conditions when classifying a patient with CFS.

NR09-57

AN EPIDEMIOLOGICAL STUDY OF CONCOMITANT USE OF HERBAL MEDICINE AND ANTIPSYCHOTICS IN SCHIZOPHRENIC PATIENTS: IMPLICATION FOR HERB-DRUG INTERACTION

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SUMMARY:
Background: Herb-drug interactions are an important issue in drug safety and clinical practice. The aim of this epidemiological study was to characterize associations of clinical outcomes with concomitant herbal and antipsychotic use in patients with schizophrenia. Methods and Findings: In this cross-sectional study, 1795 patients with schizophrenia who were randomly selected from 17 psychiatric hospitals in China were interviewed face-to-face using a structured questionnaire. Association analyses were conducted to examine correlates between Chinese medicine (CM) use and demographic, clinical variables, antipsychotic medication mode, and clinical outcomes. The prevalence of concomitant CM and antipsychotic treatment was 36.4% [95% confidence interval (95% CI) 34.2%-38.6%]. Patients using concomitant CM had a significantly greater chance of improved outcomes than non-CM use (61.1% vs. 34.3%, OR=3.44, 95% CI 2.80-4.24). However, a small but significant number of patients treated concomitantly with CM had a greater risk of developing worse outcomes (7.2% vs. 4.4%, OR=2.06, 95% CI 2.06-4.83). Significant predictors for concomitant CM treatment-associated outcomes were residence in urban areas, paranoid psychosis, and exceeding 3 months of CM use. Herbal medicine regimens containing Radix Bupleuri, Fructus Gardenia, Fructus Schisandrae, Radix Rehmanniae, Akebia Caulis, and Semen Plantaginis in concomitant use with quetiapine, clozapine, and olanzepine were associated with nearly 60% of the risk of adverse outcomes. Conclusions: Concomitant herbal and antipsychotic treatment could produce either beneficial or adverse clinical effects in schizophrenic population. Potential herb-drug pharmacokinetic interactions need to be further evaluated.

NR09-58

INFLUENCE OF MONOAMINE GENE VARIANTS ON RESPONSE TO METHYLPHENIDATE TREATMENT OF HYPERACTIVITY IN AUTISM SPECTRUM DISORDER

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SUMMARY:
Objective: Methylphenidate (MPH) has been shown to have clinical utility in reducing hyperactive-impulsive symptoms common in children with autism spectrum disorders (ASD); however, individuals vary widely in response characteristics. In order to further explore this interindividual variability, we examined genetic variants in monoamine signaling networks as potential moderators of MPH effects on hyperactivity in ASD. Methods: 66 children (mean age 7.5 years) with autistic disorder, Asperger's disorder, and pervasive developmental disorder not otherwise specified were randomized to varying sequences of placebo and three different doses of methylphenidate during a 4-week blinded, crossover study. Outcome measures utilized include the Clinical Global Impression-Improvement (CGI-I) scale and the Aberrant Behavior Checklist (ABC-Hyperactivity Index). The dopamine D2 (DRD2), dopamine D3 (DRD3), and alpha 2A adrenergic (ADRA2A) receptors were comprehensively genotyped, capturing the complete common variability across these loci. Additionally, known functional variants in the serotonin (SLC6A4) and dopamine (SLC6A3) transporter proteins were queried. Results: MPH treatment resulted in significant improvement in hyperactive-impulsive symptoms, with 49% of the sample meeting responder criteria. The 10-allele of the SLC6A4 intron 2 VNTR conferred an allele dosage-dependent increase in response rates (p=0.03). There was no evidence for the influence of genetic variation at the DRD2 or DRD3 loci with the exception of a nominally significant trend for improved response of homozygotes for the minor (Ser) allele of the DRD3 nonsynonymous Ser9Gly polymorphism. 71% of homozygotes for the common allele (CC) of an ADRA2A promoter variant (rs1800544) responded to MPH treatment compared to 39% of carriers of the minor G-allele (p=0.016). Effects at this marker and locus have been reported in prior studies of typically developing children with attention-deficit hyperactivity disorder (ADHD). Conclusions: Methylphenidate's efficacy in reducing common ADHD symptoms in children with ASD may be moderated by differences in monoamine neurotransmission related to functional genetic variants in the stimulant targets described here; however, replication in larger samples allowing stringent error correction is needed. Comparisons between studies are further complicated by population effects. Given the availability of a wide range of treatment approaches to hyperactivity and impulsivity in ASD, prior knowledge of likelihood of MPH response would hold considerable value in clinical decision-making. Moreover, understanding the molecular influences underlying these response phenotypes may present other avenues for intervention and inform drug design.

NR09-59

A RETROSPECTIVE ANALYSIS OF OUTCOMES IN OUTPATIENTS WITH MAJOR DEPRESSIVE DISORDER IN A STAFF MODEL HMO: APPLICATIONS OF A PHARMACOGENETIC ALGORITHM

Chp.:AIDA MIHAJLOVIC M.D., 1445 WHITE OAK RD, LAKE FOREST, IL 60045, Co-Author(s): Joel Winner, M.D., Josiah Allen, B.A.

SUMMARY:
Introduction: Antidepressants are among the most widely prescribed medications. However, only 35-45% of depressed patients have a complete remission of their illness when initially treated with these medications1. Consequently, the Mayo Clinic's Genomic Expression and Neuropsychiatric Evaluation group has developed a pharmacogenomic-based depression treatment algorithm that incorporates published pharmacogenomic (PGx) information related to antidepressant effectiveness and safety. The PGx testing platform utilized with the algorithm expands on CYP450 genotyping and also includes markers linked to therapeutic response with SSRI antidepressants. Both copies of six informative genes are genotyped: 1) the Cytochrome P450 2D6 gene; 2) the Cytochrome P450 2C19 gene; 3) the Cytochrome P450 CYP1A2 gene; 4) the Cytochrome P450 CYP2C9 gene; 5) the Serotonin Transporter gene (SLC6A4); and 6) the Serotonin 2A receptor gene (5HTR2A). Though this algorithm

is not yet part of the universal standard of care, Mayo clinicians have found it helpful in guiding antidepressant treatment decisions at Mayo Clinic, Rochester, MN3. Objective: The study is designed to (1) determine if there is improved outcomes with medication treatment in subjects whose therapy is in agreement with PGx testing information, (2) evaluate the potential clinical impact of the PGx interpretive report on patient care within the UHS healthcare system and 3) Assess the economic impact of pharmacogenetic variability in this population. The overall goal of this clinical utility study is to evaluate the potential clinical benefit of using a newly developed interpretive report based on the pharmacogenomic algorithm. Method: This retrospective trial is designed to occur at Union Health Services, a staff model HMO in Chicago, IL that provides outpatient psychiatric services. The trial will enroll 100 subjects who meet inclusion/exclusion criteria as described below: • Subject is between the ages of 18 and 65. • Subject is able to comprehend, sign, and date the written informed consent (ICF) to participate in the clinical investigation. • Subject received at least one medication included on a medication panel containing 26 of the most commonly prescribed antidepressant and antipsychotic medications that are likely to be affected by pharmacogenetic factors. These medications include: amitriptyline, bupropion, citalopram, clomipramine, desipramine, desvenlafaxine, duloxetine, escitalopram, fluoxetine, fluvoxamine, imipramine, mirtazapine, nortriptyline, paroxetine, selegeline, sertraline, trazodone, venlafaxine, aripiprazole, clozapine, haloperidol, olanzapine, perphenazine, quetiapine, risperidone, and ziprasidone. • Subject was diagnosed with any of the following Inclusion Diagnoses by a physician or mental health professional licensed to diagnose: Major Depressive Disorder, Dysthymic Disorder, Depressive Disorder NOS, Obsessive Compulsive Disorder (OCD), Generalized Anxiety Disorder, Panic Disorder, Anxiety Disorder NOS, Post-Traumatic Stress Disorder (PTSD), and Social Phobia. • Subject has not previously received pharmacogenetic testing and has not been diagnosed with any of the following Exclusion Diagnoses: Bipolar Disorder, Schizophrenia, and Schizoaffective Disorder. These subjects are being gathered from the principal investigators' psychiatric practice and divided into two cohorts. Cohort 1 consists of those who received pharmacotherapy treatment for their illness

NR09-60

ASSOCIATION OF THE CANNABINOID RECEPTOR CNR1 WITH ANTIPSYCHOTIC-INDUCED WEIGHT GAIN IN THE RUPP AUTISM SAMPLE

Chp.:Erika Nurmi M.D., 760 Westwood Plz, 48-256B, Los Angeles, CA 90024, Co-Author(s): Samantha L. Spilman, Ksennia K. Badashova, James T. McCracken, MD and the RUPP Autism Network

SUMMARY:
Objective: Treatment with antipsychotic medications is complicated by significant health and psychosocial consequences of associated weight gain, a common adverse event. In adults, prior data suggest a role for the cannabinoid 1 (CNR1) receptor in appetite, obesity, and antipsychotic-related weight gain. We examined four single nucleotide polymorphisms (SNPs) capturing the common genetic variation at the CNR1 locus for association with risperidone-induced weight gain in children. Methods: Four tagging polymorphisms were tested for association with weight gain during 8 weeks of risperidone treatment in a sample of 182 autistic children participating in the RUPP (2002) and RUPP-PI (2009) Risperidone studies. Results: The T-allele of a functional variant in the CNR1 promoter (rs806378) predicted an allele dosage-dependent percent increase in body weight (p=0.009, Cohen's d effect size TT vs. CC = 0.6), consistent with published results in adults. This promoter SNP appears to impact a binding site for a transcription factor involved in regulating hypothalamic feeding drives. Association with fat mass and BMI of the G-allele of a second synonymous SNP (rs1049353) within the coding region of CNR1 was reported in several studies. In our data, the G-allele conferred an independent risk for weight gain (p=0.0003), suggesting allelic heterogeneity at this locus. Both results survive correction for multiple testing. Conclusions: These results support prior evidence for the role of CNR1 in body weight and as a moderator of weight gain related to antipsychotic exposure. The allelic heterogeneity revealed by comprehensive screening at this locus may help to explain disparate findings in published studies. While significant effects in weight gain were observed after only 8 weeks, even those subjects in the low genetic risk group gained substantial weight during the trial, underscoring multifactorial contributions to this adverse event. Understanding individual variability in treatment

effects may shape clinical decision-making and the development of new therapeutics.

NR09-61

GENOTYPE DIAGNOSIS OF DEPRESSION SUBTYPE: "DEPRESSION GENOTYPE"

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SUMMARY:
Objective: The serotonin transporter gene promoter polymorphism (5HTTLPR) has been associated with individual stress responses1 as well as the presence of mental illnesses such as, anxiety, depression, alcoholism, personality disorder and bipolar disorder2. Depression is also known to be heterogeneous, and there have been many subtype categorizations proposed to distinguish each subtype of depression. There was, however, no definite explanation why we observe those universal associations. We speculate that the "reactivity" explained by the function of the short allele of 5HTTLPR is playing a key role in uniting these various phenotypes of mental illness. The objective of this review is to summarize the potential role of the 5HTTLPR genotype in explaining the characteristics of depression subtypes. Data Sources: To integrate the 5HTTLPR genotype and subgroup categorization of depression, PubMed was searched with keywords "depression, serotonin transporter gene, 5HTTLPR, melancholic, atypical, endogenous, reactive, trauma, pharmacotherapy and psychotherapy", language published in English. Study Selection: This review focused on the reports related to the association between the 5HTTLPR genotype and several subtypes of depression as follows: history of stressful life event, reactive versus endogenous, atypical versus melancholic, bipolarity versus unipolarity, and treatment response to psychotherapy versus pharmacotherapy such as SSRI. Data Extraction and Synthesis: Associations between 5HTTLPR and subtypes of depression were integrated. Many research findings suggest several similarities among the s/s genotype and subtypes of depression, including depression with a history of stressful life event, reactive, atypical, and bipolarity. The l/l genotype seems to have many characteristics in common with depression without stressful life event, endogenous, melancholic, and better response to medication. Conclusions: The genotype difference of 5HTTLPR could be helpful to distinguish subtypes of depression. The 5HTTLPR genotype, combined with other genotypes, could give us a better understanding of the pathophysiology of depression, leading to the recognition of new subtypes of depression, "depression genotype".

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NR09-62

MONOAMINE GENE VARIANTS PREDICT ANTIPSYCHOTIC-INDUCED WEIGHT GAIN IN THE NIMH RUPP AUTISM RISPERIDONE SAMPLES

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SUMMARY:
Objective: Weight gain is a frequent adverse event associated with antipsychotic exposure carrying health consequences and complicating treatment choices. In adults, prior studies suggest that differential risk for obesity and antipsychotic-related weight gain are influenced by common variants in the serotonin 2C (HTR2C), alpha 2A adrenergic (ADRA2A), and dopamine D2 (DRD2) monoamine receptors; however, the extent of variation queried at these loci has been limited. We extensively tested polymorphisms in key monoaminergic gene targets for association with risperidone-induced weight gain in the two NIMH RUPP Risperidone RCT childhood autism samples. Methods: Gene variants were examined for association with risperidone-associated weight gain during the first 8 weeks of similar risperidone exposure per protocol in a sample of 182 autistic children from the RUPP (2002) and RUPP-PI (2009) Risperidone studies. Results: Two of three SNPs capturing the common genetic variability at ADRA2A

showed significant independent associations with risperidone-induced weight gain, suggesting allelic heterogeneity at this locus. C-allele carriers at both rs1800544 and rs3750625 were at greater risk compared to minor allele homozygotes (p=0.005 and p=0.006 respectively), consistent with prior adult observations at the former marker. Both results survive correction for multiple tests. A variant in the first intron of DRD2 (rs1079596) predicted an allele dosage-dependent percent increase in body weight (p=0.006). Three SNPs shown to be protective against antipsychotic-related weight gain in HTR2C (5HT2C) in several studies of adults displayed similar trends in our study and were in modest linkage disequilibrium, forming a 5' haplotype. This ATC haplotype (consisting of the rs3813928 A-allele, rs3813929 T-allele, and rs518147 C-allele) conferred a strongly protective effect, with only 20% of boys hemizygous for this haplotype gaining >10% of their body weight compared to 53% of those with other haplotypes, (p=0.01) and explained 16.6% of the variance in weight gain in boys (effect size Cohen's d=0.5). Conclusions: Pharmacogenomic influences on monoamine signaling in antipsychotic-associated weight gain share similarities in adults and children. In the present study, these effects are robust enough to be detected after only 8 weeks of exposure. Our data suggest that additional variants at these loci contribute to variability in weight gain with antipsychotics. The variance explained by individual SNPs is modest, highlighting the multifactorial basis of this adverse event, which likely includes the contribution of other factors, gene variants, and gene-gene and gene-environment interactions. Pharmacogenomics holds considerable promise in explaining individual variability in treatment effects and may help in guiding clinical intervention and drug development.

NR09-63

META-ANALYSIS AND GENETIC ASSOCIATION OF THE BRAIN-DERIVED NEUROTROPHIC FACTOR (BDNF) GENE WITH OBSESSIVE-COMPULSIVE DISORDER (OCD)

Chp.:Gwyneth Zai M.D., R-76, 250 College Street, Toronto, OK M5T 1R8 Canada, Co-Author(s): Clement Zai, Ph.D., Eliza Burroughs, B.Sc., James L. Kennedy, M.D., Margaret A. Richter, M.D.

SUMMARY:

Obsessive-compulsive disorder (OCD) is a common and debilitating psychiatric condition with a clear genetic component, in which neurodevelopmental mechanisms may be etiologically important. Brain-derived neurotrophic factor (BDNF) is an interesting candidate gene due to its role in neurodevelopment and previous reported positive associations with OCD. We examined association at six polymorphic sites across the BDNF gene, including (GT)n and Val-66-Met, in two independent samples comprising 150 small nuclear families using FBAT and 83 case-control pairs using Pearson ?2 test and COCAPHASE program. A meta-analysis was conducted based on nine studies of Val-66-Met in OCD using the Catmap R software. In our family-based analyses, we found no biased transmission of any alleles or haplotypes; neither were these associated with Yale-Brown Obsessive-Compulsive Scale severity score or age at onset. Our case-control analyses showed nominally significant results for rs110301104 (P=0.018), rs2049045 (P=0.033), and the Val allele of Val-66-Met (P=0.051); the latter showed preferential transmission in males (P=0.035), and was contained within an associated four-marker haplotype (P=0.039). Combined testing of Val-66-Met in the two samples was similarly significant overall (P=0.034), but more so in males (P=0.012). The Val-66-Met meta-analysis in OCD was not significant. Conclusion: We found further evidence suggesting that variation at or near the BDNF gene may contribute to susceptibility to OCD in one of two independent samples. However, meta-analysis of the Val-66-Met polymorphism did not support involvement of this locus in OCD. Further investigation is required to elucidate the possible role of the BDNF gene in contributing to vulnerability to OCD.

NR09-64

KLEINE-LEVIN SYNDROME: EPISODIC HYPERSOMNIA, COMPULSIVE EATING, AND HYPERSEXUAL BEHAVIOR IN A 21 YEAR OLD MALE US MARINE OF FILIPINO DESCENT

Chp.:Marc Capobianco M.D., 34800 Bob Wilson Drive, San Diego, CA 92134, Co-Author(s): Marc A Capobianco, M.D., Donald Hurst, M.D.

SUMMARY:

Objectives
Kleine–Levin syndrome (KLS) is a rare disorder,

seen most often in adolescent white males, characterized by recurrent episodes of hypersomnia and, to various degrees, behavioral and cognitive disturbances, hyperphagia, and hypersexuality. We describe a case in a 21 year old Filipino marine. Method The patient is an active duty US Marine of Filipino descent, who presented with intermittent hypersomnia, ranging from seven to fourteen days, recurring over two years. Between episodes he was asymptomatic. When awake, he was irritable and had hypersexualized behavior, including groping women and public masturbation. Additionally, his appetite was significantly increased, to the point of aggressively taking food from the plates of other patients and demanding entry into the pantry. He recalled the majority of his behaviors and was quite embarrassed and apologetic. The patient's first episode occurred when he was nineteen years old, after smoking marijuana, and lasted twelve days. The second episode was approximately eighteen months after the first, of seven days duration, and occurred after drinking alcohol. The two most recent episodes occurred at age twenty-one while serving in the US Marine Corps. Both episodes occurred after alcohol intoxication, were separated by three weeks, lasted twelve days, and required inpatient psychiatric hospitalizations. Results The patient was examined both during and between episodes. Medical history, vital signs, laboratory tests, neurological examination, computed tomography brain scan and brain magnetic resonance imaging scans were all normal. Electroencephalographic testing during the episode was normal. Conclusion This report calls attention to Kleine-Levin Syndrome which can easily be mistaken for other psychiatric or neurologic illnesses leading to unnecessary psychopharmacologic interventions. A brief review is made emphasizing the pathophysiology, diagnosis and treatment of KLS. Further research in the natural history of KLS is needed to determine whether early intervention would improve long-term prognosis.

NR09-65

THE SAFETY OF DEXTROMETHORPHAN/ QUINIDINE IN CLINICAL TRIAL PARTICIPANTS TAKING SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIS)

Chp.:Andrea Formella Pharm.D., 101 Enterprise, Suite 300, Aliso Viejo, CA 92656, Co-Author(s): Randall Kaye, M.D., Adrian Hepner, M.D.

SUMMARY:
Background: The combination of dextromethorphan 20mg + quinidine 10mg was recently approved by the FDA for the treatment of pseudobulbar affect (PBA), a neurological condition characterized by involuntary outbursts of laughter and crying that may be incongruent with mood. PBA commonly occurs in patients with underlying neurologic diseases, such as multiple sclerosis (MS) and amyotrophic lateral sclerosis (ALS). Because DM is a weak serotonin reuptake inhibitor and Q is a potent CYP2D6 inhibitor, when combined with SSRIs, DMQ could potentially increase the risk for serotonin syndrome, characterized by a cluster of features including altered mental state, neuromuscular and autonomic hyperactivity. Objective: To evaluate the safety of DMQ in clinical trial participants with PBA concomitantly using SSRIs. Methods: Patients with PBA (n=946) and underlying ALS (46.4%) MS (39.2%), or other neurological conditions (14.4%), having both short term and long-term exposure to any dose combination of DMQ in uncontrolled and Phase 3 controlled trials were included in the analysis. Data were pooled and stratified by concomitant use of SSRIs. Descriptive statistics were used to evaluate potential differences in treatment-emergent adverse event (TEAEs) profiles. Results: DMQ exposure included doses of 30mg DM/30mg Q; 30mg DM/10mg Q; and 20mg DM/10mg Q. A total of 17.1% (n=162) of PBA patients who received any dose of DMQ also received one or more SSRIs as concomitant medication. The percentage of patients in this group with at least one TEAE (95.7%) was slightly higher than for patients not receiving SSRIs (87.5%). Discontinuations for AEs were 22.8% in the SSRI group and 24.0% in the group not using SSRIs. In patients who received SSRIs, the incidences of gastrointestinal disorders and nervous system disorders (66.7% and 59.9%, respectively) were slightly higher relative to those who did not receive SSRIs (56.1% and 50.3%, respectively). Common TEAEs that occurred with higher incidence in patients receiving SSRIs included dysphagia (14.8% vs. 7.2%), peripheral edema (13.6% vs. 6.6%), falls (31.5% vs. 20.0%), pain in extremities (19.1% vs. 7.5%), musculoskeletal pain (11.7% vs. 4.1%), insomnia (14.2% vs. 7.0%), depression (19.1% vs. 4.1%) and cough (15.4% vs. 8.6%). No occurrence of serotonin syndrome was observed. Conclusions: Limited exposures at the approved dose of DM 20mg/Q 10mg precluded a

specific safety evaluation at this lower dose when combined with SSRIs; most exposure to SSRIs occurred at DMQ doses higher than the approved combination. There were no reported cases of serotonin syndrome with any DMQ dose. However, SSRIs were associated with a higher incidence of some TEAEs. Nevertheless, this preliminary evaluation suggests DMQ treatment was generally well tolerated when coadministered with SSRIs. This study and presentation were supported by Avanir Pharmaceuticals.

NR09-66

AN INTEGRATED TREATMENT FOR PATIENT WHIT ORGANIC SYNDROME: A SYNCHRONOUS-SEQUENTIAL MODEL IN FRONTO-INSULAR DAMAGE PATIENT.

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SUMMARY:
Methods: Mr G., a 60years old, had a stroke in 2006, involving the fronto-insular area, both cortically and sub-cortically. We met this patient in October 2008. In order to assess the correct diagnosis and the evident and serious cognitive impairment, he made, at baseline and after two years treatment; we acquired structural and functional magnetic resonance data using DTI and spectroscopy sequences of Ms. G and we administered her a full neuropsychological assessment [WAIS-R, MMPI-II, Raven's Progressive Matrices, Wisconsin card sorting test, List words containing Rey (identification trial), Rey complex figure, F.A.S., Neuropsychological Interview] at baseline and after two years treatment. This battery of tests showed a deficit of executive functions with a major involvement of the affective functions: the patient was no longer able to control anxiety and worries about their sons. Ms. G. received an integrated treatment according to the Synchronous-Sequential Model: Pharmacotherapy (to control the mood disorders, the anxiety, the phobic thoughts and the sleep), Psychotherapy (a Cognitive-Behavioural Intervention to reduce obsessive thoughts, improving alternative strategies to manage her worries) and Neuropsychological Rehabilitation (a personalized program of cognitive rehabilitation based on exercises of planning and solving problems of everyday life). Results: After tow years the patient showed a decrease of anxious symptoms and a better quality of life. The MRI was unchanged from previous exam. Now we are working for the cognitive results, the patient will be submitted to a two-years follow-up assessment. Conclusions: The Synchronous-Sequential Model seems to have good efficacy with patients who had organic syndrome with a psychological aspects. According to the clinical results, this Model represents a new form of intervention that could give more improvement in fewer time and in more levels (psychosocial, cognitive, symptomatic, emotional etc).

NR09-67

ANALYSIS OF TIME TO ONSET OF ACTION OF DEXTROMETHORPHAN/QUINIDINE FOR TREATMENT OF PSEUDOBULBAR AFFECT IN A RANDOMIZED PLACEBO-CONTROLLED TRIAL (STAR)

Chp.:Adrian Hepner M.D., 101 Enterprise, Suite 300, Aliso Viejo, CA 92656, Co-Author(s): Randall Kaye, M.D.

SUMMARY:
Background: PBA is a neurologic disorder of emotional affect characterized by involuntary and inappropriate outbursts of laughing or crying, that can significantly impair social and occupational function. PBA occurs secondary to common neurologic conditions, including amyotrophic lateral sclerosis (ALS) and multiple sclerosis (MS). DM/Q is a combination product containing the uncompetitive NMDA receptor antagonist/ sigma-1 receptor agonist dextromethorphan, and low-dose quinidine, a potent CYP2D6 inhibitor, to increase DM plasma concentrations. DM/Q significantly reduced PBA episodes in randomized, controlled clinical trials. Objective: To evaluate the rapidity of onset of action of dextromethorphan/ quinidine (DM/Q) for treatment of pseudobulbar affect (PBA). Design/Methods: Patients with PBA secondary to MS or ALS were randomized to twice daily, double-blind treatment with DM/Q 30/10 mg (DMQ-30), DM/Q 20/10 mg (DMQ-20), or placebo for 12 weeks. The primary outcome was change in daily PBA episodes during treatment. Time to onset of action, defined as first occurrence of a 30% decrease from baseline in PBA episodes, was an additional outcome. Results: The study randomized 326 patients to DMQ-30 (n=110), DMQ-20 (n=107), or placebo (n=109). By Week 1

significantly more patients in the DMQ-30 (74.8%; P=0.01) and DMQ-20 (73.7%; P=0.02) groups met onset criteria compared with placebo (57.3%). However, at subsequent timepoints, progressively greater percentages in all groups met onset criteria, reaching 100% by week 12 and indicating that the prespecified onset criterion was insufficiently stringent. Thus a post-hoc analysis of percent change in PBA episodes by week was conducted to further explore onset. By week 1, PBA episodes decreased by 47% (DMQ-30;P=0.004), and 50% (DMQ-20;P=0.001) vs 23% (placebo); differences in both DMQ groups remained significant vs. placebo at all subsequent visits. Conclusions: DMQ-30 and DMQ-20 demonstrated rapid onset of action to decrease PBA episode rates, with significant differences over placebo by week 1 of treatment. This study and presentation were supported by Avanir Pharmaceuticals.

NR09-68

PREMATURITY AND LOW BIRTH WEIGHT AS RISK FACTORS FOR THE DEVELOPMENT OF AFFECTIVE DISORDER, ESPECIALLY DEPRESSION AND SCHIZOPHRENIA: A REGISTER STUDY

Chp.:Jens Knud Larsen M.D., Niels Andersensvej 65, Hellerup, 2900 Denmark, Co-Author(s): Leslie Foldager, Birgitte B. Bendsen, M.D., Povl Munk-Jørgensen, Dr.Med.Sci.

SUMMARY:
Introduction: Risk factors for the development of affective disorder have received considerable attention in psychiatric research circles in recent years. On one hand, it is well established that genetic disposition, childhood adversity and life events in adulthood contribute to the development of mood disorders, possibly through the effects on the hypothalamic-pituitary-adrenal (HPA) axis. Whether the environment encountered in foetal life plays a role in determining biological susceptibility to depression is unclear, although recent findings suggest that impaired neurodevelopment during foetal life predisposes to depression. Aim of the study: The main hypotheses were that low birth weigt (LBW: weight < 2500 gram) and premature birth (PMB: born before 37th week of gestation) increase the risk of developing psychiatric disorders, especially depression. Methods: Included were live born children born in Denmark and registered in the Danish Medical Birth Register from 1974 to 1990. Excluded were stillborn and children dying or changing civil registration number status to inactive within the first day of life. Due to missing information on gestational age from the years 1974 to 1977 these years are excluded at this time. Time from birth until first registered psychiatric admission with any or a specific psychiatric diagnosis was obtained from the Danish Psychiatric Central Register until November 2010. - In a previous study registration in the Danish Psychiatric Central Register was recorded until 29 August 2003 (1). The disorders specifically investigated were affective disorder (AD: ICD-8:296;ICD-10:F3) and schizophrenia (SZ:ICD-8:295;ICD-10:F2). Psychiatric registrations were obtained for inpatients in the whole study period and from outpatients and emergency room contacts since 1995. Statistics: We applied Cox proportional hazards regression with subjects being at risk from time of birth. Results are given as hazard rate ratio (HR) with 95% confidence intervals (CI) comparing low birth weight against normal, premature birth versus born on time (or late) and each of these adjusted for the other. The null hypothesis HR=1 was tested with a likelihood ratio test. A significance level of 5% was assumed. Results: A total of 680,411 individuals (49% females and 51% males) remained after excluding those missing the measures of gestation age (325,220) or birth weight (1,924) of whom 954 would also be excluded by missing gestation age). Among these 680,411 persons 16,895 (11,551 females) had at least one affective disorder diagnosis, 7,423 (3,232 females) had at least one schizophrenia diagnosis, and 2,138 (1,245 females) had at least one or both diagnoses. The analyses showed that low birth weight (adjusted for premature birth and stratified by gender) significantly increased the risk of receiving psychiatric diagnoses later in life in general (HR=1.31;CI:1.26-1.36;P=1 .1e-43) and in specific for affective disorders (HR=1.11;CI:1.03-1.21;P=0.007) and schizophrenia (HR=1.42;CI:1.27-1.59;P=1.6e-9). Conclusion: The present analysis based on a large dataset from the Danish registers confirm previous findings (1) that prematurity and low birth weight are risk factors for subsequent development of depression and schizophrenia. Reference: Larsen JK, Bendsen BB, Foldager L, Munk-Jørgensen P. Acta Neuropsychiatrica 2010;22:284-291.

NR09-69

SPATIAL VERSUS VERBAL MEMORY IMPAIRMENTS IN PATIENTS WITH FIBROMYALGIA

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SUMMARY:
Mounting evidence suggests that individuals with fibromyalgia (FM) have impairments in general cognitive functions. However, few studies have explored the possibility of dissociation between verbal and visuospatial memory impairments in FM. Therefore, the purpose of this study is to investigate asymmetrical impairment of cognitive functions between verbal and visuospatial memory and between short-term and long-term memory. Neuropsychological assessment was carried out on 23 female patients with FM and 24 female healthy controls. Verbal memory abilities were assessed using Korean version of Rey Auditory Verbal Learning Test (KAVLT) and Digit Span task while visuospatial memory abilities were assessed using Korean version of Rey Complex Figure Test (KCFT) and Spatial Span task. Analysis of covariance was used to assess group differences in cognitive test performances, after controlling for depression. Two groups did not significantly differ in terms of age, years of education, estimated verbal and performance IQ but patients scored their depressive symptoms worse than controls on the Beck Depression Inventory. Significant group differences were found in immediate and delayed recall of the KCFT (F1,44=6.49, p=.014 and F1,44=6.96, p=.011 respectively), while no difference was found in immediate and delayed recall of the KAVLT. In terms of short term memory, neither Digit Span nor Spatial Span task showed any difference between groups, regardless of repeating forward or backward. These findings suggest that spatial memory abilities may be more impaired than verbal memory abilities in patients with FM.

NR09-70
EVALUATION OF THE SAFETY OF DEXTROMETHORPHAN/QUINIDINE FOR TREATMENT OF PSEUDOBULBAR AFFECT IN PATIENTS ACROSS A RANGE OF NEUROLOGICAL CONDITIONS

Chp.:Laura Pope Ph.D., 101 Enterprise, Suite 300, Aliso Viejo, CA 92656, Co-Author(s): Adrian Hepner, M.D., Randall Kaye, M.D.

SUMMARY:
Background: Pseudobulbar affect (PBA) is characterized by involuntary outbursts of laughing or crying secondary to neurological disease or injury. A combination product (DMQ-20) of dextromethorphan 20mg (NMDA receptor antagonist/sigma-1 receptor agonist) + quinidine 10mg (antiarrhythmic acting as a CYP2D6 inhibitor) received FDA approval to treat PBA. In randomized, controlled trials DMQ-20 significantly reduced PBA episodes secondary to amyotrophic lateral sclerosis (ALS) or multiple sclerosis (MS). Objective: Evaluate long-term safety and tolerability of DMQ in patients with PBA across a range of neurological conditions. Methods: Patients with PBA in an open-label, multicenter study were treated with DMQ 30mg/30mg every 12 hrs for up to 52 weeks with an optional extension. Safety, analyzed by descriptive and inferential statistics, included incidence of adverse events (AEs), serious AEs (SAEs), changes in laboratory values, vitals signs, physical examinations, and electrocardiography (ECG). Results: Common underlying conditions in the 553 treated PBA patients were: MS (40.3%); ALS (31.8%); stroke (8.3%); traumatic brain injury (3.8%); primary lateral sclerosis (2.9%); Parkinson's disease (2.7%); and Alzheimer's disease (2.5%). Three hundred patients (54.2%) completed >/=1 year, and 382 (69.1%) completed >/=6 months of treatment. AEs were reported in 508/553 (91.9%) in the treatment phase and 227/262 (86.6%) in the extension. The nature, frequency, and intensity of AEs were generally reflective of a population with serious neurological conditions. The most common AEs during the treatment phase included nausea (24.8%); headache (22.8%); dizziness (excluding vertigo; 19.5%); fall (16.5%); diarrhea (16.3%); fatigue (14.6%); and weakness (13.7%). The most common AEs during the extension phase included fall (18.7%); nasopharyngitis (18.3%); headache (16.4%); and arthralgia (14.5%). SAEs were reported in 22.8% in the treatment phase and 29.4% in extension phase; none were considered treatment-related. Discontinuations due to AEs were 26.9% in the treatment phase and 14.9% in the extension phase. A total of 47 patients died during the treatment phase and 32 during the extension phase. Most deaths were associated with progression

of ALS; of the 79 patients who died, 64 had ALS, and the remaining 15 had other pathology of the central nervous system. None of the deaths was judged to be related to study drug. There were no clinically relevant changes from baseline in vital signs or physical examination results. Two patients had a QTc value >/=500 ms during the extension phase. Overall ECG results suggested DMQ had no clinically meaningful effects on myocardial repolarization nor on any other ECG variable. Conclusions: Long-term treatment with DMQ 30/30 appeared safe and well tolerated in patients with PBA. Consistent with expected clinical course of the conditions underlying PBA, SAEs and death by natural causes occurred in this study population. This study and presentation were supported by Avanir Pharmaceuticals.

NR09-71

CHRONIC INFLAMMATION IN SCHIZOPHRENIA – EFFECT OF OBESITY ON INFLAMMATION MARKERS

Chp.:Suoma Saarni M.D., PO Box 30, Helsinki, 00270 Finland, Co-Author(s): Britt-Marie Loo, PhD, Samuli I. Saarni, MD, PhD, Jonna Perälä, MD, Laura Pirilä, MD, PhD, Markku Heliövaara, MD, PhD, Jouko Lönnqvist, MD, PhD, Antti Jula, MD, PhD, Suvisaari J, MD, PhD

SUMMARY:
Objective: Chronic inflammation is considered as a possible etiological factor for psychotic disorders (Hanson & Gottesman, 2005; Potvin et al., 2008). Both obesity and schizophrenia are associated with elevated inflammation markers, i.e. cytokine levels (Mathieu, Poirier, Pibarot, Lemieux, & Despres, 2009; Potvin et al., 2008). We examined if elevated cytokine levels in subjects with schizophrenia would be explained by increased visceral obesity and fat percentage seen in these patients(Saarni et al., 2009). Method: From a population-based study (Perälä et al. 2007), we analysed serum samples from all persons with DSM-IV primary psychotic disorder (schizophrenia n=45) and controls matched by age, sex, and region of residence. Serum levels of C-reactive protein (CRP) tumor necrosis factor alpha (TNFa), interleukin-1 receptor antagonist (IL-1ra), interleukin-2 and its soluble receptor's alpha subunit (sIL2Ra) and interleukin-6 were determined. Height, weight, waist circumference (WC), fat percentage, fat free mass and segmental muscle mass were measured using segmental, multi-frequency bioimpedance analysis. Results: Persons with schizophrenia were found to have elevated levels of IL-1ra, sIL2Ra and CRP compared to matched controls ($p<0.005$). Serum concentration of sIL2Ra remained statistically significantly elevated after adjusting for body mass index (BMI), fat percentage, and WC. For IL-1ra and CRP adjusting for BMI, waist circumference did not change the result, whereas after adjusting for fat percentage the result weakened to marginally statistically significant ($p=0.06$). Adjusting for antipsychotic medication did not change the result for sIL2Ra or IL-1ra, but weakened the effect on CRP. Further, we found no statistically significant interactions between diagnostic group and body composition variables for IL-1ra and sIL2Ra. For CRP we found the association between CRP and fat percentage to be statistically significantly stronger among subjects with schizophrenia compared to controls. This was also seen for WC but the interaction was not statistically significant ($p=0.09$). Conclusions: Based on these findings, elevated serum concentration of s-IL2ra seen in patients with schizophrenia is not due to abdominal obesity and elevated fat percentage of these patients. However, higher fat percentage partly contributes to increased levels of IL-1ra and CRP.

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NEW RESEARCH SESSION 10
May 17, 2011
10 – 11:30 AM
Hawaii Convention Center, Exhibit Hall, Level 1

NR10-01

MEASURING THE EFFECTS OF MENTAL ILLNESS STIGMA ON HIV RISK BEHAVIOR OF ADULTS IN PUBLIC PSYCHIATRIC

CARE IN RIO DE JANEIRO, BRAZIL

Chp.:Cristiane Borges M.D., 1051 Riverside Drive unit 15, New York, NY 10032, Co-Author(s): Karen McKinnon, M.A., Melanie Wall, Ph.D., Eric Wright, Ph.D., Curtis Dolezal, Ph.D., Katherine Elkington, Ph.D., Claudio G. Mann, R.N., Diana Pinto, Ph.D., Milton Wainberg, M.D

SUMMARY:
Objective: Mental illness stigma (MIS) and its effects on the high rates of sexual risk behavior of people receiving psychiatric care have been ignored. This study addresses gaps in both mental illness stigma and HIV prevention research about direct effects of negative attitudes about the sexuality of psychiatric patients. Modified labeling theory suggests that stigma influences behavior through both social environmental and social psychological processes. Adapting Link and Phelan's theoretical MIS model, we developed and tested an instrument to measure MIS and HIV risk behavior of adults receiving psychiatric care in Rio de Janeiro, Brazil. Method: As part of a Brazilian HIV prevention intervention RCT for people with severe mental illness (SMI), funded by the National Institute of Mental Health (NIMH), outpatients who were sexually active in the last three months were recruited at four community mental health clinics and four major psychiatric hospitals in Rio. Detailed interviews were conducted, eliciting sexual risk behaviors in the prior three months (SERBAS-B) and MIS and its direct effects on sexuality and sexual behavior (pMISSHQ). Between June 2007 and November 2009, 3811 outpatients were screened, 1348 participants were eligible and interested, and 641 (47.6%) consented and completed the baseline interview. Results: The sample was 58.0% female, and the mean age was 42.8 (SD=10.15); 70.5% had SMI, and 32.6% of our baseline sample reported unprotected sex with multiple or casual partners. Participants reported many direct experiences of individual discrimination in their sexual lives which were associated with HIV risk. Those who were more frequently exposed to negative attitudes about their sexuality in their treatment-setting reported having significantly more sex partners and those who did not feel they could choose the course of their sex lives because of their mental illness were significantly more likely to have had unprotected sex in the past three months. Support for the utility of the model's four MIS domains was found, with scales for Societal Stigma and Individual Discrimination showing acceptable alphas; the other two scales, Structural Stigma and Social-Psychological Processes, had individual items with acceptable alphas but too few items to form usable scales. BPRS scores and sexual risk behaviors were significantly associated with all four MIS domains we measured, suggesting that the effect of mental illness stigma on the sexual lives and HIV risk behaviors of people with mental illness should be explored for HIV prevention and sexual health promotion opportunities. Conclusions: Stigma about mental illness is shaping the HIV epidemic among people with SMI. Mental health professionals should consider strategies to address the stigma of mental illness as part of treatment and a more comprehensive approach to HIV prevention in this high- risk population.

NR10-02

BRAIN-DERIVED NEUROTROPHIC FACTOR IN GENERALIZED ANXIETY DISORDER: RESULTS FROM A DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY OF DULOXETINE TREATMENT

Chp.: Susan Ball Ph.D., Lilly Corporate Center, Indianapolis, IN 46285, Co-Author(s): Lauren Marangell, M.D., Sarah Lipsius, Ph.D., James M. Russell, M.D.

SUMMARY:
Objective: To examine baseline levels of brain-derived neurotrophic factors (BDNF) and response to treatment in patients with generalized anxiety disorder (GAD). Method: Patients were from China , met criteria for DSM-IV GAD, had a Hospital Anxiety and Depression Rating Anxiety (HADS-A) subscale score = 10, and a Sheehan Disability Scale (SDS) global functioning total score = 12 at baseline. Study design was double-blind therapy for 15 weeks with duloxetine 60–120 mg or placebo. Efficacy measures included the HADS-A and Hamilton Anxiety Rating Scale (HAMA) total score. Baseline BDNF levels were examined based on anxiety severity or functional impairment. Response to treatment was defined as =50% improvement from baseline in HADS-A or HAMA, and remission as HAMA total score =7 at endpoint. Change from baseline to endpoint for BDNF by treatment group was analyzed using ANCOVA models with baseline BDNF level as a covariate. Results:. Baseline BDNF levels (N=168) did not differ significantly between treatment groups based on anxiety severity or functional impairment.

Patients who received duloxetine (n=88) had a significantly greater mean increase in BDNF level (957.80 picograms/milliliter) compared with placebo (n =80; 469.93 pgrms/ml) (P=.007). Patients who met HAMA response with either treatment (n=112) had significant within group increases from zero in BDNF levels from baseline to endpoint (P=.032). Duloxetine-treated patients who had medium to low levels of BDNF at baseline exhibited the greatest response rate (80%) relative to placebo (44.4%;P=.015). Patients who met remission criteria with either treatment (n=68) had significant increases from zero in BDNF from baseline (P=.008), as did duloxetine remitters (P=.006). Conclusions: BDNF levels significantly increased with duloxetine treatment for GAD. Further research is needed to examine the relationship between efficacy and BDNF levels for GAD. Research was supported by Eli Lilly and Company

NR10-03

THE PREVALENCE OF POSTTRAUMATIC STRESS DISORDER AMONG NORTH KOREAN DEFECTORS

Chp.:Jong Hyuk Choi M.D., Junggu Eulgiro 6go 18-79, Seoul, 100-799 South Korea, Co-Author(s): Hyun-Chung Kim, MD., Byeong Chang Kim, MD., Ph.d., Dong Kyun Koh, MD.

SUMMARY:
Background : The number of North Korean Defectors to South Korea have been gradually increasing in the past decade to 17,171. North Korean defectors have many psychiatric illnesses. The focus of this study is to describe both the prevalence of Posttraumatic Stress Disorder(PTSD) and the demographic characteristics of North Korean defectors. Methods : 193 North Korean defectors that have just received entery permissoin to South Korea were recruited from settlement training program operated by the South Korean government. PTSD criteria were determined using Structured Clinical Interview for DSM-IV (SCID). We also applied 17-item Hamilton Rating Scale for Depression (HAMD) and 14-item Hamilton Rating Scale for Anxiety(HAMA). Results : 17.6% (34/191) of subjects met the diagonostic criteria for full PTSD and 14.5% (28/191) for partial PTSD. However, there were no statistical differences between the three diagnostic groups with respect to age, gender, marriage, or time spent in other countries. Conclusion : Recent North Korean defectors to the Republic of Korea have a moderately high rate of PTSD, a finding comparable to that reported in other studies. It is quite likely these individuals require ongoing treatment in addition to educational experience and training in order to fit into South Korean society.

NR10-04

PLASMA SEROTONIN LEVEL OF VIETNAM WAR VETERANS WITH POSTTRAUMATIC STRESS DISORDER AND SYMPTOM SEVERITY

Chp.:Moon Chung M.D., 701 Chambord @ Seochodong Seochogu, Seoul, 137-080 Korea, Co-Author(s): Suk Hoon Kang, MD, Tae Young Lee, MD, Myung Hee, MD, Tae Young Kim, MD, Hae Kyung Chung, MD, Jin Hee Choi, MD

SUMMARY:
Objective This study was conducted to examine the relationship between plasma serotonin levels and post traumatic stress disorder (PTSD) symptoms in chronic PTSD patients with long term pharmacological treatment. Methods Fourteen Vietnam War veterans with chronic PTSD and 28 non-PTSD patients were recruited consecutively. Combat exposure scale(CES), Mississippi scale for combat-related posttraumatic stress disorder(M-PTSD), clinician administered PTSD scale(CAPS), Hamilton rating scale for depression(HAMD), and Hamiltion anxiety scale(HAMA) were used to evaluate PTSD symptom severity. We measured plasma serotonin levels by high performance liquid chromatography(HPLC). Results The plasma serotonin levels were significantly higher in PTSD group than control group(1st p=0.036, 2nd p=0.006). The score of M-PTSD(p<0.001), CAPS(p<0.001), HAMD(p<0.001), and HAMA(p<0.001) were significantly higher in PTSD group than control group. There were no significant relationships between plasma serotonin and PTSD symptoms. Conclusion Though the level of plasma serotonin were higher in chronic PTSD patients with long-term pharmacological treatment than

non-PTSD patients, the core symptoms of PTSD appeared partially in PTSD patients. It might be related with various neurotransmitter systems. Therefore further research is needed for other neurotransmitters, a neuroendocrine system and so on to improve treatment of PTSD.

NR10-05

COMPARISON OF TREATMENT PERSISTENCE BETWEEN SELECTIVE SEROTONIN REUPTAKE INHIBITORS AND MOCLOBEMIDE IN PATIENTS WITH SOCIAL ANXIETY DISORDER

Chp.:Yong-seok Kwon M.D., Deparment of psychiatry, Kangbuk Samsung hospital, Souel, 110746 South Korea, Co-Author(s): Jin-Sung Park,M.D.,Hyung-Kun yoon,M.D.,Se-Won Lim,M.D.,Ph.D., Young-Chul Shin,M.D.,Ph.D.,Kang-Seob Oh,M.D.,Ph.D.

SUMMARY:
Introduction: The efficacy of several antidepressants, such as selective serotonin reuptake inhibitors (SSRIs) and monoamine oxidase inhibitors (MAOIs), is being well studied in the treatment of patients with social anxiety disorder (SAD). Recently, research has shown that treatment duration is the only factor that can significantly predict treatment response in SAD. The present study aimed to compare treatment durations and dropout rates in patients with SAD who were taking either SSRIs or reversible inhibitor of MAO-A (RIMA, moclobemide). Methods: We analyzed 172 patients diagnosed with SAD using the Korean version of the MINI International Neuropsychiatric Interview Plus. Depending on their medication, we divided the patients into two groups, SSRIs (n = 54) or moclobemide (n = 118). Then, we compared demographic, clinical and treatment related variables. Results: The two treatment groups differed in the number of patients showing other psychiatric comorbidity, of which there were 34 in the SSRIs (62.96%) and 43 in the moclobemide (36.44%, p = .001). Treatment duration (weeks) was significantly longer with SSRIs (M = 46.41, median = 22.5, SD = 56.96) than with moclobemide (M = 25.53, median = 12.0, SD = 34.74, Z = -2.352, p = .019). Also, overall dropout rates was significantly lower with SSRIs than with moclobemide (81% vs. 96%, ?2 = 4.532, p = .033). Discussion: These findings suggest that SSRIs, which had better treatment persistence than moclobemide, may predict better treatment responses in the treatment of SAD. Thus, SSRIs might reasonably be the first choice for use in the treatment of SAD.

NR10-06

OBSESSIVE-COMPULSIVE SYMPTOMS DIMENSIONS AMONG PATIENTS WITH AND WITHOUT TICS

Chp.:Alice Mathis M.S., Dr ovÌdio pires de campos 785 - cerqueira cesar, Sao Paulo, 05403-010 Brazil, Co-Author(s): Pedro G. Alvarenga, M.D., Anna C. D. Alves, Ana G. Hounie,M.D., Ph.D., Victor Fossaluza, M.S., Eurípedes C. Miguel, M.D., Ph.D.

SUMMARY:
Background: Previous data suggest that Obsessive Compulsive Disorder (OCD) plus tics disorder or Tourette syndrome (TS) are a distinguish subgroup with different clinical phenotypes which probably reflects different subtypes. Methodology: Participants were recruited from a clinical sample of 813 consecutive OCD outpatients from the Brazilian Obsessive-Compulsive Disorder Consortium from 2003 to 2008. Inclusion criterion was: main psychiatric diagnosis of OCD (DSM-IV). Exclusion criterion: comorbid schizophrenia, mental retardation or any other condition that could impair the understanding of the protocol. All participants provided written informed consent. Instruments applied were: SCID-I, and SCID for Impulse-Control disorders; Y-BOCS, DY-BOCS, YGTSS. There were no self-report assessments. To compare the categorical variables concerning patients with and without tics chi-square tests were performed. To compare the same groups concerning the continuous variables Mann-Whitney non-parametric tests was performed. A significance level of 5% was considered. Results: 813 OCD patients (338 males, 475 females), of which 236 were OCD patients with tics and 577 had OCD without any tic disorder. Among OCD patients with tics, the mean age of appearance of first tics was 12.11 years (ep=0.549) and the mean severity of tics (YGTSS) was 27.20 (ep=1.418). Despite no differences between group regarding global scores (DY-BOCS), aggressive, sexual/ religious, symmetry and hoarding dimensions scored significantly higher among OCD plus tics group. Conclusions: Obsessive-compulsive symptoms dimensions have different pattern in OCD plus tics when compared to OCD without tics. The pattern of symptoms dimensions is complementary evidence that OCD plus tics consists

a particular group of obsessive-compulsive spectrum disorders.

NR10-07

LACK OF ASSOCIATION BETWEEN BRAIN-DERIVED NEUROTROPHIC FACTOR GENE VAL66MET POLYMORPHISMS AND GENERALIZED SOCIAL ANXIETY DISORDER IN KOREAN POPULATION

Chp.:Jin-Seong Park M.D., Gangbuk Samsung Hospital, Pyeong-dong, Jongno-gu, Seoul, Korea, Seoul, 110-746 Korea, Co-Author(s): Yong-Seok Kwon,M.D.,Hyung-Kun Yoon,M.D., Se-Won Lim,M.D.Ph.D., Young-Chul Shin,M.D.,Ph.D., Kang-Seob Oh, M.D.,Ph.D.

SUMMARY:
OBJECTIVE: Several lines of evidence suggest that brain-derived neurotrophic factor (BDNF) plays a role in the pathophysiology of anxiety. We analyzed the association of the BDNF gene polymorphism, 196G>A (val66met), in the coding region of exon XIIIA in chromosome 11p13 and generalized social anxiety disorder(GSAD). METHODS: Seventy three patients with GSAD and age-matched 152 control subjects were tested for the BDNF (val66met) polymorphism. A clinical interview and MINI international neuropsychiatric interview were conducted by trained psychiatrists to diagnose GSAD according to DSM-IV. Information about the symptomatic characteristics of GSAD were gathered by measuring various clinical scales(Hamilton anxiety rating scale, Retrospective Self Report of Inhibition, Spielberg State-Trait Anxiety inventory and Liebowitz social anxiety scale). RESULTS: There were no significant differences in the frequencies of the genotypes (X2=0.961, df=2, p=0.619), alleles (X2=0.415, df=1, p=0.519) or allele (Met) carriers(X2=0.019, df=1, p=0.889) between the patients and controls. In addition, in comparing the severity of GSAD with the genotypes of the BDNF gene by clinical scales, we could not find any significant differences between the genotypes or allele carriers. CONCLUSIONS: These results suggest that BDNF (val66met) polymorphisms do not play a major role in the susceptibility to or severity of GSAD in our Korean population.
Keywords: Social anxiety disorder, Brain-derived neurotrophic factor, Polymorphism

NR10-08

PANIC ATTACK, CHEST PAIN AND MYOCARDIAL ISCHEMIA. THE ROLE OF MYOCARDIAL PERFUSION IMAGING STUDY ASSOCIATED TO CO2 CHALLENGE

Chp.:Gasto Luiz Soares-Filho M.D., Hospital PR-Cardoaco Rua Gen Polidoro 192 Botafogo, Rio de Janeiro, 22280-000 Brazil, Co-Author(s): Claudio T. Mesquita, Ph.D.,Evandro T. Mesquita, Ph.D., Antonio E. Nardi, Ph.D.

SUMMARY:
OBJETIVE Myocardial oxygen supply/demand imbalance usually occurs in the presence of obstructive coronary artery disease (CAD), leading to myocardial ischemia and chest pain (CP). But not always obstructive CAD is found in ischemic CP episodes. During a panic attack (PA) people experience intense fear and somatic symptoms, including chest pain. However, PA may provoke angina pectoris in patients without CAD and may be an independent risk factor for CAD. We report the two first results of our ongoing study using 35% carbon dioxide panic challenge test (CO2 test), followed by a Myocardial Study with technetium-99m Sestamibi Single-Photon Emission Computed Tomography (M-SPECT) to study myocardial perfusion (MP) defect during PA. METHODOLOGY Both patients complained of CP and met DSM-IV criteria for PD. Foremost they were submitted to a M-SPECT at rest and at maximum exercise performance, with no evidence of MP defect. At last, patients performed a M-SPECT following CO2 test. The CO2 test consisted of two inhalations of 35% CO2 and 65% oxygen (O2) mix gas. Soon after CO2 test, sestamibi was injected. SPECT acquisition was performed and interpreted by nuclear cardiology specialists. Anxiety was measured by Visual Analogue Scale and Panic Symptom Scale. Hemodynamic data consisted in heart rate (HR), blood pressure (BP), oxygen saturation (OS) and continuous electrocardiogram (ECG). Double product (DP) was obtained multiplying systolic BP by HR, to estimate myocardial work and O2 consumption. RESULTS Case one presented severe chest pain, palpitations, shortness of breath and fear of death after CO2 test. The ECG did not change and there was no

MP defect in M-SPECT. Case two reported mild chest pain, palpitations and dizziness, denying had experienced a PA after CO2 test. Although ECG didn't change, M-SPECT demonstrated a reversible MP defect in mid antero-septal segment consistent with myocardial ischemia (Figure). Hemodynamic data is presented in table I and II. CONCLUSION Although case one denied having PA, hemodynamic data showed rise in DP, suggesting an adrenergic overload (AO), beside a MP defect. Healthy individuals, with integer endothelium, present coronary vasodilatation in response to mental stress tests (MS). In CAD, endothelial dysfunction enables MS to trigger coronary spasm by endothelium relaxation factor decrease. Studies have showed subjects with normal exercise M-SPECT and MP defect after MS, usually with DP lower than that found in exercise-induced ischemia, as we see in case two reported. Based on translational medicine objectives by application of new methods to improve the understanding of medical disorders, the use of 35% CO2 as a MS challenge test followed by M-SPECT for PD patients with CP could be a useful tool to allow the study of the relationship between PD and cardiovascular disease.

NR10-09

OBSESSIVE COMPULSIVE DISORDER TREATMENTS IN THE CLINICAL SETTING: HOW WELL DO THEY WORK?

Chp.:Michael Van Ameringen M.D., F439-1, Fontbonne Bldg, St. Joseph's Healthcare, 301 James Street South, Hamilton, L8P 3B6 Canada, Co-Author(s): Catherine Mancini, M.D., FRCPC, William Simpson, B.Sc., Beth Patterson, B.Sc.N.

SUMMARY:
OBJECTIVE: Current guidelines for treatment resistant OCD (40-60% of OCD patients), suggest switching to an alternative first–line agent or using an augmentation strategy (AS). As part of a cross-sectional study with the International College for Obsessive Compulsive Spectrum Disorders, we characterized a clinical sample of OCD patients. METHOD: Sixty-nine consecutive patients with DSM-IV OCD, at various stages of treatment, in an anxiety disorders clinic were evaluated. Patients completed self-report measures as well as detailed clinical and structured interviews. RESULTS: The sample was predominantly female (79.7%), with a mean age of 40.5 (±12.9); mean Clinical Global Impression Scale-Severity score of 4.3 (±1.3) and mean Yale-Brown Obsessive Compulsive Scale (YBOCS) score of 20.3 (± 7.2), indicating moderate severity. Only 7.4% (N=5) met criteria for remission (YBOC=10). Forty-six percent reported a past history of cognitive behavioural treatment (CBT). Twenty-eight patients (40.6 %) reported lifetime treatment with at least one AS, with augmentation using antidepressants (primarily clomipramine) (26.1%), antipsychotics (8.7%), benzodiazepines (10.1%), or other (15.9%) and a mean number of 1.9 (± 0.99) AS's The use of any AS was significantly ($p < .05$) associated with an increased global severity and disability, increased OCD symptom severity, diagnosis of major depression and increased suicide risk. CONCLUSION: In spite of receiving several first-line treatments with serotonin reuptake inhibitors or CBT, 40% required augmentation with a 2nd or 3rd line agent. These patients remained considerably symptomatic and functionally impaired, with very few achieving remission. These results raise the issue of the effectiveness of evidence-based OCD treatments.

NR10-10

MEDICATION TREATMENT ALGORITHM FOR GENERALIZED ANXIETY DISORDER IN KOREA

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SUMMARY:
Objectives: This study investigated the consensus about medication treatment algorithm for generalized anxiety disorder(GAD), which represents one subject addressed by the Korean medication algorithm project for GAD(KMAP-GAD) in Korea. Methods: The executive committee for KMAP-GAD developed questionnaires about treatment strategies for patients with GAD based on guidelines or algorithms and clinical trial studies previously published. Fifty-five(64%) of 86 experts on a committee reviewing GAD in Korea responded to the questionnaires. We classified the consensus of expert opinions into three categories(first-line,

second-line, and third-line treatment strategies) and identified the treatment of choice according using a 2 test and 95% confidence interval. Results: For the consensus of medication algorithm in the treatment of GAD, step 1 is the use of the one of a selective serotonin reuptake inhibitor(SSRI), a serotonin and noradrenaline reuptake inhibitor(SNRI) and buspirone for at least 4 to 6 weeks. Step 2, 'switch from a SSRI to a SNRI or a buspirone or vice versa', step 3, 'augment with atypical antipsychotic or add a benzodiazepine or antihistamine', step 4, 'switch to another combination that includes SSRI, SNRI, mirtazapine or tricyclic antidepressant', step 6, 're-evaluate the diagnosis', and 'benzodiazepines including clonazepam and alprazolam can be combined with another drug even from the initial period' were recommended as 1st line strategy. Conclusion: These results, which reflect the recent studies and clinical experiences, may provide the guideline about optimal medication treatment strategies for GAD. Key words: Generalized anxiety disorder(GAD), Pharmacotherapy, Algorithm

NR10-11

THE EFFECTS OF ST. JOHN'S WORT ON PREMENSTRUAL SYNDROME IN SINGLE WOMEN: A RANDOMIZED DOUBLE BLIND, PLACEBO-CONTROLLED STUDY

Chp.:Ho-Suk Suh M.D., 650-9 Yeoksam-1 dong, Kangnam-gu, Kangnam CHA Hospital, Seoul, 135-913 Korea, Co-Author(s): Jung-Gum Ryoo, M.D., Kang-Uk Lee, M.D., Young-Jin Lee, M.D., Sae-Il Chun, M.D.

SUMMARY:
Objective: St. John's wort(SJW) is known to be effective in treating depression and mood disorders. This study was designed to verify the effect of SJW for premenstrual syndrome in single women. Methods: From August 1st 2008 to October 31th 2008, 30 single women who suffer from premenstrual symptoms were recruited for this study. This study was carried out in a double blind randomized controlled clinical trial. Inclusion criterias were healthy single women, under no specific medication. We included those that had Beck depression inventory(BDI) scale scores over 10 or Premenstrual assessment form(PAF) scores over 217. Exclusion criterias were those that had endocrine disease, genitourinary, obstetric and gynecologic disease, and any psychiatric diseases, and those under medication. 30 women were divided randomly into two groups. The experimental group of 16 women were given 600mg/day of hypericin, extract of SJW. The control group of 14 women were given a placebo that looked similar to SJW extract. During 3 cycles of menstruation, all women wrote a daily diary for premenstrual syndrome. When the second menstruation cycle started, all women began to take two pills daily. We investigated BDI, PAF and VAS before starting the experiment and again at the end. Each variant was further analyzed via nonparametric test, the change in values before and after the study were studied using an Mann-Whitney U test. Results: Compared to the placebo group, the SJW group had no significant differences on VAS, total PAF, BDI. However, 3 subscales of PAF, lability, hostility/anger and impulsivity showed statistically significant difference($p<0.05$). Conclusion: This study suggested that SJW shows the effectiveness on lability, hostility, anger, and impulsivity related to premenstrual syndromes in single women.

NR10-12

USING DSM-IV´S CULTURAL FORMULATION (CF) AS A COMPLEMENTARY CLINICAL TEST

Chp.:Luis Caballero M.D., C del Estudio, 21, Madrid, 28023 Spain, Co-Author(s): Inés García del Castillo, Clara Peláez Fernandez

SUMMARY:
Introduction Until now, the DSM-IV ´s CF has generated little systematic research and its full use has considerable limitations in clinical practice (Lin, 2006; Lewis- Fernández, 2007; Baärnheim and Scarpinati, 2009). The absence of specific exploratory methods to perform it reliably, its time-consuming elaboration, and the doubts about its clinical usefulness are usual criticisms in clinical settings. An abridged cultural formulation has been proposed recently (Caballero, 2009). This poster proposes the possibility of using only some sections of the CF in a given case, just enough for understanding the extended diagnosis and implement the best possible therapeutic approach. Thus, the CF could be considered as a "complementary clinical test" in the clinical history

with specific aims and explicit qualitative methods, to be used only when necessary (as any other additional clinical test). These proposals could facilitate the clinical use and the evaluation of DSM-IV ´s CF. Patients, methods and results We present 2 patients addressed with this procedure: 1. N. is a patient with a vague cultural identity and uncertain clinical diagnosis, who repeatedly abandons treatment and suffers a relapse. The clinician suspects unidentified cultural factors underlying in such problems of diagnosis and treatment. To identify and manage them, the clinician conducts: 1) an in-depth interview with the patient and her family, 2) a brief interview with key informants and 3) the lecture of an "ad hoc" anthropological monograph. As a result, he found that the patient had a complex hybrid identity (section A of the CF) and that there were 3 different and confronted explanatory models of illness in the patient and her family members (section B). The clinician proposes a comprehensive explanatory model that reformulates and reallocates the case in medical terms. This clearly improves the therapeutic relationship (Section D), and as a consequence of the patient and family meeting, the treatment and a stable clinical remission is achieved. 2. I. is a patient with atypical psychotic symptoms and delusional behavior. The clinician has difficult to establish a therapeutic relationship with her. The patient's career and history of migration suggests underlying socio-cultural factors deeply determining the clinical symptoms and behavior. To identify and address them, the clinician conducts: 1) an in-depth clinical interview with the patient to develop her life story, and 2) an interview with a key informant who knows in detail the socio-political reality of her country of origin. As a result, the clinician identifies key cultural factors in the sociocultural environment and functional level (section C of the CF) that allows set connections of meaning in the psychopathology and behavior. This helps the patient regain the full narrative of her illness, and as a clear consequence the therapeutic alliance, the treatment adherence and the satisfaction with treatment improve dramatically (section D) Conclusions The current DSM-IV´ s CF is not yet a satisfactory tool, clinically or scientifically. Clinicians need abridged tools and procedures which provide a reliable way to the essential cultural information for a particular clinical task, showing effectiveness in different clinical

NR10-13

ASSOCIATION BETWEEN DIABETES, MOOD AND ANXIETY DISORDERS AMONG HISPANICS ATTENDING A COMMUNITY CLINIC IN RURAL SOUTHERN CALIFORNIA

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SUMMARY:
Background: The literature has emphasized the importance of screening for psychiatric problems among individuals with diabetes. Reports have also underscored the need to improve prevention and treatment of the increased morbidity among patients suffering from mental illnesses. In this regard, Hispanics are particularly vulnerable to the development of diabetes and comorbid psychiatric conditions. Objective: To describe if there is a significant association between the diagnosis of diabetes, mood and anxiety disorders among Hispanics attending a community clinic in rural southern California. Methodology: We reviewed records of 110 Hispanic patients that attended a community clinic that provided psychiatric services from January 1st until October 31st of 2010. Psychiatric diagnosis was made using the DSM-IV-TR criteria. Diagnosis of diabetes was made by the patient's treating primary care provider following the ADA guidelines. Results: The mean age was 55.1 years (SD: 8.73), and 75% were female (83/110). Generalized Anxiety Disorder (GAD) was diagnosed in 75% (82/110), followed by depression in 62% (68/110) and bipolar disorder in 25% (27/110). Fifty seven percent (63/110) of the patients were first diagnosed with diabetes before being referred for psychiatric treatment. Among patients diagnosed with diabetes, 67% (42/63) were later diagnosed with GAD, followed by 65% (41/63) with depression and 18% (11/63) with bipolar disorder. Bivariate analysis showed a significant association between the diagnosis of diabetes and GAD (?2=4.82;df=1;p<0.05) and diabetes and bipolar disorder (?2=3.99;df=1;p<0.05) but not for depression (?2=0.66;df=1;p=0.41). Multiple Regression model showed a significant

negative correlation between being first diagnosed with diabetes and then with GAD (Beta=-0.24;t=-2.58;p<0.05) and Bipolar Disorder (Beta=0.20;t=-2.21;p<0.05), suggesting that there is a significant comorbidity between Bipolar, GAD, and diabetes in this rural Hispanic sample. Conclusions and Clinical Implications: These data from a rural clinic treating Hispanics shows the importance of early screening and detection of mood and anxiety disorders among patients suffering from diabetes to monitor and improve compliance with treatment and quality of life. Additionally, these preliminary data provide further evidence of the importance of implementing a comprehensive integrated model in which psychiatrists and primary care providers work together treating metabolic and psychiatric disorders among patients, especially Hispanics attending community clinics in rural underserved areas.

NR10-14

ANALYSIS OF THE DIFFERENT TEMPERAMENT DOMAINS IN AN OUTPATIENT PSYCHIATRIC CLINIC IN BOGOTA, COLOMBIA

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SUMMARY:
Temperament has been described as an oligogenic model that confers attributes to individuals in their daily functioning. The different types of temperaments described are depressive, cyclothymic, hyperthymic, anxious and irritable. Our group has described that Hispanics living by the Mexico border in Southern California express cyclothimic and irritable temperament more often when consulting for a mood disorder. In order to understand temperament domains among other Hispanic groups, we administered the TEMPs in 88 outpatient psychiatric patients attending a mood disorders clinic in Bogota, Colombia. Our sample's mean age was 37.61 (s.d. 11.6) with 57% (50/88) being women. All participants were Spanish speakers. The following proportions of temperament domains were found: Hyperthimic 60%; Cyclothimic 58%; Depressive 55%; Anxious 53% and Irritable 41%. Factor Analysis eigenvalues showed that 61% of the variance in our sample was explained by depressive temperament, followed by 20% cyclothimic. Varimax rotation showed that Hyperthymic (0.99), Cylothimic (0.91) and Anxious (0.88) loaded as the most common factors. This compresses down to a 2 factor solution 1) distress (Depressed, Cyclothymic, Irritable, Anxious) and 2) manic (Hyperthymic). Our results showed that these cohort of Hispanic patients, have similar domains (i.e cyclothima, anxiety) from the ones described in previous reports. This data emphasizes the use of the TEMPs in an outpatient setting as a valuable tool to assess patient's temperament characteristics. Additionally, the factor analysis showed how the loading of the different temperaments seeing in this sample may be the focus of clinical intervention. These temperament domains contribute significantly to the structure of a potential pattern of undiagnosed emotional lability.

NR10-15

BOLLYWOOD MADNESS AND SHOCK THERAPY: DEPICTION OF ECT IN INDIAN CINEMA

Chp.: Mansoor Malik M.D., 2401 Georgia Ave, Washington, DC 20060, Co-Author(s): Sharma Bikash, M.D.

SUMMARY:
Introduction: Indian cinema, affectionately known as Bollywood makes more movies than Hollywood and is the world's largest cinematographic industry with global audiences1. Bollywood movies are integral part of Indian culture and are hugely influential in shaping social attitudes in Indian subcontinent and many other parts of the world. These movies historically have represented existing socio-cultural tensions and prejudices, and also provided impetus to desired change2. Influence of movies in shaping and reinforcing broader attitudes towards mental illness in well known. Unfortunately these portrayals are often negative, relying on the stereotypes and fear about mental illness3. In the current study, we explored the depiction of electroconvulsive therapy in Indian movies and compared this depiction with Hollywood. Methods and Materials: Using movie encyclopedias, source books and multiple online resources4,5, we identify movies that included depiction of ECT (Summarized in Table). After a qualitative analysis, following information was

extracted: 1) Type of attitude towards the ECT, e.g. sympathetic, comical, hostile, condescending etc. 2) Accuracy of the portrayal of ECT 3) Attribution of justification of ECT (e.g. punishment, social control, beneficial medical treatment). These results were then compared to the published results about depiction of ECT in Hollywood movies6. Results: Depiction of ECT in Bollywood movies is exaggerated, scientifically inaccurate and perpetuate misconceptions. These movies represent ECT as a punitive, futile and barbaric method to either treat human against evil spirits or to torture or coerce and to produce amnesia to the positive characters of the movie by the negative ones. ECT is often depicted as punishment from the societal hierarchy to enforce conformism of the lower classes. Indian movies almost entirely overlook the clinical evidence of the safety and effectiveness of ECT as a psychiatric treatment. Conclusions: Outdated as well as inaccurate depictions of ECT in movies are still a source of information about ECT for the general public as well as among medical students and professionals7. There is a great need for collaboration between mental health sector, film and television industries and film censorship board to explore the potential for positive portrayals to educate and inform about ECT

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NR10-16

MILITARY SUB-CULTURAL COMPETENCY

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SUMMARY:
The medical community has long considered members of the military a “special population”, but they have never broadly gained the status of a culture. Being defined as a culture gains the military population access to the same considerations of other cultures in the medical community. As a culture, it is presupposed that there are subcultures within the larger culture, that members may have various degrees of acceptance with their culture, and that cultural membership may affect the patient’s understanding of care. These concepts are illustrated in a case where then a patient understood his care in the context of his military culture. The case demonstrates how the patients understanding of his care was drastically improved once his frame of reference was acknowledged. As the military increases its reliance on civilian care, an increasingly diverse group of providers with equally diverse understandings of the military will be exposed to military culture in a clinical setting. In order to provide excellent care, steps must be taken to define military culture and tools must be created to help providers quickly assess their implications in care. Future work should be done to (1) determine what should be taught regarding military cultural competency, (2) provide an easy to use clinical tool to access military culture and (3) develop a curriculum that can easily be integrated into existing medical school curricula.

NR10-17

MECHANISMS OF IMPULSIVITY TRIGGERING BINGE EATING EPISODES IN EATING DISORDERS

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SUMMARY:
Introduction: binge eating episodes are requested for diagnosis of Bulimia Nervosa (BN) but may also be observed in anorexia nervosa (AN) patients. Binge eating episodes are experienced by patients as periods of total loss of control, which is corroborated by higher score on impulsivity scales in BN patients

compared to controls. Neuroscience tasks have identified two main components of impulsivity: behavioural inhibition and impulsive decision making. BN patients have shown a larger pattern of impairment in the tasks measuring the "impulsive decision making" component than in the tasks assessing the "behavioural inhibition" component. This cross sectional study aimed to identify which components of impulsivity are linked to the binge eating episodes and in which proportion. Methods: Three groups of eating disorder patients (AN restrictive subtype, AN purging subtype, and BN according to DSM IV R criteria) and a group of healthy subjects aged 16 to 35 years were recruited. Subjects performed seven tasks: Wisconsin Card Sorting Test (WCST), Simon, Balloon Analogue Risk Taking (BART), go/no-go (GNG), stop-signal, delay discounting (DD) and Race 15. In each task, each trial was preceded by a 1-second stressor, food or neutral image that is supposed to trigger a binge eating episode. Reaction time and subjective ratings of emotion provided by the images were recorded. Self administered questionnaires were used to assess depression, BN and AN severity, impulsivity level and to collect social-demographic data. Parameters of sigmoid curves fitted on behavioural responses for Race 15, WCST and BART tasks, error rates and response time (RT) for GNG, stop-signal and Simon task, and pattern of choices for DD task were used to perform a canonical discriminate analysis for the 2 AN groups and the BN and control groups. Results: 6 restrictive AN, 7 purging AN, 4 BN cases and 4 controls were recruited. Discriminating the 2 AN groups was based on numbers of fails to the Go trials in the GNG task and to inhibit the behavioural response in the stop signal task, number of trials required to find the optimal strategy to win for the Race 15, efficiency of the strategy adopted and performance to maintain it across games in the Race 15, and the percentage of risky choices in the DD task (contributions are 0.83, 0.65, 1.18, 7.37, 0.82, 1.10 respectively). Discriminating BN and controls was based on the number of trials required to find the optimal strategy to win for the Race 15, efficiency of the strategy adopted and performance to maintain it across games in the Race 15, and the percentage of risky choices in the DD task (contributions are 0.018, 0.038, 1.46, 0.20 respectively). Conclusion: Parameters discriminating the 2 AN groups seem also to discriminate BN from controls. Binge eating episodes may then be linked to impairments in building strategies and to a trend to choose risky options. Analysis will be extended to the full groups (20 subjects in each).

NR10-18

MEASURING VALUE IN THE TREATMENT OF ANOREXIA NERVOSA: LESSONS FROM SCHON KLINIK, GERMANY

Chp.:Emma Stanton M.D., 371 Harvard Street, Apartment 2A, cambridge, MA 02138, Deerberg-Wittram, J. Lee, T. Porter, M. Deerberg-Wittram, J. Lee, T. Porter, M.

SUMMARY:

Mental health in Germany With a population of 84 million, 89.7% of the German population is covered by a statutory health plan and 10.2% by a private health plan. Less than 0.2% of the population does not have health coverage. Different clinical thresholds exist for inpatient treatment in Germany, compared to the US, leading to higher rates of inpatient treatment. In 2009, nearly 20 per cent of hospital treatment days in Germany related to mental illnesses. Eating disorders Of all psychiatric disorders, anorexia nervosa has amongst the highest mortality rate: 0.56% annually. When matched for age, the mortality risk for suicide is 33 times the amount expected. Eating Disorders Care at the Schön Klinik, Germany The Schön Klinik is a private hospital group based in Germany, providing inpatient care for 86,900 patients per annum, specializing in three main areas: psychiatry, neurology and orthopedics. Eight of the fifteen hospitals within the group have either psychiatric or behavioral medicine departments totaling more than 1,500 inpatient beds. Eating disorder care at the Schon Klinik is interesting and different because it focuses a high volume of patients at a few sites. During 2009, the Schön Klinik provided inpatient care for 556 individuals with eating disorders. 255 had a diagnosis of anorexia nervosa. Value in Health Care The purpose of this research is to consider the value perspective. Value is the patient health outcomes achieved per dollar expended. Value for eating disorders, as for any field, should be defined around the patient and his or her particular medical condition. For eating disorders, outcomes should be measured over the cycle of care, rather than for

discrete interventions or admissions. Porter proposes a framework hierarchy to think holistically about outcome measurement: Tier 1 includes outcomes related to the patient's health status achieved. Tier 2 includes outcomes related to the process of recovery. Tier 3 includes outcomes related to the sustainability of health. Outcome Measurement of Eating Disorders Since 1985, through the effective application of IT and the effective engagement of clinicians, the Schön Klinik has routinely captured longitudinal outcomes over the outcome hierarchy. Outcomes routinely measured on admission and discharge include SIAB (Structured Inventory for Anorexic and Bulimic Disorders), BMI (Body Mass Index), BSI GSI (Brief Symptom Inventory Global Severity Index), PHQ Somatization and PHQ Depressiveness (Patient Health Questionnaire). Implications to improve value in treating eating disorders Over the last 20 years, research into eating disorders has focused on bulimia nervosa. There is a need for future research to focus on improving the value of care for individuals with anorexia nervosa. The application of the Porter outcome framework at the Schön Klinik provides a concrete example of how to organize and measure outcomes for eating disorders to improve the delivery of care.

NR10-19

BINGE EATING PREDICTS MENTAL AND PHYSICAL HEALTH IN BARIATRIC SURGERY CANDIDATES

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SUMMARY:
Despite emphasis on psychosocial evaluation in bariatric surgical candidates, and increased used of the Eating Disorder Examination Questionnaire (EDE-Q v.6) and General Quality of Life & Health Survey (SF-36 v.2), little is known about the psychometric properties of these scales within a bariatric surgery population. Post-surgical binging behaviours have been related to worse mental health and lowered quality of life. The purpose of this study was to examine bariatric surgical patients' scores relative to norms. We examined binge eating behaviour in relation to mental and physical health. In order to inform the development of interventions, we considered the impact of social support. Participants were adult bariatric pre-surgical candidates who completed the EDE-Q, SF-36, and MOS Social Support Survey. The eating pathology of bariatric surgery candidates was worse than community norms, yet better than a psychiatric sample. Compared to community norms, physical and mental health was poorer in bariatric patients. Relative to psychiatric patients, physical health was worse in bariatric patients, whereas mental health was better. The combination of eating a large quantity of food while feeling out of control predicted worse mental and physical health. When social support was added, it was highly predictive of mental health outcomes. This information suggests the importance of targeting binge eating in the context of social support group. Our clinic is developing a CBT group for binge eating with the intent of improving post-operative outcomes.

NR10-20

SEXUAL STRATEGIES AND SEX ROLES FOR MODERN MEN AND WOMEN: A REVIEW OF THE EMPIRICAL LITERATURE

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SUMMARY:
Nearly all Americans marry during their lifetime, yet close to half of all first marriages are expected to end in separation or divorce, many within a few years (Bramlett, 2002) and subsequent marriages are even more likely to end (Karney, 1995). Sexual strategies play a crucial and vital role in mate selection. Sexual dissatisfaction is associated with increased risk of divorce and relationship dissolution (Karney, 1995). According to the Kinsey Institute for Research on Sex, Gender and Reproduction (2010), the average age of first sexual intercourse experience is 16.9 for males and 17.4 for females. The average age of first intercourse by ethnicity is as follows: Whites -16.6, Blacks -15.8, Hispanic -17, Asian American - 18.1, Other 17.4 (Upchurch et al 1998). The Kinsey Institute for Research on Sex, Gender and Reproduction (2010) also reported the frequency of sex. 90% of men and 86% of women have has sex in the past year. 23% of men and 11% of women have rented x rated videos and 10% of men and 9% of

women have reported to have participated in anal sex in the past year. Sex is undeniably a large part of our lives and a motive influencing almost every area of human lives. The afore mentioned statistics are of consenting adults, but sexual assault plays a role in sexual strategies and seems imperative that we, as a society continue to inform and educate ourselves with regard to sexual strategies. 272,350 sexual assaults in 2006 in the US: 1 sexual assault every 116 seconds, or about 1 every 2 minutes (US Dept of Justice, National Crime Victimization Survey, 2006). An estimated 100 million to 400 million women worldwide have been subjected to Female Genital Mutilation (FGM). About 3 million girls are subjected to the procedure every year (World Health Organization, 2006). In studies conducted mostly in developed countries, 5–10% of men report being sexually abused as children (World Health Organization, 2004). With such a high percentage of consenting adults for sexual intercourse it is difficult to understand why sexual assault is so prevalent. While both men and women can experience similar fantasies, women more often fantasize about taking a passive role or being dominated while men more often fantasize about taking a dominant role, doing something sexual to their partner, or having multiple partners. (Leitenberg, 1995). One may begin to wonder why there are such differences among men and women. After reviewing the various sex roles and sexual strategies presented in this paper, one may begin to compare this to their own life and how their behavior and choices are influenced. While it is an impossible feat of this paper to include all of the theories regarding this topic, the following were included because, although controversial, they have produced the most empirical evidence to support their theories. These include the Sexual Selection Theory, Bateman's principles, the Parental Investment Theory, and the Sexual Strategies Theory and will be presented prior to a discussion of sexual strategies. These four theories attempt to explain sex roles and set a foundation for where sexual strategies began. Sexual Selection Theory was chosen because this paper is grounded from an evolutionary perspective; therefore Darwin (1971) is essential in setting a foundation. The remaining theories were chosen because they have been recently reexamined and empirically investigated by leading social scientists Gillian R. Brown, Kevin N. Lal

NR10-21

GLOBAL MENTAL HEALTH AS A COMPONENT OF PSYCHIATRIC RESIDENCY TRAINING

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SUMMARY:
Objective: This study seeks to assess the educational and professional value of an international psychiatry elective using a cross section of psychiatric residents who have participated in the Global Health Residency Track of the Mount Sinai School of Medicine. Methods: In 2010, a 10-item questionnaire consisting of open-ended questions was administered to Mount Sinai psychiatric residents who have participated in the Global Health Residency Track of the Mount Sinai School of Medicine. The aim of the questionnaire was to assess what role global psychiatry has within residency training through comparing and contrasting the global mental health elective with more traditional training sites. Authors reviewed the qualitative data and arrived at a consensus regarding trends and deviations regarding residents' experiences of their international field work. Results: Six residents participated in this study. Common themes included exposure to sicker, treatment-naïve patients in resource scarce conditions, enhancement of cross-cultural communications skills in dealing with staff and patients, renewed appreciation for psychiatry, empowerment as teachers, and greater awareness of health-care systems. None of the participants knew that an international elective existed when they participated in the Match, however this would have been a significant factor in their choice of residency. Respondents had concerns for the sustainability and continuity of their impact. Most felt the experience did not alter their career paths although there was interest in future international work. There was limited knowledge of global mental health prior to the elective with an evolving understanding afterwards. Participants felt that the elective was a place to consolidate skills already learned during residency and resulted in increased professional confidence. Conclusions: The study shows that international mental health electives can not only fulfill ACGME requirements as a way to consolidate residency education, but also have many added benefits. International electives can enrich psychiatric residency training in terms of understanding of mental health care systems, cross cultural psychiatry, sharpening diagnostic skills,

building professional confidence and communication skills, and reaffirming motivation to practice psychiatry. A formalized international mental health program can attract better residents. There is need for psychiatrists in resource-limited settings, and the lack of defined role for psychiatrists in international mental health leaves room for future development.

NR10-22

GENDER DIFFERENCES AMONG HOSPITALIZED SUICIDE ATTEMPTERS

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SUMMARY:
Introduction and objectives: Data suggested gender differences in suicide behavior: in most countries men committed more suicide (female-male ratio= 2-5:1), using more violent methods, while women make more suicide attempts (female-male ratio= 5-10:1), mostly by self-poisoning, which is sociocultural more gender acceptable. Among suicide attempters women are younger, often students, housewives and retirees, while men are more unemployed. Methods: Sixty patients (N=60) (32 males/28 females) admitted to Special hospital of neuropsychiatric diseases in Belgrade from 2008-2010, were assessed to gender differences regarding to sociodemographic characteristics, clinical diagnosis and suicide attempt method, duration of illness, compliance to treatment, previous suicide attempts, family history of suicide. Results: Women were younger than man (M=39.18,SD 15.283 vs. M= 46.47,SD 15.267) at the time of current suicide attempt, as well as the time of the first suicide attempt (M=38.39,SD 15.961 vs. M=45.00,SD 13.970), more unmarried (85.7% vs. 62.5%), with higher comorbidity of drug abuse /dependence (21.4% vs. 6.3%) and personality disorders (42.9% vs. 15.6%), and lower comorbidity of alcohol abuse/dependence (32.1% vs. 40.6%). Men were more likely to attempt suicide by hanging (31.3% vs. 3.6%), while women were more likely to choose self-poisoning (39.3% vs. 9.4%). There were no gender differences in educational level, employment and residential status, clinical diagnosis (mostly depression and schizophrenia), duration of illness, compliance to treatment, previous suicide attempts and family history of suicide. Conclusion: In order to improve successfulness, interventions addressed to reducing suicidal behavior should account gender differences.

NR10-23

ENTRAPMENT, DEFEAT AND SUICIDE – AN EVOLUTIONARY PERSPECTIVE

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SUMMARY:
The evolutionary approach to psychopathology focuses on blocked escape and defeat as processes involved in suicidality. In fact, an evolutionary perspective about suicide/attempted suicide hypothesizes that defensive behaviours such as fight or flight are activated but viewed as blocked. Then we can say that the person is in an entrapment situation. Entrapment is associated with strong urges to escape from a current situation or feeling state but being unable to. This put the individual into a high stress state where the execution of a defensive behaviour (e.g. escape) cannot take place. This can give rise to chronic stress and also feelings of entrapment and defeat. Gilbert & Allan (1998) identified two types of entrapment , external and internal. External entrapment is linked to being unable to get away from an abusive relationship, or being unable to leave an unpleasant environment. Internal entrapment is feeling unable to stop or get away from painful thoughts and feelings. In suicide research, escape regularly appears as a motivator for suicidal behaviour, whether this is escape from na aversive situation or from a particular state of mind (Baumeister, 1990). Williams (1997) focussed on the importance of defeat within the experience of feeling trapped with no escape, this was linked to the concept of "no rescue". Suicidal behaviour then became seen as a "cry for help", a "cry of pain" and escape from pain. Studies with groups of people who had attempted suicide reported high levels of defeat, high levels of entrapment and desire for escape and low levels of expectation of rescue. These variables also improved the prediction of suicide intent over and above depression and hopelessness.

NR10-24

RISK OF CARDIOVASCULAR MORBIDITY AND SUDDEN DEATH WITH RISPERIDONE AND PALIPERIDONE

TREATMENT: ANALYSIS OF 64 RANDOMIZED, DOUBLE-BLIND TRIALS

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SUMMARY:
Objective: To estimate risk of sudden death and cardiovascular (CV)/cerebrovascular events during treatment with oral and long-acting injectable risperidone (RIS) and paliperidone (PALI) using data from the development programs for these atypical antipsychotic drugs. Methods: The database consisted of 41 placebo-controlled (PC) trials involving RIS and PALI in the indications schizophrenia (RIS=5, PALI=11), schizoaffective disorder (PALI=2), bipolar I disorder (RIS=7, PALI=3), dementia (RIS=6), disruptive behavior or conduct disorder (RIS=5), and autistic disorder (RIS=2) and 23 active-controlled (AC) trials in schizophrenia (RIS=21, PALI=2). Treatment-emergent CV adverse events were identified using 7 predefined Standardised MedDRA Queries (SMQs) suggestive of medically important events that often precede impending CV death: embolic/thrombotic events, cerebrovascular disorders, ischaemic heart disease, cardiac arrhythmias, cardiac failure, Torsades/QT prolongation, and convulsions. Mantel-Haenszel approach stratified by study was used to estimate the common odds ratios (OR) and 95% confidence intervals (CI), comparing RIS/PALI (combined) to placebo. Results: PC trials included 11,090 adult and pediatric patients randomized to RIS (n=2,958), PALI (n=3,554), placebo (n=3,517), or active controls (n=1,061). Risk (OR) of sudden death could not be assessed because there was only a single event (95-yr old woman, RIS patient with dementia). Risk was significantly increased in the combined RIS/PALI group for 5 of the 7 total CV event SMQs (criteria not met for ischaemic heart disease and convulsions SMQs). At the preferred term level, risk (OR [95% CI]) was increased in the combined RIS/PALI group vs. placebo for 6 of the 49 unique terms for which ORs were calculable: syncope (2.8 [1.2, 6.8]), tachycardia (2.4 [1.5, 36]), palpitations (3.1 [1.1, 8.7]), oedema peripheral (1.6 [1.1, 2.4]), dysarthria (3.7 [1.7, 8.2]), and transient ischaemic attack (3.6 [1.2, 10.7]). The point estimate for the OR was numerically greater in elderly (age > 65, 92% from dementia studies) vs. non-elderly patients for all SMQs, except ischaemic heart disease. In the combined PC and AC trials, incidence of death due to CV reasons was low and similar across groups. Our findings are limited by the exclusion per protocol of patients with major or clinically unstable CV disease, relatively short treatment duration (median=42 days for RIS/PALI), and improvements in standards of care over the ~20 years that the studies were conducted. Also, small numbers of events yielded wide confidence intervals. Conclusions: Evidence from a large safety database of patients enrolled in randomized, double-blind, PC and AC studies shows increased risk for several CV events with RIS and PALI treatment, consistent with their known pharmacologic profile and product information. No new findings emerged. With only one event recorded, risk of sudden death could not be assessed. Funded by J&J PRD, LLC.

NR10-25

REASONS FOR ATTEMPTED SUICIDE AMONG INDIVIDUALS WHO OVERDOSE (OD)

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SUMMARY:
Objective: The lifetime prevalence of attempted suicide is relatively common among U.S. adults, occurring in 1.9% to 8.7% of the population (Nock, Borges, et al., 2008). There is variability in the intent behind attempted suicide; some attempt who clearly intend to die (i.e. nonambiguous suicide attempt) and others attempt suicide but are ambivalent about their intention to die (i.e. ambiguous suicide attempt). Researchers have found that the self-reported reasons for intentional self-injury vary across of the spectrum of people who experience suicidal thoughts and feelings (e.g., Brown, Comtois, and Linehan, 2002). Little is known, however, regarding differences in motivation between nonambiguous and ambiguous suicide attempts in people who overdose on prescription pills, drugs, or poisons. Examining the grey area between people who clearly intend to die by overdose and those with an intention that is more ambiguous is important for two reasons: 1) overdosing on poisons, illegal, and prescription drugs is the most common method

used to attempt suicide and 2) according to the Centers for Disease Control and Prevention (CDC), the rate of accidental death due to a drug overdose has increased five-fold from 1990 to 2007 (CDC, 2010). To achieve this aim, we recruited a sample of patients who received emergency services due to a suicide attempt by overdose. The primary purpose of this study was to examine if the reasons why people make nonambiguous suicide attempts by overdose differ from those reported by people who make ambiguous suicide attempts through overdose. Method: Participants (n=93) were identified by review of all emergency department admissions representing all times of day, days of the week, and months of the year. Participants were administered the Suicide Attempt and Self-Injury Interview (SASII) and were divided into a nonambiguous and ambiguous groups. Reasons for self injury were divided into four categories: emotion regulation (e.g., to manage negative feelings), interpersonal influence (e.g., as a means of communicating), feeling generation (e.g., to avoid feeling numb), and reasons for dying (e.g., to make others better off). Results: Compared with patients reporting an ambiguous suicide attempt, patients who overdosed with the clear intention of dying were: 1) significantly less likely ($p<.05$) to attempt suicide as a means to obtain help or as a result of interpersonal reasons (i.e. Interpersonal Reasons Scale of the SASII) than were patients reporting an ambiguous suicide attempt; and (2) were significantly more likely ($p<.05$) to attempt suicide to make other people's lives better (i.e. Reasons for Dying Scale). Individuals who attempted suicide and clearly wanted to die (i.e., the nonambiguous group) did not significantly differ from the ambiguous group on sex, sexual orientation, marital status, or a diagnosis of substance abuse or dependence. Conclusions: The results indicate that the reasons why people who utilize overdose as a means of self-harm differ among individuals who make ambiguous versus nonambiguous suicide attempts. This study suggests that each group is unique and may also have different needs in treatment. Funding for this project was provided by the National Institute of Mental Health (NIMH) 1K01-MH1933-01A1.

NR10-26

WHY DO PEOPLE DIE BY SUICIDE? THE INTERPERSONAL-PSYCHOLOGICAL THEORY OF SUICIDAL BEHAVIOUR

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SUMMARY:

The Interpersonal-Psychological Theory of suicidal behavior (Joiner, 2005) is a new comprehensive model of suicidal behavior with several implications that attempts to answer the question "why do people die by suicide?". The theory posits that three variables – thwarted belongingness, perceived burdensomeness, and acquired capability for suicide – determine the risk of an individual engaging in a lethal suicide attempt. The first of these, a sense of thwarted belongingness, involves a sense on the part of the individual that he or she lacks meaningful connections to others and that previously solid relationships have become strained or lost. The second, perceived burdensomeness, involves a sense on a part of the individual that he or she is a burden to the world, someone who not only fails to make meaningful contributions but is also a liability. Taken together, the theory says, these two perceptions produce the desire for suicide. The third variable, acquired capability for suicide, involves the degree to which an individual is able to enact a lethal suicide attempt. Joiner posited that, because a lethal or near-lethal suicide attempt is fearsome and often pain-inducing, habituation to the fear and pain is a pre-requisite for serious suicidal behavior. Joiner's theory implies that not all individuals who desire suicide are capable of completing the act, and similarly not all who are capable desire to engage in suicidal behavior. The acquired capability for suicide is thus a necessary but not sufficient risk factor for suicide completion.

NR10-27

BEDSIDE TOXICOLOGIC EXPERIENCE WITH PHYSOSTIGMINE AND FLUMAZENIL

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SUMMARY:

Background: Ingestion of pills is the most commonly employed method of self-injury with suicidal intent. Expertise in medical toxicology affords opportunities for targeted interventions to

ameliorate effects of self-poisoning above simply delivering supportive care with tincture of time. Unfortunately, reliance upon clinical lore and case reports of adverse events engenders fearful avoidance and misuse of therapeutic antidotes whose uses are not familiar to most psychiatrists. Methods: The study involves systematic review of cases (both retrospective and prospective) employing the reversal agents physostigmine and flumazenil in emergency psychiatric and inpatient critical care toxicology practice. Results: From 2003 to 2010, our service cared for over 6000 adult, pediatric, and geriatric patients; nearly 1/3 received at least one of these antidotes with response rates ranging from 50 to over 95%, depending upon the toxins involved. Therapeutic benefits included clearing of cognition that allowed further gathering of history, partnership in care, and reduced need for aggressive interventions such as intubation and mechanical ventilation, physical restraint, urinary catheter placement, and administration of sedative medications. Physostigmine (2 mg IV over 4 minutes q60-120 minutes PRN) was given to patients exhibiting anticholinergic syndrome with delirium secondary to a variety of suspected and unknown compounds from diphenhydramine to Datura spp. toxins to tricyclic antidepressants to neuroleptics. Fewer than 10% experienced adverse effects, the most common being diaphoresis, nausea, and vomiting. The rate of seizures was under 1%. There were no morbid cardiac arrhythmias; one patient had bradycardia followed by a period of asymptomatic, self-limited atrial fibrillation after two doses of 2 mg were given 20 minutes apart. Flumazenil was used to treat obtundation of sufficient severity to threaten pulmonary complications or delirium suspected secondary to benzodiazepines and related sedatives. Giving 0.5 mg IV over 30 seconds q45-90 minutes PRN produced no arrhythmias or seizures, even in chronic users of benzodiazepines. The most common side effect was anxiety, which emerged in fewer than 5% of patients. They responded sufficiently to psychobehavioral support in each case and never displayed other signs of withdrawal. Conclusion: On the basis of these results, we conclude that physostigmine and flumazenil are safe and potentially effective (though underutilized) antidotes when administered to patients presenting with psychosomatic features consistent with anticholinergic and sedative toxicities. Their proper use allows mental health care interactions in the acute wake of a purposeful ingestion to proceed more meaningfully, and patients are spared iatrogenic traumas and complications related to their overdose care.

NR10-28

RELATIONSHIP BETWEEN SUICIDE AND SOCIO-ECONOMIC FACTORS IN NORTH CAROLINA COUNTIES, 1998 – 2002

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SUMMARY:
Method: This is an ecological study that explores the relationship between suicide and socio-economic variables for 100 North Carolina counties between 1998 and 2002. Data is obtained from North Carolina State Center for Health Statistics, U.S. Census Bureau web site and County and Data Book printed by Department of Commerce. SPSS Version 17 was used for data analysis. Descriptive statistics and multivariate linear regression analysis is done for total county suicide rates, for three different age groups and for each gender. Results: County suicide rate (Adj. R^2=.390) is significantly correlated with percentages of white population, urban population, veteran population, violence rate, physician density and negatively correlated with college or higher education. Male suicide rate (Adj. R^2= .339) is significantly correlated with percentage of white population, violence rate, physician and prayer place density and negatively correlated with college or higher education. Female suicide rate (Adj. R^2=.402) is significantly correlated with percentages of white and urban population and negatively correlated with divorced/separated population and presence of 20 – 64 age group. 0 -19 age group suicide rate (R^2=.269) is significantly correlated with percentage of black and urban population and negatively correlated with percentage of 20 -64 age group. 20 -64 age group suicide rate (R^2=.320) is significantly correlated with percentage of white population and violence rate and negatively correlated with percentage of 0 -19 age group and college or higher education. 65 or older group suicide rate (R^2=.149) is significantly correlated with percentages of white, urban population and physician density and negatively correlated with college or higher education. Discussion: Except 0 -19 years age group, being white is a risk factor for all age groups and both genders(p<.000). As urbanization increases, the suicide risk increases for 0 -19 age group (p<.015) and 65 years and older (p<.002). Violence is a

significant risk factor for male suicide (p<.019). As the percentage of veteran population increases in the county, the suicide rate increases (p<.037) Physician density is a risk factor for male (p<.020) and elderly population (p<.027). College or higher education is negatively correlated with suicide rates (p<.001). Higher the percentage of divorced or separated people lower the risk of suicide (p<.000). For 0 -19 years age group presence of higher percentage of 20 – 64 age group (p<.044) and for 20 -64 age group presence of higher percentage of 0 -19 age group (p<.004) decreases the suicide risk. Conclusion: Our results support the literature that being white, living in urban area and high violence rates increases the suicide risk. Physician density is especially important risk factors for elderly population that reflects the increased medical problems. Increased education is most important protective factor since it increases income, the quality of life and increased access to medical services. Interestingly, in this study divorced and separated population is a protective factor for female suicide risk that does not support the literature.

NR10-29

THE TRIDIMENSIONAL PERSONALITY QUESTIONNAIRE IN THREE ITALIAN DIFFERENT CLINICAL GROUPS: SIMILARITIES AND DIFFERENCES

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SUMMARY:
Methods: The TPQ scores of a control group (n=430; 219 females; 211 males) were compared with TPQ scores of drug addicts impatiens (n=85), PTSD patients (n=19) and psoriasis group (n=50). Every TPQ scale consists of four subscales. The NS scale consists of exploratory excitability (NS1), impulsivity (NS2), extravagance (NS3) and disorderliness (NS4); the HA scales of worry/pessimism (HA1), fear of uncertainty (HA2), shyness with strangers (HA3), and fatigability/asthenia (HA4); instead, RD includes sentimentality (RD1), persistence (RD2), attachment (RD3), and dependence (RD4). Results: Factor analysis confirmed the three subscales of the principal dimensions of the TPQ, and persistence has not emerged as a distinct fourth dimension. As expected from theory, the correlations between scales were low. Females, in the control group, scored higher in all 3 TPQ scales than the group of males. They were higher in impulsivity, worry/pessimism, fear of uncertainty, sentimentality, attachment and dependence subscales. The drug addicted subjects had higher score in NS scale than other groups, and lower score in HA than PTSD patients, but more than controls and psoriasis groups. The group of subjects with PTSD had higher scores in HA, but the lowest score in the NS compared with the control group and patients with psoriasis. Psoriasis patients did not differ from the control group in all scales, and RD scale did not differ too in any groups of subjects. Scores of patients with psoriasis did not differ from those in the control group in all scales, and the RD scale did not differ significantly in all 4 groups of subjects. Conclusion: The TPQ is a good tool to identify personality traits of patients with a diagnosis of psychopathology. The sample of patients with psoriasis did not differ significantly with the control group. Further studies are needed.

NR10-30

ALL LIARS ARE NOT CREATED EQUAL: CATEGORIZATION OF PATIENT PREVARICATION

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SUMMARY:
Patients do not always tell physicians the truth. Lying is in fact universal behavior that cuts across cultures and is part of normal development and individuation. Freud, Nietzsche and others have described the relative nature of truth on both sides of the psychoanalytic dyad. Despite these early acknowledgements of the problem of dishonesty in the treatment relationship, contemporary literature contains relatively few practical approaches to patient lying. We limit ourselves to consideration of patient lying and draw from the limited literature and our clinical experience to identify 4 categories of lying encountered in clinical practice. We describe the 4 types of patient lies and discuss their clinical significance. 1. Altruistic: These are the benign lies, the “white lies” of clinical work (e.g., when patient claims a long wait was not frustrating, takes blame for doctor’s unclear instructions or reports more treatment efficacy than experienced to protect

doctor's feelings. These lies involve no clear external gain for the patient; they are told for the benefit of others, sometimes lies of "tactfulness." 2. Primitive: These are the "bald-faced" lies of clinical work. These lies involve dogged denial of behavioral, historical or clinical fact. Patients' denial may be willful deception, self-delusion or both. Patients refuse to accept confirmed test results, deny all corroborated outside history, and give alternative explanations for issue in question. These patients may be medication-seeking. 3. Self Preserving: These are the lies of shame or guilt; patients do not disclose their perceived inadequacies or behaviors (e.g., lack of "will power", smoking, non-adherence) to avoid embarrassment or judgment. These patients may fear loss of access to the clinician or particular treatments by reporting honestly. 4. Sociopathic: These are malignant lies that patients use to obtain personal gain (drug or other treatment, form signed, work excuse) but also harm others. These patients steal prescription pads, forge prescriptions in physician's name, accuse office staff, pharmacists, and family of stealing medication, and threaten suit for malpractice or abandonment when confronted. These patients can try to persuade clinician to malfeasance (e.g., sell prescription pads) and may sadistically seek domination or control of physicians. In naturalistic application to challenging cases these concepts have proven helpful clinically and educationally. Systematic assessment of their validity, reliability and correlation with quality of treatment relationships and clinical outcomes is necessary

NR10-31

PSYCHOEDUCATION: RESULTS OF COMMUNICATION SKILLS TRAINING FOR EMERGENCY NURSES

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SUMMARY:
Objective: To assess the effect of 'Communication Skills Training' on changing the skill level of emergency nurses and patient satisfaction related with this training. Method: Sixteen emergency nurses have attended a six-week psycho-education training to improve their communication skills. The training was designed as group study which included theoretical education, and roll playing sections which involved different communication and empathy skills education. The effectiveness of training was evaluated with 'Communication Skills Scale', 'Empathy Scale', 'Patient Satisfaction Survey' and the number of complaints on nurses' attitudes. Results: The communication skills scale post education scores of nurses increased from 86.8 ± 19 to 93.3 ± 20 ($p<0.05$). Empathy scale score increased from 25.7±7 to 32.6±6 ($p<0.05$). Patient satisfaction survey that was applied to 576 patients about the nurses' attitudes also showed higher satisfaction scores after the training. From the patients satisfaction scores; confidence in nurses, respect kindness understanding of nurses and individualized attention and time devoted for listening have increased significantly. Number of complaints about nurses' attitudes and conflicts between nurses and patients reduced 66%. Conclusion: 'Communication Skills Training' can improve emergency nurses' communication skills with a corresponding increase in patient satisfaction and reduction of complaints against nurses and conflict between nurse and patient. Key words: Communication; education; Nurses; Patient Satisfaction

NR10-32

THE TORONTO PSYCHIATRY CLERKSHIP: INNOVATIONS IN CURRICULAR REFORM

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SUMMARY:
Background: University of Toronto has 229 Year 3 clinical clerks annually, and is soon to expand in student number and teaching sites. Clerks complete 6-week psychiatry rotations at 5 teaching hospitals, 6 times per year. Until 2008-09, hospital sites provided both clinical and didactic components of the curriculum. Sites were challenged to provide a high quality curriculum that was comparable across sites. Description: A working group formed in 2007 to review the curriculum, and to propose a model optimizing both teaching quality and resource use. A new clinical clerkship was launched in 2009-10 that centralized and front-loaded the didactic portion of the curriculum, allowing hospital sites to focus on clinical teaching. Clerks each rotation meet together for part of weeks 1 and 4 of their 6-week rotation for harmonized curriculum delivery. Highly rated teachers from across the city lead the centralized group sessions. Interactive and innovative teaching

approaches are encouraged, and supported by an educational consultant. A developmental perspective, with integrated child and adult psychiatry teaching across subject areas, is emphasized. More efficient time use allows for new content areas, including Eating Disorders, Somatoform Disorders, Psychotherapy, and expanded teaching in Psychopharmacology. Evaluation: The new curriculum, student performance and student and teacher course satisfaction will be presented. Comparing 2008-09 (old curriculum) to 2009-10 (new curriculum), there are no significant differences in student performance on OSCE (t=0.04; p=0.96), short answer question (t=0.27; p=0.79) or multiple choice question (t=0.14; p=0.89) testing. Student evaluations of the course are also stable, except improved student ratings of the child and adolescent portion of the curriculum. Conclusion: A year after curricular reform, data support maintained student performance and course satisfaction with introduction of an updated and more efficient clerkship curriculum.

NR10-33

ASSESSING THE FEASIBILITY OF A UNIVERSAL SUICIDE SCREEN IN A NON-PSYCHIATRIC EMERGENCY DEPARTMENT

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SUMMARY:
Background: This study investigated the feasibility of screening every patient at an urban university and a county hospital Emergency Department (ED) for suicidal ideation (SI) using a 5 item questionnaire. JCAHO National Patient Safety Goal 15 calls for organizations "to identify patients at risk for suicide" (JCAHO, 2006). Overt suicidal ideation and attempts account for only 0.6% of ED visits although this doubled in the 1990s (Brickman & Mintz, 2003; Larkin, et al., 2008). However, when patients are specifically queried, the reported rate is 3-11% (Boudreaux et al. 2005, 2006, 2008). Methods: Recruitment occurred over 6 shifts totaling 66 hrs at a university ED and 3 shifts totaling 36 hours at a county ED. Research staff screened eligible English speaking 18-89 year olds who were seeking attention for a medical problem but were not incapacitated by their presenting problem. After informed consent, subjects completed a 5-item questionnaire, comprised of two PHQ-2 questions (Institute for Healthcare Improvement, 2009) and three Columbia Suicide Severity Rating Scale questions (C-SSRS; Posner, et al., 2007). The PHQ-2 items include one item assessing depressed mood and one assessing anhedonia. The C-SSRS items include passive and active SI questions and lifetime suicide attempts. The PHQ-2 depression questions served as a lead-in into the C-SSRS suicide questions. Results: Of the total 645 subjects approached, 466 were at the university ED and 179 at the county ED, of which 46.5% (n=217) of university patients and 36.4% (n=62) county patients enrolled. Of the 279 enrolled 41.9% were male, 164 self-identified White, 53 Black, 4 Asian, and 58 as "other" of which 57 were Hispanic. The average age was 40.25 years. Average screening time was 1.58 mins. The structure at each ED varied therefore data was examined separately. At the university ED, screening identified 22 subjects as depressed, 12 anhedonic, and 26 both. A total of 9 (4.2%) endorsed SI; 1.4% (n=3) both active and passive, 2.8% (n=6) passive only and none endorsed only active SI. All cases with SI endorsed either depression (n=8) or anhedonia (n=1). A prior attempt was reported by 42 subjects or 19.35% of the total sample and 5 of the 9 with current SI. All 3 with active SI had a prior attempt of which 2 were recent. At the county ED, screening identified 7 subjects as depressed, 2 anhedonic and 15 both. A higher fraction reported SI at 14.5%; 9.7% (n=6) endorsed both active and passive, 3.2% (n=2) passive only, and 1.6% (n=1) endorsed active only. Again 8 of 9 with SI endorsed the depression item. A prior attempt was reported by exactly the same percentage of the total sample, 19.35% (n=12) and 4 of the 9 with current SI had a prior attempt. Conclusion: The prevalence of SI at the university ED was comparable to previous studies but it was higher at the county hospital. Comparable to other studies, 89% of patients with SI endorsed a depression question. There were 9 of 269 cases (3.2%) with active SI and a prior attempt who would not otherwise have been identified during routine ED care. Most would agree that these patients are at elevated risk. These findings suggest screening in the ED may be cost effective and could possibly be streamlined.

NR10-34

SURVEILLANCE STRATEGIES

FOR ENHANCING DATA QUALITY IN ADJUNCTIVE PSYCHOPHARMACOTHERAPY TRIALS

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SUMMARY:
Introduction. Failure of clinical trials to detect drug-placebo differences has increased over time, which has been attributed to many factors including challenges at the level of the investigative site. Adjunctive therapy trials pose challenges beyond those of traditional trials of single agents vs. placebo: there are typically two critical entry points and often a single-blind that must be maintained for months. We designed and enacted a multipronged training and data surveillance program in an attempt to improve data quality and ultimately signal detection in an industry-sponsored randomized adjunctive antidepressant therapy Phase III trial that included an 8-week single-blind lead-in. Method. US investigators participated in diagnosis, efficacy scale, and interviewing skills training and certification. Investigators were required to demonstrate interviewing proficiency and efficacy scale scoring proficiency standard prior to entering data in the study. To minimize the cueing to subjects of an imminent change at mid-study randomization, investigators were also required to undergo training in techniques for maintaining the single-blind, including comportment of personnel at critical visits, and handling of difficult patient scenarios. At study onset, surveillance of all clinician-rated outcomes data was begun via a computer-driven system with daily clinical oversight. Predetermined data inconsistencies were flagged as proxies of potential ratings errors. Independent clinicians assessed each flag and when indicated contacted and remediated site raters. By design, the clinical contacts included scale conventions remediation as well as placebo response minimization coaching. Per-rater flag rates (number of flags corrected by possible number of flags) were calculated by month. Interrater reliability (kappa) on a standardized patient video was calculated at study onset and at 6 month intervals thereafter. Internal consistency of the primary efficacy measure (Montgomery Asberg Depression Rating Scale) was assessed using Cronbach's alpha. We report data from onset to month 9. Results. Interrater scoring reliability on the MADRS test videos was high (k==0.95 and 0.96, for the initial and 6 month timepoints, respectively). MADRS study data showed high internal consistency and improved significantly across the initial and month 9 timepoints (Cronbach's alpha =.81 and .89, respectively; Fisher r to z, $p < .0002$). 1150 flags occurred during the initial month; 780 occurred during month 9. The index rate decreased numerically (.048 to 0.039), but not significantly across the two time points. Conclusions. Internal consistency of actual study data can be measured and improved upon during a blinded trial. Excellent interrater reliability can be achieved at outset and maintained across a study. It is feasible to identify and directly address data inconsistencies daily. Per-rater data inconsistencies occur and continue in even highly skilled and concordant raters, supporting the need for surveillance across a full trial. Training, intervention and surveillance may contribute to enhanced data consistency and interrater concordance.

NR10-35

VALIDATION OF THE 12-ITEM CENTER FOR EPIDEMIOLOGICAL STUDIES DEPRESSION SCALE (CES-D12) AND COMPARISON WITH THE 16-ITEM QUICK INVENTORY OF DEPRESSIVE

Chp.:Pierre Tessier M.D., 1145 Carling Ave, Ottawa, K1Z7K4 Canada, Co-Author(s): Lisa Batten, M.A.

SUMMARY:
Background: The 12-item Centre for Epidemiological Studies Depression scale (CES-D12) is a measure of depressive symptomatology derived from the 20-item CES-D and adapted for use in the National Longitudinal Study of Children and Youth (NLSCY). The NLSCY is a longitudinal epidemiological study monitoring health of Canadian children from birth to early adulthood. The CES-D12 is administered as a self-report questionnaire to assess parental depression in the Canadian population. The original 20-item CES-D has established cut-off scores that effectively identify clinical depression in adult populations[1]. To date, no studies have been conducted to determine an effective threshold of the CES-D12 as an epidemiological marker for clinically significant depressive symptoms. The current study aims to determine the effectiveness of the CES-D12 in identifying depression, establish a

cutoff score of clinically significant symptoms, and compare results on the CES-D12 to the 16-item Quick Inventory of Depressive Symptomatology (QIDS-SR16), an effective brief, psychometrically sound symptom severity rating scale for depression[2]. Hypothesis: Comparison of these tools will find that a) The CES-D12 is an effective tool for identifying clinical depression; and b) The CES-D12 and the QIDS-SR16 will have similar efficacy in identifying symptom severity. Methods: Participants were recruited during initial consultation, or follow-up, in an outpatient clinic for mood disorders. Men and women with a DSM-IV diagnoses of a depressive disorder were asked to complete the CES-D12 and the QIDS-SR16 during their clinic visit. Participants were all receiving treatment and had varying levels of depression status (i.e., mild, severe, remitted). Results: A total of 70 women and 32 men (N=102) with a clinical diagnoses of a depressive disorder completed both questionnaires in a single visit. The total scores on the CES-D12 and the QIDS-SR16 were highly correlated (.89). High item–total correlations (>.60) were found for interest/life enjoyment (.75), effort/energy level (.72), self view (.71), and sad mood (.69). Moderate correlations were found for thoughts of death with could not shake blues (.51); as well as for appetite changes (.45), and concentration (.48). The suggested cutoff score of 12 on the CES-D12 yielded a sensitivity of 84.74% and a specificity of 95.65%, reducing the cutoff to 10 yielded a sensitivity of 93.59% and a specificity of 92.67%. Thus the optimal cutoff score was 10 for identification of depression. Furthermore, the optimal ranges of assessing symptom severity on the CES-D12 were 0-9 no or minimal symptoms; 10-20 moderate symptoms; and 21-36 severe symptoms. Discussion: Based on these results, the CES-D12 may be a useful measure for identifying clinical depression and was equally effective as the QIDS-16 at identifying symptoms and severity in this sample. Furthermore, it is suggested that the current guidelines for identification of significant depression symptoms on this scale be revised from 12 to 10 as the threshold for significant depressive symptoms.

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NR10-36

THE EFFECTS OF PERFECTIONISM ON ACADEMIC PERFORMANCE OF STUDENTS IN ONE KOREAN MEDICAL SCHOOL.

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SUMMARY:
The purpose of this study was to explore the differential effects of multi-dimensional perfectionism on academic achievement, depression, engagement, and burnout in medical students. In addition, the mediating effects of engagement on perfectionism and academic achievement, as well as the effects of burnout on perfectionism and depression, were examined. Two hundred eight medical students participated, and 167 students completed questionnaires, including the Frost Multi-dimensional Perfectionism Scale (FMPS), Hewitt & Flett Multi-dimensional Perfectionism Scale (HFMPS), Beck Depression Inventory (BDI), Schaufeli Engagement Scale (SES), and Malslach Burnout Inventory-General Survey (MBI-GS). Academic achievement was measured as the grade point average (GPA) of the previous semester. Data were analyzed by correlation analyses, independent t-tests, and Structural Equation Model (SEM) for path analysis. Adaptive perfectionism (personal standard, self-oriented perfectionism) was associated with GPA ($r=0.164$, $p<0.05$; $r=0.173$, $p<0.05$) and engagement ($r=0.394$, $p<0.01$; $r=0.449$, $p<0.01$), and maladaptive perfectionism (parental criticism, concern over mistakes, socially prescribed perfectionism) was associated with depression ($r=0.208$, $p<0.01$; $r=0.254$, $p<0.01$; $r=0.234$, $p<0.01$) and burnout ($r=0.218$, $p<0.01$; $r=0.236$, $p<0.01$; $r=0.280$, $p<0.01$). Engagement had mediating effects on adaptive perfectionism and GPA, and burnout had mediating effects on maladaptive perfectionism and depression. Students who experienced academic failure had lower engagement than those who did not. This study demonstrates that academic achievement and emotional difficulties such as depression are determined by adaptive and maladaptive perfectionism, respectively, in medical students.

NR10-37

CHALLENGES OF EUROPEAN POSTGRADUATE TRAINING IN PSYCHIATRY: TRAINEES´ VIEWS

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SUMMARY:
Background: There are significant differences in postgraduate psychiatric training across Europe. The countries differ especially in the length of psychiatric training, in subspecialization opportunities, in choices of placements, in necessity of psychotherapy education, in procedures for the assessment as well as in the evaluation of knowledge. In the light of the current direction of Europe (without borders and with free movement of workforce) it is inevitable to harmonize at least basic standards of psychiatric education across Europe. European Federation of Psychiatric Trainees (EFPT) is an independent, nonprofit, umbrella organization for national European psychiatric trainees' associations with a unique position to obtain feedback from trainees in order to improve the standards of psychiatric training in Europe. Objective: To identify the most important challenges of psychiatric trainees across Europe. Methods: On the basis of the reports submitted to the EFPT annual forum in Cambridge by the national trainee associations in 2009, qualitative analysis revealed some interesting findings especially in response to the question, "What are currently the three most important issues facing postgraduate psychiatric training in your country?" Results: Twenty-eight of 31 countries responded (90%). Responses were grouped under five main themes. As the most important issue trainees reported the imperfect structure of the training programs and problems with implementation of new ones. That is why new training programs based on a competency based framework are being developed lately in number of countries (e.g. United Kingdom, Ireland, Netherlands). Their components generally include a competency-based curriculum and assessment programmes ranging from work-place based assessments to exit examinations. However, not only the structure of the training and its implementation remains an issue, trainees are obviously concerned also with topics related to working conditions (e.g. work overload, undignified working environment, low salaries). Insufficient training opportunities, lack of supervision, unavailability of psychotherapy courses do also present major obstacles in the carreer of a psychiatric trainee. Conclusion : A major concern reported by trainees pertains to the implementation of these new programs rather than to the structure or content of the curricula themselves. It is of utmost importance to develop clear quality assurance strategies not only to ensure adequate implementation of new training programs but also to evaluate and address some of the other concerns. Considering, that the goal of undertaking postgraduate training in psychiatry is to become a competent specialist who is fully responsible for delivering the first class treatment for her/his patients, it is necessary to discuss and work on the improvement on those crucial issues ideally by working in partnership with otherv relevant international and national bodies.

NR10-38

ON HYPERSEXUAL DISORDER: GENDER DIFFERENCES, PSYCHIATRIC CO-MORBIDITY AND SEXUAL PARAPHILIA IN SWEDISH MEN AND WOMEN WITH SELF-REPORTED HYPERSEXUAL DI

Chp.:Katarina Öberg Ph.D., M52 Center for Andrology and Sexualmedicin Karolinska University Hospital Huddinge, Stockholm, SE 146 80 Sweden, Co-Author(s): Cecilia Dhejne MD,consultant psychiatrist, Jonas Hallberg, MSc & Stefan Arver ass professor, endocrinologist.

SUMMARY:
On Hypersexual Disorder Gender differences, psychiatric co-morbidity and sexual paraphilia in Swedish men and women with self-reported hypersexual disorder. Katarina Öberg, PhD, psychologist, psychotherapist, Cecilia Dhejne MD, consultant psychiatrist, Jonas Hallberg, MSc & Stefan Arver ass professor, endocrinologist. katarina.oberg@karolinska.se Objectives: To apply the psychometric properties of the hypersexual disorder screening inventory (HDSI), and describe differences in hypersexual behaviour (specifiers) between women and men. Further, to describe prevalence of psychiatric co-morbidity and sexual

paraphilia. Method: Data were gathered from men and women recruited by advertisement in a large circulating news paper and responded through on-line administration of the Hypersexual Disorder Screening Inventory (HDSI), (APA: s suggested diagnosis for DSM-V), and psychiatric well-being (MADRS-S, CORE-OM) and further, indicators of sexual paraphilia (self-reported sexual interest, SSI following APA: s DSM-IV-TR). Sixty-three men and 17 women, aged 19-61 perceiving themselves as hypersexual. The participants agreed to take part in a study on hypersexual behaviour and were offered assessment for possible participation in treatment for hypersexual disorder. Results: Fifty percent of the sample fulfilled the diagnostic criteria's for Hypersexual Disorder (HD) according to HDSI (men 48% and women 62%). The vast majority (97%), of HD-men reported uncontrolled pornography-consumption while "only" 50% of the women reported this. Most prevalent hypersexual behaviour among women was sex with consenting adults (90% and 83%, clinical and sub-clinical group respectively). In the whole sample 92% had at least mild depressive symptoms during the last three days. Those who fulfilled the criteria for HD reported significantly ($p < .05$) lower psychiatric well-being compared to those who did not fulfill criteria and for the whole sample women were significantly ($p < .05$) more distressed than men. Among all respondents 80% reported some kind of paraphilic interest, voyuerism and exhibitionism most commonly reported (45 and 21 % respectively), followed by fetishistic (19%) and paedophilic interest (13%). Two-thirds of those with hypersexual disorder had at least one sexual paraphilic interest, significantly more common ($p< .05$) among those with a hypersexual disorder than in the non-disorder group. Conclusion: In clinical settings clinicians seeing patients with Hypersexual Disorder should assess sexual paraphilic behaviour, psychiatric co-morbidity and acknowledge gender differences. Should we rather talk about Hypersexual Disorder with or without sexual paraphilia?

NR10-39

RECOGNITION/DIAGNOSIS OF SHIFT WORK DISORDER: AN INTERNET SURVEY OF SHIFT WORKERS, PATIENTS WITH SHIFT WORK DISORDER, AND HEALTHCARE PROFESSIONALS

Chp.:Candace Anderson Other, 41 Moores Road, Frazer, PA 19355, Co-Author(s): Lauren Sylvester, Sharon Paik

SUMMARY:
Objective: Recommendations from the 2008 National Sleep Foundation "Sleep in America" poll included a call for increasing resources for education about, and diagnosis and treatment of, sleep disorders. The objective of this market research study was to understand how shift work disorder (SWD) was diagnosed from the perspective of healthcare professionals (HCPs) and shift workers (SWs). Methods: Two separate, structured, online surveys were developed and administered to one of two study groups: (1) SWs with and without a self-reported diagnosis of SWD and (2) HCPs. To participate in the shift work survey, respondents had to have spent at least 21 hours per week working shifts in the 2 weeks prior to completing the survey; reported a diagnosis of SWD or been excessively sleepy (i.e. had a score of >/=10 of the Epworth Sleepiness Scale [ESS], administered as part of the online survey); and scored >/=5 on any of the subscales (disruption of work/school work, social life/activities, or family life/home responsibilities) of the Sheehan Disability Scale (SDS). The surveys were conducted in March and April of 2009. HCPs who spent at least 75% of their time in patient care had to have been qualified for 3 or more years in one of the following specialties or occupations: Primary Care, Psychiatry, Neurology, Sleep Medicine, Pulmonology, Occupational Medicine, Gynecology, Registered Nurse, Physician's Assistant, or Nurse Practitioner to participate in the HCP survey. Results: The shift work survey was completed by 260 respondents and the HCP survey was completed by 673 HCPs. For SWs, 28% worked a shift for less than a year, 16% for 1 to 2 years, and 20% for 10 or more years. Of SWs without a diagnosis (n=157), 23% did not believe they suffered from excessive sleepiness despite scoring =10 on the ESS and being functionally impaired as measured by the SDS. Excessive sleepiness and insomnia were reported by 45% and 38% of undiagnosed SWs, respectively, and 32% associated these symptoms with their work schedules. SWs who discussed their excessive sleepiness with their HCPs initiated this conversation 82% of the time, while HCPs rarely

initiated it (13%). Most HCPs (75%) had diagnosed patients in their practice with SWD. HCPs believed that 67% of total SWD is never detected by physicians. HCPs also believed that 50% of SWD is undiagnosed because it is often masked by other conditions, including depression and obstructive sleep apnea, and that it is misdiagnosed as depression 30% of the time, insomnia unrelated to SWD 27%, chronic fatigue syndrome 22%, and OSA 20%. Conclusion: SWs do not always recognize their own symptoms of SWD and are more likely to initiate a discussion of those symptoms due to their work schedule than HCPs. HCPs believe that SWD is missed 67% of the time and reported that SWD is masked by other comorbidities or misdiagnosed. This research was sponsored by and conducted in collaboration with Cephalon, Inc., Frazer, PA.

NR10-40

USE OF HEALTHCARE RESOURCES BEFORE AND AFTER INITIATION OF ARMODAFINIL TREATMENT FOR WAKEFULNESS

Chp.:Rashad Carlton Pharm.D., 4114 Woodlands Parkway, Suite 500, Palm Harbor, FL 34685, Co-Author(s): Timothy S. Regan, RPh, CPh, Orysola Lunacsek, Ph.D., MBA, Ryan Dammerman

SUMMARY:
Objectives: Once-daily armodafinil significantly improves wakefulness in patients with excessive sleepiness due to shift work disorder (SWD), treated obstructive sleep apnea (OSA), or narcolepsy. The objective of the current analysis was to examine the use of resources by patients who received armodafinil for these FDA-approved indications. Methods: Longitudinal patient data from medical claims (diagnostic and therapeutic services), pharmacy claims (prescriptions), and eligibility files (demographics and enrollment) were collected from the IMS LifeLink? database between December 1, 2008 and March 31, 2010. Patients were identified and healthcare use data were collected for 6 months before and up to 10 months after their first armodafinil pharmacy claim. Healthcare costs and visits before and after initiation of armodafinil were statistically analyzed using paired t tests. Results: Of the 1,282 patients included in this study, 4.5% were diagnosed with SWD, 85.9% with OSA, and 20.4% with narcolepsy. The mean monthly healthcare cost for patients prior to taking armodafinil was $1,562.99 (pharmacy costs $432.26; medical costs $1,103.73). After armodafinil therapy initiation, overall monthly cost decreased to $1,438.11 (p=0.0588). Armodafinil significantly increased prescription costs by $138.53/month (p<0.0001) but decreased medical costs by $263.41/month (p<0.0001). Further analysis of medical costs demonstrated that armodafinil treatment significantly decreased physician costs by $133.23/month (p<0.0001) and outpatient costs by $75.62 (p=0.0039). Emergency room (ER) costs were lower by $3.99/month and inpatient costs by $7.51/month following armodafinil treatment, but these costs were not statistically different from before treatment. In addition, armodafinil reduced the number of inpatient visits by 0.21/year (p=0.0307), physician visits by 4.91/year (p<0.0001), and outpatient visits by 0.89/year (p<0.0001). The number of ER visits per year decreased slightly (by 0.01/year) but was not statistically different than the pre-armodafinil period. Conclusions: After armodafinil treatment, reductions were seen in total healthcare use and costs compared to the pre-armodafinil period. As expected, total prescription costs were greater; however, lower total monthly costs were observed with armodafinil because use of medical resources decreased. This significant reduction in the use of medical resources appeared to be caused predominantly by fewer physician visits and lower outpatient costs. This research was sponsored by and conducted in collaboration with Cephalon, Inc., Frazer, PA.

NR10-41

SLEEP LATENCY RESPONSE RATES WITH RAMELTEON 8 MG TREATMENT COMPARED WITH PLACEBO USING STRICT DEFINITIONS OF RESPONSE IN ADULTS WITH CHRONIC INSOMNIA:

Chp.:Lambros Chrones M.D., 1 Takeda Parkway, Deerfield, IL 60015, Co-Author(s): Kumar Budur, M.D., Betty Lorenz, Ph.D., Mingyin Yan, Ph.D.

SUMMARY:
Objectives: Ramelteon is an MT1/MT2 melatonin receptor agonist approved for the treatment of sleep onset insomnia. The goal of the current analysis was to assess sleep latency response rates for ramelteon 8 mg using combined data from 2 clinical trials in order to identify a population of responders according to a strict definition of response. Methods: Data were combined from 2

randomized, placebo-controlled trials of ramelteon in adults diagnosed with chronic insomnia. Mean latency to persistent sleep (LPS) data were collected using 2-night polysomnography for each trial. LPS response rates for ramelteon and placebo were calculated at Visit 1 (Nights 1 and 2 for each trial) and Visit 2 (equivalent visits Week 5 and Month 1) using 3 definitions of response ([1] LPS <30 min, [2] percent decrease in LPS from baseline >50%, and [3] percent decrease in LPS from baseline >50% and LPS <30 min). Logistic regression, including study and treatment as explanatory variables, was used to test for differences in response rates between ramelteon and placebo. Results: A total of 715 subjects (mean age 43.5 yrs, 65.0% women) were included in this analysis. At Visit 1, the response rate for LPS was significantly higher for the ramelteon group using all 3 definitions of response (n=362; [1] 62.4%, [2] 61.6%, [3] 51.7%; p<0.001) compared with the placebo group (n=353; [1] 43.1%, [2] 39.7%, [3] 32.3%). At Visit 2, the response rate was sustained and remained significantly higher for the ramelteon group using all 3 definitions of response (n=336; [1] 64.6%, [2] 64.9%, [3] 55.4%; p<0.005) compared with the placebo group (n=330; [1] 52.7%, [2] 51.5%, [3] 39.7%). Conclusions: In this combined analysis, ramelteon 8 mg demonstrated significantly higher LPS response rates than placebo using all 3 different definitions of response. Ramelteon 8 mg demonstrated better response rates than placebo even for the strictest definition of response (percent decrease in sleep latency from baseline >50% and sleep latency <30 min). Funding: This study was funded by the Takeda Pharmaceutical Company, Ltd.

NR10-42

PATIENT-REPORTED SYMPTOM IMPROVEMENT IN SLEEP MAINTENANCE ENDPOINTS IN ADULT AND ELDERLY PATIENTS WITH INSOMNIA TREATED WITH DOXEPIN 3 AND 6 MG

Chp.:H. Heith Durrence Ph.D., 3570 Carmel Mountain Road, San Diego, CA 92130, Co-Author(s): Alan Lankford, PhD, Andrew Krystal, MD, MS, Brian Dorsey, Roberta Rogowski, BSN, Elizabeth Ludington, PhD, Charles S. Davis, and Thomas Roth, PhD

SUMMARY:
Objective: This report reviews patient-reported (PR) efficacy data from two trials evaluating doxepin (DXP) in insomnia patients. Method: In two double-blind placebo-controlled trials, patients meeting DSM-IV-TR criteria for primary insomnia were randomized for treatment. Study A was a 12-week trial in elderly [N=240; DXP 3mg vs placebo (PBO)]; Study B was a 5-week trial in adults (N=221; DXP 3mg and 6mg vs PBO). PR endpoints included subjective wake after sleep onset (sWASO) and total sleep time (sTST). These endpoints were analyzed with a mixed-effect model repeated measures (MMRM) approach, using a model that included fixed effects for treatment group, time, the treatment-by-time interaction, and the baseline value of the endpoint. Results: There was a main effect for treatment, with no significant interaction, for both sWASO and sTST in both studies. For both sWASO (Study A: DXP 3mg p=0.0052; Study B: DXP 3mg p=0.0213; DXP 6mg p=0.0014) and sTST (Study A: DXP 3mg p=0.0114; Study B: DXP 3mg p=0.0469; DXP 6mg p=0.0042) treatment effects were significantly different from PBO in both trials. In Study A, the estimated difference from PBO in sWASO for DXP 3mg was -18.3 minutes (SE=6.49). In Study B, the difference in sWASO for DXP 3mg was -10.2 minutes (SE=4.41), and was -14.2 minutes (SE=4.41) for DXP 6mg. In Study A, the difference in sTST for DXP 3mg was 18.9 minutes (SE=7.41). In Study B, the estimated difference in sTST for DXP 3mg was 11.9 minutes (SE=5.97), and was 17.3 minutes (SE=5.96) for DXP 6mg. Conclusions: In both an adult (3 and 6mg) and an elderly trial (3mg), DXP 3 and 6mg produced significant improvements in PR sleep maintenance and duration endpoints. These data parallel the significant improvements previously reported in polysomnographic endpoints, providing further evidence for the efficacy of DXP 3 and 6mg for the treatment of sleep maintenance insomnia.

NR10-43

MAINTENANCE OF WAKEFULNESS WITH LISDEXAMFETAMINE DIMESYLATE COMPARED WITH PLACEBO AND ARMODAFINIL IN HEALTHY ADULT MALES UNDERGOING ACUTE SLEEP LOSS

Chp.:Maria Gasior M.D Co-Author(s): Jon Freeman, PhD; Gary Zammit, PhD; Patricia Donnelly, AAS; Joseph Gao, PhD; M. Celeste Ferreira-Cornwell, PhD; Thomas Roth, PhD

SUMMARY:
Objective: To evaluate the pharmacodynamic profile

of lisdexamfetamine dimesylate (LDX), a long-acting prodrug stimulant, vs placebo and armodafinil in healthy males undergoing acute sleep loss. Methods: This randomized, double-blind, parallel-group study enrolled healthy males (18-40 y) with no known sleep disorders and stable sleep-wake cycles. Participants received a single oral dose of LDX (20, 50, or 70mg), placebo, or armodafinil (250mg) at 19:25 h. The primary outcome was mean time (min) to unequivocal sleep latency on the Maintenance of Wakefulness Test (MWT) over five 30-min sessions administered every 2 h from 2400-0800 h. Secondary outcomes included Karolinska Sleepiness Scale (KSS) and Psychomotor Vigilance Task (PVT). Safety assessments included treatment-emergent adverse events (TEAEs) and vital signs. Results: 135 males (27 in each group) were randomized and completed all MWTs. Mean (SD) age was 27.7 (5.62 y); 45.9% were white; 20% were Hispanic. Least squares (LS) mean (SE) MWT unequivocal sleep latency (min) average for 2400-0800 h was 23.3 (1.10), 27.9 (0.64), and 29.3 (0.44) for LDX 20, 50, and 70mg, respectively; 27.6 (0.63) for armodafinil; and 15.3 (1.00) for placebo. All active treatments were superior vs placebo (P<.0001); LDX 70mg was superior vs armodafinil (P=.0351); armodafinil was superior vs LDX 20mg (P=.0014). LS mean (SE) average postdose KSS scores were 4.7 (0.21), 4.0 (0.21), and 3.6 (0.21) for LDX 20, 50, and 70mg, respectively; 4.7 (0.21) for armodafinil and 5.2 (0.21) for placebo. LDX 50mg and 70mg significantly improved subject-estimated sleepiness vs placebo (P<=.0002) and armodafinil (P<=.03); LDX 20mg and armodafinil did not differ significantly vs placebo or each other. All active treatments significantly improved sustained attention and decreased attention lapses (reaction times [RT] >500ms) by PVT vs placebo (P<.0001 for all). LS mean (SE) postdose average median RTs (ms) were 243.6 (3.59), 234.8 (3.58), and 243.5 (3.58) for LDX 20, 50, and 70mg, respectively; 243.7 (3.59) for armodafinil, and 270.2 (3.59) for placebo. Postdose average median frequency of attention lapses were 1.4, 0.7, and 0.7 for LDX 20, 50, and 70mg, respectively; 0.7 for armodafinil, and 4.9 for placebo. No significant differences were found between active treatments on PVT. Overall, 7.4% of participants receiving placebo, 19.8% of participants receiving any dose of LDX, and 11.1% of participants receiving armodafinil experienced TEAEs. No serious AEs or AEs leading to discontinuation were noted. Conclusion: This preliminary study in sleep-deprived males showed that all doses of LDX maintained wakefulness and alertness vs placebo and LDX 70mg was superior to armodafinil on the primary endpoint. The safety profiles of LDX and armodafinil were consistent with prior studies. Further studies in patients with disorders of excessive sleepiness may be considered. Clinical research was funded by the sponsor, Shire Development Inc.

NR10-44

ARMODAFINIL IMPROVES SEVERE SLEEPINESS, AS MEASURED BY SLEEP LATENCY TIME, COMPARED TO PLACEBO IN PATIENTS WITH SHIFT WORK DISORDER

Chp.:Steven Hull M.D., 10590 Barkley Street, Overland Park, KS 66212, Co-Author(s): James K. Wyatt, Ph.D, DABSM, Ryan Dammerman, M.D., Ph.D, Ronghua Yang, Ph.D

SUMMARY:

Objective: In a previous study (Czeisler, 2009), armodafinil significantly improved wakefulness in patients with excessive sleepiness associated with shift work disorder (SWD), as measured by the Multiple Sleep Latency Test (MSLT) given at night. This post-hoc analysis of the same study examined the effect of armodafinil on improving severe nighttime sleepiness based on MSLT sleep latency time. Methods: In a multi-center, 12-week, randomized, double-blind, placebo-controlled, parallel-group study, permanent or rotating night shift workers with nighttime sleep latencies of < / =6 minutes on MSLT who were diagnosed with moderate to severe SWD were administered 150 mg armodafinil or placebo 30-60 minutes before a laboratory night shift, after 3 consecutive night shifts. Patients were administered the MSLT at 2400, 0200, 0400, 0600, and 0800 at baseline and at Week 12. For this analysis, severity of sleepiness was categorized using MSLT sleep latency time as follows: <5 minutes (severe), 5 to 10 minutes (diagnostic "grey area"), and 10-20 minutes (normal). Improvements in severely sleepy SWD patients were determined by calculating the percentage of those whose sleep latency time was >5 minutes after completing the night shift. Results: A total of 226 patients were included (armodafinil, n=112; placebo, n=104). At the end of the study, 38% of armodafinil-treated patients had sleep latencies >5 minutes (17% for placebo). The percentage of patients with sleep latency >5 minutes

at 2400 hours was 49% in the armodafinil group and 30% in the placebo group. These percentages decreased throughout the night for armodafinil (42% at 0200, 33% at 0400, 22% at 0600) and for placebo (27% at 0200, 12% at 0400, 7% at 0600). There was a slight increase at 0800 for both treatment groups (26% armodafinil; 12% placebo). Conclusion: Armodafinil improved MSLT sleep latencies compared with placebo in patients with SWD and severe excessive sleepiness. Armodafinil resulted in sustained improvements in MSLT sleep latencies and attenuated the decline of sleep latency throughout the night shift. A percentage of patients in both groups had sustained MSLT sleep latency times that remained <5 minutes. Czeisler CA, Walsh JK, Wesnes KA, Arora S, Roth T. Armodafinil for treatment of excessive sleepiness associated with shift work disorder: A randomized controlled study. Mayo Clin Proc. 2009;84:958-72. This research was sponsored by Cephalon, Inc., Frazer. The original study is registered on clinicaltrials.gov (NCT00080288).

NR10-45

IMPROVEMENT IN SLEEP MAINTENANCE AND EARLY MORNING AWAKENINGS IN ADULT AND ELDERLY PATIENTS WITH INSOMNIA TREATED WITH DOXEPIN 3 AND 6 MG

Chp.:Andrew Krystal M.D., Psychiatry and Behavioral Sciences; Trent Drive Room 54221, Durham, NC 27710, Co-Author(s): Alan Lankford, PhD, Brian Dorsey, Roberta Rogowski, BSN, Elizabeth Ludington, PhD, H. Heith Durrence, PhD, and Thomas Roth, PhD

SUMMARY:
Objective: This report reviews the effects of doxepin (DXP) 3 and 6mg on sleep maintenance (SM) and early morning awakenings (EMA) in transient and chronic insomnia. Method: SM and EMA endpoints from four double-blind placebo-controlled trials are reported (see Table). SM endpoints included polysomnographic wake after sleep onset (WASO) and subjective WASO (sWASO). EMA was assessed with PSG Sleep Efficiency% in the last quarter-of-the-night (SE-LQ). Data from the first and final assessment point of the study are reported. Results: DXP 3 and 6mg significantly improved WASO on N1 of all three trials (p<0.0001), with improvements vs PBO ranging from 25 (Study B, 3mg) to 40 minutes (Study D, 6mg). DXP 3mg (Study A and B; p=0.0008) and 6mg (Study B and D; p<0.0001) significantly improved SE-LQ on N1 of all three trials, with improvements vs PBO ranging from 8% (Study B, 3mg) to 15% (Study A, 3mg). DXP 6mg (Study C; p<0.0001) significantly improved sWASO in WK1, with improvement vs PBO of 23 minutes. The significant improvements in SM and EMA were maintained at the final timepoint in all studies, excepting SE-LQ on N29 (Study B, 3mg p=0.07). Conclusions: DXP 3 and 6mg demonstrated significant improvements in WASO, sWASO and SE-LQ that were consistent across all Phase 3 trials and that were maintained at the final timepoint for all but one assessment (N29 SE-LQ). These data suggest DXP is effective at treating both SM (WASO and sWASO) and EMA (SE-LQ) in both transient and chronic insomnia populations, and in adult and elderly populations. Table Trial Population N Outcome Type Treatments Duration A Elderly PI* 240 PSG DXP 3mg; PBO 12 weeks B Adults PI* 221 PSG DXP 3mg; DXP 6mg; PBO 5 weeks C Adults PI* 255 Self-Report DXP 6mg; PBO 4 weeks D Adults Transient Insomnia , ** 565 PSG DXP 6mg; PBO 1 night *PI=DSM-IV TR Primary Insomnia; , ** A model of transient insomnia in healthy adults

NR10-46

CONCOMITANT TREATMENT WITH ESZOPICLONE AND ESCITALOPRAM FOR INSOMNIA COMORBID WITH GENERALIZED ANXIETY DISORDER (GAD): PREDICTORS OF RESPONSE

Chp.:Randall Marshall M.D., 84 Waterford Drive, Marlborough, MA 01752, Co-Author(s): Todd Grinnell, BA, Edward Schweizer, Dan J. Stein, MD

SUMMARY:
Introduction: Concomitant treatment with eszopiclone 3 mg and escitalopram 10 mg was demonstrated effective for treating insomnia comorbid with GAD in a large, randomized, controlled trial.1 This analysis aimed to identify predictors of treatment response. Methods: A post-hoc, multivariate logistic regression analysis was performed on ITT week 8 LOCF (endpoint) data comparing escitalopram 10 mg+ eszopiclone 3 mg to escitalopram + placebo for insomnia in patients with comorbid GAD (n=593). Treatment response was defined as >50% reduction from baseline in sleep latency (SL) or wake time after sleep onset (WASO); or >30 minute increase from baseline in total sleep time (TST). Covariates

included demographic and baseline clinical variables, and odds ratios (OR) with confidence intervals were calculated for each potential predictor. Results: Treatment group (eszopiclone 3 mg vs placebo) was the only factor found to influence all 3 response variables (range OR=1.7 to 2.0, p<0.003 or less). Significant predictors of eszopiclone response were the following: for SL, baseline SL (OR=1.07, p<0.0001); WASO, the Hospital Anxiety and Depression Scale (OR=1.08, p<0.003) and Quality of Life, Enjoyment and Satisfaction Scale ([QLESQ] OR=1.05, p<0.001); TST, gender (OR=1.82, p<0.04), age (OR=1.35, p<0.02), baseline TST (OR=1.06, p<0.003), and baseline QLESQ (OR=1.04, p<0.008). No negative predictors were identified. Conclusions: The factor that consistently influenced response was treatment assignment to eszopiclone 3 mg. Gender (female) and older age predicted better clinical response on TST. Thus, treatment response was more likely in these groups at higher risk for primary insomnia. Overall, the likelihood of clinical response was largely independent of patient characteristics. Support: Funded by Sunovion Pharmaceuticals, Inc.

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1) Pollack M, et al. Eszopiclone coadministered with escitalopram in patients with insomnia and comorbid generalized anxiety disorder. Arch Gen Psychiatry. 2008;65:551-562.

NR10-47

LOWER DAILY AVERAGE CONSUMPTION AND GREATER PRESCRIPTION COSTS SAVINGS OF ARMODAFINIL VERSUS MODAFINIL: A 12-MONTH RETROSPECTIVE DATABASE ANALYSIS

Chp.:Timothy Regan R.Ph., 4114 Woodlands Parkway, Suite 500, Palm Harbor, FL 34685, Co-Author(s): Rashad Carlton, Pharm.D, MSPH, Gary K. Rice, MS, MBA

SUMMARY:

Objectives: Armodafinil and modafinil are indicated to improve wakefulness in patients with excessive sleepiness associated with shift work disorder, treated obstructive sleep apnea, or narcolepsy. Although both medications are approved for once-daily dosing with different tablet strengths, their use in the real world may differ. Moreover, pharmaceuticals with similar therapeutic indications must be evaluated for formulary coverage based on their clinical profile, use, and budgetary differences. Thus, the objectives of this analysis were (1) to examine the use of armodafinil and modafinil based on daily average consumption (DACON) and (2) to apply economic modeling techniques in the DACON analysis to determine the impact of armodafinil and modafinil on pharmacy budgets. Methods: The DACON of armodafinil and modafinil was examined in a retrospective database analysis of pharmacy analytic data collected from March 1, 2009 to May 31, 2010 via Wolters Kluwer Source® Lx. DACON was calculated by dividing the total tablets dispensed by the total days supplied. An economic model was used to evaluate the financial impact of changes in prescription share from modafinil to armodafinil. Results: Armodafinil's DACON was 1.03 based on 70,976 prescriptions (1 full year of data after launch) and modafinil's was 1.40 based on 453,216 prescriptions. Among patients with 2 to 8 prescriptions filled for armodafinil, the DACON remained between 1.03 and 1.05. A total of 6,069 patients taking modafinil switched to armodafinil. Their DACON on modafinil was 1.46 before switching and 1.05 on armodafinil after switching. Based on economic modeling, and assuming a 10% increase in armodafinil's share of prescriptions, the projected annual cost savings with armodafinil would be $921,949, with a per-member-per-month cost savings of $0.077. Assuming a 20% increase in armodafinil's share, the savings would be $1,843,897 and $0.154, respectively. Conclusions: By using pharmaceutical claims data in tandem with well-designed economic models, payers can better estimate current and future pharmaceutical spending. Based on this DACON analysis, the use of armodafinil has a real-world advantage over modafinil that can significantly affect pharmacy budgets. This research was sponsored by and conducted in collaboration with Cephalon, Inc., Frazer, PA.

NR10-48

RISK OF FALLING ASLEEP ON THE MAINTENANCE OF WAKEFULNESS TEST WITH LISDEXAMFETAMINE DIMESYLATE, ARMODAFINIL, AND PLACEBO IN SLEEP-DEPRIVED ADULTS

Chp.:Thomas Roth Ph.D., One Ford Place, Detroit, MI 48202, Co-Author(s): Jon Freeman, Ph.D., Gary Zammit, Ph.D., Patricia Donnelly, A.A.S., Joseph Gao, Ph.D., M. Celeste Ferreira-Cornwell, Ph.D., Maria Gasior, M.D., Ph.D.

SUMMARY:
Objective: To use Generalized Estimating Equation (GEE) analysis of Maintenance of Wakefulness (MWT) data to compare lisdexamfetamine dimesylate (LDX), a long-acting prodrug stimulant, vs placebo and armodafinil in healthy males undergoing acute sleep deprivation. Method: This randomized, double-blind, parallel-group study enrolled healthy males (18-40y) with no known sleep disorders, stable wake-sleep function, and adequate sleep on day -1, then received a single dose of LDX (20, 50, or 70mg), placebo, or armodafinil (250mg) at ~19:25 on day 1. Assessments included analysis of multiple unequivocal sleep onsets (USOs) on 30-min MWT conducted every 2h from 2200-0800 on day 1-2. MWT is an objective assay of sleepiness/alertness, by assessing ability to remain awake. In trials using MWT, participants often stay awake the full test period (30 min), especially during certain circadian times (ie, early evening). To avoid arbitrarily imputing scores of 30 min when no sleep occurred, data was analyzed using GEE including treatment group and time points as explanatory variables to compare the risk of falling asleep between treatments (eg, ratio=1 implies equal risk between comparators; ratio<1 implies less comparative risk; ratio>1 implies greater comparative risk). The Poisson link was used. Models were fit jointly for 0400-0800 during overnight sleep deprivation as well as separately for individual time sessions. This analysis avoids imputation of data points for ceiling effects by not relying on actual durations but rather treating the data as a count variable for multiple events. Safety assessments included treatment-emergent adverse events (TEAEs) and vital signs. Results: 135 enrolled males (27 in each group) were in safety/efficacy assessments; 1 withdrew after completing all MWTs. Mean (SD) age was 27.7 (5.62) years; 45.9% were white; 20% were Hispanic. Overall GEE risk ratios (95% CI) compared with placebo were 0.45 (0.27, 0.76); 0.10 (0.05, 0.20); 0.05 (0.02, 0.14); and 0.11 (0.06, 0.21) for LDX 20, 50, and 70mg and armodafinil 250mg, respectively (P<.005 for all). Overall GEE risk ratios (95% CI) for LDX compared with armodafinil were 4.13 (1.97, 8.67); 0.91 (0.37, 2.21); and 0.45 (0.14, 1.48) for LDX 20, 50 and 70mg, respectively. GEE risk ratio analysis for evaluable individual time points (0400, 0600, 0800) yielded similar results to overall. With LDX (all dose groups combined), placebo, and armodafinil, respectively, 19.8%, 7.4%, and 11.1% had TEAEs; no serious AEs or TEAEs leading to discontinuation were noted. Conclusion: The GEE analysis on multiple USOs per MWT session provides insights into the wakefulness maintenance effects of LDX and armodafinil compared with placebo. The use of this analytic method needs to be tested with other MWT data especially in patients suffering from sleep disorders with severe daytime sleepiness. Clinical research was funded by the sponsor, Shire Development Inc.

NR10-49

IMPACT OF EXCESSIVE SLEEPINESS ASSOCIATED WITH SHIFT WORK: AN INTERNET SURVEY OF SHIFT WORKERS AND PATIENTS WITH SHIFT WORK DISORDER

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SUMMARY:
Objectives: Recent findings from the 2008 National Sleep Foundation's "Sleep in America" poll indicated that (1) the effects of shift work are under-studied; (2) shift workers (SWs) who reported symptoms of shift work disorder (SWD) were more likely to experience negative outcomes; (3) sleepiness or falling asleep at work, mood-related work impairment, and occupational accidents were more common among SWs. The objective of this market research study was to investigate the impact of excessive sleepiness associated with shift work using an Internet survey. Methods: SWs completed a structured, on-line survey, conducted in 2009. Respondents must have spent at least 21 hours per week working shifts in the 2 weeks prior to completing the survey; reported a diagnosis of SWD or had an Epworth Sleepiness Scale score of >/=10; and scored >/=5 on any subscale (disruption of work/school work, social life/activities, or family life/home responsibilities) of the Sheehan Disability Scale. Results: A total of 260 respondents completed the survey (average age 38 [+/-10.13] years; 57% female). Anxiety (50%) and depression (45%) were the most commonly diagnosed conditions. Shift work negatively impacted respondents' lives by affecting energy level (72% of respondents), social life (64%), mood (63%), ability to get sufficient sleep (63%), irritability (60%), motivation (59%), weight (57%), alertness/ability to stay awake (55%), quality of life (55%), concentration (55%), sex life

(54%), emotional health (52%), and physical health (51%). As a result of their excessive sleepiness, 87% reported a loss of concentration/lapses of attention at work in the previous month; 69% had made mistakes at work; 43% said their ability to care for dependents had been compromised; 37% had dozed off while driving; 34% had almost caused a work-related accident; 11% were injured at work; and 10% had had >/=1 work-related accident. Respondents reported using a variety of over-the-counter remedies to treat the symptoms of SWD, including coffee/tea (35%) and caffeinated soda (33%). A similar percentage (38%) received prescription medication to treat symptoms such as excessive sleepiness and/or insomnia. 12% of respondents were diagnosed with excessive sleepiness associated with SWD and were prescribed medications (>20%: buproprion [52%], other anti-depressants [52%], anxiolytics [45%], modafinil [42%], and zolpidem [36%]). 51% of respondents wanted to change their jobs or work hours and did not feel it was possible to do so. Conclusion: SWs suffered a number of conditions including anxiety and depression. Respondents reported that both excessive sleepiness and insomnia associated with shift work seriously impacted their lives, both at home and at work. A significant number of respondents have used over-the-counter remedies and pharmaceutical interventions to treat SWD-related symptoms. This research was sponsored by and conducted in collaboration with Cephalon, Inc., Frazer, PA.

NR10-50

CONCOMITANT TREATMENT WITH ESZOPICLONE AND FLUOXETINE FOR INSOMNIA COMORBID WITH MAJOR DEPRESSIVE DISORDER (MDD): PREDICTORS OF RESPONSE

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SUMMARY:
Introduction: Concomitant treatment with eszopiclone 3 mg and fluoxetine 20-40 mg was demonstrated to be effective for treating insomnia comorbid with MDD in a large multi-center trial.1 This analysis aimed to identify predictors of treatment response. Methods: A post-hoc multivariate logistic regression analysis was performed on ITT week 8 LOCF (endpoint) data comparing fluoxetine 20-40 mg + eszopiclone 3 mg to fluoxetine (20 – 40 mg) + placebo for insomnia in patients with comorbid MDD (n=543). Treatment response was defined as >50% reduction in sleep latency (SL) or wake time after sleep onset (WASO) or >30 minute increase in total sleep time (TST). Covariates included demographic and baseline clinical variables, and odds ratios (OR) with confidence intervals were calculated for each potential predictor. Results: Treatment group (eszopiclone 3 mg vs placebo) was the only factor found to influence all 3 response variables (range OR=1.64 to 2.51, p<0.01), Significant predictors of eszopiclone response were the following: for SL, baseline SL (OR=1.03, p<0.004); WASO, baseline WASO (OR=1.07, p<0.007); TST, none at p<0.05. No negative predictors were identified. Conclusions: The strongest consistent factor that influenced response was treatment assignment to eszopiclone 3 mg. Overall, the likelihood of clinical response was largely independent of patient characteristics.

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NR10-51

PTSD SYMPTOM SEVERITY IN SERVICE MEMBERS RETURNING FROM IRAQ AND AFGHANISTAN WITH DIFFERENT TYPES OF INJURIES

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SUMMARY:
Introduction: Risk for Post Traumatic Stress Disorder (PTSD) varies in part due to the nature of the traumatic event involved. Both injury and return from combat pose high risk of PTSD symptoms. How different injuries may predispose towards PTSD is less well understood. Objectives: To examine the relationship between different types of physical injury in combat and the risk of PTSD. Methods: A retrospective record review was

conducted from 1402 Service Members who had returned to Naval Medical Center San Diego from Iraq or Afghanistan and who had completed the PTSD Checklist as part of their post-deployment screening. Rates of PTSD were examined in relation to mechanism of injury. Results: Of those without injury, 8% met criteria for PTSD. 13% of those with a penetrating injury, 29% with blunt trauma, and 33% with combination injuries met criteria for PTSD. PTSD severity scores varied significantly according to type of injury. Discussion: The World War I concept of "shell shock" implied that blast-related injuries were more likely to result in psychological symptoms than were other injuries. These data may support that idea. Circumstance of injury, population differences, and reporting bias could also have influenced the results. Conclusion: These results suggest that Service Members with blunt or combination injuries merit particular attention when screening for PTSD.

NR10-52

COMBAT EXPOSURE AND LOW UNIT COHESION AS RISKS FOR SUICIDAL IDEATION AMONG REDEPLOYED SOLDIERS

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SUMMARY:

Background: Combat exposure has been shown to be a risk factor for a variety of mental health problems such as PTSD and depression, both of which have been associated with suicidal ideation as well as suicide attempts and completions (Vogt et al., 2008). Unit cohesion in contrast, has been shown to be a protective factor that can reduce the risks for mental health problems among soldiers returning from combat (Oliver et al., 2000). As part of a larger public health investigation, survey data was collected from two brigade combat teams (BCTs) 6 months after returning from deployment. Of the 6,128 soldiers who participated in the survey, we used data from 1,663 males who had deployed only once. Using factor analyses and structural equation modeling in Mplus v. 5.2, we created factors for combat exposure and unit cohesion which were used to predict the odds of self-reported suicidal ideation in the previous 4 weeks. This model indicated that greater combat exposure (adjusted odds ratio [AOR] = 1.34, 95% Confidence Interval [CI] = 1.16, 1.55) and less unit cohesion (AOR = 1.34, CI = 1.20, 1.49) were predictive of greater suicidal ideation. We also tested a second model and found a significant positive interaction term between the combat exposure and unit cohesion factors (AOR = 1.21, CI = 1.01, 1.45), such that soldiers who reported higher combat exposure and lower unit cohesion had the greatest odds for reporting suicidal thoughts in the previous 4 weeks. Conclusions: Consistent with extant research, we found significant main effects such that increased combat exposure and decreased unit cohesion were associated with an elevated risk of suicidal ideation. In addition, a significant interaction effect between combat exposure and unit cohesion indicates that among soldiers with comparable levels of combat exposure, those reporting less unit cohesion are at significantly greater risk of suicidal ideation. These results suggest that interventions to reduce suicidal ideation should focus on increasing unit cohesion as a way to ameliorate mental health risks associated with suicidal ideation.

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NR10-53

THE ROLE OF ANXIETY AND DEPRESSION ON STRESS-RELATED EXACERBATIONS IN WOMEN WITH MULTIPLE SCLEROSIS

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SUMMARY:
Objective There is a growing body of evidence supporting the concept that Stressful Life Events (SLEs) may play an important role in triggering Multiple Sclerosis (MS) relapses. A number of studies indicated that the duration of impact (as perceived by the patient) was the best overall stressor predictor of MS relapse. The aim of this study was to investigate the role of anxiety and depression on stress-related MS exacerbations. Method Twenty six ambulating women (Expanded Disability Status Score, EDSS =3) with relapsing-remitting Multiple Sclerosis were followed for 12 months. Each week patients assessed SLEs in self reported weekly diaries that were collected at regular visits every 4 weeks. SLEs were classified as short-term if has no lasting effect and long-term if implies lasting changes at least 10-14 days after the event. Psychological status assessment was performed at base line and at every regular visit, with the Hamilton Rating Scale for Anxiety (HAM-A), the Hamilton Rating Scale for Depression (HAM-D17), the State-Trait Anxiety Inventory (STAI) and the Beck Depression Inventory (BDI). Results The presence of at least one long-term SLE was associated with 5 times (95% CI 3.25- 33.52, p<0.05) the rate of MS exacerbation during the following four weeks. ?his effect was cumulative and was not influenced by the patients' psychological status. Contrarily, the frequency of short-term SLEs in the precedent 4 weeks had no effect on risk for relapsing. An increase of one point score in HAM-A and, HAM-D17 was associated with 1.13 and, 1.19 times increment respectively of the exacerbation risk. Changes in STAI and BDI scores were not associated with disease relapses. Conclusions Ambulatory women with relapsing-remitting MS who experience long-term SLEs may be at a greater risk for relapse. The effect of long-term SLEs is cumulative and seems to not be influenced by the patients' anxiety and depression levels. Only observer-rated scales of anxiety and depression provided predictive validity regarding the risk of relapse in MS.

NR10-54

DEPLOYMENT-RELATED ACUTE STRESS RESPONSE: MILITARY PSYCHIATRISTS' CLINICAL PERSPECTIVES

Chp.:Kristina Money M.D., 244 Cypress Ridge Dr., Severna Park, MD 21146, Co-Author(s): Patcho Santiago, M.D., David Benedek, M.D.,Kirsten Benevides, M.A., Robert Ursano, M.D.

SUMMARY:
Preparing for DSM-V emphasizes the need for new information on acute stress response, particularly related to combat exposure. Multiple recent studies have questioned the current conceptual basis of Acute Stress Disorder (ASD) criteria and called for future revisions. Presently, there is a significant rise in new onset self-reported post-traumatic stress symptoms among deployed personnel reporting combat exposure. Studies specific to acute combat related trauma are less numerous than more generalized trauma responses. Objective: To guide and inform the re-conceptualization of stress-related syndromes for DSM-V, with specific emphasis on combat related trauma responses. Method: 407 U.S. military psychiatrists were electronically surveyed about their experience treating Service Members with an acute stress response to an event while deployed to Operation Iraqi Freedom or Operation Enduring Freedom. The respondents completed an eight-item questionnaire about "the most recent case of an acute stress reaction that you saw in theater." They were asked to provide case details to include patient's age, nature of trauma, duration post-event to first patient encounter, types of symptoms, length of care, length of symptom persistence, and disposition. The study was descriptive and hypothesis generating. Results: 118 clinicians responded. 52 respondents completed the entire survey. The majority of reported cases (74%) were aged 20-24. 100% were combat exposed. The most common exposures were: knowing someone seriously injured/killed (62%), being attacked/ ambushed (55%), IED blast (53%) and receiving small arms fire (51%). Most (75%) were seen within four days of event; 44% were seen within two days. The symptoms most reported were sleep disturbance (85%), hyperarousal (83%), and re-experiencing (62%). Dissociation was seen in only 28% of cases.

Symptoms resolved "within days" in 27%, "within months" in 53%, while 25% reported persistence. Nearly 71% returned to duty within 3 days, while 12% were evacuated from theater. Conclusion: It is important to study acute symptoms, their trajectory, and long-term outcomes related to exposure context. Combat-related stress reactions may differ from reactions to other types of trauma, as a wide range of exposures often occur simultaneously. Clinicians found that sleep disturbance and hyperarousal were very common, while dissociation was far less prevalent. These findings support proposed DSM-V revisions to the ASD diagnosis. Time to patient presentation has implications for potential targeted interventions, which must account for a delay in care of four days in most combat-related stress cases.

NR10-55

PSYCHIATRIC SYMPTOMS PRIOR TO DEPLOYMENT PREDICT RISK OF NEW ONSET PTSD IN A COHORT OF NATIONAL GUARD TROOPS

Chp.:Giovanni Caracci M.D., 183 South Orange Ave, Newark, NY 10128, Co-Author(s): Donald S. Ciccone, Ph.D., Giovanni Caracci, M.D., Sarah Jane DeAsis, M.D., Anna Kline, Ph.D. [Admin. Note: Caracci IS the presenter in Program Book, but 2nd author in New Research Abstracts.]

SUMMARY:
Introduction. Early identification of individuals at risk for posttraumatic stress disorder (PTSD) raises the possibility of prompt illness detection and more effective psychiatric treatment. At present, the most robust predictors of PTSD appear to be peritraumatic factors including symptoms of acute stress disorder and dissociation (Bryant et al, 2003). To date, most studies that address this issue have relied on cross-sectional designs that cannot distinguish symptoms that occur before illness onset from those that occur afterward. In the present longitudinal study, we sought to (1) determine whether preexisting (subclinical) symptoms of PTSD (intrusions, hyperarousal, and avoidance) increase vulnerability to new onset PTSD in a cohort of National Guard troops; and (2) determine whether symptoms of psychiatric distress (depression, alcohol dependence, and somatization-like illness) act as antecedent risk factors. Method. A survey that included validated screening instruments for PTSD, depression, alcohol dependence, and somatization was administered anonymously to New Jersey National Guard troops prior to military deployment (Kline et al, 2010). The survey was readministered during a mandatory debriefing one year later. Matched pre- and post-deployment data were obtained on a total of 922 Guard members. Individuals screening positive for PTSD before deployment were excluded from the analysis. Results. After controlling for the effects of education and exposure to combat trauma, we found that subclinical symptoms of PTSD assessed prior to deployment were associated with increased vulnerability to new onset PTSD. Adjusted odds ratios (AOR) for intrusion, avoidance, and hyperarousal were 2.64 (CI=1.51.4.62); 2.83 (CI=1.32-6.04); and 2.75 (CI=1.53-4.94), respectively. Guard members screening positive for two out of three components prior to deployment had a higher risk of new onset PTSD than those screening positive for a single component with AORs of 3.69 (CI=1.95-6.98) and 1.94 (CI=1.07-3.54), respectively. Predeployment depression and alcohol dependence were not associated with increased risk of PTSD after deployment but risk was significantly elevated in the case of somatization, AOR= 4.00 (CI=1.58-10.15). Discussion. Subclinical symptoms of PTSD and somatization assessed prior to military deployment appear to be antecedent risk factors for new onset PTSD. Despite the fact that depression and alcohol dependence are frequently comorbid with PTSD neither acted as a risk factor in the present study. The presence of multiple, nonspecific ailments, however, consistent with a somatization-like process, was associated with increased vulnerability.

NR10-56

WITHDRAWN

NR10-57

PSYCHOMETRIC PROPERTIES OF A 2-ITEM PTSD SCREEN FOR TBI AND NON-TBI PATIENTS IN THE ACUTE CARE MEDICAL SETTING

Chp.:Megan Petrie B.A., 325 Ninth Ave Box 359911, Seattle, WA 98104, Co-Author(s): Jin Wang, PhD, Joan Russo, PhD, Amy Wagner, PhD, Douglas Zatzick, MD

SUMMARY:
Although recent progress has been made in developing PTSD screens for injured trauma survivors, few studies have implemented brief

screens with high ecologic validity for acute care medical settings in TBI and non-TBI patients. We assessed the psychometric properties of a 2-item PTSD screening measure. The measure was administered at the time of acute care injury hospitalization and again in the days and weeks following admission either in surgery outpatient clinic or over the telephone. The two-item screen was feasibly implemented, had adequate sensitivity and specificity, and had fair-to-good area under Receiver Operating Characteristic (ROC) curve. Acute care policy guidelines should attempt to integrate brief PTSD screening procedures.

NR10-58

BROKEN DREAMS:THE RELATIONSHIP BETWEEN POSTTRAUMATIC STRESS DISORDER AND THE MOTHERS OF PREMATURE NEWBORNS IN THE NEONATAL INTENSIVE CARE UNIT

Chp.:Yifa Greenberg M.D., 15 Keren Kayemet st., Bat Yam, 59100 Israel, Co-Author(s): 1,3) Nora Naor,MD.,1,3)Lea Sirota,MD.,2,3)Elliot Hadi,MD.,2,3)Pinkhas Sirota,MD.1)Schneider Children's Hospital,Petach Tiqwa 2) Abarbanel MHC,Bat Yam,and 3)Sackler Faculty of Medicine,Tel Aviv University,Tel Aviv, Israel

SUMMARY:
Background Pregnancy is a unique and exceptional period. The mother to be is mentally preoccupied with her baby. Her wishes, hopes, fantasies and plans are concentrated around him. High risk pregnancy, "difficult" delivery, emergency caesarian section, preterm delivery, hospitalization in the neonatal intensive care unit, are all stressful and are experienced as traumatic events. OBJECTIVE To evaluate mothers' responses to having a baby (preterm or full term) in the neonatal intensive-care unit and to determine if they fulfill the criteria for PTSD or depression. METHODS Forty nine mothers of preterm babies and ten mothers of full term babies who had been hospitalized in NICU of Schneider Children's Hospital in Pethach Tiqwa,Israel, were interviewed at the follow-up clinic between 4-17 months after discharge. The evaluation was carried out by one senior psychiatrist and was based on the diagnostic criteria for PTSD and depression according to DSM-4. Severity of PTSD was measured by PSS-sr and severity of depression by HAMD-D. Stress factors in NICU setting were evaluated by Parental Stressor Scale:neonatal intensive care unit (M&F&C scale). RESULTS 1.Fifty five percent of mothers of preterm babies and 40% of mothers to full term babies fulfilled the criteria for PTSD .This difference was not statistically significant. 2. 25% (15/59) of the whole sample had moderate to severe PTSD. 3. In the whole sample a strong correlation between PTSD and severity of stress during hospitalization in NICU was found(measured by M&F&C). 4. In the preterm group a strong connection was found between PTSD and stress factors, specifically changes in parental (maternal) functioning as measured by F&M&C and depression. 5. In the preterm group a strong connection was found between PTSD and specific stress factors (changes in: baby behavior, maternal behavior,and sounds and visions). CONCLUSIONS 1. These findings suggest that the maternal responses to hospitalization of a preterm or full term baby in NICU predicts the development of later PTSD and depression. 2. Mothers with no previous obstetric history of childbirth or abortion are more prone to develop PTSD while having a baby in NICU. 3. The forced changes in maternal functioning such as inability to hold and to feed her baby due to his condition and the NICU setting (not being alone, the need to separate from him, the feeling of helplessness for herself and her baby) and depression are the most sensitive predictors of later PTSD.

NR10-59
WITHDRAWN

NR10-60
SERUM BRAIN DERIVED NEUROTROPHIC FACTOR (BDNF) IS ALTERED IN PREGNANCY

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SUMMARY:
Introduction: BDNF is a neurotrophin that is important for healthy, fetal development. BNDF has also been implicated in the pathophysiology and treatment of depression. We sought to charchterize serum BDNF levels in healthy, pregnant women as an introduction to understanding BDNF's role in depressed, pregnant women. Specific Aim: To characterize and compare serum BDNF levels in pregnant and follicular phase, non-pregnant women who have been carefully screened for the absence of depression. Methods: Twenty healthy pregnant women = 28 weeks gestational age and 20 non-pregnant, healthy women in the follicular phase of their menstrual cycle were recruited from a general obstetrics clinic at the University of Pennsylvania. All subjects were = 18 years of age and able to give informed consent. All procedures were approved by the University of Pennsylvania's Institutional Review Board. Subjects were given the Structured Clinical Interview for Diagnosis (SCID) to rule out lifetime or current psychiatric illnesses. All subjects had a Hamilton Depression Rating Scale and Beck Depression Inventory < 8 and a Beck Anxiety Inventory and Edinburgh Postnatal Depression Scale < 10. Serum BDNF concentrations were measured using an ELISA kit according to the manufacturer's instructions (R &D Systems, Minneapolis, USA). Serum BDNF levels were compared between the groups using a Wilcoxon-Rank Sum test. Sample Characteristics: 40 women completed the study. The mean age of the pregnant group was 30 years (SD 6.8) and mean gestational age was 34.5 weeks (SD 3.7). The mean age of the non-pregnant group was 30 years (SD 6.4). There were no significant differences between groups for age, race and rating scales (p > .05). BDNF samples with a CV < 20 were included, leaving 14 subjects in the pregnant group and 15 subjects in the non-pregnant group. Results: Median serum BDNF in the pregnant group was 18872.15 pg/ml (IQR 16449.19, 21918.85) and in the non-pregnant group was 33577.86 pg/ml (IQR 26476.86, 44181.31). Serum BDNF was significantly lower in the pregnant group compared to the non-pregnant group (p = .0002). Conclusions: Serum BDNF is significantly lower during pregnancy in healthy women. Since BDNF is important for maintaining a healthy fetus, we hypothesize that BDNF may be sequestered by the fetus during pregnancy. This low BDNF state during pregnancy could put some women at risk for developing depression during pregnancy. BDNF levels in depressed, pregnant women are a future area of interest.

NR10-61

GENDER DIFFERENCES IN THE RISK AND PROTECTIVE FACTORS ASSOCIATED WITH COMBAT STRESS DISORDER

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SUMMARY:
Objectives: General population studies indicate a higher prevalence of PTSD from all causes among women compared to men. Whether gender differences exist in the prevalence of, or risk factors for, combat stress, however, remain open to question. Previous research has linked the development of combat-related PTSD to high combat exposure (Buydens-Branchey, 1990) and peritraumatic mental health conditions (Bryant et al., 2003), while recent research also suggests that such protective factors as high perceived military preparedness (MacDermind-Wadsworth, 2010) and strong unit cohesion (Bailey, 2007) may attenuate the development of combat stress. This longitudinal study aimed at identifying gender differences in the risk and protective factors affecting the development of PTSD in a cohort of New Jersey National Guard troops. Method: Data for the study were obtained through anonymous pre- and post-deployment surveys administered to New Jersey National Guard members deployed to Iraq in 2008. The surveys contained personally non-identifying items used to create a linking algorithm across survey waves. Matching pre-and post-deployment data were obtained on a total of 922 Guard members, including 91 women. Survey items included standardized measures of mental health, combat exposure, military preparedness and unit cohesion. Results: Women were significantly more likely than men to meet screening criteria for PTSD post-deployment (18.7% vs. 8.7%; OR=2.39; CI=1.29-4.43). While there was no significant difference between men and women in their level of combat exposure during deployment, women were significantly less likely than men to report feeling well prepared for combat at baseline (14.3% vs. 32.2%; p=.000) and more likely to report low unit

cohesion during deployment (49.4% vs. 30.9%; p=.002). In a multivariate model, after controling for age, race, education and the antecedent risk factors, combat exposure and prior mental health problems, a significant gender vulnerability in the development of PTSD persisted (AOR=2.30; CI=1.14-4.62). When the protective factors, military preparedness and unit cohesion, were entered into the model, however, the gender difference was no longer significant (AOR=1.73; CI=.84-3.57). Discussion: This study suggests that women may be at greater risk than men of developing combat-related PTSD, in part, because of their lower experience of factors believed to be protective in combat situations.The findings suggest the need for more research into the causes of feelings of low military preparedness and unit cohesion among women as well as the development of interventions to enhance women's exposure to these protective factors.

NR10-62

DEPRESSION, QUALITY OF LIFE, WORK PRODUCTIVITY AND RESOURCE USE AMONG WOMEN EXPERIENCING MENOPAUSE

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SUMMARY:

Objective: Depression has been associated with the onset of menopausal symptoms; however, the impact of depression on health outcomes among women experiencing hot flashes are not fully understood. The current study characterizes the health-related quality of life (HRQoL), work productivity, and resource use among women experiencing menopausal symptoms, including hot flashes, in women with self-reported depression. Methods: The current study included data from the 2005 US National Health and Wellness Survey (N = 41,184), which is a cross-sectional, internet-based survey representative of the adult US population. Women who reported currently experiencing menopausal symptoms, including hot flashes, but never experiencing bipolar disorder, were included for analyses (N = 3632). Women who reported experiencing depression in the last year (n = 1165) were compared with women who did not report experiencing depression in the last year (n = 2467), controlling for demographic and health characteristics. Outcomes measures included HRQoL (SF-8), work productivity (WPAI) within the past 7-days, and self-reported healthcare resource use within the past 6-months. Normally distributed variables were assessed with multiple regressions, while non-normally distributed variables were assessed with generalized linear models specifying a negative binomial distribution with a log-link function. Results: There was little difference in the mean age of women experiencing depression (49.39 yrs, SD = 5.79) and women not experiencing depression (49.95 yrs, SD = 5.96). Women experiencing depression were significantly ($p<.05$) more likely to be white, unemployed, uninsured, currently smoking, not exercising, overweight, obese, and to have ever used hormone replacement therapy. After controlling for demographic and health characteristics, women experiencing depression reported significantly lower mental (39.66 vs. 50.85, $p < .0001$) and physical (44.05 vs. 46.38, $p < .0001$) SF-8 component summary scores. Similarly, time missed from work (5.31% vs. 2.80%, $p = .0029$), impairment while at work (25.00% vs. 14.32%, $p<.001$), and impairment of activities in daily living (37.32% vs. 23.16%, $p < .0001$) due to health were greater among women experiencing depression. The number of physician visits (2.47 vs. 1.77, $p < .0001$), ER visits (0.27 vs. 0.16, $p < .0001$), and hospitalizations (0.36 vs. 0.18, $p = .0012$) was higher among women experiencing depression vs. those not depressed. Conclusions: For women experiencing menopausal symptoms, including hot flashes, depression was associated with lower levels of mental and physical quality of life. In addition, women with depression had lower productivity and greater impairment in activities of daily living as compared to women not experiencing depression and greater healthcare resource utilization. These findings suggest assessment of depressive symptoms may be an important part in the treatment of hot flashes and other menopausal symptoms. Funding: The current study was conducted by Kantar Health on behalf of Pfizer Inc, which funded the study.

NR10-63

ENDOGENOUS OXYTOCIN, ATTACHMENT STYLE, AND MENTAL ILLNESS DURING PREGNANCY

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Road, Montreal, H3T 1E4 Canada, Co-Author(s): Barbara Hayton, MD, Ian Gold, Ph.D., Nancy Feeley, Ph.D., Erin Yong Ping, B.Sc., Deborah Weiss, Ph.D., C. Sue Carter, Ph.D.

SUMMARY:
Objective: Oxytocin (OT) is a neuropeptide, primarily of hypothalamic origin, that may play a role in attenuating anxiety and stress, and promoting positive social interaction. As such, it is relevant to the field of perinatal mental health, as a factor that may be related to prenatal maternal symptomatology and the mother-infant relationship. There is some evidence that higher levels of anxious and depressive symptoms are associated with dysregulation of the OT system, and that early life adversity and interpersonal stress can affect the OT system. The present study examined the association of endogenous OT levels with the experience of psychosocial stressors, and symptoms of anxiety and depression in a sample of pregnant women referred for psychiatric assessment. The relationship of OT to maternal attachment style was also assessed, to examine whether women who reported emotionally close relationships had higher levels of endogenous OT than those with insecure patterns of social relationships. Method: A sample of 22 pregnant women was evaluated in the Perinatal Mental Health Service in the psychiatry department of a tertiary care hospital. Mean age was 32.3 years; most were multiparous (63%) and had at least some college education (60%). All but 4 were married or living with partners. Mood disorders were most common (54%), 32% had anxiety disorders, and 14% had adjustment disorder. In addition to a diagnostic interview, all participants were administered a set of questionnaires measuring symptoms of depression (Edinburgh Postnatal Depression Scale), anxiety (GAD-7), psychosocial stressors (ANRQ), and attachment style (Relationship Questionnaire). Participants also gave a 10 ml blood sample, to measure plasma OT levels. A comparison group of 22 pregnant women recruited from obstetrical practices at the same hospital, who were matched to the clinical sample in age, educational level, parity and marital status, was also evaluated. Results: The clinical sample reported significantly higher levels of depression and anxiety than the community sample, with a mean EPDS score of 16.4 and a mean GAD-7 score of 11.8 in the clinical sample as compared to scores of 6.4 and 4.5 in the community sample (p's< .0001). There were higher rates of psychosocial stressors in the clinical sample (mean ANRQ score = 38.5) than in the community sample (mean ANRQ = 16.1), p < .0001. However, the two groups did not differ significantly in mean levels of plasma OT (272 ng/ml [SEM = 26.2] vs. 232 ng/ml [SEM = 24.0]). In the clinical sample, there was no association between plasma OT levels and depressive symptoms (Pearson r = -0.02), symptoms of anxiety (r = -.11), or psychosocial stressors (r = -.11). Women reporting secure attachment styles had significantly higher mean levels of plasma OT (357 ng/ml [SEM =36.67]) than women with insecure attachment styles (214 ng/ml [SEM = 26.8]), p< .01. Conclusions: Contrary to findings in other clinical samples, this study found no association between plasma OT and symptoms of depression and anxiety during pregnancy, nor were high levels of prenatal psychosocial stressors related to OT. The association of attachment style to OT levels suggests that insecurity about social relationships may affect the OT regulatory system. This may ultimately have implications for the mother-infant relationship, since OT has been shown to promote maternal care. (This study was funded by the Canadian Institutes of Health Research.)

NR010-64

WOMEN ACCUSED OF COMMITTING SEX OFFENSES: CHARACTERISTICS AND COMPARISON WITH THEIR MALE COUNTERPARTS

Chp.:Susan Hatters Friedman M.D., 24200 Chagrin Boulevard, Beachwood, OH 44122, Co-Author(s): Sara West, M.D., Susan Hatters Friedman, M.D., Ki-Dan Kim [West is lead author; Hatters Friedman is presenter.]

SUMMARY:
Background: Female sex offenders comprise approximately 3% of all sex offenders, likely underestimated based on societal views and biases. Given that this behavior stands in stark contrast with what society expects of women, the lay person may assume that those who commit these crimes are mentally ill. Very few studies have examined the characteristics of these offenders. Methods: We retrospectively compiled data on all alleged female and (matched) male sex offenders who were referred for psychiatric evaluation to a large midwestern city's court psychiatric clinic. Data was abstracted regarding: their crimes, charges, demographics, social history, medical history, legal history, violence history, substance use, sexual

history, psychiatric history, and their victims. Results: The sample consisted of 12 alleged female sex offenders and 12 counterpart alleged male sex offenders who were evaluated in the court psychiatric clinic. Women's charges most frequently included rape or gross sexual imposition. They were most frequently referred for Sexual Predator Classification evaluations. Ages ranged from 19-50 and the majority had children. Most had prior arrests. One third had a past history of psychiatric hospitalization, and most were given a psychiatric diagnosis. Multiple women reported past histories of victimization. Discussion: During the poster presentation, women's histories will be contrasted with their male counterparts. This study yields a better understanding of the phenomenon of sexual offending by women.

NR010-65

MEDITATION IMPROVES DEPRESSION, COPING, COGNITION, AND INFLAMMATION IN FAMILY DEMENTIA CAREGIVERS IN A RANDOMIZED 8-WEEK PILOT STUDY

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SUMMARY:
BACKGROUND: This study examined the potential of daily brief meditation practice to improve depressive symptoms, distress, coping, quality of life, cognition, and inflammatory markers in stressed family dementia caregivers in a randomized study of yogic Kirtan kriya compared to relaxation practice. METHODS: Thirty nine older family dementia caregivers (mean age 60.3 y.o. (SD=10.2)) were randomized to practice Kirtan Kirya versus listening to the relaxation tapes for 20 minutes per day for 8 weeks. Severity of depressive symptoms, resilience, burden, distress, quality of life, suffering, and the severity of care-recipient's cognitive and behavioral disturbances were assessed at baseline and over the course of the study. The mean Hamilton Depression Rating Scale (HDRS) score at baseline was 11.6 (SD=4.1). Cellular expression of the Nuclear Factor kappa Beta (NFkB), a protein complex that has been linked to chronic stress and inflammatory response, was examined in the lymphocytes and monocytes using intranuclear staining and flow cytometry. Telomerase levels were measured before and after the intervention. RESULTS: The severity of depressive symptoms improved in both groups. However, improvement in the quality of life, cognitive tests (Mini-Mental Status Exam and several executive function and memory tests) ($p<0.05$) were greater among caregivers practicing meditation compared to the relaxation group and were accompanied by improvements in sleep, anxiety, and perceived burden. The preliminary data also demonstrated significant decreases in NFkB expression in the meditation group compared to the relaxation group. Levels of telomerase increased in the meditation group and did not change in the relaxation group. CONCLUSION: This small randomized study found that brief daily meditation practice by stressed family dementia caregivers can lead to improved severity of depressive symptoms, distress, coping, cognition, and quality of life compared to relaxation. This improvement is accompanied by decreases in the number of stimulated cells that express NFkB signifying improvement in inflammation. Increased levels of telomerase in the meditation group suggest possible antiaging/anti-stress protective effect of meditation due to its effect on telomere length. Our results need to be confirmed in a larger sample.

NR10-66

WITHDRAWN SYMPTOMS AND LEVELS OF FUNCTIONING ASSOCIATED WITH 4 DIFFERENT DIAGNOSES OF SUBTHRESHOLD POST-TRAUMATIC STRESS DISORDER

Chp.:John Kasckow M.D., 1703 Bear Run Dr, Pittsburgh, PA 15237, Co-Author(s): John Kasckow, M.D., Ph.D., Derik Yaeger, Ph.D., Kathryn Magruder, M.P.H., Ph.D.

SUMMARY:
Background: Post-traumatic Stress Disorder (PTSD) is highly prevalent and is associated with marked psychiatric comorbidity and impairment across a number of psychosocial domains. Although subthreshold PTSD is not a formal diagnosis, it has been used in research to characterize individuals who report clinically significant trauma-related symptoms but do not meet full diagnostic criteria for PTSD. There is no agreed-upon "gold standard" to determine whether a particular definition of subthreshold PTSD accurately identifies patients. We have examined 4 distinct definitions of this subthreshold syndrome (based on Blanchard, Schnurr, Marshall, and Stein) with the aim of

comparing the 4 in their ability to distinguish subthreshold patients from normal patients. We compared each definition with respect to PTSD symptoms and levels of functioning. Methods: Data were part of a larger cross-sectional study conducted on a random sample of primary care veterans at 4 VAMC primary care clinics. A cross-sectional, epidemiological design (N = 815) using self-report measures (PTSD Checklist, or PCL; SF-36) and structured interviews (Clinician Administered PTSD Scale or CAPS) was used to obtain information for analyses. Only patients who were PTSD negative by CAPS (n=713) were considered for the subthreshold analyses. For each definition, we compared those who met the subthreshold criteria (by that definition) to those who did not ("normal") or to those with CAPS + PTSD; thus, there were 4 sets of comparisons (for each subthreshold definition) for symptoms (PCL scores) and functioning (SF-36 scores). Results: For all results, we preserve the same order (Blanchard, Marshall, Schnurr, and Stein) of presentation. For each definitions, the prevalence of subthreshold PTSD was: 4.8%, 9.7%, 5.2%, and 4.0%. The average PCL score for each was: 37.0, 36.6, 35.9, and 35.5 vs 50.1 for CAPS+ patients ($p < 0.01$ for each). The average SF-36 physical component scores were: 139.1, 134.7, 141.0, and 144.3 vs 118.0 for CAPS+ patients ($p < 0.01$ for each group vs CAPS + group); the average SF-36 mental health component scores were: 217.1, 214.2, 223.3, 223.9 vs 151.5 for CAPS+ patients ($p < 0.01$ for each group vs CAPS + group). For both PCL and SF-36 composite scores, each subthreshold group was different from their own "normals." ($p < 0.01$ for each). Conclusions: These results suggest that there is not a great deal of difference between the definitions in terms of distinguishing subthreshold PTSD patients from normals by either symptom level or functioning level. The Marshall definition produced a higher prevalence of PTSD, and also slightly worse functioning scores; however, the Blanchard definition had slightly worse symptom levels. Additional analyses will be conducted to examine overlap among the definitions. Longitudinal study is also needed to help clinicians identify those at greatest risk for worsening outcomes. Supported by: VA HSR&D Service