POSTER SESSIONS

P01

Inhibitory controls in bipolar and major depressive disorder: a NIRS study

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Introduction: Patients with bipolar disorder (BD) or major depressive disorder (MDD) both show impaired inhibitory control. However, the brain mechanism underlying inhibitory deficit in both disorders has been incompletely described. The aim of the study is to determine the brain dysfunctions associated with inhibitory control in patients with BD or MDD using multichannel near-infrared spectroscopy (NIRS). We hypothesized that subjects would show clinically relevant alterations in changes in oxy hemoglobin concentration ([oxy-Hb]) in frontal lobe during the stop-signal task.
Methods: Twenty-one patients with BD and 48 patients with MDD which were equally depressed were participated in the study. Changes in [oxy-Hb] concentration during the stop-signal task, a measure of motor response inhibition, were monitored using frontal probes of the 47-channel NIRS machines.
Results: Both of the groups were not significantly different in the performance impairments on the stop-signal task. The BD group shows larger changes in [oxy-Hb] concentration than MDD group in bilateral middle frontal probes ($p < 0.05$). Changes in [oxy-Hb] concentration of the MDD group in the superior frontal probes and those of the BD group in the inferior frontal probes were correlated with the performance impairments in inhibitory control.
Conclusions: Our NIRS study indicated that BD and MDD shows the different brain dysfunctions associated in the inhibitory controls.
Keywords: bipolar, inhibitory control, near-infrared spectroscopy, neuroimaging

P02

Attention deficit/hyperactivity disorder comorbid with bipolar disorder does not enhance cognitive impairment

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Introduction: Bipolar disorder (BD) is a chronic, severe, and highly disabling psychiatric disorder. Cognitive impairment is frequently observed among individuals with BD during acute and euthymic phases of the disorder. Attention deficit/hyperactivity disorder (ADHD) is one of the most common childhood psychiatric disorder. About 50% of the affected children, the disorder continues to adulthood, which corresponds to a 4–5% prevalence rate for adult ADHD in the community and 9–35% in the BD patients. The aim of this study is to determine the frequency of adult ADHD comorbidity with lifetime BD, and the influence of this comorbidity on cognitive impairment.
Methods: Between 18 and 65 years old patients who are regularly followed up at Uludag University Psychiatry Department, Mood Disorder Unit and had already received a diagnosis of BD according to DSM-IV criterions were recruited. Inclusion criteria requires remission for at least 1 month at the time of enrollment to the study, as corroborated with the Young Mania Rating Scale (≤8) and Hamilton Depression Scale (≤7) scores. All patients were also assessed for the presence of ADHD according to DSM-IV criterions, and also completed the Turkish version of the Wender Utah Rating Scale-25 (WURS) and adult attention-deficit/ hyperactivity disorder self report scale (ASRS) for confirmation of the diagnosis. Wisconsin Card Sorting Test (WCST), Stroop Test and Trail Making Test were applied to all patients by a specialist psychologist to establish cognitive impairment.
Results: Sixty nine consecutive bipolar patients (39 female, 22 male) were evaluated. Of the 69, 8 (%11.6) patients had comorbid adult ADHD. There is no significant difference in WCST, Stroop Test and Trail Making Test between BD and BD comorbid adult ADHD groups.
Conclusions: This study concluded that adult ADHD comorbid with BD has no unfavorable effects on cognitive impairment, but the data presented here has to be verified with further studies with increased number of cases.
Keywords: cognitive impairment, bipolar disorder, adult ADHD, comorbidity

P03

The relationship between residual symptoms and sociodemographic features, characteristics of the disorder and the treatment and functionality of the remitted bipolar disorder patients

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Introduction: In the current study, we aimed to determine the relationship between residual symptoms and sociodemographic features, characteristics of the disorder and the treatment of the remitted bipolar disorder (BD) patients.
Methods: Participants of the study were chosen among BD patients who were regularly followed up at Uludag University Psychiatry Department, Mood Disorder Unit, with no comorbid psychiatric disorder. Sociodemographic information Form, Young Mania Rating Scale (YMRS), Hamilton Depression Rating Scale (HDRS), Hamilton Anxiety Rating Scale, Functionality at Bipolar Disorder Scale, and General Assessment of Functionality (GAF) were used for assessment.
Results: A total of 120 patients were enrolled to the study. 65 (54.2%) were female and 55 (45.8%) were male with the mean age of 40.76 ± 12.28. Mean duration of the disorder was 15.39 ± 8.10 year, mean number of episode was 8.81 ± 8.3. There was no significant relationship between pharmacotherapy, residual affective symptoms and functionality of patients. There was a significant relationship between YMRS scores, onset age of the disorder, duration of the disorder, regular follow-up duration of the patient, total number of hospitalizations, marital and working status and subtype of the disorder. There was a significant relationship between HDRS scores, regular follow-up duration, gender of the patient, onset of the disorder before age 18 and last episode type. As the onset age of illness, duration of illness and total number of episodes increased stigmatization experienced by patients also increased. There was a significant relationship

between psychosocial functionality of the patients as evaluated by GAF, and onset age of the disorder, regular follow-up duration of patients, gender, marital status and working status. It was found that depressive residual symptoms have more negative effects over social and psychological functionality compared to manic residual symptoms.

Discussion: Future longitudinal studies are required to observe whether symptoms of BD attenuate over time or some subtypes grow worse and whether life events have predictable influences over stability of affective symptoms.

Keywords: bipolar disorder, clinical features, treatment characteristics, residual symptoms, psychosocial functioning

P04

Frequency of antipsychotic drug using on long-term treatment of bipolar disorder

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Introduction: In the current study, we aimed to determine the prevalence of antipsychotic drug (AD) administration and its role on daily clinical practice on Bipolar Disorder (BD) patients who are regularly followed up at Uludag University Psychiatry Department of Mood Disorder Unit, which will help to figure out new treatment strategies of AD use on BD.

Methods: For the purpose of the study 151 patients file with BD diagnose according to DSM-IV-TR, was reviewed retrospectively. File information including socio-demographic information were also recorded.

Results: Study subjects consisted of 86 (57%) women and 65 (43%) men. The mean age of the patients was 41.5 ± 12.8 and the mean duration of follow-up time was 2227.3 ± 3687 days, at the time the files were examined. Patients were euthymic during the 86% of the follow up time. We observed that noncompliance to the treatment was associated with manic episode and when the treatment was ineffective patients switched to depresif episode. As a result of longitudinal evaluation patients were under antipsychotic and mood stabilizer therapy, mood stabilizer monotherapy and antipsychotic drug monotherapy, 95.4%, 3.3% and 1.3% respectively. The main finding of our study is; patients who are under predominantly AD have early onset (18 year old and younger) of the illness, their first episode is mania, do not demonstrate seasonal features, have psychotic symptoms, have hospitalization history and have more manic or hypomania episodes and unmarried. On the other hand patients who are under predominantly antidepressant and mood stabilizer are elder, married, their first episode is depression, demonstrate seasonal feature and have more depressive episodes.

Discussion: As a result, antipsychotic drugs are being used more frequently and longer time in the treatment of BD.

Keywords: Bipolar disorder, antipsychotic, mood stabilizer, duration of treatment

P05

Adult attention deficiency-hyperactivity disorder with bipolar disorder: the good clinical outcomes of a case with stimulant treatment

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Introduction: It is still being a discussion that stimulant treatments are not safe for childs, adolescents and adults with Attention Deficiency-Hyperactivity Disorder (ADHD) because they cause sensitivity for risk of a substance abuse, especially cocaine, but many of the results of studies suggested that there is no causal relationship between stimulant treatment and further substance abuse.

Case Presentation: 24 years old, single, male patient. He has attended with substance abuse problems. He has been taking methamphetamine as 'ecstasy' every day and in huge doses. He had started to abuse substances at age of 15. He had many depressive and hypomanic episodes from early adolescence and sometimes these were rapid cycling, especially in early adolescence. He had a severe ADHD story in his childhood and still has adult ADHD. After detoxification, he had put on mood stabilizers, antipsychotic treatment, than methylphenidate treatment started at a dosage of 10 mg/day. He reported that he started to 'live' because he could catch the time, could organize his daily living, could talk to his family without any argument, and could do all these without taking any substance. His mood regulation has been better than ever with these treatments.

Discussion: Substance abuse may be the consequence of inattentiveness or impulsiveness in adult ADHD, but substance abuse alone may contribute to depression or hypomania/mania. We know that the lifetime prevalence of ADHD in Bipolar Disorder is approximately 20% which means that patients with ADHD with a substance abuse are under a very high risk of developing an affective dysregulation. Many of the studies suggested on using stimulants in ADHD to prevent substance abuse which would also contribute the prevention of affective dysregulation, very closely related with ADHD. In our case, mood regulation has been better after stimulant treatment contrary to worried expectations. He didn't abuse anything till today after treatment.

Keywords: ADHD, bipolar, stimulant treatments, substance abuse

P06

Insights into the neurobiology of bipolar disorder from patients with comorbid epilepsy

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Background: Just as Sir William Osler considered syphilis to be an illness which offered great opportunity for instruction in medicine, epilepsy offers great opportunity for enhanced biological understanding of psychiatric disorders. Psychiatric disorders are common in patients with epilepsy and careful observation may help to shed light on potential neuroanatomical substrates of psychiatric symptoms. This is a descriptive and observational study of a small number of patients with epilepsy and comorbid bipolar disorder whose aim is to generate a working hypothesis of the neurobiology of bipolar disorder.

Method: During routine clinical care of patients in a neuropsychiatry epilepsy clinic, it was noted that patients with bipolar disorder tended to have a fairly well-defined pattern of mood symptoms in relation to seizure occurrence. Their charts were reviewed to document this pattern and look for potential confounding and associated factors. Based on these observations, a hypothesis was generated and the existing evidence to support and refute this hypothesis was discussed.

Results: 5/5 patients with epilepsy and bipolar disorder showed a cyclical pattern of psychiatric symptoms in relation to seizures. Patients and caregivers described a cycle of 4–6 weeks of escalating anxiety and nervous tension, progressing into insomnia and manic symptoms ending in a seizure and euthymia around the 4–6 week. 4/5 patients had idiopathic generalized epilepsy. The patient with focal epilepsy showed manic symptoms only after temporal lobectomy. All patients were on antiepileptic drugs and compliant. One patient was abusing substances.

Discussion: These observations may suggest a final common pathway in the generation of symptoms of bipolar disorder and

those of epilepsy. A reasonable hypothesis is that bipolar disorder may be manifestations of ictal activity in the limbic cortex whilst seizures are manifestations of ictal activity in the motor cortex.

Conclusion: Observations of neuropsychiatric symptoms in patients with epilepsy and bipolar disorder suggest that biological substrates may play a larger role in the neurobiology of bipolar disorder than just genes and environment. The possibility of bipolar disorder being a form of 'limbic epilepsy' should be explored further.

Keywords: Bipolar disorder, limbic epilepsy

P07
Internalized stigma of individuals with bipolar disorder and schizophrenia

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Introduction: Bipolar disorder (BD) and Schizophrenia (SCH) are serious mental disorders that can cause social and functional impairments during the course of the illness. In clinical setting it can readily be observed that most patients with the diagnosis of BD and SCH experience stigmatization. Internalization of stigmatization experiences and expectations leads to self-stigmatization, thus patients start isolating themselves. We wanted to assess the stigmatization experiences of BD and SCH patients and whether internalized stigmatization of patients with these two serious disorders differ according to sociodemographic variables, such as age, gender.

Methods: Internalized Stigma of Mental Illness Scale (ISMI) was used to compare stigmatization of patients with BD and SCH. Alienation, Stereotype Endorsement, Perceived Discrimination, Social Withdrawal and Stigma Resistance are subscales of ISMI which consist of 29 Likert items.

Results: The preliminary data (n = 48, 30 BP, 18 SCH) indicates no significant differences between these two disorders regarding the subscales of ISMI. It was assumed that patients with SCH would feel more stigmatized than BD patients. Hence, this finding can be explained with the patients who are being treated in Ege University Medical School. This institution is described as a tertiary center which most difficult patients in the region are being treated. Most BD patients in this sample had psychotic symptoms. It can be concluded that as BD gets severe, BD patients experience similar stigmatization experiences with SCH. There was no significant relation between stigmatization of BD and SCH patients and sociodemographic variables such as, gender, age, education, marital status and work status. However, in SCH patients, a negative correlation between Alienation subscale (feelings of shame about having a psychiatric illness) and age was found ($r = -0.581$; $p < 0.012$). In other words as the age of patients with SCH increase, feeling of alienation decrease, and vice versa.

Discussion: Further studies can examine the relation between the features of the illness and internalized stigmatization.

Keywords: stigmatization, bipolar disorder, schizophrenia

P08
Comparison of coping strategies and personality traits between bipolar patients and control group

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Introduction: The main objective of this research is to determine the relationship between personality traits of individuals who have been diagnosed with Bipolar Disorder and the coping strategies for

stress that they use and to compare the obtained results with the comparison group results.

Methods: The sample of this study consists of two groups. 100 bipolar patients who are followed in Rasit Tahsin Mood Clinic of Bakırköy Research and Training Hospital for Psychiatry, Neurology and Neurosurgery and age, gender, education level matched 100 healthy controls were recruited for the study. Sociodemographic data form, Eysenck Personality Questionnaire–Revised Shorter Form (EPQ-RSF), Stress Coping Scale were applied to participants and additionally Mood Disorder Questionnaire (MDQ) is given to control group to exclude a mood disorder. Data analysis was done with descriptive statistics, t-test, ANOVA and Chi-Square test.

Results: We found a relation between personality traits and coping strategies. People who are extroverted were using problem centred coping strategies and social support. But there was no relation between neurotisizm and avoidant coping strategies. And also no relationship was found between mood disorders and coping strategies.

Discussion: In this study, patients were followed regularly by each clinician in a specialized mood clinic which may improve patients' coping strategies during the follow-up. Thus, results may not be reflecting the whole bipolar spectrum.

Keywords: personality traits, coping strategies, bipolar disorder

P09
Lamotrigine as a mood stabilizer: data from a specialized mood clinic in Turkey

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Introduction: Lamotrigine is an anticonvulsant agent that inhibits the voltage-sensitive sodium channels. In psychiatry, lamotrigine is approved for maintanence treatment of bipolar disorder and only licensed for prevention of depressive relapse in bipolar disorder by the Food and Drug Administration. From here, we aimed to evaluate some clinical variables such as the number of depressive episodes, hypomanic-manic episodes, suicides, hospitalization before and after Lamotrigine treatment.

Methods: 50 bipolar patients followed in a specialized mood clinic and had been on lamotrigine treatment alone or combination at least for 1 year between 100 and 300 mg/d were recruited for the study. Number of mood episode, suicide and hospitalization were compared before and after lamotrigine started or added on the treatment. Descriptive statistics and Wilcoxon test were used for statistics.

Results: Most of the patients were female (74%), married (64%), housewife (58%). Mean age was 43.5 ± 12.5 years, mean duration of illness was 16.4 ± 8.1 years, mean age of illness onset was 27.0 ± 9.9 years. The first episodes of patients were 58% depression (n = 29), 36% mania or hypomania (n = 18). When we compared the clinical variables before and after lamotrigine, we found that number of hospitalization ($p < 0.001$), number of depressive ($p < 0.001$) and manic-hypomanic episodes ($p < 0.001$), number of sucide attempts ($p = 0.047$) were significantly lower after lamotrigine treatment.

Discussion: The preventive effect of lamotrigine from depressive recurrence is showed in many studies but it is noteworthy that it also may work for preventing from mania-hypomania, suicide and hospitalization. Our sample is selected from a homogeneus data pool thus our findings may not be reflecting the whole bipolar spectrum. Prospective long term systematic follow-up studies are required to clarify the preventive effects of lamotrigine.

Keywords: lamotrigine, bipolar disorder, mood episode, suicide, hospitalization

P10
Low rates of alcohol use among Turkish bipolar patients: cultural or genetic?

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Introduction: Epidemiological studies reported that SUD is the most common co-occurring Axis I disorder in patients with BD. Studies from western countries indicated that the rate of AUD varies between 40–60% and, may be influenced by genetic, social and cultural factors. Thus, we aimed to assess the rate and severity of alcohol use among bipolar patients in Istanbul.
Methods: The Alcohol Use Disorders Identification Test (AUDIT) was applied to eutymic 111 bipolar patients followed in an outpatient mood disorders clinic. Descriptive statistics were done to evaluate the rate of alcohol use and total AUDIT scores between genders were compared with Mann Whitney U test.
Results: Two thirds of the bipolar patients were female (n = 76). 77.5% of the patients reported that they never use alcohol life-time. Among patients who use alcohol, 91% of them (n = 101) were having 1 or 2 drinks containing alcohol on a typical day. The proportion of alcohol use disorders (patients with a total AUDIT score greater than 8) was 6.3% (n = 7). AUDIT scores of fenale bipolar patients were significantly lower comparing to male patients (p = 0.001).
Discussion: The rate of alcohol use and AUD were lower among Turkish bipolar patients comparing to the studies done in western countries but gender differences in terms of alcohol use were consistent with the literature. There may be several factors that play an important role on the low alcohol use rate. It might either be associated with genetic polymorphism of Turkish bipolar patients or related to culture and religion that influence alcohol consumption behavior in eastern societies.
Keywords: bipolar disorder, alcohol use, Turkey

P11
Bipolar disorder, substance use and violent behavior: what are the relationships?

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Objectives: The objective of the study is to determine the prevalence of substance use among patients with bipolar disorders in University of Malaya Medical Centre (UMMC), Kuala Lumpur, Malaysia. This study also aims to determine the association of bipolar illness, substance use, violent behaviour and the demographic characteristics among bipolar patients in UMMC.
Methods: This is a cross-sectional study whereby the first 121 subjects who attended and diagnosed to have bipolar disorders based on DSM IV criteria were interviewed in outpatient and inpatient settings at UMMC from March 2009 until September 2010. The subjects' medical files were also examined for evidence of substances use and violent behaviour.
Results: The results showed the prevalence of substances use among patients with bipolar disorder in general (including nicotine smoking and alcohol) was 40.9% bipolar patients have used at least one substance in their lifetime. The most common substance use is nicotine (34.5%), followed by alcohol (20.9%) and cannabis (10.0%).
Conclusion: There is higher prevalence of substance use among patients with bipolar disorders as compared to general population. Those patients with history of substance misuse are more likely to association with violent behaviour. There was no significant association found between the age group, gender, ethnic group with violent behaviour among bipolar disorders patients in UMMC.
Recommendation: The bipolar patients with history of substance use may needs special precaution and probably in need of specialist help.
Keywords: bipolar disorder; violent behaviour; substance use

P12
Comparison of comorbidity pattern of obsessive compulsive disorder in children and adults with bipolar I disorder

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Background: This study was carried out to assess the co morbidity of obsessive compulsive disorder in children, adolescence, and adults with bipolar I disorder (BID).
Methods: One hundred hospital inmates (50 children and adolescents, 50 adults) with BID were selected using convenience sampling. Diagnosis of bipolar disorder was made through questionnaires schedule for affective disorders and schizophrenia for school age (K-SADS) (children) and structured clinical interview for DSM-IV (SCID)(adults). Co morbidity and phenomenology of lifetime OCD was determined by the DSM-IV check list and Yale-Brown Scale.
Results: The co morbidity of OCD was 52% for children and adolescents and 28% for adults with a significant difference between the two groups. The comparison of Obsessive compulsive phenomenology between the two groups showed a significant difference only in the cluster of religious, sexual, aggressive and somatic obsessions, and checking compulsions (22% children and adolescents vs. 0.6% adults).
Discussion: The high co morbidity of OCD in patients with BID, especially in children and adolescents, is consistent with earlier findings.
Conclusion: The higher rate of OCD co morbidity among children and adolescents can be indicative of a specific clinical subgroup of bipolar disorder requiring a distinct therapeutic plan.
Keywords: co-morbidity, obsessive compulsive disorder, bipolar disorder

P13
Psychomotor speed and coordination in bipolar disorder

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Introduction: Psychomotor performance is related to cognitive functioning and there is robust evidence indicating cognitive

dysfunction in patients with bipolar disorder. Psychomotor coordination has been only evaluated with limited tasks (i.e. reaction times, digit symbol). Motor coordination and processing speed tasks may measure psychomotor performance better. It was aimed to assess psychomotor performance of the patients with bipolar disorder in comparison to healthy controls.

Methods: Forty-one bipolar I patients (mean age: 35.68 ± 7.35, female/male: 19/22) and age, gender and education matched 36 healthy controls (mean age: 33.31 ± 7.08, female/male: 13/23) were enrolled. Patients were euthymic for at least 3 months. After a brief musculoskeletal examination, subjects were assessed with Montreal cognitive assessment (MOCA) for brief cognitive screening and subjects scoring less than 23 were excluded. Other measurement tools were PEG board, finger tapper test, adult memory and information processing battery (AMIPB), reaction time (RT) test (visual and auditory) and Edinburg lateralization test.

Results: Healthy controls performed better than patients with bipolar disorder in dominant (p < 0.0001) and non-dominant (p < 0.0001) hand trials of PEG board test, dominant (p = 0.001) and non-dominant (p = 0.004) hand trials of finger tapper test, motor score of AMIPB (p = 0.005) and visual (p < 0.0001) and auditory (p < 0.0001) RT tests. Hand preference did not differ between groups (p = 0.282). Visual RT (p = 0.001) and PEG board test (p = 0.002) discriminated bipolar group from healthy controls in logistic regression analysis (Nagelkerke R^2 = 0.49).

Discussion: Bipolar disorder seems to be related with impaired motor coordination and psychomotor speed as well as cognitive functions. Motor coordination and psychomotor speed require uniform and intact central and peripheral nerve system. Neural synchronization deficiencies may underlie inefficient neural networks. However, it is still not clear if psychomotor performance was influenced by psychotropic medications or not.

Keywords: psychomotor speed, motor coordination, bipolar disorder, euthymia

P14
Effects of concurrent pharmacotherapy on ECT applications and on maintenance following ECT

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Introduction: Electroconvulsive therapy (ECT) is an effective treatment modality in treatment resistant depression. However, after acute intervention, with concurrent pharmacological agents, ECT should be discontinued and maintenance should be done with pharmacotherapies. It was aimed to investigate effects of concurrent medications on ECT applications; whether relapse rates and duration until relapse vary according to the type of the medication in patients with major depression treated with electroconvulsive therapy.

Methods: Between 2006 and 2010, 264 patients with recurrent and single episode depression according to DSM-IV diagnostic criteria who had ECT treatment were included. Medical records were investigated to obtain sociodemographic data, characteristics of the disorder, medications, data regarding ECT (i.e. seizure duration and seizure induction energy) and clinical data (relapses, subthreshold symptoms, side effects etc.) obtained from follow ups.

Results: Seizure duration of the patients on antipsychotics was significantly longer than antipsychotic free patients. No significant difference was detected between patients on SSRIs and SNRIs. Patients with recurrent unipolar depression had significantly more

family history, more frequent subsyndromal depressive symptoms than patients with single episode major depression. Relapse rates and duration until relapse did not differ between recurrent unipolar and major depression groups.

Discussion: Antipsychotics are found to be related to prolongation of seizure duration. Prolonged seizures may increase side effects, particularly cognitive side effects. Advanced age and history of side effects are the risk factors that may require more attention when using antipsychotics. Subsyndromal symptoms are found to be related to increased relapse rates particularly in patients with recurrent unipolar depression, therefore patients with subsyndromal symptoms should be treated longer and more aggressively. Prospective controlled studies regarding effects of medications on relapse and duration until relapse should be conducted.

Keywords: electroconvulsive therapy, depression, maintenance, pharmacotherapy, relapse

P15
To compare bipolar disorder and attention deficit hyperactivity disorder with regard to neurological soft signs

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Introduction: There are shared symptoms such as excessive talking, increased physical activity, impulsivity and inattention in both bipolar disorder (BD) and attention deficit hyperactivity disorder (ADHD). Although neurological soft signs (NSSs) have been investigated in bipolar disorder, there is no study in Adult attention deficit hyperactivity disorder we best of knowledge. Aim of current study is to compare neurodevelopmental characteristics of BD and ADHD using neurological soft signs.

Material and Methods: This study included 66 patients with BD, 62 patients with ADHD, 58 healthy controls. Participants were given a sociodemografic data form, Hamilton Depression Rating Scale, Young Mania Rating Scale, Wender Utah Rating Scale, Structured Clinical Interview for DSM-IV, Turgay ADHD scale and Neurological evaluate scale.

Results: It has been shown that there is no difference in both BD and ADHD groups with regard to sociodemografic characteristics. Patients with BD had worse performance than controls for motor coordination, sensory integration, sequencing of motor acts and other subscale of Neurological evaluate scale. On the other hand patients with ADHD had worse performance than controls for motor coordination and sensory integration. Patients with BD have worse performance than patients with ADHD have in sequencing of motor acts and other subscale. In current study, while patients with BD showed worse performance than controls have with regard to graphesthesia only, patients with ADHD have worse performance with regard to extinction, stereognosis and audiovisual integration.

Conclusion: Negash et al. have found that patients with BD have worse performance for motor coordination, sensory integration and sequencing of motor acts than controls. Our results supports to neurodevelopmental etiology in both BD and ADHD. However, it may be thought that there are differences of neurodevelopmental mechanism in both disorders, because of patients with BD have worse performance in sequencing of motor acts and other subscale of neurological evaluate scale. Worse performance of sensory integration may be sourced to dysfunction of orbitofrontal cortex in patients with ADHD.

Keywords: bipolar disorder, attention deficit hyperactivity disorder, neurological soft signs

P16
Reliability and validity of Turkish version of biological rhythms interview of assessment in neuropsychiatry

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Background: In this study, it is aimed to perform the validity and reliability of the Turkish version of Biological Rhythms Interview of Assessment in Neuropsychiatry.

Methods: The study was performed with 79 bipolar type-I disorder, 26 bipolar type-II disorder and 42 major depressive disorder patients attending to mood disorder clinics of three university hospitals and one state training hospital as well as 116 university students consisting healthy control subjects. The mean duration of the illness was 15.1 years for the bipolar groups and 9.3 years for the depressive group. For concurrent validity, Pittsburgh Sleep Quality Index was used. In the statistical analyses, internal consistency coefficient, item – total score correlations, exploratory and confirmatory factor analyses, correlation with the other scale and ROC curve were calculated.

Results: The forward and back translation of the Biological Rhythms Interview of Assessment in Neuropsychiatry was performed, and linguistic equivalence was obtained with the scale prepared. In internal consistency, the Cronbach alpha coefficient was found to be 0.899 and item – total correlation coefficients were between 0.239 and 0.747. In the exploratory factor analysis, a total of three factors representing 56.5% of the total variance was obtained and the themes of the factors were daily activities, sleep and eating habits and interpersonal relations. In the confirmatory factor analysis, confirmatory fit index was 0.932 and root mean square of approximation was 0.065. The correlation between Biological Rhythms Interview of Assessment in Neuropsychiatry and Pittsburgh Sleep Quality Index was found to be $r = 0.238$. In the sensitivity and specificity analysis, the area under the ROC curve was 0.876. The scale discriminated mood disorder groups from the healthy control group.

Conclusion: It is shown that the Turkish version of Biological Rhythms Interview of Assessment in Neuropsychiatry which is used in the assessment of circadian rhythm and functionality is reliable and valid.

Keywords: mood disorders, biological rhythms interview of assessment in neuropsychiatry, reliability, validity

P17
Reliability and validity study of the Turkish version of functioning assessment short test in bipolar disorder

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Introduction: There is need for instruments to assess functioning practically. In this study it is aimed to perform the reliability and validity analyses of Functioning Assessment Short Test (FAST) in bipolar disorder.

Methods: The study was carried out with 70 patients with bipolar disorder and 134 healthy controls. Thirteen of the patients were in the manic episode, 16 were in the depressive episode, and 41 patients were in remission. First FAST was translated into Turkish and then it was back-translated into English, and the translation was approved by the author of the original development study. In the concurrent validity, Bipolar Disorder Functioning Questionnaire (BBi) was used.

Results: In the reliability analyses, Cronbach alpha coefficient of internal consistency was calculated to be 0.960, and test-retest reliability coefficient was found to be 0.945. In the validity analyses, in the exploratory factor analysis five factors were obtained and the factor represented social functioning, occupational functioning, autonomy, cognitive functioning and financial issues. In the confirmatory factor analysis, comparative fit index was found to be 0.912 and RMSEA value was 0.085. In the concurrent validity analyses, the domains of FAST were poorly to moderately correlated with the subscales of BBi. FAST discriminated bipolar patients with symptomatic episodes and remitted patients, healthy controls. The area under the ROC curve was found to be 0.824.

Discussion: These results point out that the Turkish version of Functioning Assessment Short Test can used reliably and validly in bipolar patients.

Keywords: functioning assessment short test, reliability, validity

P18
Bipolar disorder in current practice: analysis of a multinational observational study (WAVE-bd) with Turkish recruitment data[*]

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Introduction: WAVE-bd (NCT01062607) is a multinational ambispective study of bipolar disorder (BD) to reveal disease characteristics, therapeutic approaches and burden of disease, without the limitation of focusing on a specific phase or treatment.

Methods: This multinational, multicentre, non-interventional, longitudinal study enrolled patients diagnosed with bipolar disorder type I (BD-I) or II (BD-II), with at least 1 mood event in the preceding 12 months, followed for 12–27 months (ambispectively). Clinical features of the Turkish sample during the retrospective phase of the study are presented.

Results: In the Turkish sample 369 patients were recruited from various practices. The mean age of onset was 26.0 years in BD-I and 27.7 years in BD-II. The mean duration of illness is 11.3 years in the BD-I group and 8.8 years in the BD-II group. BD-I mostly started with a manic episode (73.1%) whereas BD-II with a depressive episode (60.3%). Rapid cycling course was seen in 26.6% of BD-I and 38.2% of BD-II. Psychotic features were observed in 42.9% of BD-I and 10.3% of BD-II. Psychiatric and medical comorbidity were prevalent in 8.3% and 29.6% of BD-I patients, and 41.2% and 13.2% of BD-II patients, respectively. Most commonly used drug classes (BD-I, BD-II, respectively) were antipsychotics (69.1%, 89.7%) anticonvulsants (42.9%, 44.1%), antidepressants (13.0%, 47.1%) and lithium (32.2%, 16.2%).

Discussion: Differences were observed between BD-I and II patients with respect to the first episode, rapid cycling course,

prevalence of psychotic features, medical or psychiatric comorbidities and medications used. Antipsychotics and mood stabilizers were the most commonly used drugs.

Keywords: bipolar disorder, disease characteristics, burden, treatment

*Study funded by AstraZeneca; Clinical Trials Registry: NCT01062607

P19

The frequency of dissociative symptoms and bipolar disorder comorbidity of patients with conversion disorder

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Background: Conversion disorder is an illness of symptoms or deficits that affect voluntary motor or sensory functions, caused by the psychological conflict or need. Conversion disorder is usually associated with another mental illness. Mood disorders are the most prevalent comorbid disorders.

Methods: 54 consecutive consenting patients primarily diagnosed with conversion disorder according to DSM-IV-TR criteria, who were admitted to psychiatric emergency outpatient clinic of Sisli Etfal Research and Teaching Hospital between June 2011 and August 2011 were included in the study. SCID-I, SCID-D, DES were administered for diagnosis and evaluation. Study groups consisted of 20 patients with a dissociative disorder and a control group of 34 patients without a diagnosis of any dissociative disorder.

Results: No significant difference was found between the study groups in terms of sociodemographic characteristics. The frequency of dissociative disorder was 37%. The prevalence of dissociative disorders were as follows: dissociative disorder not otherwise specified, 18.5%; dissociative amnesia, 14.8%; depersonalization disorder, 3.7%; none had dissociative identity disorder or dissociative fugue. Significant differences were found between the study groups with respect to comorbidity of bipolar disorder, past hypomania (p values were 0.001, 0.028 and 0.015 respectively). Overall comorbidity of bipolar disorder was 27.8% (i.e. for all 54 cases).

Discussion: The frequency of dissociative disorders in conversion disorder was found to be 37%. Increased rate of bipolar disorder comorbidity found in patients with dissociative symptoms suggest that these patients may have a more severe form of conversion disorder.

Conclusion: Comorbidity of bipolar disorder in patients with conversion disorder is prevalent and existence of dissociative symptoms increases the comorbidity. It is crucial to investigate dissociative symptoms and bipolar disorder comorbidity in conversion disorders.

Keywords: conversion disorder, dissociative symptoms, bipolar disorder, comorbidity

P20

The frequency of adult attention-deficit hyperactivity and bipolar disorders in parents of ADHD children

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Background: ADHD is one of the most common mental disorders of childhood and adolescence, and characterized by inattention, hyperactivity, and impulsivity symptomatology. In addition to increased rates of ADHD and bipolar disorder in the offspring of parents and siblings of children with ADHD, family studies

resulted in a high risk for ADHD and bipolar disorder in the offspring of parents with ADHD.

Methods: 132 parents (67 mother and 65 father) of 90 ADHD children; aged between 6 and 12, and 67 parents (34 mother and 33 father) of 45 non-ADHD children; aged between 6 and 12, were recruited in the study. Control parents were matched to ADHD children parents according to age, gender and educational status. Wender Utah Rating Scale and Turgay's Adult ADD/ADHD DSM-IV Based Diagnostic and Rating Scale were administered to the participants. SCID-I/CV (Structured Clinical Interview for DSM-IV Axis I Disorder, Clinical Version) was used to evaluate the psychopathology in probands' and controls' parents.

Results: Rate of childhood ADHD were significantly higher among parents of ADHD children compared to the parents of control group (p = 0.039). Rate of adult ADHD (p = 0.076) and bipolar disorder (p = 0.277) were not significantly higher among parents of ADHD children compared to the parents of control group. Rate of bipolar disorder were significantly higher among fathers of ADHD children compared to the mothers of ADHD children group (p = 0.032). Rate of repeating the year in school (p = 0.025) and entering in trouble with the police (p = 0.046) and having any mood disorder (p = 0.014) were significantly higher among parents of ADHD children compared to the control group.

Conclusion: This is a study that evaluates the prevalence of adult ADHD and bipolar disorder in the parents of children with ADHD. Under the highlight of our findings, assessing adult ADHD and bipolar disorder in patients with having a child with ADHD is important for treatment and prognosis.

Keywords: bipolar disorder, ADHD, family history

P21

Adult attention-deficit hyperactivity disorder of frequency in first-degree relatives of bipolar patients

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Introduction: This is a cross-sectional study designed to assess adult attention-deficit hyperactivity disorder (ADHD) of frequency in a group of high-risk subjects for bipolar disorder compared to a control group. As high-risk subjects first-degree relatives of bipolar patients were selected. The purpose of this study is to find out the rate of adult ADHD in the first-degree relatives of patients with bipolar disorder compared to first-degree relatives of patients without any psychiatric disorder

Methods: 73 first-degree relatives of 40 bipolar patients with I, II and not otherwise specified mood disorder and 68 first-degree relatives of 40 subjects without any psychiatric disorder were recruited in the study. Control subjects were matched to bipolar patients and first-degree relatives of subjects were matched to first-degree relatives of bipolar patients according to age, gender and educational status. Wender Utah Rating Scale and Turgay's Adult ADD/ADHD DSM-IV Based Diagnostic and Rating Scale were administered to the participants. SCID-I/CV (Structured Clinical Interview for DSM-IV Axis I Disorder, Clinical Version) was used both to ascertain the psychiatric status of the patient and control subjects, and to evaluate the psychopathology in probands ' and controls' relatives.

Results: Rate of adult ADD/ADHD were significantly higher among the first degree relatives of patients with bipolar disorder compared to the control group (p = 0.037). The comorbidity of dysthymic disorder (p = 0.049), obsessive-compulsive disorder (p = 0.017), and alcohol abuse (p = 0.049) were significantly higher in the participants with adult ADD/ADHD compared to those without adult ADD/ADHD.

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Conclusion: To the best of our knowledge this is the first study that evaluates the prevalence of adult ADD/ADHD in the first degree relatives of patients with bipolar disorder. Under the highlight of our findings assessing adult ADD/ADHD in patients with family history of bipolar disorder is important for treatment and prognosis.

Keywords: bipolar disorder, adult ADHD, first-degree relatives

P22

A comparative study of heart rate variability among adolescent siblings of patients with bipolar disorder type I and matched controls

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Objectives: There is no published literature on the HRV status of the asymptomatic siblings of individuals diagnosed with bipolar disorder. The current study is aimed at assessment of the HRV of the asymptomatic adolescent siblings of the individuals diagnosed with bipolar affective disorder type I.

Methods: The study was carried out at the Department of Psychiatry of a tertiary care multi-specialty hospital. The sibling group comprised of adolescent siblings of the individuals diagnosed with bipolar disorder. The control group comprised of age and sex matched healthy adolescents. Both study groups included 30 subjects each. HRV was measured according to the guidelines laid down by the Task Force of the European Society of Cardiology and the North American Society of Pacing and Electrophysiology. Independent sample t test and Chi-square test were used to compare two study groups for different variables. The level of statistical significance was kept at p < 0.05 for all the tests.

Results: The two groups were comparable for various socio-demographic variables except for the number of siblings. In the Time Domain, all the values were significantly lower in sibling group. In the Frequency Domain the difference was found to statistically significant for Low Frequency maximum frequency, LF Power ms^2, High Frequency Power ms^2 and total power.

Conclusion: The asymptomatic younger siblings of the patients with bipolar affective disorder type I were found to have a lower HRV variability as compared to the controls with no siblings diagnosed with bipolar disorder.

Keywords: adolescents, bipolar disorder type I, heart rate variability (HRV)

P23

Differences in psychophysiological parameters in patients with bipolar disorder, depression remitted and healthy controls submitted to a cognitive paradigm.

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Background: Affective disorders are chronic and severe psychiatric conditions that are often accompanied by cognitive disturbances, anxiety disorders and alterations in autonomic regulation.

Objective: To determine differences in psychophysiological parameters and their relationship with anxiety in patients with remitted unipolar depression (MDD), bipolar disorder (BPD) in euthymia and healthy people by conducting a psychophysiological profile using a cognitive paradigm.

Material and methods: Three groups were formed: 1) control group CG (15), 2) Patients with MDD (20), and 3) patients with BPD (17). Applied: MINI, SCL-90, Hamilton anxiety and depression scales, and Young scale for mania. Biofeedback equipment was used to measure the following parameters: respiratory rate (RR), surface electromyography (EMGS), skin conductance (SC), peripheral temperature (TP), electroencephalography (EEG) 2 leads (Oz and Pz) and heart rate (HR). We used a paradigm with ten stages, alternating relaxation and cognitive tests. *Statistical analysis*: We used the SPSS 12. For demographic and clinical variables contingency tables for dichotomous variables and ANOVA simple were made. Only differences in age were found, so ANOVA for repeated measures was performed and this variable was controlled in addition to measuring baseline to start the test.

Results: There were differences in SC in stages 2, 4 and 9 (a: 0.023, 0.047 and 0.025). SC level was higher in the CG vs. BPD. The HR showed differences in stages 5, 8 and 10 (a: 0.004, 0.012 and 0.001). The MDD group had lower HR vs. BPD. There were no differences in Hamilton Anxiety among groups.

Conclusions: Significant differences were found in SC and HR. BPD group had decreased SC when exposed to a stressful event and increased HR in stages of relaxation. There were no differences in Hamilton anxiety or comorbid anxiety disorders between groups. Perhaps the psychophysiological changes in the profile could be part of an endophenotype for patients with affective disorders.

Keywords: depression, anxiety, bipolar, psychophysiological profile.

P24

Imipramine reverses depressive-like parameters in pneumococcal meningitis survivor rats

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Introduction: Pneumococcal meningitis is a severe infectious disease of the central nervous system, associated with acute inflammation and might cause damage to the host, such as deafness, blindness, seizure, learning deficits. The hypothalamic-pituitary-adrenal (HPA) axis plays an important role on the regulation of the anti-inflammatory response. Moreover, meningitis also is known to cause increases in the level of serum adrenocorticotropic hormone (ACTH), an adenohypophysial hormone, and the cortisol titers. Infectious diseases can play a significant role in the etiology of neuropsychiatric disturbances. In this context, we evaluated depressive-like parameters; corticosterone and ACTH levels in pneumococcal meningitis surviving rats.

Methods: *S. pneumoniae* was cultured overnight in 10 mL of Todd Hewitt Broth, diluted in fresh medium and grown to logarithmic phase. Adult male Wistar rats (250–300 g body weight), were underwent a magna cistern tap receiving either 10 μL sterile saline or a *S. pneumoniae* suspension at the concentration of 5×10^9 cfu/mL. The rats were divided into four groups: sham + saline; sham + imipramine; meningitis + saline; and meningitis + Imipramine. Imipramine was obtained from Novartis Pharmaceutical Industry (Brazil). All groups were administered intraperitoneally (i.p.) once daily with saline or doses of imipramine (10 mg/kg) for 14 days (3 until 17 day). The consumption of sweet food was measured for 7 days (10–17 day). During the anhedonia test, imipramine was administrated 60 min before the test. Imipramine was dissolved in saline immediately before the intraperitoneal injections. All treatments were administered in a volume of 1 ml/kg.

Results: After 10 days, the animals seemed to be free from infection. The meningitis group decreased the sucrose intake and increased the levels of corticosterone and ACTH levels in the serum and TNF-α in the cortex; however the treatment with imipramine reverted the reduction of sweet food consumption, normalized hormonal levels and TNF-α in the cortex.

Discussion: Our results supported the hypothesis that pneumococcal meningitis surviving rats presented depressive-like behavior and alterations in the hypothalamus-pituitary-adrenal axis, so, the use of imipramine reversed the depressive-like symptoms and decreased the hormone levels.

Keywords: streptococcus pneumoniae, meningitis, anhedonia, corticosterone, ACTH

P25

Dysphoric State in Mood Disorders: a clinical marker of Bipolar Disorder?

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Backround: In the field of the mood disorders, clinical experience and diverse factorial analysis studies raise the existence of a dysphoric syndrome as a different mood state, distinct from depressive and maniac states. Some discussion has been delineating a psychopathology for dysphoric states, claiming that is necessary to operationalizate it for research purposes.

Method: The present study has sought to create of a dysphoric syndrome screening tool for patients with mood disorders, and to explore its psychometric properties in an ambulatory mixed clinical sample of unipolar and bipolar patients.

Results: The instrument has encouraging psychometric properties. Some items separately, and the questionnaire as a whole, showed good discriminant capacity to distinguish between unipolar and bipolar patients.

Discussion and Conclusion: This syndrome could be more frequent in bipolar patients and be at the base of some of the denominated mixed forms.

Keywords: affective disorders, bipolar disorder, mixed states, dysphoria, screening instrument

P26

Psychiatric comorbidity of heroin and alcohol dependence and bipolar disorder treatment within work-occupational therapy

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Introduction: Addiction is a process which is followed by use and abuse of psychoactive substances. It is characterised by behevioral patterns which gradually become dominant in motivational hierarchy of individual. Bipolar disorder is a complex, recurrent mood disorder associated with significant psychiatric comorbidity. In diagnostic psychiatric practice, special attention is applied to establishing comorbidity of addiction disorder and other psychiatric disorders, as well as when applying therapeutic methods besides medicament therapy. The purpose of this study is to show that bipolar disorder is often in comorbidity with alcohol dependence rather than heroin addiction (here, we assume that higher comorbidity with personality disorder is firstly with antisocial personality disorder); as well as to show positive therapeutic effects of the work-occupational therapy.

Methods: Personality disorders are diagnosed by applaying Psychiatric interview and TCI-9 (Temperament and Character Inventory), MMPI-202 (Minnesota Multiphasic Personality Inventory) was applayed to identife bipolar disorder. Within work-occupational therapy, Scale of Interest and Aggression Evaluation Questionnaire, and Back Anxiety Rating Scale, are used in order to include patient in different kinds of occupational and recreational activities and to evaluate the level of aggression and anxiety in first four weeks. Hundred patients who were hospitalized at the addiction department during 2009 and 2010 were tested.

Results: Comorbidity of heroin addiction and antisocial personality disorders are by high percentage (53%), just 3% with bipolar disorder. Alcohol dependence and bipolar disorder are in comorbidity in 15%. Level of aggressiveness and tension was decreasing from week to week, proportional to the activity at the working-occupational therapy.

Discussion: The results gained from the study confirm a belief that heroin addiction is in high degree in comorbidity with antisocial personality disorder and in lower degree with bipolar disorder, unlike alcohol dependence. This study shows that longer and greater activity at the work-occupational therapy leads to the reduction of tension and have positive effects on patient psychological state.

Keywords: heroin, alcohol, bipolar, occupational therapy

P27

Differentiating between bipolar disorder type II and major depressive disorder

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Introduction: For patients presenting with depression, the distinction between Bipolar Disorder Type II (BDII) and Major Depressive Disorder (MDD) is not always readily apparent. Given differences in management and prognosis, making this distinction is of crucial significance. Identifying differences between these two populations can assist the clinician in appropriate diagnosis so that proper treatment can be initiated. The current analysis compares demographics, clinical features, co-morbid conditions, and depressive symptoms between these two populations.

Methods: Data were obtained from the National Epidemiological Survey on Alcohol and Related Conditions, which is a large cross-sectional representative survey (n = 43.093) of the U.S. population. A total of 4,189 subjects were included in our analysis based on DSM-IV criteria, 494 with BDII and 3695 with MDD. Variables examined included demographics, clinical features, co-morbid conditions, and depressive symptomatology. The primary analysis examined differences between BDII and MDD using t-tests, Chi-squares, and logistic regressions.

Results: Key differences between BDII and MDD were identified in all categories. In our regression analysis of demographics, clinical features and co-morbid conditions, younger age, not having taken medication for depression, personality disorders and alcohol abuse or dependence were predictive of BDII. A regression of symptoms during a depressive episode demonstrated that appetite loss, psychomotor retardation, guilt feelings and being argumentative were more predictive of BDII. Having difficulties with responsibilities was found to be a predictive characteristic of MDD.

Discussion: There are significant differences between BDII and MDD as demonstrated in demographical data, clinical features, co-morbid conditions and depressive symptomatology that can help distinguish between these separate conditions. Earlier

differentiation and recognition of these disorders can lead to substantial improvements in management and prognosis.

Keywords: Bipolar Disorder Type II, Major Depressive Disorder, epidemiology

P28
Abstract Withdrawn

P29
Burden in care givers of patients with schizophrenia and mood disorders: a cross sectional comparative study from central India

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Background: Caregivers of persons with mental illness undergo significant distress and experience burden. Literature has many studies on caregiver's burden in schizophrenia but studies on mood disorders especially bipolar disorders are very few. This field demands systematic investigation.

Objectives: To compare the burden experienced by primary care givers of patients with diagnosis of schizophrenia, bipolar II disorder & unipolar depression.

Methods: We studied 100 primary caregivers of schizophrenia, 50 caregivers of unipolar depression and 50 caregivers of patients with bipolar II disorder. These illnesses were diagnosed using DSM-IV (TR-2000) criteria. Primary caregivers for inclusion in study were identified by Pollack & Perlick method. Family Burden Interview Schedule was used for measurement of burden. Data was analysed using Epi-info programme.

Results: Caregivers of schizophrenia had significantly more objective and subjective burden than that of mood disorders. In mood disorder group, carers of bipolar II disorder had significantly more burden than those of unipolar depression. Parents experienced more burden than spouses and other relatives. Similarly burden was more if patient was unemployed, belonged to nuclear family and was residing in urban area.

Conclusions: Caregivers bear a significant burden in caring for patients with schizophrenia and mood disorders. Systematic approach to caregiver's issues can minimise their distress. Addressing their problems can be helpful in improving overall care of patient.

Keywords: caregiver, burden, schizophrenia, mood disorder.

P30
Pharmacologic strategies used by Venezuelan psychiatrists in the treatment of acute manic episodes in patients with bipolar disorder

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Introduction: The purpose of this survey is to investigate the use of different pharmacologic strategies for the management of acute mania (AM) in patients with bipolar disorder (BD), by Venezuelan psychiatrists. We were also interested in knowing if there were any differences in the treatments of euphoric mania (EM) and psychotic mania (PM). This could inform us of the current Venezuelan practice in this condition.

Methods: An eight question survey was developed to investigate the different strategies. This survey was conducted in July 2010 at a Psychiatric meeting in Caracas, during the presentation of a clinical case with the model of key-pad. These questions were administered to 90 Psychiatrist.

Results: In terms of strategies of management, for the EM: 47% prescribe a mood stabilizer (MS) plus a second generation antipsychotic (SGA) and 26% MS plus SGA plus a benzodiazepine (BZD). For PM: 51% used MS plus SGA plus BZD and 45% MS plus SGA. In the case of MS, for EM: lithium 47%, Valproate 28%, in PM: lithium 51%, Valproate 40%. In relation to SGA, for EM: Olanzapine 48%, Quetiapine 26%; risperidone and aripiprazol 11% each one. For PM: 54%, 35%, 4% and 4% respectively.

Discussion: This survey shows that the majority of the participants prefer a combination of medications as a treatment strategy. The most common drugs are: Lithium and Valproate as MS and Olanzapine and Quetiapine as SGA. These results also provide an idea in real life of the current management of acute mania in our country. The main drawback is that it was conducted in a small sample of psychiatrists.

Keywords: acute mania, bipolar disorder, survey, strategies for management, line of treatments

P31

Pharmacologic strategies used by Venezuelan psychiatrists in the treatment of acute depressive episode in patients with bipolar I and II disorder

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Introduction: The purpose of this survey is to investigate the use of different pharmacologic strategies for the management of Acute Bipolar Depression (ABD) in patients with diagnosis of Bipolar Disorder I and II (BDI, BDII) by Venezuelan psychiatrists. This data can give us a better understanding of the current Venezuelan practice for this condition.

Methods: A questionnaire with ten items was developed to investigate the different pharmacological strategies for the management of ABD in patients with BD. The survey was conducted in July 2010, at a Psychiatric meeting in Caracas, in the presentation of a clinical case with the model of key-pad, were administered to 90 psychiatrists.

Results: For BDI: 45% prescribe a mood stabilizer (MS) plus an antidepressive (AD), 25% MS as monotherapy, and 14% MS plus a second generation antipsychotic (SGA), 7% SGA monotherapy. For BDII: 42% MS plus an AD, 20% MS alone, 18% MS plus SGA, 0% AD as monotherapy, 4% SGA as monotherapy. The MS more prescribed was lamotrigine (65% in BDI, 64% in BDII); the AD, bupropion (33% in BDI, 43% in BDII); the SGA was quetiapine (64% in BDI, 89% in DBII) as first line treatment.

Discussion: The most common treatment strategy was a combination of medications. The drugs more used were: Bupropion (AD), Lamotrigine (MS) and Quetiapine (SGA). These results are in agreement with International and National guidelines of Clinical practice. This study also provided a closer view to the current management of acute bipolar depression in our country. A drawback is that it was conducted in a small sample of psychiatrists.

Keywords: acute bipolar depression I and II, survey, strategies for management, first line of treatment

P32

Scientometrics study of bipolar disorder in web of science (2006–2010)

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Introduction: Bipolar disorder is a major affective disorder marked by severe mood swings (manic or major depressive periods) and a tendency to remission and recurrence. It is mainly a biological disorder that occurs in a specific area of the brain that is related to the malfunction of certain neurotransmitters, or chemical messengers, in the brain.

Methods: The objective of this study is to analyze and visualize the scientific activities in the field of Bipolar Disorder by leading countries and to illustrate the scientific publication from Turkey and Iran compared to Germany during a period of 5 years (2006–2010). Our data set include all scientific publication that was indexed as a topic of 'Bipolar Disorder' in the databases of SSCI-E and SSCI through 2006–2010.

Results: The study showed that a total number of 11.313 scientific publications were indexed in SCIE and SSCI in the field of Bipolar Disorder during the period of study. The USA sharing 47.5% of world publication was the most productive country followed by England 9.9%, Canada 7.6% Germany 6.8%; Whereas Turkey and Iran published only 2.3% and 0.4% of total publications in the field. English consisting of 96.2% of total publications language was the most dominant language of publications, followed by French (1.1%), German 1.1% and Turkish 0.5%. The Journal of 'Bipolar Disorders' publishing 11.6% (1311 papers) of total publications in the field was the most prolific journals, followed by 'Biological Psychiatry' 5% (570), and 'Journal of Affective Disorders' 5% (563 papers).

Discussion: Analysis of data indicated that the most majority of scientific output in the field of Bipolar Disorder came from North America and Western Europe. Comparison of scientific activities among three countries showed that the scientific output of Germany was ˜ 3 times greater than those from turkey; whereas the scientific publication by Turkish scientists was ˜ 6 times greater than Iranian scientist.

Keywords: bipolar disorder, scientometrics, WoS, Germany, Iran, Turkey

P33

An adolescent with Asperger's disorder and comorbid bipolar disorder: a case report

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Background: Adolescents with Asperger's disorder often are seen by child psychiatrists, as having a variety of behavioral and emotional disturbances. Aggression and self-injury are among the most common problematic behaviors. In some adolescents, these disturbing behaviors are symptoms of a comorbid psychiatric condition.

Methods: The case report describes information about the occurrence of psychiatric disorders among developmentally disabled children, with an emphasis on those with pervasive developmental disorders. It also serves as an illustration of how disturbing behaviors can be symptoms of comorbid psychiatric disorders and emphasizes the necessity of accurate diagnostic formulation in these patients.

Results: For this adolescent, once he was diagnosed with comorbid bipolar disorder, appropriate treatment led to a decrease in disturbing behaviors, an improvement in quality of life for the adolescent, and a decrease in family burden.

Discussion: Generally, many clinicians continue to accept these disturbing behaviors as part of the underlying pervasive developmental disorder. Hence, it is particularly important to recognize and treat comorbid psychiatric conditions in these patients, which can considerably improve functioning.

Keywords: Asperger's disorder, bipolar disorder, aggression, adolescent

P34

The Turkish version of the mixed state scale in bipolar disorder

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Background: There is no clinical scale that specifically measures the phenomena of the bipolar disorders mixed state. This scale includes clinically relevant symptoms of both mania and depression in a bivariate scale. In it's original population, United Kingdom, it captures the key features of the mixed state of bipolar disorder. The

scale also endorses the view that mixed state may be more than the sum of their parts. It allows endorsement of one or more of the manic and depressive symptoms. The aim of the present study was to examine whether the scale answered the same purpose for Turkish clinical population and then conduct the Turkish version of the scale in Turkish population including both clinical and non clinical population.

Method: The patients and the participants from normal population with no psychiatric diagnosis were asked to fill the scale. Data were collected by means of face to face applications in both clinical and 'normal population'. Reliability and validity analysis were applied.

Results and Conclusions: The results indicated that this scale appears to capture the key features of mixed states in Turkish population too. Moreover, the scale can be used to identify the patients diagnosed as bipolar disorder on their experiences of mixed state in Turkish population. Through the usage of the scale it is expected that some diagnostic problems may be eliminated for Turkish population.

Keywords: the mixed state scale in bipolar disorder, Turkish, bipolar disorder, affective disorders

P35

Antidepressant-induced hypomanic switch predictors in social anxiety disorder patients

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Background: Recent studies showed that the comorbidity of the social anxiety disorder in the patients with major depressive disorder can be the predictor of hypomanic switch. It is also reported that there can be a relationship between social anxiety disorder and bipolar disorder. In this study, we investigated the predictors of antidepressant induced hypomanic switch (AIHS) in social anxiety disorder (SAD) patients.

Methods: In this study, we evaluated 247 social anxiety disorder patients who were primarily diagnosed with social anxiety disorder according to DSM-IV criteria. 128 of 247 patients had the history of antidepressant using one period in a lifetime and in these patients, 32 had antidepressant induced hypomanic switch. All the patients were evaluated with SCID-I, BDI (Beck Depression Inventory), Liebowitz Social Anxiety Scale (LSAS), and Global Assessment of functioning (GAF). Logistic regression analyses were used to find out the predictors of antidepressant-induced hypomanic switch.

Results: The ratio of AIHS was found as 25% in SAD patients. The history of suicide attempt and the increased number of depressive episodes, the younger age at onset of depressive episode, depressive episode with atypical features and the decrease in average score of GAF were the predictors of AIHS.

Discussion: Comorbidity of major depressive disorder with atypical features and seasonal pattern in the patients who were diagnosed with SAD, can switch to hypomania during antidepressant treatment more frequently.

Conclusion: In the presence of early onset of depression, atypicality in depression, suicide attempt, multiple depressive episodes, it has to be caution should be exercised in terms of hypomanic switch.

Keywords: social anxiety disorder, hypomanic switch, predictor

P36

The clinical impact of mood disorder comorbidity on social anxiety disorder

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Background: The comorbidity of mood disorder in social anxiety disorder is very common but there are limited studies on this issue. The aim of this study is to investigate the clinical impact of the bipolar disorder comorbidity on the social anxiety disorder clinic.

Method: 247 patients were enrolled in our study with the primary diagnosis of SAD according to DSM-IV criteria. The patients were assessed with GAF, BDI, and LSAS. 3 groups were created; the patients with social anxiety disorder and major depressive disorder, bipolar disorder comorbidity and the social anxiety disorder patients without comorbidiy.

Result: In the social anxiety disorder patients with bipolar disorder comorbidity the number of suicide attempt and the duration of antidepressant use were higher.

Conclusion: In the presence of mood disorder comorbidity, the clinical severity of social anxiety disorder increases and the functionality of the patients' decreases.

Keywords: social anxiety disorder, comorbidity, mood disorder

P37

COMT allele (Met[158]) modulates facial emotion recognition in bipolar disorder I mood episodes and in healthy controls

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Background: One of the many cognitive deficits reported in Bipolar Disorder (BD) patients is facial emotion recognition (FER), which has recently been associated with dopaminergic catabolism. Catechol-O-methyltransferase (COMT) is one of the main enzymes involved in the metabolic degradation of dopamine (DA) in the prefrontal cortex (PFC). The COMT gene polymorphism rs4680 (Val[158]Met) Met allele is associated with decreased activity of this enzyme in healthy controls. The objective of this study was to evaluate the influence of Val[158]Met on FER during manic and depressive episodes in BDI patients and in healthy controls.

Materials & Methods: 64 BD type I patients (39 in manic and 25 in depressive episodes) and 75 healthy controls were genotyped for COMT rs4680 and assessed for FER using the Ekman 60 Faces (EK60) and Emotion Hexagon (Hx) tests.

Results: Bipolar manic patients carrying the Met allele recognized fewer surprised faces, while depressed patients with the Met allele recognized fewer angry and happy faces. Healthy homozygous subjects with the COMT Met allele had higher FER scores on the Hx total score, as well as on disgust and angry faces than other genotypes.

Conclusion: This is the first study suggesting that COMT rs4680 modulates FER differently during BD episodes and in healthy controls. This provides evidence that PFC DA is part of the neurobiological mechanisms of social cognition. DA receptor stimulation alterations during BD mood episodes might explain the contrasting results found in BD compared to controls. Further

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studies on other COMT polymorphisms that include euthymic BD patients are warranted.

Keywords: dopamine, facial emotions, catechol-O-methyltransferase, bipolar disorder, mania, depression
ClinicalTrials.gov Identifier: NCT00969

P38

Is there a functional brain imaging biomarker of bipolar disorder? a systematic review and meta-analysis

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Background: Functional MRI abnormalities have proposed to be potential biomarkers of number of psychiatric disorders including bipolar disorder. There is significant amount of conflicting findings in published functional MRI findings in bipolar disorder. A recent meta-analysis of fMRI studies suggested that limbic overactivity and decreased activity in inferior frontal cortex is a consistent feature of bipolar disorder. However, meta-analytical method used in this meta-analysis does not exclude single-study effects.

Methods: Functional MRI studies in bipolar disorder that used cognitive or emotional activation paradigms were systematically reviewed. Coordinate based meta-analytic methods which treat individual studies rather than voxel foci as independent variables were used. Meta-regression analyses and subgroup used to examine the effect of confounding clinical variables and differences in cognitive tasks used.

Results: There was significant heterogeneity of the findings. There were no consistent functional changes that were consistent across studies and patient-control differences did not reach significance for any region.

Discussion: Even the most frequently observed functional MRI changes in bipolar disorder have been observed in a small fraction of the studies. Currently, there is no reliable functional imaging marker of bipolar disorder. However, there is significant heterogeneity of the cognitive activation paradigms used in the published studies.

Conclusion: Current meta-analysis raise doubts about the utility of functional MRI changes as a biomarker of bipolar disorder.

Keywords: bipolar disorder, MRI, biomarker

P39

Improving criteria for differentiating bipolar disorder and major depressive disorder in patients experiencing a major depressive episode

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Background: Current diagnostic criteria for diagnosis of bipolar disorder or major depressive disorder do not incorporate illness course or family history and fail to emphasize particular significance of certain symptoms over others. We evaluated the characteristics of patients presenting with a current major depressive episode who were assigned a diagnosis of bipolar disorder using three different diagnostic algorithms.

Methods: In the BRIDGE study, conducted in 18 countries community and hospital based psychiatrists administered semi-structured diagnostic, illness course and family history assessments to a consecutive series of adults seeking treatment for a major depressive episode. The psychiatrists also completed a questionnaire on patients' clinical features which enabled a diagnosis of bipolar disorder by DSM-IV-TR, modified DSM-IV, eliminating durational and exclusionary criteria, and Bipolarity Specifier criteria, which incorporate illness course assessments and family history of hypomania/mania).

Results: Symptoms of affective liability, first illness onset at < 30 years of age, ≥ 2 mood episodes and family history of hypomania/mania were significantly associated with bipolarity. Rates of bipolar diagnosis based on the three criteria applied were similar across major geographic and cultural regions. Women with first episode post-partum depression had higher rates of bipolar disorders, with more hypo/mania in first degree relatives. Self assessed symptomatology by the Hypomania Checklist-32 was largely consistent with the psychiatrist assessed data.

Discussion: Our and other recent studies support elimination of the DSM-IV bipolar exclusion criteria for hypomania due to the use of antidepressants or of other substances, or to other medical conditions. Comorbidity of anxiety differed significantly between bipolar I and II patients. Bipolar II patients compared with patients with major depressive disorder had greater comorbidity for all subgroups of anxiety disorders; greater anxiety disorder comorbidity in bipolar I patients was limited to social phobia and OCD. Recent studies indicate that bipolar patients recognize changes in energy, mood stability, sleep and social functioning as early indicators of depressive or manic states.

Conclusions: Some reordering of key criteria to establish diagnoses of bipolar disorder or major depressive disorder should improve early diagnosis, appropriateness of interventions and facilitate studies of both new interventions and psychopathological mechanisms for both disorders.

Keywords: bipolar, depression, major depression, diagnosis

P40

Altered levels of Neuron Specific Enolase (NSE) in patients with bipolar disorder and schizophrenia

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Introduction: Bipolar disorder and schizophrenia share many features, including an increasing overlap of genetic susceptibility along the two diagnoses. Although the pathophysiology of these disorders remains unclear, mechanisms such as oxidative stress, changes in neuroplasticity and energy metabolism have recently been associated with both conditions. However, these mechanisms seem to be differently involved in each disorder. The enzyme Neuron Specific Enolase (NSE) is a regulator of glycolysis in the central nervous system, and plays an important role in the energy metabolism of the brain. Its presence in serum samples is commonly taken as a marker of neuronal damage.

Objectives: The objective of this study was to determine serum levels of NSE in schizophrenic and bipolar disorder patients in different episodes and compare them with healthy controls.

Results: We analyzed serum samples of 20 schizophrenics, 61 bipolar and 71 healthy controls using a commercial sandwich ELISA kit. Levels of NSE were significantly elevated in bipolar

patients in euthymia (p < 0.0001) and in depressive episode (p < 0.0001) and in schizophrenic patients (p < 0.0001) when compared to the control group. Although we found no significant differences between controls and bipolar manic patients, we observed a positive correlation between levels of NSE and scores on the YMRS scale ($r = 0.515$, p = 0.005).

Discussion: These findings suggest a neurodegenerative process taking place at both conditions, possibly associated with neuronal loss in patients with schizophrenia and bipolar disorder, the latter in an episode-dependent way.

Keywords: bipolar disorder, schizophrenia, neuro specific enolase

P41

Predictors of transition into bipolar disorder after the first lifetime depressive episode

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Background: The prevalence of change from unipolar to bipolar disorder is estimated to 1% each year and as much as 40–50% over lifetime. There has been increasing interest in defining clinical differences between unipolar and bipolar depressions and detecting subtypes of depression, which are associated with increased risk of later development of bipolar disorder. However, previous studies have assessed these characteristics retrospectively. Therefore, it is not possible to distinguish clearly between predictors of transition into bipolar disorder, present already from outset of the disorder, and secondary consequences of different courses of illness. Accordingly, there is a need for prospective studies from onset of the first lifetime depressive episode in order to assess the effect of different variables on the risk of development of bipolar disorder.

Method: A total number of 301 patients aged 18–70 years with recent onset of the first lifetime depressive episode were systematically recruited using the Danish Psychiatric Central Research Register in 2005–2007. Clinical characteristics of the first episode depression, psychiatric co-morbidity including personality disorders, treatment history and outcome, the level of neuroticism, family history of psychiatric disorders, and the experience of stressful life events during a 6 month period preceding onset of depression were assessed by structured interviews, and nine polymorphisms in the genes encoding the serotonin transporter, brain derived neurotrophic factor, catechol-*O*-methyltransferase, angiotensin converting enzyme, tryptophane hydroxylase, and the serotonin receptors 1A, 2A, and 2C were genotyped. Approximately 5–6 years later, the patients will now be invited to a follow-up study aiming to examine the course of the illness and assess demographic, clinical and genetic variables associated with transition into bipolar disorder as well as development of recurrent and chronic depressions.

Discussion: This is the first study of predictors of various courses of illness among patients followed prospectively from onset of the first lifetime episode of depression. The design will be presented in more details, and strengths and limitations further discussed.

Keywords: first episode depression, bipolar disorder, co-morbidity, stressful life events, genetic polymorphisms

P42

Varenicline-induced psychotic depressive episode in a patient with bipolar disorder

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Introduction: Varenicline is a novel treatment for smoking cessation. This agent is a partial agonist that binds at the nicotinic α4β2 receptor, and it seems to be the most effective smoking cessation product currently available. As a partial agonist, varenicline produces low to moderate levels of dopamine release, which reduces craving and withdrawal symptoms. Increased neuropsychiatric symptoms such as depressed mood, agitation, and suicidal ideation and behavior have been reported with the use of varenicline. We report development of a psychotic depressive episode after using varenicline for smoking cessation in a patient with the diagnosis of bipolar disorder.

Case Presentation: A 47 years old male was admitted to our psychiatry outpatient clinic with the symptoms of insomnia, agitation, and suicidal ideations during the last 4 days before his admission. His initial examination revealed paranoid ideas about his wife's deception. He was suffering from severe insomnia. He also described suicidal ideas racing in his mind. The patient described that his complaints have acutely begun after an increase in the daily dose of oral varenicline tablets which was prescribed to him 10 days ago by a smoking cessation clinic.
His past psychiatric history revealed the diagnosis of bipolar disorder for the last 25 years. He was under mood stabilizator treatment when he was admitted to our clinic.

Evaluation: The onset of psychotic depression in this patient after initiation of varenicline treatment for smoking cessation certainly suggests that varenicline has the capacity to induce depression and psychosis at least in patients with a history of mood disorders, though this has been reported in another patient with a documented history of bipolar disorder.

Conclusion: This case report provides valuable support of previously published cases that demonstrate the risk of exacerbation of psychotic symptoms and depression with varenicline use in patients with severe mental illness.

Keywords: bipolar disorder, smoking cessation, varenicline

P43

Anxiety disorders in rapid-cycling bipolar youths: a cohort study of a national managed care database

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Objective: To compare comorbid anxiety disorders between bipolar youths with and without rapid cycling in a large cohort study.

Method: Analysis was conducted on a cohort of 8.129 youth patients (≤18 years old) with Bipolar disorder (BD), from the Integrated Healthcare Information Services (IHCIS) Identified from June 30, 2000 to July 1, 2003. Anxiety disorders were compared between rapid and non rapid cycling bipolar youths.

Results: Included were 58 patients with rapid cycling (defined as: ≥4 episodes per year) and 8.071 without rapid cycling. Patients with rapid cycling had significantly more comorbid Social Anxiety Disorder (33.3% and 11.8%) ($\chi^2 = 23.29$, df = 1, p < 0.0001); Phobias (22.2% and 0%) ($\chi^2 = 1010$, df = 1, p < 0.0001); and panic disorder (3.1% and 0%) ($\chi^2 = 78.92$, df = 1, p < 0.0001) than patients with non-rapid cycles. OCD (11.4% and 11.0%) did not show a significant difference ($\chi^2 = 1.79$, df = 1, p = 0.18). Patients with rapid cycling were more likely than those without rapid cycling to be given mood stabilizers (91.4% vs. 60.3%, ($\chi^2 = 22.02$, df = 1, p < 0.0001), antidepressants (79.3% vs. 59.2%, ($\chi^2 = 8.82$, df = 1, p = 0.0003), and antipsychotics (89.7% vs. 45.8%, ($\chi^2 = 42.91$, df = 1, p < 0.0001). The use of stimulants did not differ between the two groups (24.1% vs. 23.0%), ($\chi^2 = 0.02$, df = 1, p = 0.96).

Conclusion: Our findings support that rapid-cycling in youths is frequently associated with comorbid anxiety conditions, in particular Social Anxiety, Panic Disorder and Phobias. These findings highlight the need to refine diagnosis, treatment and interventions for youth diagnosed with comorbid mood and anxiety disorders.

This study highlights the need to refine diagnosis for comorbid anxiety in bipolar youths.

Keywords: bipolar, youth, anxiety, rapid cycling

P44

Can serum BDNF levels be identified as a candidate endophenotype in bipolar disorder?

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Introduction: Despite discrepancies in serum BDNF (brain-derived neurotrphic factor) levels in different states of bipolar disorder (BD), low peripheral BDNF levels are generally accepted as a biomarker for illness activity and progression. This is the first study investigating serum BDNF levels as a candidate endophenotype for BD.

Objective: We aimed to compare serum BDNF levels in bipolar patients, their unaffected first degree relatives and in healthy controls.

Method: Patients with DSM-IV BD (n = 53) either in euthymic (n = 30), depressed or manic (n = 23) states, their first degree relatives (n = 19) and 37 healthy controls were included in the study. Diagnosis was confirmed using Structural Clinical Interview for DSM-IV-TR (SCID-I); Symptomatic and syndromal severity were assessed using Young Mania Rating Scale (YMRS), Hamilton Depression Scale-17 (HAM-D 17), Clinical Global Impression Scale (CGI). Serum BDNF levels were measured with an enzyme-linked immunosorbent assay (ELISA) method.

Results: The mean serum BDNF levels of in-episode bipolar patients (4.27 ± 1.09 ng/ mL) were significantly lower than that of euthymic patients (8.04 ± 2.20) (p < 0.00), first degree relatives (7.14 ± 2.13 ng/mL) (p < 0.000), and healthy controls (7.05 ± 2.64 ng/mL) (p < 0.000). There was no significant difference between the latter three groups. Serum BDNF levels correlated negatively with HAM-D, YMRS and CGI scores.

Conclusion: Our findings confirm the existing data that serum BDNF levels are abnormally low in active phases of BD and related with episode severity. We suggest that low serum BDNF levels are nonspecific state markers and cannot be identified as an endophenotype for BD.

Keywords: brain-derived neurothrophic factor, bipolar disorder, endophenotype, biomarker

P45

DNA damage in bipolar disorder: a quantitative assessment by using Gas Chromatography-Isotope Dilution Mass Spectrometry (GC-MS)[*]

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Introduction: Oxygen-derived free radicals can cause membrane and DNA damage through lipid and protein oxidation. Oxidative damage may be associated with the patophysiology of bipolar disorder (BD). One previous study using Commet assay had shown increased frequency of DNA damage in BD.

Objective: We aimed to compare the level of the oxidatively induced DNA base damage in peripheral blood of BD patients and healthy individuals by assessment of three different parameters.

Method: Patients with BD (n = 36; 12 euthymic, 24 depressed or manic; 33 medicated) and healthy controls (n = 14) were included in the study. Diagnosis was confirmed using Structural Clinical Interview for DSM-IV-TR; Symptomatic and syndromal severity were assessed using Young Mania Rating Scale, Hamilton Depression Scale-17, and Clinical Global Impression Scale. DNA was isolated from blood samples. The levels of DNA damage was assessed through measurement of 4, 6 diamino-5-formamido-pyrimidine (FapyAde), 2, 6-diamino-4-hydroxy-5-formamido-pyrimidine (FapyGua) and 8-hydroxyguanine (8-OH-Gua) by gas chromatography-isotope dilution mass spectrometry (GC-MS). Higher values represent more DNA damage.

Results: Neither FapyGua (patients vs. controls: 0.4285 ± 0.26444 vs. 0.3654 ± 0.11677) nor 8-OH-Gua (patients vs. controls: 2.9550 ± 1.30785 vs. 3.2456 ± 1.14737) levels differed significantly between the groups. FapyAde levels were significantly higher in controls (4.76 ± 1.372) compared to patients (3.42 ± 2.626) (p = 0.005). Clinical features and DNA damage parameters were not correlated in the patient group.

Conclusions: Medicated bipolar patients displayed similar or less amounts of DNA damage compared to controls on all three parameters assessed by GC-MS method. The finding may be due to neuroprotective effect of treatment.

Keywords: DNA damage, bipolar disorder, GC-MS method

P46

Vitamin D deficiency or insufficiency in patients with bipolar disorder compared to health controls

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Background: Some cross-sectional studies have suggested that low serum levels of 25-hydroxyvitamin D3 (25-OH VD) are significantly associated with depression. However, there were few studies exploring the relationships between vitamin D deficiency or insufficiency and bipolar disorder. This study aimed to examine differences between control participants and bipolar disorder patients on measures of vitamin D levels and to investigate whether vitamin D levels were different according to subtypes or mood episodes of bipolar disorder.

Methods: The study sample included 60 patients with bipolar disorder(BP I = 28, BP II = 17, BP NOS = 15). All patients

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were diagnosed by the interviewing psychiatrist according to DSM-IV. Healthy controls(n = 23) were recruited from among people attending their regular check-up visit at the Health Promotion Center. Serum levels of 25-OH VD were assessed by radioimmunoassay. The clinical severity of the bipolar disorder patients were measured using the Clinical Global Impression(CGI) scale before blood sampling. Based on mood episode at the time of blood sampling, patients were grouped into three categories : euthymic (n = 36), depressive (n = 13), and manic/hypomanic (n = 11).

Results: Patients with bipolar disorder had lower serum levels of 25-OH VD than healthy controls (p < 0.001). However, there were no significant differences between BPI, BP II, and BP NOS in serum levels of 25-OH VD. Vitamin D deficiency(< 20 ng/mL)/ insufficiency(< 30 ng/mL) was highly prevalent among all subtypes of bipolar disorder compared to healthy controls : 28.6% (n = 8)/21.4% (n = 6) in BP I, 41.2% (n = 7)/29.4% (n = 5) in BP II, 6.7% (n = 1)/40.0% (n = 6) in BP NOS vs. 0% (n = 0)/4.3% (n = 1) in healthy controls (p < 0.01). Contrary to our expectations, there were no significant differences in serum levels of 25-OH VD across the current mood states.

Conclusions: This study found that regardless of subtypes of bipolar disorder, vitamin D deficiency or insufficiency was common in the bipolar disorder patients. Notably, low serum levels of 25-OH VD in manic/hypomanic patients were comparable to those in depressive or euthymic patients. Further studies are needed to determine whether vitamin D deficiency or insufficiency might be a trait risk factor for bipolar disorder.

Keywords : Vitamin D, bipolar disorder

P47

Integrating clinical impressions and symptomatic severity in depressed patients with bipolar disorders

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Background: Evaluating clinical significance and symptomatic severity of depression is essential in long-term management of bipolar disorders. In this study, we linked the longitudinal changes in clinical impressions of depression to the longitudinal changes in symptomatic severity of depression and explored the relationship between the two different facets of depression in patients with bipolar disorders.

Methods: A total of 295 patients with DSM-IV bipolar I or II disorders were evaluated with the Hamilton Depression Rating Scale (HAMD), the Montgomery-Asberg Depression Rating Scale (MADRS), and independently assessed with the Clinical Global Impressions for Bipolar illness-Modified (CGI-BP-M) depression subscale. At 6 months and at 12 months post-baseline, 176 and 135 patients repeated these evaluations, respectively. We conducted equipercentile linking of the scores of the CGI-BP-M depression subscale to the total scores of the HAMD and the MADRS. To reveal the relationship between the CGI-BP-M depression score and each items of the HAMD/MADRS, we performed focused principal components analysis (PCA).

Results: A linear relationship was identified between the CGI-BP-M depression score and the HAMD/MADRS scores showing a wide range of the HAMD/MADRS scores at '3 (mildly ill)' and '5 (markedly ill)' of the CGI-BP-M depression score. Focused PCA showed an increasing pattern of positive correlation between clinical impressions and psychological anxiety/inner tension during the long-term treatment of bipolar disorders. Although not significant, the 'insight' item on the HAMD was negatively

correlated with the CGI-BP-M depression score at 6 months and 12 months follow-ups.

Discussion: The findings of linking analysis implicate the need for a clinical attention to 'mild' or 'markedly' depressed patients with bipolar disorder in terms of depressive symptomatology. Psychological anxiety or inner tension appears to substantially influence on clinicians' judgments of depression severity of patients with bipolar disorders during maintenance phase.

Conclusion: Combining the assessments of clinical impressions and symptomatic severity may provide a practical help to clinicians in assessing clinical status of depressed patients with bipolar disorders.

Keywords: clinical impression, symptomatic severity, bipolar disorders

P48

The metabolic syndrome in drug-naïve bipolar II disorder patients and the influence of 12-week pharmacological intervention on metabolic disturbances

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Introduction: Accumulating evidences indicate the high prevalence rate of metabolic disturbances including diabetes, obesity, hyperlipidemia in bipolar disorder patients, and the association with either disease itself or common pharmacological intervention is under investigation. However, advanced information about the possible differences between the metabolic disturbances across subtypes of bipolar disorder subtypes is scant. In this study we surveyed the prevalence rate of metabolic syndrome in drug-naïve bipolar II patients. Moreover, the influences of pharmacological treatment on individual metabolic index were evaluated.

Methods: This study recruited forty-two patients diagnosed as bipolar II disorder according to DSM-IV criteria from the outpatient department and psychiatric ward in two university hospitals in Taiwan. All patients were drug-naïve before being recruited; they received 12-week pharmacological intervention thereafter. The prevalence rate of metabolic syndrome was calculated under drug-naïve status. Individual metabolic index including body mass index (BMI), waist circumference, buttock circumference, waist-to-hip ratios, lipid profiles, fasting serum glucose level, HbA1C, serum insulin and leptin level were measured at baseline, 2 week, 8 week, and 12 week after medication use. Measurements were compared by using repeated measurements.

Results: The metabolic syndrome prevalence rate in bipolar II disorder patients before pharmacological intervention was 16.6%, which was lower than that observed in bipolar I disorder but similar to that of general population in Taiwan. Compared with baseline, the body mass index (BMI) increased significantly after 12 weeks of pharmacological intervention. Other biochemical indices fluctuated but revealed no significant changes after the treatment.

Conclusion: Our result suggested that the prevalence rate of metabolic syndrome was similar between bipolar II disorder drug-naïve patients and general population, but lower than that in bipolar patients. The influences brought by medication were also smaller than that noted in patients with bipolar I disorder. The results indicated differences in the severity and prevalence of metabolic disturbance among subtypes of bipolar patients, either with or without medication use.

Keywords: bipolar II disorder, metabolic disturbance

P49

Comparisons of cognitive function between euthymic older people with previous history of bipolar disorder and those with major depression: homocysteine related?

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Introduction: In acute stage, compared with older people with major depression (MDD), those with bipolar disorder (BPD) may have greater cognitive impairment. Compared to normal controls, euthymic older people with previous BPD may have persistent impairment in executive function, attention and verbal memory, while those with MDD have impairment in executive function, memory, and processing speed. The aim of this study is to compare the cognitive function between euthymic older people with BPD and those with MDD.

Methods: Older people $\geqq 60$ years with history of BPD and current euthymic state, defined as the score of 17-item Hamilton Depression Rating Scale (HDRS) $\leqq 10$ and Young Mania Rating Scale $\leqq 7$ for 4 consecutive weeks, were enrolled from outpatient services. Data of euthymic older people with history of MDD, defined as the score of 17-item HDRS $\leqq 10$ for 4 consecutive weeks, matched by age and gender with those with BPD were extracted from our dataset. Subjects with the Mini-Mental State Examination (MMSE) score < 17 were excluded. All of them had received the assessment of clinical variables, laboratory examination (including homocysteine, folate, vitamin B12, and lipid profiles), and a series of cognitive tests.

Results: Forty four people in each group were enrolled. No differences were found in MMSE, HDRS and global cognitive composite score between these two groups. In terms of individual cognitive test, only attention domain (time for color trail test-1(CTT-1)) was shown to be more severely impaired in BPD group after adjustment for age, gender, and education. Plasma homocysteine level was higher in bipolar group and positively correlated with time for CTT-1 (0.42 sec increase for the increase of each μmol/L homocysteine levels) after adjustment.

Discussion: In euthymic state, older people with BPD had poor attention performance compared to those with MDD. In addition, higher homocysteine levels were positively associated with poor attention performance. Whether homocysteine levels have a role in the attention deficit in older people with BPD needs further investigated.

Keywords: geriatric bipolar disorder, cognitive function, depression, attention, homocysteine

P50

Artists 'In the Mood'

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Introduction: Creativity and artistic processes are thought to be associated with psychiatric disorders. Many famous poets, writers, painters and composers are known to have psychiatric disorders such as mood disorders and addiction problems. The aim of this study was to investigate prevalence of mood disorders and alcohol abuse and addiction among artists.

Methods: 85 artists (painters, sculptures, musicians, ballerinas) who make their living as art professionals were included in the study. Control group consisted of 80 academicians from engineering faculty. All subjects were administered the Michigan Alcohol Screening Test (MAST) and Mood Disorder Questionnaire (MDQ). SPSS 12.0 was used for statistical analysis of data.

Results: Of 165 participants 37 (28, (%33) in the artists group and 9 (%11) in the control group) had a history of previous psychiatric disorders (p = 0.001). In the artists group, we found that 17 (%20) had depression, 5 (%5, 8) had bipolar disorder and 6 (21, 4%) had miscellaneous disorders. In the control group 7 (78%) had depression and 2 (22%) had miscellaneous disorders. Bipolar disorder were significantly more common in the artists than the control group (p = 0.028). Suicidal attempts were reported in 12 participants all of whom were in the artists group. Ten of participants who attempted suicide had a previous diagnosis of psychiatric disorders. Mood Disorders Questionnaire mean scores had significantly higher in the artists compared to the controls (p = 0.032). There were no differences in Michigan Alcohol Screening Test (MAST) scores between the artists and the controls.

Discussion: Psychiatric disorders were more common in artists than controls in our study. Depression was the most common psychiatric disorder in both groups. Mood disorders especially bipolar disorders were more common in artist group in this study. Manic and hypomanic episodes as well as depressive episodes may be linked to artistic processes and creativity. Clinicians should be aware about mood disorders in this high vulnerable population.

Keywords: bipolar disorder, alcohol abuse, suicide, artist, creativity

P51

Gender differences in first episode mania

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Objective: It is unclear to whether there are gender differences in the incidence, onset, and clinical course of first episode bipolar disorder. The aim of this paper was to delineate the impact of gender on the premorbid history, illness onset, and 18 month outcomes of patients with first episode mania (FEM).

Method: File audit methodology was used to assess the medical files of 118 (male = 71; female = 47) patients with FEM aged between 15 and 25 years and who were treated at the Early Psychosis Prevention and Intervention Centre (EPPIC), Melbourne. Australia. Patients were assessed on a range of clinical and functional measures.

Results: Males with FEM were more likely to have past histories of substance use (**OR** = 3.66, p < 0.001) and forensic problems (**OR** = 2.17, p = 0.008), whereas females with FEM were more likely to have a history of sexual abuse (**OR** = 8.07, p = 0.001). There were no gender differences in age of onset or duration of untreated illness. At service entry, males with FEM were more likely to being using substances, especially cannabis (**OR** = 1.47,

p = 0.047), had more severe psychopathology (**OR** = 1.72, p = 0.037), and poorer functioning (**OR** = 0.96, p = 0.045). During treatment males were more likely to decrease or stop their substance use (**OR** = 2.13, p = 0.008) and were more likely to be living with their families (**OR** = 3.20, p = 0.009). There were no gender differences in discharge psychopathology or functioning.

Conclusions: There are substantial gender differences among individuals with FEM, which seem to be largely driven by different risk factors associated with poor outcome. For males, substance use was associated with a worse clinical presentation and poor functioning but appears to be responsive to early intervention. In females with FEM, the impact of trauma (e.g., sexual abuse) on illness coursewarrants further consideration.

Keywords: gender, first episode mania, substance use, sexual abuse, outcome

P52

Regained control: lived experience of patients suffering from bipolar disorder with a relapse prevention plan, a phenomenological study

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Background: A bipolar disorder is a severe chronic mental illness. Learning to live with this disease requires self-management interventions from patients. Developing and using a relapse prevention plan can be helpful. Till now there is no specific study known about the experiences of patients with a bipolar disorder working with a relapse prevention plan.

Purpose: This study aimed to understand the lived experience of patients suffering from a bipolar disorder with the development and use of a relapse prevention plan.

Design and Methods: In this fenomenological study fifteen participants were asked about their lived experience, in unstructured interviews. Colaizzi's data analysis method was used.

Findings: For patients the plan was a guide and overview in the process of (re)gaining control over their own life. Experiences as confrontation, resistance, denial, grief and acceptance played a role. Self-management interventions were learned. Contact with relatives and the individual matching with the professional were important and helpful factors.

Conclusion: In the recovery process of patients with a bipolar disorder the development and use of a relapse prevention plan is an important tool to regain control. Professionals should be teached to use this patients experience as a source of knowledge.

Keywords: bipolar disorder, relapse prevention plan, lived experience, self-management

P53

Adding quetiapine to antidepressants in the depressive episode of bipolar disorder II – case report

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Background: The treatment of Bipolar Disorder II –Depressive Episode includes some issues due to anxiety, mood instability, impulsivity, poor functionality, recurrence, poor compliance in long-term treatment, poor or non-response to psychotherapy.

Hypothesis: Many effective antidepressants can be helpful for depression, but the risk of switching to hypomania or mania still could occur. On the other hand, there are some burdens like diminished ability to think or concentrate, indecisiveness nearly every day, low self-esteem, distractibility, dysfunctions in the professional or domestic activities. Adding quetiapine could help recover from depressive episode and prevent recurrence or switching to another hypomanic episode without using a mood stabilizer; this way, the side effects of the mood stabilizer are avoided and the medical costs on a long term treatment are lowered.

Methods: we evaluated 2 female patients, about the same age and psychiatric history: R.M. 36 years, presently in a depressive episode after several months of hypomania, with 1 manic, 2 mixed, 2 hypomania, last depressive episode without psychotic features. The second, A.R.D. 42 years, in a depressive episode after 6 months of hypomania, psychiatric history with 2 manic, 2 depressive and 2 hypomania episodes.

This study's periods of time were:6 weeks of stabilization for R.M. with venlafaxine 225 mg/day, valproate 1000 mg/day, bromaze-pam 3 mg/day (average), Zolpidem 10 mg/day. The patient A.R.D. received quetiapine XR 150 mg/day and escitalopram 10 mg/zi. We evaluated the efficacy at baseline with YMRS (R.M. = 9 and A.R.D. = 10), MADRS (R.M. = 27 and A.R.D. = 29), after 6 weeks: (R.M. = 11 and A.R.D. = 8). Also, we evaluated the patients' satisfaction with PSMQ questionnaire, health index with WHO 5 elements and activity with WPAI-GH. The next time frame was a 6 months period of fix dose to observe a possible relapse or mood switch. There was none relapse for both patients.

Results: 1) Both combinations were effective in treating the depression symptoms. 2) Adding quetiapine to escitalopram had the advantage to use less medication for insomnia or as mood stabilizer. 3) The patient A.R.D. satisfaction was greater and the functionality was better, due to a good compliance and fewer side-effects.

Keywords: bipolar depression, quetiapine, switch, bipolar II

P54

Bipolar disorder in Women: a comparative study of homeopathic treatment with aurum metallicum, natrum muriaticum and ammonium carbonicum versus Tegretol®

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Introduction: Eolas – Homeopathic Research Centre comparative study is a randomized controlled single blinded study involving female subjects with diagnosed bipolar disorders of age 16–42, conducted between September 2009 and January 2011. The purpose of the study is to investigate efficacy of Homeopathic Medicine in the treatment of Bipolar Disorders.

Methods: A controlled single-blinded methodology was used. 122 patients were considered. 61 subjects were treated homeopathically (Homeopathic Group) with Aurrum metallicum, Natrum muriaticum and Ammonium carbonicum in LM potencies between LM1 and LM6 and prescribed accordingly to symptoms. 61 remaining subjects were treated allopathically with Tegretol® 200 mg 2 times daily on first 3 months and then Tegretol® 400 mg 3 times daily for further 3 months, Tegretol® 200 mg 4 times daily for subsequent 3 months. All subjects completed the protocol.

Symptoms of the elevated mood stage of bipolar disorder such as exaggerated sense of confidence and well-being, racing thoughts, excessive talking, distractibility, increased desire for pleasurable activity, decreased need for sleep, impulsivity, irritability, and impairment in judgment as well as the depressed phase symptoms

of sadness, fatigue, pessimism, feelings of helplessness, low self-esteem, and loss of interest in life, possibly with thoughts of suicide were considered as inclusion criteria. Use of contraceptive pill, diagnosed hormonal imbalances and thyroid disorder were considered as exclusion criteria. Therapeutic success within 30 days, 2 months, 4 months and 6 months, 9 months, 12 months, 15 months of treatment was considered as evaluation criteria

Results: After 6 months of treatment (phase IV) 45% of the Homeopathic Group showed favourable response against 25% of the Allopathic Group. After 15 months of treatment (phase VII) 75% of the Homeopathic Group was diagnosed as cured against 55% of the Allopathic Group. Furthermore, after treatment only 2% of the Homeopathic group relapsed against 35% of the Allopathic Group.

Discussion: The homeopathic medicine was not therapeutically inferior to the allopathic reference drug. Furthermore, the homeopathic treatment has proved superior in terms or relapses and side effects.

Keywords: bipolar, alternative medicine, psychotherapy, pharmacology

P55
Associations of selective attention with trait features in remitted bipolar patients

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Background: Meta-analytic studies emphasize selective attention deficit as a possible intermediate cognitive phenotype of bipolar disorder (BD). Clinical variables have been well documented as significant predictors of cognitive and functional outcome in BD, whereas the relationships of cognitive deficits with trait characteristics are unclear. We aimed to assess selective attention and trait characteristics and their relationship in a sample of remitted bipolar outpatients.

Methods: 63 medicated patients with remitted BD (as indicated by HAMD score < 12, and YMRS score < 10) and 60 sociodemographically matched healthy controls were administered a computerised Colour-Word Stroop test, The BIS/BAS (Behavioural Inhibition and Behavioural Activation) Scales, TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire) and The Barratt Impulsiveness scale, BIS-11.

Results: Remitted bipolar patients showed slower and less accurate Stroop performance with a pronounced interference effect, scored higher on all impulsiveness dimensions and on BAS-fun dimension relative to controls. Additionally, traits of depressive, cyclothymic, irritable and anxious temperament were found to be more pronounced in bipolar patients than in controls. Of note, a subgroup of patients with BD type II showed diminished performance on a Stroop task, less favourable profile of affective temperaments and higher impulsiveness scores relative to patients with BD type I and healthy controls. Older age, elevated BAS-fun seeking and anxious temperament were significantly associated with a greater Stroop interference effect, on a linear regression model, which accounted for 37% of the variance ($F = 10.25$, d.f. = 56, p < 0.001).

Discussion: Our findings on deficient performance on selective attention task, evidence of trait-related impulsivity, higher BAS sensitivity and higher scores on cyclothymic temperament in remitted bipolar patients are largely consistent with those of previous studies. However, we failed to confirm the role of clinical variables in cognitive performance in our sample.

Conclusion: In the light of our findings, the evaluation of the role of BAS sensitivity and affective temperament in the maintenance of cognitive deficits may hold therapeutic implications for functional outcome in BD.

Keywords: cognitive functioning, selective attention, BAS, affective temperament

P56
How to facilitate the diagnosis of bipolar disorder: The use of long and short version of the TEMPS-A scale (Temperament Evaluation of Memphis, Pisa, Paris and San Diego – Autoquestionnaire)

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Background: Temperamental dysregulation may constitute the link between predisposing familial-genetic factors and affective disorders. Temperament could therefore represent the earliest subclinical phenotype of mood disorders. With this perspective, TEMPS-A questionnaire (Temperament Evaluation of Memphis, Pisa, Paris and San Diego – Autoquestionnaire) was developed as a screening tool for early signs of bipolar disorder. The aim of our study was to assess the affective temperaments as measured by the long and short version of the TEMPS-A scale among remitted bipolar outpatients and healthy controls and to ascertain whether the Slovenian versions of the questionnaires could represent a valid screening instrument for early affective symptoms.

Methods: 82 euthymic bipolar outpatients and 82 healthy controls filled out the long version of the TEMPS-A scale, whereas 22 bipolar outpatients and healthy controls were self-assessed with the short version of the TEMPS-A questionnaire. The TEMPS-A Scale measures five affective temperaments, namely depressive, cyclothymic, hyperthymic, irritable and anxious. The long version consists of 110 items, while the short version comprises 45 items.

Results: Bipolar outpatients proved to have statistically more distinct depressive, cyclothymic, irritable and anxious temperament and less pronounced hyperthymic temperament when assessed with the long version of the questionnaire. Similar results were obtained when the short version of the scale was applied, except for the irritable temperament, where there was no difference between both groups.

Discussion: Our study demonstrated that affective temperaments could indicate a vulnerability to pathological mood regulation. However, the results on hyperthymic temperament are conflicting, as many previous studies suggest that this temperament could be a premorbid personality trait of manic patients, which is not in agreement with our results. Nevertheless, both questionnaires proved to be valid instruments and could therefore represent a useful screening tool in the early diagnostic picture of bipolar disorder. With the use of TEMPS-A the correct diagnosis could be set up more quickly and easily.

Keywords: bipolar disorder, diagnosis, affective temperaments, TEMPS-A scale

P57

Association of homocysteine and methionine levels with cognition and functioning in bipolar disorder

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Backgrounds/Aims: Recently, researchers have investigated the relationship between homocysteine (HCY) levels and cognitive impairments, particularly executive functions in bipolar disorder. However, conflicting results have been reported. The aim of the present study was to investigate whether HCY, methionine, vitamine B12 and levels in BD patients are different from controls and the relationships between the levels of HCY, methionine, vitamine B12 and folate and clinical features, cognitive functions and psychosocial functioning in euthymic bipolar patients and controls.
Method: Sixty Bipolar Disorder type I euthymic patients and twenty controls were assessed using a battery of neuropsychological tests, the Global Assessment of Functioning and the Bipolar Disorder Functioning Scale. Analysis of plasma HCY levels was conducted using the nephelometric method, and plasma methionine levels were analyzed using a mass spectrophotometric method. Serum vitamin B12 and folate levels were assessed using an electrochemiluminescence immune method.
Results: Methionine was found to be a predictor of BD (p = 0.049, 95% CI = 0.790–1000, **OR** = 0.889). HCY levels showed a positive correlation with illness duration (r = 0.271, p = 0.036), the number of episodes (r = 0.265, p = 0.041) and the number of manic episodes (r = 0.380, p = 0.003).
Discussion: Low serum methionine levels were a predictor of BD. HCY may be related to the long duration of illness and the number of episodes.
Conclusions: Additional studies are needed to clarify the impact of single carbon metabolism in this disorder.
Keywords: Bipolar disorder, homocysteine, methionine, cognitive impairment

P58

Levels of TNF-α, soluble TNF receptors (sTNFR1, sTNFR2) and cognitive impairment in bipolar disorder

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Backgrounds/Aims: The pathophysiology of bipolar disorder (BD) is poorly understood. Current evidence suggest that inflammatory cytokines, particularly TNF-α may play a critical role in this process. Recently, researchers have succested the relationship between TNF-α level and cognitive impairments in bipolar disorder, until now, there are no studies evaluating this relationship. The aim of the present study was to investigate whether TNF-α and its soluble receptors (sTNFR1, sTNFR2) levels in euthymic BD patients are different from controls and the relationships between the levels of TNF-α and its soluble receptors and cognitive functions in euthymic BP patients and controls.
Method: Fifty four BD type I euthymic patients and eighteen controls were assessed using SCID, Hamilton Depression Rating Scale, Young Mania Rating Scale and a battery of neuropsychological tests. Analysis of plasma TNF-α sTNFR1, sTNFR2 levels were measured by ELISA.

Results: Levels of sTNFR1, sTNFR2 were found to be a higher in BD patient form controls. sTNFR2 levels showed a positive correlation with illness duration, sTNFR1 levels showed a positive correlation with the number of episodes. TNF-α level showed a negative correlation with total recall score in Rey's Auditory Verbal Learning Test. sTNFR1 levels showed a positive correlation with the total wrong cancelled target number. sTNFR2 levels showed a positive correlation with total cancelled target number, sTNFR2 levels showed a negative correlation with total missed out target number and total error in Cancelation test .
Discussion: Our results showed that sTNFR1 and sTNFR2 production in euthymic BD patients different from healthy controls. Inflammatory states could continue in euthymic period. Verbal memory and vigilance could be related soluble TNF receptors.
Conclusions: Additional studies are needed to clarify the impact of cytokine on cognitive function in BD.
Keywords: bipolar disorder, TNF-α, soluble TNF receptors cognitive impairment

P59

The effects of psychodrama on depression among women with chronic mental disorder

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Introduction: At resent management of chronic mental disorders at psychiatric health association tobe high attention
Purpose of study: determining effect of psychodrama on depression among women with chronic mental disorder.
Methods: This study was a quasi-experimental study that was done in RAZI comprehensive psychiatric center. Community of this research consists of chronic mental patients bedridden at RAZI comprehensive psychiatric center that among them 30 women with chronic mental disease possess entrains criterions selected and with randomized permuted blokes' allocation to two control and intervention groups. Then them depression examined with beck depression inventory (BDI). Then 12 sessions hours long of psychodrama, twice per week, 6 weeks for intervention group enactment but control group received routine treatments. When the program ended depression of ills reexamined whit study instrument and analyzed with independent T test, paired T test kolmogroph smernophand Leven and covariance analyzes tests.
Results: Main of depression before and after intervention at control group was not significant but at Intervention group was significant (P = 0.000). At two groups after Intervention depression differences revolve significant (P = 0.000). Comparison between main of depression after psychodrama even after modification of age and before intervention depression effect by covariance analyzes at two groups showed significant deferens.
Conclusion: Psychodrama leads to decrease of depression at intervention group.
Keywords: psychodrama, depression, chronic mental patient

P60

Evaluation of weight and metabolic parameters after switching from olanzapine to aripiprazole: a clinical case series of bipolar patients

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Objective: We aimed to evaluate the changes in metabolic parameters and weight in bipolar patients who had been taking olanzapine and switched to aripiprazole because of increased appetite and weight gain.

Case Summaries: Here we present three cases all of which have been with the diagnosis of bipolar disorder in a euthymic state for at least 6 months: a 46-year old man, a 29-year old woman and a 28-year old man with 19, 15 and 7 years histories of bipolar disorder respectively. All subjects were treated with lithium and olanzapine for over one year. Their olanzapine dosages were titrated 15 mg, 7.5 mg and 7.5 mg/day respectively. Since they had increase in appetite, weight gain, waist circumference and elevated serum metabolic parameters, their olanzapine treatment switched to aripiprazole 10 mg/day. Their appetite evaluated with UKU returned to normal after first two weeks of aripiprazole. 1 kg, 2 kg and 3 kg of weight losses were observed and serum metabolic parameters had decreased values after 18 weeks of treatment switch. All subjects had no change in their mood states throughout the follow-up.

Discussion: Aripiprazole is classified as having a lower risk of causing metabolic abnormalities among the atypical antipsychotics, whereas olanzapine is described as having the highest risk with clozapine. Switching to aripiprazole induced loss of appetite and weight gain. Decrease in weight and elevated serum metabolic parameters were observed during the follow-up. Diet and exercise status also could have an effect on patients' parameters.

Conclusions: Aripiprazole switch tended to decrease appetite. Therefore patients did not have weight gaining symptoms anymore and could loose a mean weight of 2 kg in 18 weeks. Their metabolic parameters started to return normal but new case series with longer follow-up times will be helpful to determine long-term changes.

Keywords: aripiprazole, olanzapine, appetite, weight, metabolic parameters

P61

A case report on treatment of bipolar disorder of 10 years via faradarmani

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Objective: This patient is a 47 year old female who has been suffering from depression anxiety and fear attacks for ten years.After the suicide of her child 3 years ago, she was diagnosed with a bipolar disorder and severe depression and attempted to commit suicide.She decided to discontinue medication after one week due to the side effects and became familiar with Faradarmani and Psymentology. Given the recrudescence of symptoms with short intervals of conventional medicine,Pysmentology and Faradarmani could be regarded as optimum complementary and alternative treatments.Being categorized amidst other fields in Complementary and Alternative Medicine of Iran,Psymentology has an Interuniversalist perspective on the human being with an all inclusive approach.This subject tries to alleviate mental and psychic disorders.Faradarmani as an alternative complementary medicine is based on the theory of ''the consciousness bond of the parts''or''parts having consciousness in common''.

Methods: In this treatment the patient is asked to close her eyes(optional)and examine the sensations.The patient becomes connected to the Interuniversal Consciousness(network of awareness and consciousness governing the universe)via Fara-therapist and undergoes the Scanning process of the universal intelligence.Due to the nature of this connection,some information is conveyed and the defective parts are treated.

Results: Symptoms were relieved after the repeated connections (Etesal) of Faradarmani and Psymentology.Until now, symptoms only intensified on the anniversary of her son's death and each time was also controlled by Faradarmani and Psymentology.

Conclusions: This report confirms the effectiveness of Faradarmani and Psymentology for treatment of bipolar disorder.This patient has had bipolar affective disorders since 10 years ago and shows a strong hereditary tendency.Conventional therapy experiences recrudescence of symptoms with short intervals.After acquaintance with Faradarmani and Psymentology,the symptoms were under relative control for the past 2 years and the repeated attacks which were alleviated.It seems that she is moving towards complete remission and this case will be clarified in the following follow ups.

Keywords: faradarmani, psymentology, complementary and alternative medicine, bipolar, Intelligent Bond

P62

Abstract Withdrawn

P63

Factors related to misdiagnosis in bipolar disorder with psychotic symptoms

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Introduction: Early onset forms of bipolar disorder may be difficult to distinguish from schizophrenia. Although operational criteria have become more precise, and there are more diagnostic systems to catalogue a psychotic adolescent, the clinicians continue having difficulties.

Objective: To know the stability of the diagnosis of definitively bipolar patients with psychotic symptoms during the episodes, and factors that can influence other psychotic diagnoses in the first episode of the illness.

Method: 140 bipolar patients of Araba, (Basque country) were included during 2 years. Patients were divided into two groups: unstable diagnoses (UD)bipolar patients with an initial diagnosis of other psychosis and stable diagnoses (**SD**) of bipolar disorder. Clinical and Sociodemographic data were obtained.

Results: The mean age at onset was significantly lower in the UD group (p = 0.004). It was rare to have an unstable diagnosis when the first psychotic episode occurred after age 38 (p = 0.008). There were more singles in the UD group (p = 0.010). The presence of mood incongruent psychotic symptoms was more frequent in the unstable diagnosis group (p < 0.001). Mood incongruent psychotic symptoms variable was the only independent factor significantly associated with an unstable diagnosis in the multivariate analysis (p = 0.036).

Discussion: Almost one third of the patients have been previously diagnosed with other psychotic illness. This study suggests that the most important factor was the clinical picture, especially the presence of mood-incongruent psychotic symptoms. A correct diagnosis is important because patients who are prescribed mood stabilizers have lower rates of rehospitalisation than those who are not treated with mood stabilizers.

Keywords: misdiagnosis, bipolar disorder, psychotic symptoms

P64

Affective temperament characteristics and bipolar disorder comorbidity in obsessive compulsive disorder

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Background: The researches on obsessive compulsive disorder (OCD) have reported high prevalence rates of mood disorders. İt is an issue of argument that if there is relationship of temperamental variables in the patients of OCD with comorbid bipolar disorder (BD).

Method: The aim of the study is to investigate the clinical and sociodemographic features of the patients with OCD in terms of the comorbidity of BD including affective temperamental variables. In this cross-sectional study, forty-four randomly selected patients with the diagnosis of OCD were included. Patients were assessed by interview with patients (SCID I), applying sociodemographic form, Hamilton depression scale, Yale Brown OCD scale(Y-BOCS), and TEMPS-A affective temperament questionnaire.

Results: The results showed significantly higher rates of BD comorbidity (especially bipolar II) in patients with OCD. Hypomania due to antidepressant treatment was also high in OCD patients. Patients with comorbid BD were predominantly male. Seasonal course was prominent in patients with bipolar comorbidity and their family history showed higher prevalence of bipolar disorder and depression than non-bipolar patients. The mean number of lifetime depressive episodes was also higher in BD comorbid patients. Depressive temperament was not detected among bipolar comorbid patients. Cyclothymic temperament was more predominant among bipolar OCD patients.

Conclusion: We conclude that there is significant rate of bipolar comorbidity in patients with OCD. Knowing their clinical and sociodemographic features might help to diagnose this comorbidity which could be overlooked in clinical practice. This may be important for the treatment of these patients and to improve their clinical course.

Keywords: obsessive compulsive disorder, bipolar disorder, affective temperament

P65

Cognitive style in bipolar II disorder

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Introduction: Exploration of cognitive style in bipolar disorders informs psychological models and treatment. Research on cognitive style in bipolar II disorder is lacking, with studies focusing on bipolar I or combining bipolar-sub-types. To our knowledge, this is the first study examining cognitive style in bipolar II disorder, contrasting this sub-type with other affective disorders.

Methods: Affective groups were derived on the basis of agreement between clinician and MINI diagnosis. Participants (94 bipolar I, 114 bipolar II, 109 unipolar recurrent depression, 100 healthy controls) completed cognitive style measures including the Rosenberg Self-Esteem Scale (RSE), Dysfunctional Attitudes Scale (DAS-24), Inferential Styles Questionnaire (ISQ), Stress Appraisal Measure (SAM-19) and the Behavioural Inhibition System/Behavioural Activation System Scale (BIS/BAS).

Results: After controlling for age, gender, current mood symptoms and state anxiety, affective groups differed from controls on a number of cognitive style measures. Unlike those with bipolar II disorder, bipolar I participants quantified significantly higher DAS-Self-Control and BAS-Reward Responsiveness scores than controls; and significantly higher BAS-Drive and BAS-reward responsiveness scores than unipolar participants. Bipolar (I and II) participants scored significantly higher on BAS-Fun Seeking than unipolar participants. Bipolar I and II participants did not differ on any cognitive styles measures. Removal of state anxiety as a covariate revealed similar results, with two exceptions: i) only bipolar (I and II) participants differed significantly from controls on negative inferential style, ii) bipolar II participants no longer differed significantly from controls on the primary appraisal dimensions of Challenge and Centrality.

Discussion: Cognitive styles were similar in unipolar and bipolar participants, but with BAS-relevant styles characterizing bipolar I disorder in particular. Bipolar I and II participants had comparable cognitive style profiles, suggesting that cognitive therapy is likely to be effective for both sub-types. State anxiety specifically influences negative inferential style in unipolar disorders and appraisal of stress in bipolar II disorder, highlighting the importance of controlling for anxiety when assessing cognitive style. Further exploration of cognitive style in bipolar II disorder may reveal over-represented features that contribute to the more chronic depressive course characterizing this sub-type.

Keywords: bipolar, unipolar, cognitive style, anxiety

P66

Is cognitive impairment a core element in the affective psychosis?

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Kraepelin, in 1896 made the difference of two psychopathological disorders, dementia praecox and manic depressive psychosis. Bipolar disorder is characterized by progressing to chronicity, relapse, and decreased length of time between each episode. The severity of impairment in executive functions, attention and working memory are similar to those observed in schizophrenia, however, there is evidence that cognitive impairment in patients with schizophrenia is often present before the onset of the disease.

Keywords: affective psychosis, cognitive symptoms, psychosis

P67

Mixed episodes of bipolar disorder vs personality disorder

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The average time between initial symptoms the onset of and the diagnosis of bipolar disorder is 10 years. The combination of depressive symptoms, irritability and impulsivity is a confounding factor in the initial presentation of patients with Mixed Episodes of Bipolar Disorder.

Patients with Mixed Episodes of Bipolar Disorder have an increased risk of impulsive behaviors including suicide attempts and self harm, this appears to be related to a pattern of brain activation and neurophysiological failure of inhibition in the amygdala.

Keywords: affective psychosis, mania, borderline personality

P68

Pathophysiology of bipolar disorder and inflammatory mediators

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There is evidence that in bipolar disorder are changes in second messenger systems, monoamines, inflammatory cytokines, coticoesteroides, and oxidative stress, these alterations may be involved in shortening the time between episodes and decreased response to drug treatment. These changes have been challenging characteristic of bipolar disorder treatment.

Keywords: affective psychosis, cellular neurobiology

P69

Drugs not included in the bipolar disorder treatment guidelines

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The difficulties in the proper long-term management of clinical manifestations and progression to chronicity of bipolar disorder, have set up numerous research lines to try to find an effective treatment. Advances in neuroscience and early intervention have provided evidence for initial neurobiological alterations of bipolar disorder. Using this knowledge in conjunction with the mechanisms of action of numerous drugs have been proposed potentially effective pharmacological treatment in some of the processes involved in the pathophysiology of bipolar disorder.

Keywords: affective psychosis, treatment, pathophysiology

P70

Assessment of mood disorders prevalence in Brazilian military population

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Introduction: The police work, even in peaceful and developed countries, is a hard and stressful job, with high levels of risk exposures, violence and exhausting work schedules. Not surprisingly such workers have a higher risk for mental disorders, such as depression, anxiety, PTSD, and suicide, with higher prevalence than general population. The main purpose of this study was to evaluate the prevalence of mood disorders in a military population, using two screening instruments, the PHQ-9 (Patient Health Questionnaire, Version Portuguese/Brazilian) and the MDQ (Mood Disorder Questionnaire).

Methods: This is a cross-sectional study, in a population of 1004 police officers of the State of Sao Paulo. Demographic measures included age, sex, ethnic group, education level, years of police work, and marital status. Depression was measured with the 9-item Patient Health Questionnaire (PHQ-9), a well-validated clinical scale for depression based on the DSM-IV criteria that is widely used in primary care and specialty mental health settings. The Mood Disorder Questionnaire (MDQ) was designed as a screening questionnaire for bipolar disorder, type I and II. The obtained data was analyzed using SPSS v17, for determine statistically significant correlations between variables.

Results: From the 1004 police officers that entered the study 735 answered the required information, with a mean age of 35.2 years, being 90.2% from male gender. The prevalence rate of depression using PHQ-9 was 18.2%. There was a statistically significant difference (p > 0.0001) on the PHQ-9 scores between genders; women had higher scores of depressive symptoms (mean 7.34) then men (mean 4.02). When MDQ required the presence of at least 8 symptoms, approximately 13.1% (n = 97) of the 735 patients screened positive and this group had higher scores of depressive symptoms than the unipolar group (mean 10.1), characterizing a more severe group.

Discussion: Bipolar disorder is often misdiagnosed as unipolar depression, which can result in a greater burden of illness, risk of suicide and inappropriate treatment. The high rates of mood disorders found in this study show the importance of screening military population and this will facilitate more targeted prevention and treatment services for this population.

Keywords: depression, bipolar, screening, bipolar depression, military, police, shift work

P71

Delay in bipolar disorder treatment is correlated to an adverse course of illness

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Introduction: Onset of bipolar disorder (BD) in childhood is common and often associated with extraordinarily long delays to specific treatment. Treatment delay is associated with a persistent adverse course of illness rated prospectively in adults (Post, 2010). The aim of this study is to examine the influence of the delay in time to first treatment on course and morbidity in adulthood among patients with BD.

Methods: One hundred thirty-six euthymic adult outpatients diagnosed with BD according to DSM-IV criteria were included and evaluated in a transversal observational design. Euthymia was defined as scores on Young Mania Rating Scale and Hamilton Depression Rating Scale under 8. Sociodemographic and clinic variables were evaluated by the research protocol.

Results: The mean age of illness onset was 28 years. Thirty-two percent of patients had illness onset in childhood or adolescence (< 18 years of age). A greater delay in treatment was correlated to an earlier onset of the illness (p < 0.001, r = 0.361). Independently, delay to first treatment was associated with greater number of episodes (p = 0.001, r = 0.297).

Discussion: These results converge with previous evidence that treatment delay in BD is associated with a more adverse course of illness, what reinforces the idea that earlier detection and more effective early intervention is still needed to prevent the social and cognitive impairments associated to BD.

Keywords: bipolar disorder, treatment, illness onset, course of illness

P72

The staging model of bipolar disorder and cognitive functioning: a comparison with patients with schizophrenia

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Introduction: Evidences indicate that bipolar disorder (BD) has much less favorable long-term outcomes than previously thought. Some patients with BD present cognitive deficits that can be as severe as those seen in schizophrenia (SZ). A staging model (SM) in BD has been proposed and should help clinicians to predict treatment response. SM divides BD in four stages. Recent data has been shown that serum biomarkers differ in along the stages in BD. Regarding cognitive functioning, stages I and II present no or transient impairment, while stages III and IV present permanent impairment. This study aims to assess performance in the Hopkins Verbal Learning Tests (HVLT), in patients with BD and SZ compared to healthy controls (HC). HVLT provides assessment of verbal learning and memory and worse response is related with prefrontal-striatal pathway.

Methods: Thirty DSM-IV euthymic outpatients with BD, thirty-one with SZ and 40 HC were included. Among patients with BD, 15 were in stage I and II (BDE) and 15 were in stage III and IV (BDL). In patients with SZ, 17 had less than 10 years of illness (SZE) and 14 more than 20 years of illness (SZL). A trained psychologist applied the HVLT in all subjects.

Results: There were no differences in level of education between patients and controls (p = 0.274). BDE performances in HVLT were similar to HC (p = 0.125). However, BDL, SZE and SZL had a worse performance than HC (p < 0.001). Between them, BDL and SZE had a similar performance (p = 0.853), better than SZL (p = 0.004).

Discussion: Cognitive impairment is the target of early intervention. Our findings show a progressive decline in cognitive functioning in patients with BD in stages III and IV, what is in-line with previous reports. The worse neuropsychological dysfunction in BD has been associated with a worse prior course of illness, particularly the number of manic episodes, hospitalizations and lenght of illness. This finding reinforces the importance of the staging model as the way to identify and personalize the threatment in BD.

Keywords: bipolar disorder, impairment, schizophrenia

P73

Misdiagnosis of bipolar disorder

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40%–70% of patients with Bipolar disorder are initially misdiagnosed and the mean time to diagnosis is too long. Misdiagnosis is a major factor leading to a poor outcome for patients, including high mortality rate. There are several factors contributing to the under-recognition: most patients often deny or mis-attribute symptoms of mania or hipomania because of the lack of subjective suffering, enhanced productivity and ego-syntonicity, mixed stated may be confused with agitated depression and disruptive symptoms with abnormal personality, frecuently misdiagnosed as attention-deficit disorder in children, psychosis symptoms may be confused with schizophrenia, comorbid conditions: anxiety, substance use, OCD, personality disorders, mania secondary to prescription drugs or physical illness... Awareness of these distinctions can greatly improve diagnosis and provide an opportunity for effective therapeutic intervention.

Keywords: bipolar, diagnosis, misdiagnosis

P74

Bipolar disorder in youth

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Up to 20% of adult cases of bipolar disorder have suffered the initial symptoms during childhood and early adolescence. Differential diagnosis is difficult because of the controversies about its real existence, the special clinical presentation and the comorbid disorders likely associated. Appropriate detection and treatment are crucial in these life stages.

Keywords: bipolar, childhood, adolescence, diagnosis, treatment

P75

Electroconvulsive therapy in bipolar disorder

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Electroconvulsive therapy may be a safe and effective treatment for refractory patients with bipolar disorder, both in manic and depressive episodes and as maintenance therapy for mood disorders. Several studies have confirmed the significant superiority of ECT in the treatment of severe and refractory psychiatric conditions. Electroconvulsive therapy may also be the best treatment in pregnant patients, in depression with psychotic features, suicidality and in catatonia.

Keywords: bipolar, electroconvulsive therapy, treatment

P76

Smoking and bipolar disorder

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The rate of smoking in people with bipolar disorder is much greater than in the general population. Smoking Bipolar patients are more likely to have earlier age at onset, greater severity of symptoms, poorer functioning, history of a suicide attempt, history of

comorbid anxiety and substance use disorders, worse treatment outcomes. The most effective treatment is pharmacological with psychological interventions.

Keywords: bipolar, smoking

P77

Recognizing bipolar disorder in patients with PTSD a case report

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Background: Childhood trauma may be one of the risk factors for those who have a predisposition to develop bipolar disorder. The course of the bipolar symptoms in these patients is more severe, higher suicide risk, more frequent and more severe manic episodes and with an earlier age of onset.

If there is a history of childhood trauma, the predominating symptoms patients may show, can easily be attributed to PTSD, possibly neglecting the mood instability.

Aims: To illustrate the possible relationship between traumatising and unrecognized symptoms of bipolar disorder.

Case: A woman at the age of 42 years, who suffered for many years, from among other symptoms, severe mood instability. She underwent severe early childhood abuse. The mood instability has been attributed to a posttraumatic stress disorder for which she received treatment. This treatment reduced the symptoms, but total remission has never been achieved.

She participated in a Mood Disorder Questionnaire (MDQ) study at a unipolar outpatient clinic. The MDQ turned out to be positive and after referral to a bipolar outpatient clinic, bipolar disorder was diagnosed and treated. Within weeks, the mood instability was nearly gone as well as the other symptoms.

Conclusions In this case study bipolar disorder was overlooked in a patient with PTSD. In the DSM IV criteria there seems to be overlay between some of the symptoms of both illnesses. For example: markedly diminished interest, persistent symptoms of increased arousal, as difficulty falling or staying asleep; irritability; difficulty concentrating. These symptoms (attributed to the PTSD in the case) could also partly fit to a depressive or a mixed episode. It could be possible that in this case, patients history was salient and therefore the symptoms of a bipolar disorder where overlooked. When generalised it would mean that in patients with a clear history of child abuse and symptoms of PTSD (especially when depressive symptoms are dominant) there should be awareness for the possibility of the existence of bipolar disorder.

Keywords: bipolar disorder, PTSD, trauma, under diagnosing

P78

^{1}H MRS of hippocampus in bipolar disorder after recovery from the first episode of mania

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Background: Although it has been extensively investigated, the pathophysiology of bipolar disorder remains unclear. The investigation of stable patients at disease onset is a strategy to avoid the confounding effect of progression of disease, mood state or duration of treatment. Our purpose is to investigate *in vivo* neuronal metabolites in the hippocampus using Proton Magnetic Resonance Spectroscopy (^{1}H-MRS) after patients have recovered from their first manic episode.

Methods: Fifty-eight BD I patients meeting DSM-IV criteria recently recovered from their first episode of mania and 27 healthy subjects were studied using ^{1}H-MRS with a 3.0 T Philips Achieva unit. Voxels with 30×15×15 mm were placed in the hippocampus on both sides of the brain and the signal was collected using a PRESS sequence with TE = 35ms and TR = 2000ms. Data analysis was performed using the LC Model software.

Results: N- Acetyl-Aspartate, Choline, Myo-Inositol, Creatine and Glx levels were compared between the groups and no statistically significant difference was found between them. The investigation of psychosis, years of disease, presence of previous depression before mania, duration of manic phase, presence of symptoms and use of medication did not show any difference between the groups. There were no significant associations between all the metabolites, demographic and clinical variables.

Conclusion: Our results suggest that at the onset of BD there are no alterations in cell vulnerability or metabolism in the hippocampus after patients have recovered from their first manic episode.

Keywords: Proton Magnetic Resonance Spectroscopy, bipolar disorder, disease onset

P79

Brain glutamate levels measured by MRS in patients with bipolar disorder: a meta-analysis

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Objectives: Bipolar disorder (BD) is a relatively common highly disabling disease characterized by substantial cognitive and functional impairment. The investigation of its causes has identified abnormalities in neurotransmission and neuroplasticity. In this context, there is growing evidence that glutamate plays an important role in the neurobiology of the disease. Proton magnetic resonance spectroscopy (^{1}H-MRS) is a non-invasive method that produces *in vivo* assessments and has corroborated to this investigation, although contrasting results have been found. The objective of this study was to undertake a review and meta-analysis of the literature on measurement of glutamate by ^{1}H-MRS in BD.

Methods: A review of the literature was conducted to identify published studies that used ^{1}H-MRS to compare Glx (glutamate + glutamine), Glx/Creatine (Cr) ratio, glutamate (Glu), or Glu/Cr ratio in adult or child/adolescent patients with BD and healthy subjects in any brain region. A meta-analysis of pooled data was conducted.

Results: BD patients have increased Glx compared to healthy subjects with all brain areas combined, in medicated and non-medicated patients, and in the combined frontal areas in adults. A non-significant trend (p = 0.09) suggested an increase in both Glx/Cr and Glu in patients compared to healthy subjects. No significant difference was found in Glu/Cr.

Conclusion: Overall, these findings support the notion that elevated glutamate levels play an important role in the pathophysiology of BD.

Keywords: bipolar disorder, glutamate, Glx, proton magnetic resonance spectroscopy, meta-analysis

P80
Twenty-year multi-follow-up of hallucinations in psychotic and mood disorders

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Background: Hallucinations are a major aspect of psychosis and a diagnostic feature of psychotic and mood disorders. However, there is a lack of information regarding the diagnostic relationship and long-term course of hallucinations in psychotic and mood disorders, as well as the association between hallucinations and real-world functioning. The goal of this study was to evaluate the 20-year longitudinal trajectory of hallucinations in bipolar disorder with psychosis, schizophrenia, schizoaffective disorder, and unipolar depression.

Methods: The current investigation is based on data from the Chicago Follow-up Study, a longitudinal, multi–year-follow-up research program of psychiatric disorders. One hundred and fifty young patients were studied prospectively at an index phase of hospitalization for hallucinations and then reassessed at 6 subsequent follow-ups over a 20-year period.

Results: The longitudinal course of hallucinations clearly differentiated between schizophrenia and bipolar disorder with psychosis and suggested some diagnostic similarities between schizophrenia with schizoaffective disorder, and bipolar disorder with schizoaffective disorder and depression. Hallucinatory activity was associated with impaired real-world functioning, including impaired work functioning.

Discussion and Conclusion: The longitudinal trajectory of hallucinations can differentiate between different psychotic and mood disorders. Information clarifying the clinical course of similar psychiatric disorders can inform accurate classification and diagnosis.

Keywords: bipolar disorder, schizophrenia, schizoaffective disorder, depression, hallucinations

P81
A Magnetic Resonance Spectroscopy study of the Anterior Cingulate Cortex in youth with emotional dysregulation

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Introduction: Despite ongoing controversy on how to best categorize emotional volatility in the young, there is no debate that a sizeable minority of youth is affected with various forms of emotional regulation deficits associated with high levels of morbidity and disability. Recent efforts have shown that Child Behavior Checklist (CBCL), an empirically derived scale with excellent psychometric properties, discriminates youth with deficits in emotional regulation, however, whether these deficits are associated with unique biomarkers remains unknown. The main aim of this study was to use proton Magnetic Resonance Spectroscopy (^{1}H-MRS) to identify brain biomarkers for emotional dysregulation in youth as measured by subscales of CBCL.

Methods: We conducted a 4 Tesla ^{1}H-MRS study in the anterior cingulate cortex (ACC) on 37 pediatric subjects aged 6–17 years. Subjects were grouped based on combined T scores on 3 subscales of the CBCL (Anxiety/Depression, Aggression and Attention) previously associated with deficits in the regulation of emotion. Based on their scores, subjects were stratified into those with high (> 180) (N = 10) and low (< 180) (N = 27) scores. The metabolite of interest was glutamate (Glu) since prior studies have linked glutamatergic abnormalities to mood disorders.

Results: We found a statistically significant correlation between Glu levels in the ACC and CBCL dysregulation profile scores among subjects with high dysregulation profile scores ($r = 0.659$, p = 0.019).

Discussion: Our finding of higher Glu levels in mood disordered youth with high CBCL dysregulation profile score is consistent with previously reported glutamatergic abnormalities in bipolar disorder and with a literature that suggests that glutamatergic abnormalities are a prominent feature of mood disorders. Although additional work is needed to replicate these findings and further examine the implications of glutaminergic dysregulation in the ACC on the development of emotional dysregulation, our findings may have important scientific and clinical implications. Biomarkers of risk for emotional dysregulation may allow the identification of subjects at risk for this serious clinical problem as well as increase our understanding of the neural and biochemical bases of emotional dysregulation in youth.

Keywords: bipolar, magnetic resonance spectroscopy, glutamate, emotional dysregulation

P82
The effects of manic and depressive symptoms on the circadian rhythmicity of activity levels in bipolar disorder

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Introduction: Rhythm disruption is a hallmark of bipolar disorder. Actigraphy has been used previously to assess sleep, activity, and circadian variables in bipolar disorder. The aim of this study was to formally test the relationships between mood state, symptom severity, and rhythm disturbances as measured via actigraphy in bipolar subjects.

Methods: 42 BD I patients were included in the study. YMRS and the IDS-30-C were used to determine the degree of manic and depressive symptoms, respectively. Subjects wore the actigraph continuously on the non-dominant wrist for seven days. The 24-hour *autocorrelation coefficient*, which is the correlation of a time series with its own past and future values, was used as an indicator of overall rhythmicity. The *circadian quotient*, or amplitude to mesor ratio as determined by cosinor analysis, was used to characterize the strength of a circadian rhythm.

Results: A greater severity of manic symptoms correlated with a lower degree of rhythmicity and less robust rhythms of locomotor activity as indicated by lower 24-hour autocorrelation ($r = -0.3406$, p = 0.03) and circadian quotient ($r = -5485$, p = 0.0002) variables, respectively. Several relationships between rhythm disruptions and clinical characteristics of mania were noted. No relationship was noted between the degree of depression and the degree of rhythm disruption. In addition, significant correlation noted between the 24-hour autocorrelation and circadian quotient scores ($r = 0.6347$, p < 0.0001) suggest a relationship between the degree of circadian rhythmicity and the robustness of circadian rhythms.

Discussion: These results support the notion that circadian rhythm disturbances are associated with bipolar disorder and that these disturbances may be associated with clinical signatures of the disorder. Further assessment of circadian rhythms disturbances in bipolar disorder are warranted.

Keywords: bipolar, actigraphy, circadian rhythm

P83

Psychosocial functioning in first-versus multiple episode bipolar patients

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Background: Bipolar disorder has been associated with a marked impairment in psychosocial functioning that appear early in the course of the illness. Poor psychosocial functioning may be the result of multiple bipolar episodes. The aim of this prospective, 12-month follow-up study was to compare the clinical features and the functional outcome between first and multiple episode bipolar patients.

Methods: A total of 119 bipolar patients in acute episode (60 first episodes, 59 multiple episodes) were recruited from two hospitals in Spain. The Hamilton Depression Rating Scale (HDRS) and the Young Mania Rating Scale (YMRS) were used to assess mood symptoms. The Functioning Assessment Short Test (FAST) was used to assess functioning.

Results: First-episode patients showed better overall functioning than patients with multiple episodes. Specifically, they presented higher levels of autonomy, greater work and cognitive performance as well as greater capacity to enjoy their relationships and leisure time. However, after adjusted analysis to control for potential confounders, group and depressive symptoms were significantly associated with poor occupational functioning ($F = 9.736$, d.f. $= 4$, 102; $p < 0.001$), interpersonal relationships ($F = 6.041$, d.f. $= 4$, 102; $p < 0.001$), leisure time ($F = 8.399$, d.f. $= 4$, 102; $p < 0.001$) as well as overall functioning ($F = 9.553$, d.f. $= 4$, 102; $p < 0.001$) at 6-month follow-up. Finally, at 12 month follow-up differences between groups on cognitive functioning, ($F = 8.406$, d.f. $= 4$, 103; $p < 0.001$), interpersonal relationships ($F = 7.711$, d.f. $= 4$, 103; $p < 0.001$), leisure time ($F = 12.012$, d.f. $= 4$, 103; $p < 0.001$) and overall functioning ($F = 14.145$, d.f. $= 4$, 103; $p < 0.001$) were also associated with age.

Discussion: The findings suggest that patients with first episode are more likely to achieve functional recovery that those with multiple episodes in specific areas of functioning. First episode patients showed a higher level of autonomy, better work and cognitive performance, greater capacity to enjoy their relationships and leisure time related to those with multiple episodes. However, clinical (depressive symptoms) and demographic (age) factors appear to have an important role on the functional recovery at 6-month and 12-month assessments, respectively.

Keywords: psychosocial functioning; functional impairment; functional recovery; first episode; multiple episodes; bipolar disorder

P84

Do contemporary maintenance treatment study designs in bipolar disorder demonstrate that atypical antipsychotics are mood stabilizers?

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This paper will argue that, by certifying some of the atypical antipsychotics as indicated for the 'maintenance' treatment of bipolar disorder, the US FDA has created confusion in the field. These maintenance indications are based on studies using a 'relapse prevention' design, a design that does not address whether the agents tested can prevent new episodes of illness.

Our review of these studies indicates that the relapse prevention design fails to prove that these agents are mood stabilizers because patients are pre-selected to respond to the study drug for an acute mood episode and when they relapse following withdrawal of the drug to which they had just recently responded, the relapse is into an episode of the same polarity. We believe that such clinical outcomes reflect a withdrawal related relapse back into the same episode that was initially being treated by the study drug, rather than truly preventing a recurrence into a new mood episode.

We will review recent as well as classical studies on the natural history of bipolar disorder which show that long-term recurrence into new episodes typically are of the opposite polarity. For instance our reanalysis of outcomes in the placebo groups from two 18 month maintenance RCTs of lamotrigine showed that relapses within six months of the index episode were *always* into an episode of the *same* polarity whereas recurrences that occur in the period between six and 18 months after the index episode were into the opposite pole 85% of the time.

If one defines a mood stabilizer, as we do, as a drug that prevents new episodes of mania and depression in monotherapy, then these studies do not show that atypical antipsychotics are mood stabilizers. This is an important clinical conclusion and, further, we provide reasons why future maintenance research studies in bipolar disorder should use the prophylaxis design (i.e. without pre-selection of drug responders and with adequate duration of the trial), rather than the relapse prevention design.

Keywords: bipolar, atypical antipsychotics, mood stabilizers, maintenance, prophylaxis design

P85

Recognizing prodromes of manic or depressive recurrence in outpatients with bipolar disorder: a cross-sectional study

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Background: There is some evidence that teaching patients to recognize prodromes of manic and depressive episodes improved time to recurrence and hospitalization, social function, and performance in employment. Little information is available about which prodromal symptom patients with bipolar disorder recognize as being the very first symptom of recurrence.

Objectives: The aims of this study were to describe the very first symptoms in manic or depressive recurrence reported by patients with bipolar disorder and to explore associations between the ability to recognize these prodromal symptoms and the clinical characteristics of these patients.

Design: A cross-sectional, descriptive design.

Settings: Five psychiatric outpatient clinics in the Netherlands.

Participants: 111 outpatients diagnosed with bipolar disorder, currently not in an episode.

Methods: Data were obtained through a face-to-face interview with open ended questions and a questionnaire for demographic and clinical characteristics. Reported prodromes were categorized in an instrument inductively constructed and based on literature review and expert opinion. Associations were calculated with chi squares.

Results: The first recognized symptom of recurrence in mania was change in energy level (21%), sleep (17%), and social functioning

(16%). In depression it was change in thought (15%), mood stability (12%), energy level (12%), social functioning (11%), and sleep (10%). Twenty-eight percent of the patients were not able to recognize prodromes of recurrence in mania. Also 28% was not able to recognize prodromes of depression, and 12% was not able to recognize either of them. A significant association (p = 0.033) was found between the ability to recognize prodromes of depression and the lifetime number of depressive episodes.

Conclusions: The majority of euthymic patients with bipolar disorder are able to recognize prodromes of recurrence. These warning signs often emerge early in the process of recurrence. Our results suggest that patients learn to recognize prodromes of recurrence rather by experience than from therapeutic interventions. Talking to patients and their relatives closely after recovered from an episode to construct the early phase of recurrence can be important to improve recognition and prevent future episodes of mania or depression.

Keywords: bipolar disorder, recurrence, prodromal symptoms, cross-sectional studies

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Role of biomarkers in the staging of bipolar disorder: inflammatory factors and oxidative stress

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Introduction: The staging model in bipolar disorder suggests a progression from prodromal to more severe and refractory presentations and seems consistent with neurocognitive as well as neuroimaging findings. The aim of our study was to detect biomarkers which may help to better define this model.

Methods: This case control study included 151 subjects. 126 were diagnosed with bipolar disorder and 25 were positive controls, defined as first-relatives of bipolar patients. Recruitment was carried out in the Bipolar Disorders Program of Hospital de Clínicas in Porto Alegre, Brazil. Patients required euthymia for at least one month and those with a history of neurologic disorders, current cancer, inflammatory diseases or infection were excluded. Clinical and functional assessments were performed by means of the Functioning Assessment Short Test. Patients were classified into four groups depending on functional results. Blood was withdrawn to determine levels of the inflammatory factors IL-2, IL-4, IL-6, IL-10, IL-17, TNF-alfa, INF-gamma; of lipid and protein oxidation; and of the neurotrophin Brain-Derived Neurotrophic Factor. Analyses of comparison were conducted using Mann-Whitney U Test and Kruskal-Wallis test and analysis of correlation with Spearman coefficient.

Results: Ninety-nine (71.2%) patients of the sample were female with a mean age of 43.5 (**SD** = 12.7) years old. With regard to age and gender, there were no differences between patients and control group (p = 0.667, p = 0.375). IL-6 levels showed a tendency to differentiate control positive subjects and patients (p = 0.053). Significant differences were detected in carbonyl and IL-6 levels between stage one compared to the other stages (p = 0.007 both of them). The correlations between IL-6 levels and length of the disorder (r_s = 0.298, p = 0.001) and number of episodes were significant (r_s = 0.253, p = 0.007).

Discussion: A progressive increase in the inflammatory and oxidative state of patients is observed along the evolution of the disorder suggesting that with multiple mood episodes and longer duration of illness, the neuroprotective mechanisms may become less effective.

Conclusion: Staging models may help to clarify the mechanisms underlying the progression of the disorder and assist in treatment planning and prognosis.

Keywords: bipolar disorder, staging, interleukin 6, protein oxidation

P87
Social cognition in young people at-risk for bipolar disorder: associations with neurocognition and emotion regulation

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Background: Evidence for aberrant social cognition is emerging in bipolar disorder, alongside established deficits executive function and use of maladaptive cognitive strategies for emotion regulation. We set out to investigate aberrations in social cognition that may be evident in participants at-risk for bipolar disorder, and to determine associations between neurocognition and social cognition, and between social cognitive and emotion regulation style, in healthy and at-risk individuals.

Methods: Participants were 61 young adults (< 30 years) at genetic high-risk for bipolar disorder, and 82 healthy controls. Participants completed the Ekman 60-faces emotion recognition test, The Awareness of Social Inference Test (TASIT) of higher order social cognitive abilities, and the Cognitive Emotion Regulation Questionnaire (CERQ). Executive function was measured with selected tests from the Cambridge Neuropsychological Test Automated Battery (CANTAB) and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) was used to index attention, immediate and delayed memory, language, and visuospatial/construction skills.

Results: The at-risk group demonstrated subtle, but significantly enhanced perception of complex social exchanges on the TASIT, compared to healthy controls. In control participants, higher order social cognitive skills were significantly predicted by cognitive capacities in mental flexibility, planning, language and immediate memory. However, there were no significant neurocognitive predictors of social cognition in the at-risk group. In healthy controls, better social cognitive skills were associated with more frequent use of 'positive reappraisal', and less 'catastrophising', when regulating one's own emotions, but this association with social cognition was not apparent for at-risk participants.

Discussion: Strong associations between social cognition and neuropsychological function observed in healthy individuals are absent in young adults at high-risk for bipolar disorder. Moreover, associations between social cognitive capacity and adaptive emotion regulation skills are absent in at-risk participants.

Conclusions: The relative absence of associations between core neuropsychological functions and social cognition, as well as cognitive methods for emotion regulation, are consistent with etiological models implicating aberrant development of fronto-limbic brain circuitry in the development of bipolar disorder.

Keywords: social cognition, neurocognition, emotion regulation

P88
Abstract Withdrawn

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Analysis of mitochondrial complexes activity in peripheral blood mononuclear cells of bipolar disorder, schizophrenic and healthy subjects

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Introduction: Evidence suggests that mitochondrial dysfunction is involved in the pathophysiology of psychiatric disorders such as schizophrenia (SZ) and bipolar disorder (BD). However, the mechanism responsible for this dysfunction in patients is not well understood. Losses in the activities of electron transport chain (ETC) complexes have been described in these disorders and may reflect changes in mitochondrial metabolism and oxidative stress level. The objective of this study was to compare the activity of ETC complexes and protein oxidation marker in euthymic patients with BD, patients with stable chronic SZ and healthy controls.

Methods: We recruited 17 SZ patients, 12 BD patients and 20 healthy volunteers. Subjects met the DSM-IV diagnosis, and psychiatric conditions were determined by BPRS scales for SZ, and YMRS and HAM-D for BD. From each subject, we collected 20 mL of blood in heparin tubes to avoid coagulation. The activities of complexes I, II, III and IV were determined by enzyme kinetics of mitochondria isolated from blood mononuclear cells and oxidative damage to proteins was evaluated by the carbonyl technique.

Results: The activity of complex I was significantly lower in SZ patients compared with controls (p = 0.04), suggesting a dysfunction in the electron transport chain within these patients. The activity of complex III showed a tendency, although not significant, decrease in patients with SZ compared with BD (p = 0.056). There was no difference in the activities of complexes II and IV or within carbonyl values between all tested groups.

Discussion: Our results concerning the complex I in patients with SZ confirm previous findings. Although the decrease in complex I activity is widely reported to increase the production of reactive oxygen species, inducing oxidative damage to proteins, our analyses showed no significant difference between groups. It is possible that we failed to find further differences in ETC activities and carbonyl values between groups due to a too small sample size.

Keywords: bipolar disorder, schizophrenia, mitochondria, electron transport chain, oxidative stress

P90

Health help-seeking behavior in patients with bipolar disorder: the effect of sex on use of medicine and health help-seeking behavior in patients with bipolar disorder

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Introduction: Bipolar disorder consists of manic or depressive attacks which can be seen at same or different time. An important subgroup has been detected in lots of studies found that irregularly or never medicine use. Main reasons of inconsistency are side effects, continuous depressive mood, comorbid situations, lack of social and parental supports and lack of knowledge about the disorder. Patients with bipolar disorder have passed so many stages until psychiatric help-seeking. Sex has an important role in mental disorders. Studies showed that sex plays significant role on perception and identification of mental disorders and help-seeking behavior. The aim of this study was to investigate the effect of sex on use of medicine and health help seeking behavior in patients with bipolar disorder.

Method: Socio-demographic data form, structured clinical interview for DSM, survey for understanding of illness model, survey for reasons of non-use of medicine have been applied to those who live up to the criteria of acceptance of study from patients who apply for bipolar disorder clinic in department of psychiatry.

Results: 37 of the 88 patients were male and 51 were female. Mean age of patients were 39.8 ± 12.5. The reasons of patients do not prefer to use of medication: 'the medicines made them like a robot' for 30.7% of patients; 'the medicines got them to gain weight' for 28.4% of patients and 'the medicines made them sleepy' for 28.4% of patients. 'They were not ill' and 'they did not need them' were statistically significant reasons associated with non-use medicine for males. 'Family issues caused the disorders' statistically significant for females in terms of understanding of illness model. 'There was a difficulty in access to health services' statistically significant for males when asked 'why they applied practices out of medicine'.

Conclusion: These results considered that sex has an important role on non-use medicine' and 'health help-seeking behavior' in patients with bipolar disorder.

Keywords: bipolar disorders, help-seeking behavior, sex effect

P91

Brain oscillations in bipolar disorder as emerging biomakers

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Introduction: Recent findings from assessment of brain oscillatory activity in neuropsychiatric disorders point at a promising functional imaging method. We aim to present emerging biomarkers of oscillatory actitivity in bipolar disorder.

Method: We performed a series of analysis on the spontaneous EEG oscillations, and event related as well as sensory evoked oscillatory responses in different sets of patients in comparison to healthy controls. Drug free (n = 22) and lithium treated (n = 13) euthymic patients were compared cross-sectionally. Another set of analysis were completed in drug free manic patients (n = 10). Measurements include changes in oscillatory response activities in the slow (4–6 Hz) and fast theta (6–8 Hz), alpha (8–13 Hz) and beta (18–30 Hz) range. The analysis of connectivity was performed using analysis of long distance coherence function in the gamma (28–48 Hz) frequency range. Odd-ball paradigm was used as the cognitive task to elicit event related responses.

Results: Spontaneous and response activities in the alpha range is highly reduced whereas beta responses are increased in drug free euthymic and manic patients. Lithium responsive euthymic patients present further and significant increase in the beta frequency range. Fast but not slow theta responses were highly reduced under cognitive load in drug-free euthymic and manic patients. A significant decrease in the long distance gamma frequency coherence in drug free manic and euthymic patients during odd-ball paradigm indicates a selective decrease of connectivity during cognitive processing.

Conclusions: Findings present a constellation of six promising oscillatory biomarkers in bipolar disorder which may serve for diagnostic and treatment response purposes.

Keywords: brain oscillations, biomarkers, brain imaging

P92

Subjective experiences of offspring of bipolar patients: from memories of childhood to attitudes and behavioural patterns in adulthood

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Introduction: Parent–child relationship in early years of children's life is crucial for developmental features which would be carried out to adulthood in many ways. Offspring of bipolar patients experiences many events and processes with this regard in their childhood which have particular impact on their adulthood attitudes and behavioural patterns. Considering high individuality and complexity of these developmental processes, there is special importance to hear individual voices from offspring of bipolar patients. The aim of this study is to gather subjective and personal experiences and memories from offspring of bipolar patients in order to explore and understand some common but also many uncommon and individual processes which have an impact on adulthood attitudes and behaviours.

Method: A series of offspring of BP patients (n = 10) were interviewed by open ended questions for their childhood memories and experiences and their perceptions of possible influences on their adulthood attitudes and behaviours. These interviews were qualitatively analyzed to delineate common and individual patterns of experiences, attitudes and behaviours.

Results: Some of the common experiences and patterns of offspring of BP patients were as follows: early and high sense of responsibility, parentification, high interest in academic work, different styles of denial, difficulties in establishing and maintaining interpersonal relations. Beyond these common patterns there were unique experiences of almost each individual.

Discussion: Parent-child relationship in the family of BP parents is one of the most important and enforcing issue in the developmental context. This qualitative study mainly emphasized the need of focusing these experiences and processes which are part of coping mechanisms with many difficulties mainly in two different ways: common patterns shared by many children of bipolar parents and individual patterns which were highly personal and unique perceptions and patterns for each offspring of BP parents. Studies for understanding these processes more deeply, should consider both ways. In other words, there is a need to integrate qualitative studies that mainly relies on subjective experiences to quantitative studies for better understanding the BP parent-offspring relationship and their consequences.

Keywords: bipolar offspring, parenting, development

P93

Variations in CYP2D6 metabolism in bipolar disorder: a study on patients hospitalized in emergency psychiatric ward

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Background: Cytochrome P450 2D6 (CYP2D6) is an important enzyme involved in the metabolism of psychoactive drugs. The gene coding for CYP2D6 carry a large number of polymorphisms. Although these genetic variations are frequently scrutinized for their effects on metabolism and pathology of somatic and psychiatric diseases, information on frequency of these genetic variations on bipolar patients is sparse.

Method: We investigated the frequency of CYP2D6 variations in a population of 155 bipolar disorder I and II acutely admitted in-patients (mean age 42 ± 14 years; 52.9% women). The patients were SCID 1 diagnosed and admitted to a catchment area based psychiatric department in Norway from November 2002 through June 2009. Full blood was collected from all patients and following extraction, DNA samples were genotyped for six most frequent alleles, CYP2D6*1, *2, *3, *4, *5, *6, in white Caucasian populations using standard PCR methodology.

Results: The observed frequency for dysfunctional alleles in the group was 19%. Alleles were distributed as 7% poor metabolizer (PM), 23% intermediate metabolizer (IM) and 70% rapid metabolizer (RM) among patients. These numbers differ significantly from previously published frequencies from healthy volunteers from a Scandinavian population for both allele (19% vs. 27%, Chi Square 16.37, p < 0.0001) and genotypes (PM 7%, IM 23%, RM 70% vs PM 9%, IM 45%, RM 46%; Chi Square 23.889, p = 0.0001).

Conclusion: The significantly low frequency of dysfunctional CYP2D6 alleles among patients with bipolar disorder warrant further investigation on the effects of CYP2D6 gene variations on bipolar disorder.

Keywords: bipolar disorder, CYP2D6, genotype, poor metabolizer, allele

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Moral judgments in euthymic patients with bipolar disorder*

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Background: Persons with bipolar disorder have difficulties with emotional and cognitive information processing. Recently, many studies suggest that emotion influences moral judgments and emotion-related areas of the brain contribute to moral judgment. We investigated participants' judgments of the acceptability of harmful actions in moral dilemma scenarios.

Methods: Fifteen euthymic bipolar patients and twenty healthy controls performed moral judgment task composed of three types of moral scenarios (13 impersonal, 20 personal, and 17 non-moral).

Results: Bipolar patients tended to make utilitarian judgments on impersonal, but not personal, dilemmas than controls. In contrast, the judgments of patients were similar to those of controls in non-moral dilemmas. Patients also responded more quickly than normal controls in impersonal moral judgments.

Conclusion: These results suggest that peoples with bipolar disorder may have impairment of moral decision-making, probably with lower conflict. It might be related to deficits in emotional processing observed in bipolar disorder.

Keywords: Bipolar, Moral Judgment, Moral dilemma

P95

Neuropsychological correlates of autobiographical memory in bipolar disorder: a preliminary study*

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Background: Autobiographical memory (ABM) is a special type of episodic memory, containing events that have occurred in a personal life. Overgeneral tendency of ABM refers to retrieve only general and categorical descriptions of memories rather than specific events. We investigated ABM specificity and their neuropsychological correlation effects in patients with bipolar disorder.

Methods: Thirty two bipolar patients 15 healthy controls were participated. Each participant was prompted to recall positive or negative memory and describe it in detail, responding to 5 positively and 5 negatively valenced emotional cue words. When participants reported specific memory of time and place, 1 was scored. Otherwise, 0 was scored.

Results: Bipolar patients reported significantly more general negative memories than healthy persons. Both patient and control groups showed significant positive correlation between negative ABM scores and scores of verbal memory and controlled oral word association test. And significant correlations of negative ABM scores with total IQ and category formation and perseverative error of WCST were found in patient group.

Conclusion: These preliminary results suggest that overgeneral tendency of negative ABM may be more influenced by impaired executive function in bipolar disorder. More data gathering and discussion will be required.

Keywords: bipolar, autobiographical memory, executive function

P96

Regional gray matter abnormalities in first-episode bipolar disorder

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Background: Bipolar disorder is associated with abnormalities in regional brain structures but it is unclear if such alterations are present at the disease onset or related to illness progression. To ascertain this, we examined regional gray matter volumes and concentration in patients who recently recovered from a first-manic episode.

Methods: Magnetic resonance images from 58 patients who recently recovered from first-episode mania and 32 healthy controls were acquired and processed using voxel-based morphometry. The processed gray matter tissue volumes were compared between patients and controls groups.

Results: Compared to controls, patients with first-episode mania had a decreased gray matter concentration in the bilateral medial prefrontal, anterior cingulate, posterior cingulate, and in the left insular and prefrontal regions and a smaller gray matter volume in the right middle temporal gyrus.

Conclusions: These data suggest that gray matter concentration and volume alterations in brain structures that have important roles in emotion processing are present in first-episode manic patients with bipolar disorder.

Keywords: bipolar disorder, first-episode, magnetic resonance imaging, gray matter, voxel-based morphometry

P97

Creatine alterations in the hippocampus in bipolar I disorder - a 3T ^{1}H-MRS study

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Background: Several hippocampal MRS studies have been performed in patients with bipolar disorder. They mainly concentrated on N-acetyl-aspartate (NAA), creatine (Cr) and choline (Cho) levels in the left (whole) hippocampus. Out of these, the ratio of NAA/Cr, taking Cr as an internal standard, has repeatedly been found to be significantly reduced in bipolar patients. This method of quantification uses ratios rather than absolute levels of these metabolites which led many authors to speculate on the different significance of NAA and Cr alterations. Some authors have reported changes related to the creatine pathway in bipolar patients, suggesting that Cr might not be the correct internal standard. Our study specifically examines absolute values (using water as internal standard) of the mentioned metabolite concentrations in the head of both hippocampuses. In this presentation we report our preliminary findings.

Methods: We aim to perform a 3T PRESS 1H-MRI scan in 20 adult euthymic patients with a bipolar I disorder and in 20 healthy controls. Two 3.375 cm^3 cubic voxels were placed, one containing the left and the other containing the right hippocampus. Statistical analysis has been performed using linear regression, while correcting for age and gender.

Results: So far, we have included 15 patients and 13 controls, which provided 13 and 9 workable quantification results. Preliminary analyses demonstrate significantly decreased Cr levels in the head of the left hippocampus in the bipolar patients compared with controls. Significant alterations of several Cr-related ratios in the patients have also been found. Adjustment for age and gender did not change the results.

Discussion: Creatine alterations in neuronal tissue is known to be caused by cell energy metabolism disturbances, as well as osmotic changes. Our preliminary findings support the theory that a change in creatine kinase plays a role in the pathophysiological mechanism of bipolar disorder. Further investigation needs to confirm this result and to explore the relation with other disease parameters.

Keywords: bipolar disorder, magnetic resonance spectroscopy, creatine

P98

Bipolar disorder comorbidity and affective temperament in panic disorder

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Introduction: The studies on panic disorder (PD) have reported high prevalence rates of mood disorders. Besides, it is a matter of debate, if there is relationship of temperamental variables which are thought to be developmental subways of bipolarity, in patients with comorbid anxiety disorders.

Method: The aim of the study is to investigate the clinical and sociodemographic features of the PD in terms of the comorbidity of bipolar disorder (BD) including affective temperamental variables. 42 patients with the diagnosis of PD, were included to the study. Patients were assessed by interview with patients (SCID 1), applying sociodemographic form, Hamilton depression scale, Yale Brown OCD scale, Panic agoraphobia scale and TEMPS-A affective temperament questionnaire.

Results: The results showed higher rates of bipolar II comorbidity in of PD patients (7.1%;n = 3). In 40% of the PD patients, one or more than one dominant temperament was found. Anxious temperament was the commonest dominant affective temperament. Two of the patients (4.8%) had cyclothymic temperament. Antidepressant induced hypomania was found in 7.1% (n = 3) of the PD patients.

Conclusion: We conclude that there is significant rate of bipolar II comorbidity in patients PD. Bipolar disorder type II comorbidity could be overlooked in clinical practice. This finding might be important for the management of PD patients.

Keywords: panic disorder, bipolar disorder, affective temperament

P99

Default mode network in children at risk for bipolar disorder: preliminary resting-state fMRI findings

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Background: Default mode network (DMN) is thought to be involved in the monitoring of internal mood states, allowing humans to recall episodic memories and work out unresolved problems during periods of rest. Brain areas typically active during resting-state include the medial prefrontal cortex (mPFC), posterior cingulate cortex, medial temporal lobe (MTL) and the retrosplenial cortex. Among adults with bipolar disorder (BD) there is evidence of functional hyper-connectivity of the mPFC to the insula and ventrolateral PFC (vlPFC). As the mPFC, vlPFC and insula are all important components of emotional processing circuits, such hyper-connectivity may be associated with heightened emotional responses during the active processing of episodic memories in patients with BD. As BD frequently starts in youth, it would be important to assess the integrity of the DMN in pediatric BD patients and youth at-risk to develop BD. Here we report a preliminary analysis of resting-state fMRI in children at increased risk of developing BD (children of parents with BD).

Methods: Seven high-risk children with at least one parent with BD (mean age of 14.7 years) and 4 matched controls (mean age of 14.5 years) underwent an 8-minute resting-state fMRI session at 3 telsa.

Results: Within-group analyses showed significant activation of the mPFC, and vlPFC in the control group, whereas high-risk children showed activation in the precuneus and limited mPFC activation.

Conclusion: Our preliminary analysis suggests that differences in the DMN may be associated with vulnerability for BD in childhood.

Keywords: bipolar disorder, high-risk offspring, fMRI, resting state, default mode network

P100

A prospective study of activation syndrome induced by antidepressants

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Introduction: Activation syndrome (AS) is a side effect of antidepressants and is thought to induce anxiety, irritability and so on among people starting antidepressants, which carries a potentially increased risk of suicide. However, the incidence of AS has not been fully investigated and little has been reported on its predictor. The aim of this study was to survey the incidence of AS and clarify its predictor in a clinical setting.

Methods: The study population included the patients who newly presented at the psychiatric department in our hospital between January 2009 and April 2011. We prospectively surveyed 205 patients who did not take any antidepressants for one month before visiting and were prescribed antidepressant during one month after initial visit. Patients were classified as developing AS if they experienced any symptom of anxiety, agitation, panic attacks, insomnia, irritability, hostility, aggressiveness, impulsivity, akathisia, hypomania and mania during the first one month. These symptoms are based on the 2004 FDA warning. Differences in demographic and clinical variables between patients with and without AS were compared by means of χ^2 analysis or t test. Multiple logistic regression analysis was conducted to examine any association between relevant independent demographic and clinical variables and appearance of AS.

Results: Seventeen of the 205 patients (8.3%) developed AS. The incidence did not significantly relate with gender, age, the class of antidepressant, combined use of benzodiazepine and DSM IV-TR diagnosis.

Conclusion: This study suggests that there is no predictor of AS in a clinical setting.

Keywords: activation syndrome, antidepressant, side effect

P101

Therapeutic drug monitoring of risperidone in bipolar disorder: a case report

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Introduction: Therapeutic drug monitoring is an established tool that gives clinicians greater control over medication dose and helps in determining patient compliance and detecting early signs of medication toxicity. It can also be used to help distinguish nonresponse from noncompliance.

Methods: We report on a case in which repeated low plasma levels of risperidone were observed. After cytochrome P450 2D6 genotyping, it was observed that patient was ultra metabolizer for the enzyme. Risperidone dose modifications guided by TDM were performed.

Results: In risperidone treated patients, the risperidone/9-OHRisperidone concentration ratio is an index of CYP2D6 activity; an ratio of < 0.1 may indicate a CYP2D6 ultra metabolizer (UM).

Discussion: Both the genotyping and the monitoring of plasma drug concentrations may be useful for clinical improving in treatment resistant cases.

Keywords: therapeutic drug monitoring, risperidone, CYP2D6

P102

Affective prosody in remitted patients with bipolar I disorder

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Objectives: Patients with bipolar disorder (BD) present impairments of emotion recognition abilities in episodes of symptoms and in remission. The bigger part of recently conducted studies investigated the *facial* emotion recognition abilities. The goal of the present study was to investigate the ability of remitted patients with bipolar I disorder to perceive *affective prosody* and to investigate if there is a relationship between auditory emotion perception and subjective and functional outcomes.

Methods: This cross-sectional study examined the relationship of prosodic affect recognition and subjective and functional outcome in BD I patients compared to healthy volunteers.

Results: Altogether 58 patients meeting diagnostic criteria for BD I according to DSM IV and 45 healthy controls were included in this study. Only one out of two prosodic affective tests (CATS 2) showed impaired perception of affective prosody. Surprisingly, patients significantly more often misinterpreted sad as happy prosody compared to healthy controls. Poorer identification of emotions expressed by the voice (CATS 1) was significantly associated with higher scores on the MADRS. The misinterpretation towards a more depressive emotionality was also significantly correlated with higher MADRS scores. Regarding functional outcome, a better performance in the CATS 1 was positively associated with patients' general level of functioning (GAF) and also with their employment status. Patients and controls differed significantly with regard to their partnership, employment status, their living situation and self-reported quality of life.

Conclusion: Our results are comparable to the inconsistent findings of recently realized studies of this subject matter. Further research is needed to clarify how far remitted BD patients are affected by the impairment of affective prosody perception.

Keywords: affective prosody, bipolar I disorder, subjective and functional outcome

P103

Characteristics of late onset bipolar disorder: evaluation using the bipolarity Index

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Introduction: Earlier onset is an important sign of bipolar disorder (BD) among mood disorders. 90% of BD patients have the first mood episode earlier than 45 years old, however, BP patients having the first mood episode at older age seem increasing in an aging society as Japan. To investigate prevalence and clinical characteristics of 'late onset' BD, we evaluated 150 BD patients, both of type I and II, using the Bipolarity Index (Sachs 2004).

Methods: We investigated 150 BD inpatients and outpatients recruited at Kurume University Hospital and related Hospitals in September 2011. Five dimensions of the Bipolarity Index of each patient were evaluated by the physician in charge retrospectively, using the medical records. We defined 'late onset' as onset age 50 or older.

Results: 20% of all over BD patients met 'late onset' definition. In dimension of 'Episode characteristics', late onset BD type I showed more dysphoric or irritable characteristics than euphoria, comparing to 'normal' onset patients. No specific clinical feature of late onset BD was elucidated in dimensions of 'response to medications' and 'family history'. Over 95% of late onset BD patients have depressive first episode.

Discussion: The present investigation suggested that late onset BD patients should be increasing and, the dimension 'age of onset' might be a 'weaker' index of bipolarity in aging society.

Keywords: late onset BD, the bipolarity index, aging society

P104

Anthropometric parameters in neonates exposed prenatally to lithium or polytherapy

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Introduction: Although lithium has been used extensively in the last 50 years in pregnant women with bipolar disorder, information about perinatal effects of its fetal exposure is limited.

The objective is to determine the effect of in-utero exposure to lithium on anthropometric parameters among infants born to women with bipolar disorder.

Methods: Prospective observational study including 21 pregnant women on maintenance treatment with lithium alone (n = 14) or polytherapy (n = 7) during late pregnancy, which were treated at the Perinatal Psychiatry Program BCN-Clinic between 2007 and 2011. We evaluated sociodemographic data, lithium plasma concentrations in maternal blood and umbilical cord, maternal obstetric complications, gestational age, birth weight, APGAR scores, birth defects.

Results: Mean maternal age (SD) 32.71 (4.02), 66% primiparaes, 95% Caucasian and 100% married or with partner. Infant exposed to polytherapy (lithium plus another psychoactive drug) had on average a higher birth weight (3773.3 vs. 3079.6), but not in terms of percentile. They had higher gestational age (40 vs. 38, 29 weeks), were longer (51.8 vs. 48, 89 cm), had increased head circumference (35.6 vs. 33.43). In lithium-only exposed infants, two were prematures (gestational age < 37 weeks). Infants exposed to polytherapy at any time during pregnancy had a higher incidence of congenital malformations (3/7 vs. 1/14). There not were differences in umbilical cord/maternal plasma lithium levels in both groups (0.95 vs. 0.98).

Conclusions: Lithium crosses the placental barrier almost completely. Fetuses exposed to polytherapy with lithium present higher weight, gestational age and increased head circumference. Foetal growth surveillance is recommended in pregnancy.

Keywords: bipolar, lithium, anthropometric parameter, neonate

P105
Cognitive functioning during depressive and manic episodes in bipolar disorder

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Introduction: Previous studies have found cognitive deficits in patients with bipolar disorder during episodes and after the subsidence of active symptoms. However, evidence on possible differences or similarities in cognitive functioning between depressive and manic episodes is scarce. The aim of the study was to assess and compare the cognitive functioning between depressive and manic bipolar disorder patients.

Methods: General intelligence, attention, verbal memory and learning, working memory, visuospatial ability, executive functions and theory-of-mind (ToM) were assessed in 23 depressive and 28 manic bipolar-I patients, as well as in 51 normal controls. A comprehensive battery of neuropsychological test was used, including WAIS – Vocabulary, Block design and Digit span, Stroop Test, Babcock Story Recall Test, Rey Auditory Verbal Learning Test (RAVLT), Trail Making Test (Trails A and B), Wisconsin Card Sorting Test (WCST) and Faux Pas Recognition Test. The three groups were matched for gender, age and education. One-way ANOVA with post hoc Bonferroni corrections was used for the between groups comparisons.

Results: Both manic and depressive patients were found significantly impaired in working memory, verbal learning and delayed recall, visuospatial ability, executive functions and ToM compared to control subjects. Moreover, patients with depressive episode performed significantly worse than healthy controls in tests that assess processing speed (Trails A and Stroop – word). There was no significant difference between both patient groups and healthy controls in general intellectual ability, verbal immediate memory and sustained attention.

Conclusions: Dysfunction in a wide range of cognitive areas was found in the acute phases of bipolar disorder. Our results indicate that patients with bipolar disorder exhibit similar profiles of cognitive impairment during manic and depressive states. Impaired processing speed appears to be specifically related to depressive symptoms.

Keywords: bipolar disorder, neurocognition, affective episodes, theory of mind

P106
Postdischarge suicides of inpatients with bipolar disorder in Finland in 1987–2003

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Background: Suicide risk of psychiatric inpatients is high after discharge. Temporal patterns and modifying factors of risk among bipolar patients are obscure. We investigated postdischarge temporal patterns of hazard and modifying factors by type of illness phase among inpatients with bipolar disorder.

Method: Based on national registers, all discharges from a psychiatric ward in Finland in 1987–2003 of patients with bipolar disorder (n = 52747) were identified and the patient followed up to 12 months post index discharge, or suicide (n = 466). Factors

modifying hazard of suicide (n = 129) during the first 120 days were investigated for discharges in 1995–2003 (n = 42971).

Results: The temporal pattern of suicide risk depended on illness phase, being highest but steeply declining after discharge with depression; high but less declining in mixed states, but relatively stable after mania. In Cox models, for postdischarge suicides (n = 65) after hospitalizations (n = 9635) for bipolar depression, hazard ratio was 8.05 (p = 0.001) after hospitalization with a suicide attempt and 3.63 (p < 0.001) for males, but 0.186 (p = 0.001) if on lithium. Suicides after mania (n = 28) or mixed episodes (n = 20) were predicted by male sex and preceding suicide attempts, respectively.

Conclusions: Among inpatients with bipolar disorder, risk of suicide is high and strongly related to time elapsed after discharge after hospitalizations for depressive and less strongly, mixed episodes. Intraepisodic suicide attempts and male sex powerfully predict suicide risk. Lower suicide rate among those prescribed lithium after hospitalizations for depression is consistent with a possible preventive effect.

Keywords: bipolar disorder, suicide, lithium, hospitalization, risk factors

P107
Electronic self-monitoring of patients with bipolar disorder

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Objectives: The purpose of this study is to give an overview of the existing software developed for electronically self-monitoring of patients with bipolar disorder and to examine the potential in this type of assessment to reduce the severity and duration of future episodes of depression and mania.

Methods: A literature review was performed searching PubMed and Google using the following keywords: bipolar disorder, electronic self-monitoring, mobile self-monitoring, mobile app.

Results: A total of three published studies were identified. Scharer et al. (2002) tested the feasibility of using PDA's for long-term monitoring of patient outcomes for patients with bipolar disorder. Bopp et al. (2010) studied the feasibility of collecting data from patients with bipolar disorder using weekly text-messaged mood ratings. Depp et al. (2010) piloted a Personalized Real-Time Intervention for Stabilizing Mood (PRISM) for patients with bipolar disorder in which patients used a PDA for storing data and receiving preselected self-management strategies. The three studies concluded that electronical self-monitoring is a reliable and feasible method. Three commercial apps were identified: Bipolar Mood Monitor, Optimism iPhone and Mood Journal. These apps were designed to help patients with bipolar disorder track mood changes, recognize symptoms, triggers and early warning signs and to work out strategies for staying well and furthermore to give health providers accurate up-to-date information to help manage bipolar patients.

Conclusion: The current literature on electronical/mobile self-monitoring in the management and treatment of bipolar disorder shows promising results regarding feasibility and reliability but no blinded or controlled trial has been carried out on the effect of these items. We are currently running a RCT in patients with bipolar disorder (the MONARCA study) to investigate the effect of using a software program for online electronic self-monitoring including a cell phone and an interactive feedback loop. Primary outcome is severity of depressive and manic symptoms during a 6 months period. If the cellphone self-monitoring system is proved effective in preventing mood symptoms there might be basis for

extending the use of the system to treatment of patients with bipolar disorder in clinical practice in general.

Keywords: bipolar disorder, electronic self-monitoring

P108
Abstract Withdrawn

P109
More eveningness in the patients with BP type II than BP type I disorder

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Introduction: Morningness/eveningness (M/E) is a stable characteristic of individuals. Circadian rhythms are altered in episodes of mood disorder. It has been reported that bipolar disorder patients were more evening-type than normal population. In this study, we examined M/E in the patients with bipolar type I and type II disorders.

Methods: The sample consisted of 149 subjects: 106 subjects were diagnosed with bipolar type I disorder, 43 subjects with bipolar type II disorder. M/E was evaluated using the Korean version of the composite scale of morningness (CS). Factor analysis was done to extract specific elements of circadian rhythm. Total scores, scores on three factors (morning favor, morning alertness, evening tiredness) and individual items of CS were compared in order to find difference between bipolar type I and type II disorders using SPSS 12.0.

Results: Total scores and scores on two factors (morning favor, evening tiredness) of CS were significantly correlated with age in the whole subjects. After controlling for age, there was no significant difference in CS total score between two groups. Bipolar type I disorder subjects had significantly higher score on a factor of evening tiredness than bipolar disorder type II subjects. This difference was more profoundly observed in female subgroup, but not observed in male subgroup.

Conclusion: This result indicates that bipolar type I disorder patients are more likely to experience evening tiredness than bipolar type II disorder patients, especially in female. As one of the eveningness, evening tiredness is a differential characteristics between bipolar type I and II disorders in our sample. In conclusion, more eveningness was found in the patients with bipolar type II disorder than bipolar type I disorder. More studies with large sample size of bipolar disorders on M/E are warranted.

Keywords: morningness/eveningness, bipolar type I disorder, bipolar type II disorder, composite scale, Korean

P110
Quetiapine for manic-like symptoms in a patient with mitochondrial myopathy, encephalopathy, lactic acidosis and stroke-like episodes (MELAS) syndrome

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Objective: Mitochondrial myopathy, encephalopathy, lactic acidosis and stroke-like episodes (MELAS) syndrome is a rare, devastating, multisystem, neurodegenerative disease. MELAS syndrome is caused by mitochondrial DNA mutations and is inherited maternally. Mitochondria are involved in the generation of adenosine triphosphate (ATP) and regulation of cytosolic calcium levels. Consequently, mitochondrial diseases such as MELAS syndrome result in neuronal injury and severe psychiatric symptoms, such as dementia, psychosis and mania. Due to the adverse oxidative effects of mood stabilizers, including valproic acid, no treatment options have been established for manic-like symptoms in MELAS syndrome. We report successful quetiapine treatment for the first-onset manic-like symptoms in a patient previously diagnosed with MELAS syndrome.

Method: A 29-year-old year old female was admitted to the neurologic ward for the treatment of status epilepticus. She had been diagnosed with MELAS syndrome 9 years earlier. At the time of admission, she showed various clinical manifestations of MELAS syndrome, such as short stature, hearing loss, lower extremity weakness, cognitive impairment and diabetes mellitus. Three to 4 days after recovering from the status epilepticus, she began to show manic-like symptoms, including a euphoric mood, decreased need for sleep and talkativeness. She also had excessive sexual interest in young male patients and doctors.

Results: One week after the onset of the manic-like symptoms, she was referred to the psychiatric department and prescribed quetiapine (initial dose 50 mg per day). After 7 days of quetiapine (maximum 200 mg per day) treatment, the manic-like symptoms subsided without exacerbation of any other symptoms of MELAS syndrome.

Conclusion: A low dose of quetiapine can be effective and tolerable for the treatment of manic-like symptoms in a patient with MELAS syndrome.

Keywords: MELAS syndrome, quetiapine, manic state

P111

Lithium monotherapy and metabolic syndrome

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Aims: Atypical antipsychotics, mood stabilizers or drug combinations and past depressive episodes are accused for metabolic syndrome in bipolar affective disorder (1). Although there is some literature dealing with the relationship between lithium monotherapy and weight gain (2), the relation of lithium monotherapy with metabolic syndrome in literature is lacking. We aimed to investigate the prevalence of metabolic syndrome in euthymic patients with bipolar affective disorder whom are under lithium monotherapy.

Methods: The follow up reports in files of patients was screened whom were euthymic and under lithium monotherapy. The compounds of metabolic syndrome as: triglyceride, high density lipoprotein and fasting glucose levels, waist circumference and blood pressure parameters were recorded. The data of patients whom were under lithium monotherapy at least 3 months were included in the study. The data of patients who had used psychotropic drugs other than lithium and/or concomitant use of alcohol or substance were excluded.

Results: 65 patients were included in the study. The mean BMI was $27.67 \pm 4.47 \text{ kg/m}^2$ and mean waist circumference was $87.72 \pm 12.48 \text{ cm}$. The mean fasting blood glucose level was $87.86 \pm 15.53 \text{ mg/dl}$, total cholesterol level was $180.29 \pm 47.38 \text{ mg/dl}$, HDL was $38.81 \pm 8.62 \text{ mg/dl}$ and triglyceride level was $136.57 \pm 108.08 \text{ mg/dl}$. The number of patients who met the criteria of metabolic syndrome was ten, cross sectionally. Nine of these ten patients were females and the rest one was male ($\chi^2 = 4.841$, $p = 0.028$).

Conclusion: The prevalence of metabolic syndrome seems less frequent in patients with bipolar disorder who are under lithium monotherapy when compared to other treatment modalities. Lithium monotherapy might lead to weight gain nevertheless it might be favorable towards glucose levels in patients with bipolar disorder who have diabetes mellitus co-morbidity. Further well designed, prospective studies with large sample are required to explore the relationship between lithium monotherapy and metabolic syndrome.

Keywords: lithium monotherapy, metabolic syndrome

P112

Effect of valproic acid through regulation of NMDA receptor-ERK signaling in sleep deprivation rats, the manic-like animal model

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Introduction: Although the effect of mood stabilizer valproic acid (VPA) through multiple signaling pathways has been shown, its therapeutic mechanism is still largely unknown. We investigated the effect of valproic acid (VPA; 200 mg/kg, every 12 h) in sleep deprivation (SD) rats (72 h), the manic-like animal model, focusing on the N-methyl-D-aspartic acid (NMDA) receptor and signaling mediators of synaptic plasticity such as extracellular signal-regulated protein kinase (ERK), cAMP response element-binding protein (CREB), B-cell CLL/lymphoma 2 (BCL2) and brain derived neurotrophic factor (BDNF).

Methods: Rats were randomly assigned to one of four groups (n = 6 per group): control (non-SD rats), VPA (VPA-treated non-SD rat), SD and VPA-treated SD groups. To determine the effect of VPA, every 12 h we administered intraperitoneally (i.p.) VPA (200 mg/kg) to rats of VPA and VPA-treated SD groups, or saline (0.9% NaCl) to rats of control and SD groups, respectively. After 72 h, we sacrificed rats of all groups, dissected out the frontal cortex and hippocampus of each rat, weighed them and kept them frozen until analysis. The results of immunoblots were quantified using ImageJ image analysis software. To quantify the BDNF protein level, we performed an enzyme-linked immunosorbent assay in homogenized tissues of the frontal cortex and hippocampus of each group.

Results: SD reduced the expression of the NR2B subunit of the NMDA receptor in the frontal cortex and hippocampus, but did not affect the expression of NR1 and NR2A subunits. In comparison, VPA inhibited the SD-induced reduction of NR2B expression in both brain regions. VPA also elevated ERK phosphorylation that was attenuated by SD in the frontal cortex and hippocampus. Additionally, VPA increased CREB phosphorylation, BCL2 expression and BDNF expression which were decreased by SD in the frontal cortex but not in the hippocampus.

Discussion: These results indicate that VPA could regulate NMDA receptor-ERK signaling in SD rats, elevating the expression of NR2B subunit and the activation of ERK signaling mediators such as ERK, CREB, BCL2 and BDNF.

Keywords: sleep deprivation, valproic acid, N-methyl-D-aspartic acid receptor, extracellular signal-regulated protein kinase

P113

Significance of homocysteine to the cardiovascular risk in bipolar disorder

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Background: Bipolar disorder (BD) is associated with an increased risk of cardiovascular morbidity and mortality. Hyperhomocysteinemia has emerged as an independent and graded risk factor to development of cardiovascular disease (CVD). Therefore, in the present study we evaluated the determinants of total plasma homocysteine levels and their relations with traditional biomarkers of cardiovascular disease in the same bipolar patients in mania vs. euthymia state.

Methods: The study was conducted on 30 bipolar patients, (50% women and 50% men). Patients were analyzed in terms of biochemical parameters (homocysteine [Hcy], folic acid, vitamin B12, ferritin, creatine-kinase [CK] and high-sensitivity C-reactive protein (HsCRP) in order to assess eventual differences between the serum levels in mania and after the symptomatic recovery.

Results: The Hcy, vitamins and ferritin levels in BD patients were similar to normal values for healthy population and we did not found significant difference comparing the levels in mania and after euthymic mood. The Ck levels were higher in mania state than euthymia. According the guidelines our results of HsCRP may suggest an intermediate cardiovascular risk.

Conclusions: The collected data add to the notion that changes in the energy metabolism and inflammatory system take place in bipolar disorders. Studies are needed in order to understand the state-dependent differences observed in serum CK levels and to confirm if CRP is a mediator of the pro inflammatory phenotype to better determine the clinical consequences of activation of inflammatory systems in BD.

Keywords: homocysteine, bipolar disorder, cardiovascular disease

P114

Possible preattentive auditory dysfunction in bipolar disorder: a magnetoencephalography study

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Objective: The mismatch negativity (MMN) and its magnetic counterpart (MMNm) are thought to reflect an automatic process that detects a difference between an incoming stimulus and the sensory memory trace of preceding stimuli. In patients with schizophrenia, the attenuation of the MMN/MMNm amplitude has been repeatedly reported. However, in patients with bipolar disorder, the MMN/MMNm has received less attention. In the present study, we investigated the MMNm in patients with bipolar disorder using a whole head 306-ch magnetoencephalography (MEG).

Methods: 22 (6 males, 16 females) patients with bipolar disorder and 22 matched healthy control subjects participated in this study. In one session, subjects were presented with approximately 2600 binaural tone pips and 400-msec interstimulus intervals. Standard tones were 1000 Hz or 1200 Hz, 80 dB SPL, 100 msec (2340 trials). Deviant tones were 1200 Hz or 1000 Hz, 80 dB SPL, 100 msec (260 trials). Two sessions were performed (**SD**: 1000 Hz/1200 Hz and 1200 Hz/1000 Hz). Event-related brain responses to standard tones were subtracted from event-related brain responses to deviant tones.

Results: Bipolar patients showed significantly bilateral reduction of magnetic global field power (mGFP) ($p = 0.02$) and dipole moment of the MMNm ($p = 0.04$) compared to healthy subjects. No significant differences were observed in mGFP latencies and dipole locations of MMNm. For clinical correlations, bipolar patients with reduced mGPF of MMNm showed higher scores on Young Mania Rating Scale (rho $= -0.504$, $p = 0.02$).

Conclusion: This study suggested that bipolar disorder patients may exhibit preattentive auditory dysfunction indexed by reduced MMNm.

Keywords: bipolar disorder, magnetoencephalography, mismatch negativity, preattentive dysfunction

P115

Clinical characteristics and pattern of drug use in a population of crack cocaine users with and without mood disorders

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Introduction: The use of crack cocaine has emerged as a major public health problem, with a lifetime prevalence estimated at 0.7%. The goal of this study is to examine the prevalence of MD among the population of crack cocaine users and the impact of this comorbidity on clinical variables.

Methods: Patients were being followed at Cruz Vermelha Brasileira, Porto Alegre, Brazil, for the treatment of crack cocaine misuse. Axis-I comorbidites and clinical variables were assessed by a psychiatrist through an interview based on the Structured Clinical Interview for the DSM-IV.

Results: We recruited 101 outpatients on naturalistic treatment for use of crack cocaine. Of these, 36.6% had no other psychiatric comorbidity, 33.7% had Major Depressive Disorder, 13.9% had BD, 13.9% anxiety disorders and only 2% presented with schizophrenia. Patients with comorbid MD (n = 45) more frequently had a family history of drug abuse (58.3% vs. 32.4%,

$p = 0.015$), alcohol dependency (85.4% vs. 67.6%, $p = 0.045$) and general psychiatric disorders (54.2% vs. 21.6%, $p = 002$) as well as greater frequency of previous suicide attempts (39.6% vs. 13.9%, $p = 0.009$). Daily use of crack cocaine was more common in the group without any MD (91.4% vs. 75%), however, this difference was not statistically significant. Interestingly, patients with comorbid MD had experience longer periods of abstinence during the course of their illness (15.12 vs. 8.17 months, $p = 0.043$). There were no significant differences regarding demographic variables and history of psychiatric hospitalizations. There were no significant differences between patients with BD and MDD.

Discussion: Diagnosis of a MD was highly prevalent in our sample of crack cocaine users. Some of our findings are in line with previous reports, such as a higher family history of substance abuse/dependence and psychiatric illness. However, in relation to the consumption pattern of crack, MD patients showed longer duration of abstinence over the years.

Keywords: mood disorders, crack cocaine

P116

A placebo-controlled, double-blind study of the efficacy and safety of aripiprazole for the treatment of acute manic or mixed episodes in Asian patients with bipolar I disorder (The AMAZE Study)

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Background: In order to investigate the efficacy and safety of aripiprazole for the treatment of bipolar I patients in acute manic phase or mixed state in an Asian population, we have conducted an international multicenter, randomized, double-blind, placebo-controlled, Asian clinical study with aripiprazole.

Method: Subjects (n = 258) were recruited at multi centers in various Asian countries such as Japan, China, Taiwan, The Philippines, Indonesia and Malaysia. After informed consent, subjects were randomized to either aripiprazole (24 mg/day; reduced to 12 mg/day if needed for tolerability; n = 128) or placebo (n = 130) for 3 weeks in this multicenter, double-blind study. In order to evaluate the efficacy of ariprazole, the primary endpoint of this clinical trial was the mean change from baseline in Young Mania Rating Scale (YMRS) Total score.

Results: Overall, 136 patients (aripiprazole 56.3%; placebo 49.2%) completed the study. The 24 mg/day dose was maintained by 92.6% of aripiprazole-treated patients. Aripiprazole produced statistically significant mean improvements in YMRS Total scores compared with placebo from Day 4 through Week 3 (–11.3 vs. –5.2; $p < 0.001$). The most common adverse events ($>15\%$ of patients; aripiprazole vs. placebo) were akathisia (22.0% vs. 5.6%) and insomnia (16.3% vs. 9.6%). Aripiprazole treatment resulted in no significant difference compared with placebo in change in mean body weight from baseline (–0.4 kg vs. –0.7 kg; $p = 0.231$). Aripiprazole was not associated with an elevated serum prolactin level.

Concusion: In conclusion from this clinical study, Aripiprazole had significantly greater efficacy than placebo for the treatment of acute manic or mixed episodes associated with bipolar I disorder in Asian patients. Treatment by aripiprazole was generally safe and well tolerated.

Keywords: bipolar disorder, aripiprazol, Asian population, placebo-controlled double-blind clinical trial

P117

Are depressive episodes of bipolar disorder I and II different?

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Introduction: Clinical differentiation of unipolar and bipolar depression is well known in some extend up to date. Hovewer little is known about differences of depressive episodes in bipolar I (B I) and bipolar II (B II) disorder.

Methods: 186 patients who were diagnosed with major depressive episode, bipolar disorder according to DSM-4, gave informed consent and they involved in a naturalistic observation study. Semistructured Bipolar data collection form, Hamilton Depression Rating Scale (HAMDRS), Hospital Anxiety Depression Scale, Suicide Ideation and Suicide Behavior Scale, Barratt Impulsivity Scale, The Eating Attitudes Test, Pittsburg Sleep Quality Index, Arizona Sexual Experience Scale, Golombok Rust Inventory of Sexual Satisfaction were given in the first week and Short Form of Health Survey (SF-36) and Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire were given when patients reach remission.

Results: 139 patients with BP I and 47 patients with BP II were similar in age, age of illness onset. Duration of untreated illness was longer in BP II group (p = 0.002). Female gender was more predominant in BP II group (p = 0.001). Family history of BP was more frequent in BP I and family history of unipolar depressive disorder was more frequent in BP II (p = 0.001). Cyclothymic temperament was more frequent in BP II (p = 0.006). Migraine, allergy and thyroid illness were more frequent in BP II (p values are 0.001, 0.005 and 0.001 respectively). Atypical depressive features were frequent and frequency of depressive episodes were higher BP II (p = 0.001 and 0.001). Functionality was higher in BP II (p = 0.038). Psychotic features, severity and duration of depressive current episode and suicidality were similar. However some items of HAMDRS, such as somatic symptoms, physical anxiety, guilt feelings were higher in BP II. Sexual satisfaction was better in BP II and female patients (p = 0.001 and 0.05). Current substance use was more frequent in BP II.

Discussion: Even there are some similarities in characteristics of depressive episodes and outcome features of illness subtype, we found remarkable differences that can be useful in differential diagnosis and treatment.

Keywords: bipolar disorder, bipolar depression, depressive episode

P118

A comparison before and after using lamotrigine in long term continued treatment: the effect of blood level

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Objective: The hypothesis of this study is that the efficacy of lamotrigine, with its inhibitor activity in sodium and calcium channels and presynaptic neurons and which is an anticonvulsant with a stabilizer quality in neuronal membrane, is related with blood level in bipolar disorder. Our aim is to compare the period before and after lamotrigine usage in cases and to study if there is any relation between lamotrigine blood level and clinical progress.

Method: For this aim, 40 cases diagnosed as bipolar disorder type I according to DSM-IV, using lamotrigine for at least 2 years, with any mood stabilizer, lithium, anticonvulsant or atypical antipsychotic, were evaluated consecutively. For evaluation, being in remission period was set as a criterion for these cases. Patient interview was carried out with SCID-I in bipolar cases. The parts before and after protective treatment in SCIP-TURK Mood Disorders Diagnosis and Patient Registration Form were filled in with the patients and their relatives. Later blood samples were taken from bipolar cases in order to analyze lamotrigine blood level.

Results: In bipolar cases, when comparing before and after long term maintenance of lamotrigine, it was determined that after using lamotrigine, total episode frequency and depressive episode frequency decreased, episode severity is less (p < 0.001, 0.039 and 0.04) and fast onset and termination ratio decreased (p = 0.027). When evaluated according to these variables, in long term maintenance the ratio of good treatment response to lamotrigine among bipolar cases is 77.5%. In cases with good treatment response to lamotrigine, while lamotrigine doses were found similar with others (135.5 ± 52.7/155.6 ± 69.7 mg/day), lamotrigine blood levels were found higher (3.8 ± 1.9/2.0 ± 1.1 µg/ml) (p = 0.005). No correlation was shown between lamotrigine dose and lamotrigine blood level (r = 0.185, p = 0.254).

Conclusion: As a result, lamotrigine is an efficient choice in long term maintenance treatment of bipolar disorder. The relation of this efficacy with blood level must be supported with succeeding studies.

Keywords: lamotrigine, bipolar disorder, blood level

P119

Gender specific sexual adverse effects and hormonal variables in bipolar patients: A comparison between lithium, quetiapine and olanzapine

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Objective: The aim of this study is to determine the differences between lithium, quetiapine and olanzapine with regards to their effects on sexual function and hormonal variables in bipolar disorder and to assess the findings in term of gender differences.

Method: 28 female and 29 male cases diagnosed as bipolar disorder type I according to DSM-IV, using lithium or quetiapine and quetiapine + lithium or olanzapine and olanzapine + lithium were evaluated consecutively. For evaluation, being in remission period was set as a criterion for these cases. Patient interview was carried out with SCID-I and SKIP-TURK. Sexual function and satisfaction are evaluated with Arizona Sexual Experiences Scale (ASEX) and Golombock-Rust Inventory of Sexual Satisfaction (GRISS). Blood samples were taken from patients in order to determine PRL, FSH, LH, E2 and free T levels.

Results: Mean age, mean age of onset, number of manic, depressive and total episodes and functionality levels were similar between female and male patients. While scores of ASEX were similar between female and male patients, male patients scored higher in GRISS (p = 0.001). Both in female and male patients, no difference found between lithium, quetiapine and quetiapine + lithium and olanzapine and olanzapine + lithium groups in terms of PRL, FSH, LH, E2 and free T levels. Both in female and male patients, no difference found between three groups in terms of ASEX and GRISS scores.

Conclusion: There are some evidence showing gender based differences in the side effects of atypical antipsychotic drugs. Future studies with a specific focus on this topic are needed in order to have a better understanding of the basic mechanisms of gender differences.

Keywords: gender, sexual side effect, psychotropics, bipolar disorder

P120

Diabetes in first episode mania: relations with clinical and the other endocrinological and metabolic parameters

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Objective: To evaluate the frequency of diabetes in BPD cases in relation to clinical, endocrinological/metabolic parameters.

Methods: A total of 50 patients diagnosed with first episode mania according to DSM-IV diagnosis criteria upon their admission to our clinic between April 2010 and February 2011 were included in this study. Young Mania Rating Scale (YMRS) was used to evaluate the severity of mania. Levels of fasting blood glucose (FBG), HbA1c, OGTT (Oral Glucose Tolerance Test), Lipid Profile (Total Cholesterol, Triglyceride, LDL, HDL), CRP and sedimentation, thyroid functions tests (TSH, FT3, FT4), Vitamin B12 and folate were determined.

Results: Diabetes was evident in 18% of patients. In diabetic patients, menstruation disorder and premenstrual syndrome were more frequent ($p = 0.054$ and $p = 0.038$), fT4 levels were higher ($p = 0.001$), first episode mania was more frequent ($p = 0.042$), psychotic finding was more frequent ($p = 0.022$), remission was less frequent ($p = 0.01$) and a strong correlation between YMRS scores and OGTT1 ($r = 0.78$), OGTT2 ($r = 0.57$) and HbA1c ($r = 0.51$) while weak correlation with FBG ($r = 0.039$), triglyceride ($r = 0.31$) and BMI ($r = 0.28$) were evident. Negative family history in mood disorder, late age of onset, levels of triglyceride and BMI were determined as the predictors of diabetes (**OR** = 11, 2.3–10, $p < 0.001$; **OR** = 6.8, 1.3–4.8, $p = 0.009$; **OR** = 6.1, 1.3–4.7, $p = 0.014$; **OR** = 4.3, 0.8–2.1, $p = 0.038$).

Conclusion: As a result, in bipolar cases with late age of onset and negative family history, diabetes diagnosis should be kept in mind and investigated on.

Keywords: first episode, bipolar disorder, diabetes

P121

The relationship of internalized stigmatization in bipolar disorder with quality of life and treatment compliance

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Objective: This study aims to investigate the impact of the internalized stigmatization on quality of life and treatment compliance in bipolar cases.

Methods: 100 cases diagnosed as bipolar disorder type I according to DSM-IV were evaluated consecutively. For evaluation, being in remission period was set as a criterion for these cases. Patient interview was carried out with SCID-I in bipolar cases. The internal experiences of the mental illness stigma in the cases are evaluated by The Internalized Stigma of Mental Illness Scale-ISMI. In order to investigate the treatment compliance in bipolar cases, The *Mood Stabilizer Compliance* Questionnaire (MSQC) and to examine the quality of life World Health Organisation Quality of Life Assessment-Bref (*WHOQOL-Bref-TR*) is applied. The insight of the cases about their mental illness is explored by McEvoy's the *Mood* Disorders *Insight Scale* (MDIS).

Results: In this study, the internalized stigmatization of the bipolar cases is found to be at the rate of % 46. Stigmatization perception found frequently in the seasonal patterns and rapid cycling. In the part which the doctor-patient relationship perception and the beliefs about mood stabilizers scores are investigated, there was no significant difference between the cases with or without internalized stigmatization. The results of The Mood Disorders Insight Scale supported these datas. The relationship between the internalized stigmatization and the insight is found to be moderately significant. In the study, individuals whose perception of internalized stigmatization was high, their quality of life is found to be influenced significantly negative. As the internalized stigmatization increased, the bipolar cases achieved autonomy in the recommended treatment. Mania, hypomania and mixed episod numbers did not create any difference with internalized stigmatization, though depressive episode numbers are found to be higher in the cases which have the perception of internalized stigma than which do not.

Conclusion: The treatment compliance is found to be influenced by the stigmatization perception.

Keywords: bipolar disorder, internalized stigma, treatment compliance, quality of life

P122

The effects of centralised and specialised outpatient intervention vs. standard treatment in the early course of bipolar disorder: a randomised clinical trial

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Background: The risk of relapse is high in bipolar disorder and increases as the number of episodes increases. Naturalistic follow-up studies suggest that the progressive development of the illness is not prevented with the present treatment modalities. It is not known whether centralised and specialised secondary care intervention initiated early after the onset of the disease can prevent the progression and thereby improve the prognosis.

Methods: A randomised clinical multi-centre trial comparing a centralised and specialised outpatient intervention program consisting of combined pharmacological and psychological intervention in a mood disorder clinic with standard decentralised psychiatric treatment. Patients discharged from their first, second, or third hospitalisation due to a manic episode or bipolar were randomised. The primary outcome measure was time to re-hospitalisation with an affective episode. Data on re-hospitalisation were obtained from the nationwide Danish Psychiatric Central Register. The secondary and tertiary outcomes were severity of depressive symptoms according to the Major Depression Inventory, adherence to medical treatment and satisfaction with treatment according to the total score on the Verona Service Satisfaction Scale-Affective Disorder (VSSS-A). These outcomes were assessed using questionnaires 2 years after discharge from hospital.

Results: A total of 158 patients were randomised to centralised and specialised outpatient intervention vs. standard decentralised psychiatric treatment. Results will be presented at the conference.

Keywords: early intervention, mood disorder clinic, bipolar disorder

P123

The neurocognitive profile in depressed therapy resistant bipolar disorder inpatients

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Introduction: Bipolar disorder (BD) is associated with cognitive impairment during mood episodes and in euthymia. Few studies have investigated the neuropsychological profiles in BD depression and the effects of clinical parameters on cognitive performance.
Objective: The aims of the study were to evaluate the neurocognitive profiles in treatment resistant, acutely admitted BD depression inpatients and to assess the associations between cognitive domains and clinical characteristics.
Methods: The data stems from the Norwegian Randomized controlled trial of Electroconvulsive therapy in treatment resistant BD depression. Study participants comprised 46 patients who suffered from a major depressive episode (MADRS ≥25) and met DSM-IV-TR criteria for bipolar I (n = 16) or bipolar II (n = 30) disorder. Neuropsychological functioning was assessed at baseline with the MATRICS Consensus Cognitive Battery (MCCB). Additionally we used the Norwegian versions of the Wechsler Abbreviated Scale of Intelligence (WASI) and the National Adult Reading Test (NART).
Results: The treatment resistant BD depression inpatients showed an impaired neurocognitive profile compared to the normal population. Speed of processing was the domain most severely affected with a mean score more than 1 SD below norms. 15% of the patients did not show impairment in any domain and 20% had impairments in all six domains. We found an association between age and cognitive decline, supporting a deteriorating process in severe BD suggested by other authors. The impact of other clinical parameters on neurocognition will be described on the conference. There was no significant difference between diagnostic groups (BP I vs. BP II) in premorbid IQ estimated with NART (112 vs. 114). We found bipolar I patients performing significantly lower on current IQ (WASI) than bipolar II patients (95 vs. 109, p < 0.01), indicating an IQ decline in BP I patients from premorbid to actual level.
Keywords: Bipolar disorder depression, neurocognitive profile, MATRICS Consensus Cognitive Battery

P124

Is CHRNA7 associated with childhood inattention of bipolar disorder?

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Background: It is known that bipolar disorder patients have attention deficit during even euthymic status. Bipolar disorder patients showed more childhood inattention and other ADHD (attention deficit hyperactivity disorder) like feature. The Alpha 7 nicotinic receptor (CHRNA7) gene has been known to play roles in attention and sensory gating and association between CHRNA7 gene and bipolar disorder has been reported. Therefore, we investigated a possible association between childhood inattention of bipolar disorder and CHRNA7 gene polymorphisms.
Methods: We included 122 patients with bipolar disorder (89 subjects of bipolar disorder type I, 33 subjects of bipolar disorder type II). Childhood inattention was measured by Wender Utah Rating Scale–Korean (WURS-K). All subjects were ethnically Korean. Genotyping was done for three intronic SNPs of CHRNA7: rs2337506 (A/G), rs6494223 (C/T) and rs12916879 (A/G). Analysis of association was done by UNPHASED version 3.1.4, free software for genetic statistics.
Results: Factor analysis was done for WURS to extract inattention factor from childhood ADHD like feature. Three factors were extracted: Impulsivity, Inattention and Depressive anxious mood. Allelic association tests revealed positive association between total WURS score and SNP rs6494223 (p = 0.043), factor score of impulsivity and SNP rs2337506 (p = 0.038) as well as SNP rs6494223 (p = 0.043). These positive associations were survived after 1000 permutation tests. Haplotypic association tests performed for total WURS and factor scores could not find any significant association. Factor score of inattention was not associated with any SNP or haplotype of CHRNA7.
Conclusion: We found CHRNA7 gene involved in childhood ADHD like feature, especially impulsivity of bipolar disorder patients. However, we could not find association between CHRNA7 gene and inattention in bipolar disorder. Further studies are necessary to clarify genetic role of CHRNA7 in attention of bipolar disorder.
Keywords: CHRNA7 gene, impulsivity, inattention, bipolar disorder

P125

The association between serum leptin, active ghrelin, adiponectin and metabolic syndrome in patients with bipolar disorder

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Introduction: Metabolic syndrome is a great concern in the course of treatment for bipolar disorder because metabolic syndrome is a major but modifiable risk factor for cardiovascular disease and diabetes and a contributor for mortality. We aimed to investigate the association between metabolic syndrome and serum leptin, active ghrelin and adiponectin levels in patients with bipolar disorder in Korea.

Methods: Metabolic syndrom was assessed according to the guidelines of the American Heart Association and National Heart, Lung and Blood Institute's adaptation of the National Cholesterol Education Program Adult Treatment Panel III, with modified waist circumference criteria by Korean Society for the Study of Obesity. Metabolic syndrome is defined by any three or more of the following criteria; (1) fasting plasma glucose: ≥100 mg/dL or drug treatment for elevated glucose, (2) serum triglycerides: ≥150 mg/dL drug treatment for elevated triglycerides, (3) HDL-cholesterol: <40 mg/dL males and <50 mg/dL in females, (4) blood pressure (BP): systolic BP ≥130 mmHg or diastolic BP ≥85 mmHg, or drug treatment for hypertension, (5) waist circumference: ≥90 cm for men, ≥85 cm for women. A total of 100 Korean bipolar patients were assessed for the diagnosis of metabolic syndrome and their serum leptin, active ghrelin and adiponectin levels were measured.

Results: Metabolic syndrome was found in 29%; 42.5% of men and 20.0% of women. Abnormality of waist circumference was reported most frequently for both sexes (57.5%). Male patients showed significantly higher serum leptin, active ghrelin, adiponectin levels than female. In both sexes, leptin levels were significantly correlated with higher waist circumference and BMI, which were negatively correlated with active ghrelin levels. Male patients with metabolic syndrome showed significantly lower active ghrelin levels than those without, whereas leptin and active ghrelin levels were not different according to the presence of metabolic syndrome in box sexes.

Discussion: Metabolic syndrome was frequent in patients with bipolar disorder and abnormality of waist circumference was the most frequent subcomponent of metabolic syndrome. Serum active ghrelin levels were lower in male patients with metabolic syndrome.

Keywords: bipolar disorder, metabolic syndrome, leptin, ghrelin, adiponectin

P126
Concurrent validity of the Korean version of the parent and adolescent general behavioral inventories

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Introduction: Mood disorders in children and adolescents manifest differently than in adulthood and are difficult to diagnose accurately. The Parent and Adolescent General Behavior Inventories (PGBI and AGBI) are considered to be promising to detect depressive, hypomanic and mixed symptoms in children and adolescents. We aimed to investigate the concurrent validity of the Korean version of the PGBI and AGBI.

Methods: The parents of 24 adolescents with depression or bipolar disorder (age range 12–17, 10 boys) completed the Korean version of the Schedule for Affective Disorder and Schizophrenia for Children (K-SADS), Parent-version Young Mania Rating Scale (P-YMRS), Child Behavior Checklist (CBCL) and 10-item PGBI. The adolescents performed the 76-item AGBI, Beck Depression Inventory (BDI) and Mood Disorder Questionnaire (MDQ).

Results: The PGBI score was positively correlated with the P-YMRS score ($r = 0.755$, $p = 0.005$). The AGBI depression subscore was significantly associated with the BDI scores ($r = 0.926$, $p < 0.001$). The AGBI hypomania/biphasic subscore was significantly associated with the BDI ($r = 0.877$, $p < 0.001$) and MDQ scores ($r = 0.666$, $p = 0.025$). Moreover, the PGBI score was positively correlated with the Somatic Complaints ($r = 0.633$, $p = 0.027$), Anxious/Depressed ($r = 0.662$, $p = 0.019$), Delinquent Behaviors ($r = 0.800$, $p = 0.002$) and Aggressive Behaviors ($r = 0.753$, $p = 0.005$) scores on the CBCL. The AGBI depression subscore was also significantly associated with Withdrawn ($r = 0.796$, $p = 0.003$), Anxious/Depressed ($r = 0.777$, $p = 0.005$), Social Problems ($r = 0.694$, $p = 0.018$) and Attention Problems ($r = 0.691$, $p = 0.018$) scores on the CBCL. The AGBI hypomania/biphasic subscore was also significantly associated with CBCL Anxious/Depressed ($r = 0.626$, $p = 0.040$) and Delinquent Behaviors ($r = 0.651$, $p = 0.030$) scores.

Discussion: Our results support preliminary evidence for the concurrent validity of the PGBI and AGBI and suggest that these measures can be used as valid tools to evaluate depressive and manic symptoms in adolescents. Further study is needed to examine concurrent and discriminant validity and reliability in larger sample.

Keywords: adolescents, bipolar disorder, depression, general behavior inventory

P127
Seasonality and circadian preference in patients with bipolar disorder and their unaffected siblings

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Introduction: Seasonal changes in mood and behavior were frequently reported in bipolar disorder (BD) and disturbances in circadian rhythm also seem to be implicated in the pathogenesis of BD. In our previous investigation, seasonality measured on a lifetime basis was prominently observed in BD. The purpose of the current study was to discern whether deviations in circadian preference also manifest in BD patients as a lifetime trait. Furthermore, we investigated those two cyclic characteristics in unaffected siblings of BD patients as candidates for the endophenotype of BD.

Method: Subjects were 102 clinically stable patients with BD, 30 of their unaffected siblings and 201 healthy controls. Seasonality was measured using the Seasonal Pattern Assessment Questionnaire (SPAQ). Circadian preference and sleep irregularity were assessed using the Composite Scale of Morningness and the Sleep Timing Questionnaire, respectively.

Result: The patient group exhibited significantly higher global seasonality score on the SPAQ and higher rate of seasonal affective disorder compared to both sibling and control groups. Differences in these measures were not observed between sibling and control groups. The circadian-preference, morningness and eveningness, did not significantly differ among three subjects groups. Compared to the control group, both patient and sibling groups showed significantly higher irregularity in good-night time during weekdays.

Conclusions: Seasonality and irregularity in sleep-wake cycle could be regarded as lifetime traits related to BD. Irregularity in weekday sleep cycle was also prominent in the unaffected siblings of the patients for which further investigation as a behavioral phenotype related to the vulnerability to BD is warranted.

Keyword: bipolar disorder, seasonality, circadian preference, sleep-wake cycle, unaffected siblings

P128

Intracerebroventricular administration of ouabain, a Na/K-ATPase inhibitor, activates tyrosine hydroxylase through extracellular signal-regulated kinase in rat striatum

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Background: Alteration in dopamine neurotransmission has been reported to be involved in the mania of bipolar disorder. Tyrosine hydroxylase (TH) is the rate-limiting enzyme that is crucial for dopamine biosynthesis and its activity is tightly regulated by phosphorylation at multiple N-terminal serine residues. Previously, we have reported that intracerebroventricular (ICV) injection of ouabain, a selective Na/K-ATPase inhibitor, induces hyperactivity in rats that mimics manic symptoms related to the activation of extracellular signal-regulated protein kinase1/2 (ERK1/2), which plays crucial roles in the modulation of TH phosphorylation.

Methods: We investigated the effects of ICV injection of ouabain on TH phosphorylation in rat striatum and the involvement of ERK1/2 in ouabain-induced TH activation.

Results: ICV ouabain induced an acute dose-dependent increase in locomotor activity and in TH phosphorylation in rat striatum. TH phosphorylation at Ser19 was significantly increased with 100, 500 and 1000 μM ouabain and phosphorylation at Ser31 and Ser40 was significantly increased with 500 and 1000 μM. We also found that ICV pretreatment with U0126, a specific MEK1/2 inhibitor, attenuated the 1000 μM ouabain-induced increase in TH phosphorylation at Ser19, Ser31 and Ser40, as well as the hyperactivity of rats. Moreover, the increased phosphorylation of TH (Ser19, Ser31 and Ser40) was maintained until 8 h after single administration ouabain was accompanied by increased phosphorylation of ERK1/2 (Thr202/Tyr204) and p90RSK (Thr359/Ser363).

Conclusion: These findings imply that TH activation of the ERK1/2 signal pathway could play an important role in ouabain-induced hyperactivity of rats, a mania model.

Keywords: Na/K-ATPase, catecholamine, mitogen-activated protein kinase, locomotor activity, bipolar disorder

P129

Reward learning in patients with bipolar disorder: findings from a probabilistic reward task

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Background: Bipolar disorder (BPD) is characterized by recurrent episodes of depression as well as mania or hypomania with intermittent euthymic phases. BPD patients often show excessive goal-directed and pleasure-seeking behavior during manic episodes and reduced hedonic capacity during depressive episodes, indicating that BPD might involve altered reward processing. As such, BPD subjects have been reported to show impaired reward learning in situations requiring integration of reinforcements over time. In this study, we examined characteristics of reward learning in BPD patients using a probabilistic reward task.

Methods: We recruited 23 euthymic patients with bipolar disorder and 47 healthy subjects for the probabilistic reward task. This task is a reward-based paradigm to produce a response bias, in which correct identifications of two ambiguous stimuli are differently rewarded. The other dependent measures were the response bias, discriminability, hit rate and reaction time.

Results: Unequal frequency of reward between two correct responses produced a response bias and the more frequently rewarded stimuli were preferentially selected. Relative to comparison subjects, bipolar patients showed a reduced acquisition of response bias toward the more frequently rewarded stimulus (p = 0.004). The overall reward learning was positively correlated with state and trait anxiety levels in bipolar patients (p < 0.01). No significant differences of discriminability, hit rates and reaction time were found between bipolar patients and controls.

Conclusion: These findings suggest that BPD patients may have deficits in reward learning related to anxiety.

Keywords: reward learning, probabilistic reward task, response bias, bipolar disorder

P130

Psychometric differences of hallucinatory experiences in psychotic and nonclinical population

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Background: In terms of psychosis prevention, it is important to identify and investigate the characteristics of hallucination-like experience of the non-clinical population compared to psychotic population. The psychometric properties of Korean version of Launay-Slade Hallucination Scale-Revised (LSHS-R) and the distribution of hallucinatory experience in clinical and nonclinical population were examined in this study.

Methods: A total of 248 nonclinical individuals (Male 121, Female 127) and 124 psychosis patients (Male 64, Female 60) diagnosed according to DSM-IV, completed the Korean version of LSHS-R and the Korean version of perceptual aberration scale (PAS). The internal consistency of LSHS-R was assessed for examining reliability. Comparison of endorsed items and distribution of total scores of LSHS-R and PAS were done between nonclinical population and psychosis patients. The correlation between PAS and LSHS-R was assessed to confirm validity of LSHS-R. Explanatory factor analysis with varimax rotation was performed for LSHS-R. Statistical analyses were performed using SPSS 15.0 for Windows (SPSS Inc., Chicago, Ill).

Results: The Cronbach's alpha was 0.902 for the entire study population, which confirmed good internal consistency. There was significant association between total PAS score and total LSHS-R score (Nonclinical population r = 0.537, p < 0.001; psychosis r = 0.459, p = 0.001). The item with highest scores for nonclinical individuals were item 1 (unrelated thoughts creep into my head), 3 (my thoughts seem very real), whereas for psychotic patients the item with highest scores were item 5 (the sounds from my daydreams feel vivid), 8 (have experienced hearing voice, but no one was there), 12 (have been disturbed due to the voices in my head). Nonclinical population showed distribution skewed toward low scores in total LSHS-R score (mean 5.75, SD 5.56, range: 0–26), whereas in psychosis patients the total LSHS-R scores were evenly spread out throughout entire range of the scores (mean 22.60, **SD** 10.05, range 0–44). The factor analysis with varimax

rotation showed that LSHS was composed of one factor for both nonclinical population and psychosis patients.

Conclusion: The study shows that the Korean version of LSHS-R is a valid and reliable tool in assessing hallucination proneness in nonclinical population. The results also suggest that although nonclinical population experience hallucinations, the nature of the experience may differ between nonclinical population and psychosis patients.

Keywords: hallucination, nonclinical population, psychosis, perceptual disturbance

P131

Increased whole blood brain-derived neurotrophic factor in healthy individuals with a family history of affective disorder: a case-control study

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Background: The brain-derived neurotrophic factor (BDNF) seems to play an important role in the course of affective disorders. We aimed to study the associations between BDNF in healthy individuals with and without a family history of affective disorder.

Methods: Whole blood BDNF protein levels were compared for healthy individuals with (n = 76) and without (n = 39) a family history of depression.

Results: Levels of BDNF were significantly increased in healthy individuals with a family history of depression (mean 35.7 ng/mL, **SD** 15.2) compared to healthy individuals without a family history of depression (mean 29.6 ng/mL, **SD** 11.2) (p = 0.02) also after adjustment of the effect of age and gender differences. Higher levels of BDNF were associated with increasing age (B = 0.32, 95% CI: (0.08–0.57), p = 0.01) and female gender (B = 5.1, 95% CI: (0.02–10.3), p < 0.05).

Conclusion: We found that, BDNF was increased in healthy individuals with a family history of depression when compared to healthy individuals without a family history of depression.

Keywords: affective disorder, genetic predisposition, healthy, brain-derived neurotrophic factor (BDNF), case-control

P132

An unexpected ultrasonographic finding in lithium treated patients: peripyramidal hyperechogenity

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Introduction: One of the adverse effects of lithium is on kidney. Many studies revealed the changes in glomerular filtration rate and the urinary concentrating ability. However, to our knowledge, none of the studies described ultrasonographic findings of patients undergoing chronic lithium treatment. The purpose of this study is to investigate both the renal functions and the morphological changes of the lithium treated patients.

Methods: This study was conducted in Affective Disorders Outpatient Unit of Ege University. We compared the urea,

creatinine and creatinine clearance (CC) values of 22 healthy controls with those of 82 bipolar or schizoaffective disorder patients who had been on lithium therapy for at least 3 months and have no suspicion of kidney disease. CC was calculated by the Cockroft-Gault formula by using age, weight and creatinine values. Ultrasonographic examination was performed with two experienced radiologists who are blind to the group or biochemical results of the subjects.

Results: Only one patient's creatinine value was above the normal limits. There are no significant differences in urea, creatinine or CC levels between the groups. Ultrasonographic examinations revealed that all kidney volume values were within the normal range and no one had hydronephrosis; one subject from the control group had kidney stones, one patient from lithium group had only one kidney and ten lithium treated bipolar patients had bilateral peripyramidal hyperechogenity.

Discussion: It is not surprising that there is no difference in renal functions between the groups; as the sample included the patients who are already examined regularly. However, the 'peripyramidal hyperechogenity' is an unexpected finding as it is not common in the adult ages. Prospective studies are needed to evaluate this finding as an imaging marker for lithium related kidney disease

Keywords: bipolar disorder, lithium, kidney, ultrasonography

P133

Thyroid abnormalities in lithium treated bipolar patients: a cross sectional study with healthy controls

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Introduction: Lithium has many effects on thyroid physiology. The most important action is the inhibition of thyroid hormone release which may result in the development of goiter. This study investigated the thyroid morphology, hormone levels and antibodies in lithium treated patients comparing with healthy controls.

Methods: This study was conducted in Affective Disorders Outpatient Unit of Ege University. We compared serum free thyroxine (fT4), thyroid stimulating hormone (TSH) levels; anti-thyroglobuline and thyroperoxidase antibodies presence; thyroid volume, nodule presence and prenchymal changes of 84 bipolar disorder patients who had been on lithium therapy for at least 3 months, with those of 22 healthy controls. The ultrasonographic examination of thyroid was performed by two experienced radiologists who are blind to the group or hormonal results of the subjects.

Results: fT4 and TSH levels were not statistically different between the groups. When the levothyroxine taking subgroup of the patients is excluded there was no difference. Besides, the presence of the thyroid antibodies were not statistically different between the groups. According to the ultrasonographic examination, lithium treated bipolar patients had goiter more than the controls (46.9% vs. 4.5%). Total thyroid volume was significantly greater in the patients than the control group (23 ml vs. 12.71 ml). Most of the patients have at least one thyroid nodule but there are no significant difference between the groups for nodule presence and parenchymal changes.

Discussion: To our knowledge, this is the first study using detailed thyroid ultrasonographic examination of lithium treated patients. Consistent with the literature we have found a high prevalence of goiter in the lithium treated patients. Besides, we have found a new finding which is a high prevalence of thyroid nodules in the patient

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group. Further large and prospective ultrasonographic studies are needed to investigate this effect.

Keywords: Bipolar Disorder, Lithium, Thyroid, Ultrasonography

P134
Bipolar disorder treatment: implications from the staging model perspective

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Introduction: Bipolar Disorder (BD) is a severe psychiatric disorder. Literature has been suggesting a disease progression. In order to define such progression a staging model for BD was proposed. There is evidence that the activity of BD is associated with peripheral biomarkers variations (Kapczinski, 2009). There is also evidence that earliest stages of BD are associated with more favorable response to treatment (Berk, 2011). Current guidelines of treatment consider only the acute clinical picture of patients with BD. The aim of this study is to investigate the current treatment of patients with BD in a psychiatric clinic specialized in mood disorders using the staging model perspective.

Methods: One hundred-thirty-six euthymic outpatients diagnosed with BD according to DSM-IV criteria were included. They were classified according to stage of BD as follows: Stage I- Well defined periods of euthymia without overt psychiatric symptoms; Stage II- Symptoms in inter-episodic periods are mainly related to comorbidities; Stage III- Marked impairment in cognition and functioning; Stage IV- Unable to live autonomously due to cognitive and functional impairment (Kapczinski, 2009).

Results: The number of drugs used to treat stage I patients with BD is smaller than to treat stages II, III and IV patients (p < 0.001). There were no differences between the number of drugs used to treat stages II, III and IV (p > 0.1). Stage I was treated mostly with mood stabilizers or atypical antipsychotics, both in monotherapy. Combination therapy always includes one mood stabilizer. Another mood stabilizer, typical or atypical antipsychotic and benzodiazepine were used similarly when prescribed as combination therapy to stages II, III and IV.

Discussion: Later stages of BD are associated with a clinical need for combination therapy. As treatment is offered according to the clinical response, staging model could provide more assertive therapies to symptoms remission management of patients with BD. Since treatment response could change with progression of BD, clinical guidelines would consider the staging model to better guide treatment effectiveness.

Keywords: bipolar disorder, staging, treatment

P135
Abstract Withdrawn

P136
Antipsychotic and antidepressant associations: effectiveness retrospective study in a psychiatric hospitalization unit

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Background: The limited response to monotherapy in mental disorders induces to the psychopharmacological association as an alternative.

Aims: To analyze types of antidepressant-antiosychotic associations, main indications and clinical efficiency in hospitalized patients.

Methods: Patients prospective Study in Unit of Hospitalization in 2009 who were treated by antidepressant-antipsychotic association independently from psychoactive drugs. There were used scales BPRS, ICGS and ICGM as a measure of clinical efficiency.

Results: 31, 5% of the admissions received association of antidepressant-antipsychotic. The principal diagnoses in Axis I were affective disorders (41.3%), psychosis and disorder for use of substances (14.5% each one) 51.7% had diagnosis in Axis II: disorder of personality not specified, followed by limit disorder of personality, having comorbility with Axis I in 47.6%. The most antidepressants used were Mirtazapina (30.9%), Venlafaxina (19.7%) and Escitalopram (18.6%); the most antipsychotic employed were: Quetiapina (43.5%); Olanzapina (32.3%) and Risperidona (11.9%). From the most antidepressant-antipsychotic associations used the outstanding ones are Mirtazapina-Quetiapina (12, 0%), Mirtazapina-Olanzapina and Escitalopram-Quetiapina (11, 2% each one), Venlafaxina-Quetianpina (9, 0%) and Venlafaxina-Olanzapina (7, 5%). The BPRS was globally different statistically (t 19, 78; p = 0.000): To the admission 46, 83 and to the discharge 33, 55.Individualized BPRS ITEMS except item 8 were different statistically. ICGS also different (t 20, 66; p = 0.000): To the admission 4, 40 and to the discharge 3, 26. ICGM to the discharge: in degree four: 36, degree three: 102, degree two: 96 and one: 34.

Conclusions: Antidepressant-antipsychotic association constitutes a usual medical practise. Used principally in re-admitted patients, with non-specified affective disorders of personality. The most employed ones: Mirtazapina-Quetiapina, Mirtazapina-Olanzapina, Escitalopram-Quetiapina. Effective, obtaining significant reductions in BPRS and improvements in ICGM and ICGS, with an average admission of 12, 9 days.

Keywords: psychopharmacological association, effectiveness

P137

Serum level of leptin, ghrelin, adiponectin according to mood status in patients with bipolar disorder

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Background: The association between serum leptin, ghrelin and adiponectin levels and metabolic syndrome has been observed. Some previous studies investigated the association between these adipokines and mood status of patients with major depressive disorder. But there were few studies in patients with bipolar disorder. We aimed to explore the association between leptin, ghrelin and adiponectin levels and mood status of patients with bipolar disorder
Methods: The 94 Korean bipolar patients were assessed fasting glucose, triglycerides, HDL-cholesterol, blood pressure, waist circumference, height and weight for the diagnosis of metabolic syndrome. And their serum leptin, active ghrelin and adiponectin levels were measured. For assess of mood status, we measured Hamilton Rating Scale for Depression (HAMD) and Young Mania Rating Scale (YMRS). The patients were divided to subgroup by mood status: euthymia and non-euthymia. Euthymia group was defined as HAMD score was < 7 and YMRS score was < 12. Non-euthymia group was defined as HAMD score was 7 and more and YMRS score was < 12.
Results: In male patients, non-euthymia patients were 32.5% (n = 13) in female patients, 57.4% (n = 31). Leptin, ghrelin, adiponectin level were higher in female patients. After adjusted with body mass index (BMI), the differences were still significant. Leptin, ghrelin and adiponectin level were not significantly different according to mood status. But after adjusted with BMI, only leptin level was significantly higher in non-euthymia group. There were no interaction between mood status and gender.
Discussion: This study is first study to investigate association between mood status and leptin, ghrelin and adiponectin. This study is cross sectional study and the patients were recruited to only one hospital. So, generalization of the results would be limited.
Conclusion: Leptin, ghrelin and adiponectin level were higher in female patients than male patients. Leptin level was significantly higher in non-euthymia group after adjusted with BMI.
Keywords: bipolar disorder, metabolic syndrome, leptin, ghrelin, adiponectin

P138

NF1A gene can be a susceptibility gene for seasonal pattern mania: a GWAS of bipolar disorder

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Objective: Using subphenotypes is an effective approach for genetic studies of complex diseases. Seasonal pattern of manic episodes may distinguish phenotypic subgroups of bipolar subjects that may also differ genetically.
Method: To this purpose we have performed a genome-wide association study using GAIN genotype data from the Bipolar Genome Study (BiGS) and bipolar subjects that were categorized as having either seasonally or non-seasonally patterned manic episodes.
Results: A bipolar case-only analysis identified three genomic regions that differed between seasonally and non-seasonally patterned manic episodes of bipolar disorder patients, The most significant association was in rs41350144 at 1q31, an intron of NF1A gene (p = 3.08×10^{-7}, **OR** = 2.27). Haplotype construction using three neighboring SNPs of rs41453448, rs1125777 and rs12568010 spanning 7549 bp showed more significant association (p = 2.12×10^{-7}, **OR** = 0.4).
Conclusions: These data suggest that genetic variants in the NFIA gene region may predispose to a seasonal pattern of mania of bipolar disorder.
Keywords: seasonal pattern, bipolar disorder, genome-wide association study (GWAS)

P139

Interaction of the DRD3 and BDNF gene variants in subtyped bipolar disorder

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Backgrounds: Bipolar disorder is a severe mental disorder with prominent genetic etiologic factors. Dopaminergic dysfunction has been implicated in the pathogenesis of bipolar disorder suggesting the dopamine D3 receptor gene (DRD3) as a strong candidate gene. Previous report also indicated the involvement of the brain derived neurotrophic factor (BDNF) gene in the etiology of bipolar disorder. In this study, we examined the association between the BDNF Val66Met and DRD3 Ser9Gly polymorphisms with more homogenous subtypes of bipolar disorder, bipolar-I and -II disorders. Because the expression of DRD3 is regulated by BDNF, we further examined the possible interactions between these genes.
Methods: Nine hundred twenty-six participants were recruited: 262 with bipolar-I, 434 with bipolar-II and 230 healthy controls. The genotypes of the BDNF Val66Met and DRD3 Ser9Gly polymorphisms were determined using polymerase chain reactions plus restriction fragment length polymorphism analysis.
Results: Logistic regression analyses showed a statistically significant main effect for the DRD3 Ser/Gly genotype (p = 0.011) and the Val/Met genotype of the BDNF Val66Met polymorphism (p = 0.038) predicted bipolar-II patients. Significant interaction effect for the BDNF Val66Met and the DRD3 Ser9Gly polymorphism was found only in bipolar-II patients (p = 0.004).
Conclusions: We provide initial evidence that the BDNF Val66Met and DRD3 Ser9Gly genotypes interact only in bipolar-II disorder and that bipolar-I and bipolar-II may be genetically distinct.
Keywords: gene, interaction, bipolar disorder, BDNF, DRD3

P140

Subjective and physiological emotional reactivity in normothymic bipolar patients

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Introduction: The normothymic phase in bipolar disorders is generally considered to be symptom-free, which is controversial. Many authors emphasize that residual symptoms, such as emotional reactivity disturbance, are under-evaluated. The aim of

this study was to compare emotional reactivity between normothymic bipolar patients and healthy controls.

Methods: We evaluated emotional reactivity in 26 normothymic bipolar patients and 30 controls, using an emotional induction method based on the viewing of a set of 36 pictures (12 negative, 12 neutral, 12 positive) extracted from the International Affective Picture System. We evaluated subjective emotional reactivity (valence and arousal) with the Self-Assessment of Manikin and physiological reactivity measuring the pupil response with an eye-tracking material.

Results: The dilation of the pupil was significantly lower in normothymic bipolar patients during the viewing of positive pictures (p < 0.05). However, no difference was found between normothymic bipolar patients and controls regarding the subjective emotional reactivity.

Discussion: Compared to controls, normothymic bipolar patients had less emotional reactivity to positive valence. This result is in coherence with the more frequent negative emotional bias (sadness, anxiety and anger) observed usually in bipolar patients. These preliminary results need to be replicated.

Keywords: bipolar disorder, emotional reactivity, emotions, pupil, affective pictures

P141
Valproate plus quetiapine combination therapy in maintenance treatment of bipolar disorder contributes more improvement than either used alone

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Background: Valproic acid (VA) and Quetiapine (QTP) are both recommended as monotherapy in maintenance treatment of bipolar disorder, but they are not fully effective in many patients when they are used individually. Evidence has shown that combined use of mood stabilizers and antipsychotics in the maintenance phase is more likely to prevent relapses. We aimed to investigate whether VA plus QTP in the maintenance treatment was better than they are used alone for improving cognition and brain activities.

Methods: After an open-label treatment and at least 4 weeks of clinical stability, thirty bipolar patients stabilized on VA monotherapy (plasma concentration 45–125 μg/ml), QTP monotherapy (150–600 mg/day, in flexible divided doses), or combination therapy (VA plus QTP) were followed up for up to another 4 months. Both resting ^{18}F-fluoro-deoxyglucose positron-emission-tomography and neuropsychological tests including attention, memory and executive function were arranged twice, baseline and end of 4 month.

Results: Twenty-five patients (12 on combination, 13 on monotherapy) completed 4-month follow-up. Compared to healthy subjects, bipolar patients had a fronto-thalamic-limbic-occipital dysregulation and presented worse visual attention and executive function, but not memory. The cognitive functions improved over 4 months' continuous treatment, yet executive

dysfunction remained. The enhanced cognitive functions were associated with a reversal of baseline fronto-occipital imbalance, hypoactivities in prefrontal cortex and anterior cingulum and hyperactivity in occipital cortex. VA plus QTP was superior to monotherapy for contributing more cognitive improvement and associated brain metabolic changes.

Discussions: Euthymic bipolar patients presents with executive deficits and a fronto-limbic-occipital dysregulation. Our results indicate that combination therapy with atypical antipsychotics (QTP) plus mood stabilizers (VA) is more likely to improve cognitive performance and to normalize the fronto-occipital imbalance than is either QTP or VA monotherapy. However, executive function still remained impaired in stable bipolar patients. These findings suggest that compared to other cognitive deficits, executive dysfunction might be a more stable trait marker in bipolar patients.

Conclusions: VA and QTP in combination work better than VA or QTP used alone, yet impaired executive function remained over time.

Keywords: bipolar; maintenance; remission; cognition; glucose metabolism

P142
Adjunctive methylphenidate therapy for patients with treatment-resistant bipolar depression

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Backgrounds: Mood stabilizers and antidepressants are often insufficient to alleviate depressive symptoms of patients with bipolar disorders. This naturalistic study aimed to evaluate the effectiveness of adjunctive methylphenidate treatment in patients with bipolar depression inadequately responsive to mood stabilizers.

Methods: A total of 85 patients with bipolar depression were treated with adjunctive methylphenidate up to 16 weeks. Data analyses were based on the intention-to-treat population. Clinical efficacy of adjunctive methylphenidate was assessed using changes in the Clinical Global Impressions-Bipolar Version-Modified (CGI-BP-M) scores. Time to methylphenidate discontinuation during 16-week period was calculated using the Kaplan-Meier estimate.

Results: Methylphenidate was started at a mean daily dose of 12.9 ± 8.2 mg. The mean dose was 15.7 ± 8.9 mg/day with a maximum dose of 12.9 ± 8.2 mg/day. A significant and sustained decrease in depression severity was found in patients with bipolar depression treated with adjunctive methylphenidate from week 1 onward. The discontinuation rate was 34.7% during 16-week study period. Adjunctive methylphenidate did not worsen manic symptoms in this sample population.

Discussion: Methylphenidate add-on led to a significant improvement of depression severity in patients with treatment-resistant bipolar depression. Adjunctive use of methylphenidate was safe and generally well-tolerated.

Conclusion: The potential benefit of adjunctive methylphenidate therapy for bipolar depression was suggested.

Keywords: methylphenidate, bipolar depression, adjunctive therapy

P143

What is the contribution of executive dysfunction to the cognitive profile of bipolar disorder? A well – controlled direct comparison study

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Background: Large scale neuropscycholopgical studies of patients with bipolar disorder have reported verbal memory and executive function deficits that persistent during remission. A recent analysis by Thompson et al. (2009) indicated that verbal memory deficits could be entirely explained by the statistical variance attributed to primary executive function deficits. This study tests the hypothesis that verbal memory deficits in bipolar patients are largely the result of executive difficulties by direct comparison of verbal neuropsychological tests primarily differing in their executive load as well as examining potential interactions with medication status.

Methods: 33 Bipolar I patients not taking medication, 40 Bipolar I patients taking medication and 28 healthy controls were compared on measures of IQ, verbal fluency, category fluency, verbal recall and category prompted recall.

Results: After controlling for IQ, performance on tasks that involved additional executive involvement was significantly worse. Medication had a small but reliable effect on cognitive performance.

Conclusions: The results provide support the hypothesis that the most significant source of cognitive impairment in bipolar is from executive impairment and verbal memory deficits may arise as a result of this, rather than from primary impairment to core verbal memory mechanisms.

Keywords: bipolar disorders, memory, neuropsychology, executive function

P144

Descriptive features of mixed bipolar outpatients

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Background: Mixed episodes in bipolar disorder have been widely discussed. When the Viena school included dysphoria as a third affective state, mixed episodes became relevant and turned into a specific entity today included in the DSM-IV. Mixed episodes have been conceptualised as affective states different from mania, as a subtype of mania with specific characteristics and as transitional states between mania and depression. Due to the limited empirical data, in the upcoming DSM-V mixed disorders will be excluded as specific episodes and will appear as a description of the bipolar episode.

The present study aims to review sociodemographic and clinical features in patients who have suffered mixed episodes in an outpatient department.

Methods: Within all patients visited at least once in the Santa Coloma's Mental Health Centre from 2005 to 2009, we have recruited all patients with a type I bipolar disorder who have at least suffered one mixed episode. We have identified 31 patients and we have retrospectively reviewed sociodemographic and clinical features. Four patients have been excluded because of missing data.

Results: We have identified that a 59% were women, 44% were married, 48% were legally disqualified, 26% had problems with the

primary group, 52% had a first depressive episode, 11% had a first mixed episode, 26% had previous suicide attempts, 70% had incongruent psychotic symptoms, 72% had at least one hospital admission, 37% had comorbidity with alcohol, 33% with other toxics and 26% with axis II.

Discussion: Despite the small sample size these results suggest a tendency and are congruent with the hypothesis that women are more proned to suffer mixed bipolar disorders than men. There are specific clinical characteristics in this disorder (incongruent psychotic symptoms, high comorbidity with alcohol, toxics and axis II) and has an important clinical impact (high disqualification and hospital admissions). These data suggest that mixed episodes would have specific characteristics different from pure mania and worse prognosis. To evaluate this we will compare, in a second phase of this study, the studied sociodemographic and clinical features in patients with mixed episodes and patients with pure mania.

Keywords: mixed episodes, bipolar, clinical, sociodemographical

P145

Prescription patterns in bipolar disorder women

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Introduction: Although prevalence of bipolar disorder seems to be similar in both genders, some differences have been described regarding clinical characteristics in women (for example, more bipolar II diagnosis and depressive episodes). These differences could be reflected in a different prescription pattern of antidepressants and mood stabilizers in bipolar women, compared with men.

The main objective of the present study is to describe frequencies of prescriptions to bipolar disorder women in an Argentinean sample and to analyze possible relationships between this practice and some of their clinical features.

Methods: Clinical and pharmacological treatment data were systematically collected from outpatients with bipolar disorder type I, II or not otherwise specified (NOS) in eleven participating centers during a six- month period. Diagnoses were made according DSM-IV criteria and applying the MINI 500 structured interview. DSM IV Bipolar NOS diagnoses were extended by guidelines for bipolar spectrum as proposed by Akiskal and Pinto.

Results: The sample (n = 341) consist of 229 women (67.2%) and 112 men (32.8%). Women represent 71.3% of non-bipolar I diagnosis (bipolar II and NOS) and 62.1% of bipolar I diagnosis (female/male ratio of 2.5:1 and 1.6:1 respectively). Regarding medications, women received antidepressants more frequently than men (43% vs. 28%), but were medicated less frequently with mood stabilizers (84% vs. 91%). There was no difference in prescription of antidepressants between sex in patients currently depressed, but women with history of depression received more antidepressants compared with men.

Discussion: In this sample, women received more often antidepressants and less frequently mood stabilizers compared with men. This could be associated with a more frequent diagnosis of bipolar disorder type II or NOS, which may have clinical presentation with more depressive episodes and perhaps more history of depressions.

Keywords: bipolar disorders, women, antidepressant prescription

P146

The International Mood Network (IMN): a network created to foster research and improve practice in the treatment of depressive and bipolar illnesses

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Introduction: Multicenter studies are needed since some of the most pressing research questions require hundreds, even thousands, of patients to have adequate statistical power. Without several years of patient enrollment, such sample sizes are beyond the reach of most individual institutions. The IMN is being created to overcome this problem and welcomes sites from the US and abroad to participate without any requirements except a wish to contribute to multicenter research on mood disorders.

Methods: The IMN will establish a joint international research database, accessible to all its participating sites. To date, 40 international sites have agreed to participate. The entry of anonymous patient data will be based on a common core set of variables; 'The IMN Baseline Harvest Sheet' and supplemented with optional additional data required for specific projects. At the start of the network, all participating sites will be asked to provide data on 10–50 subjects. The IMN is in its initial phase and is currently working on establishing the infrastructure for its research network. This work is being conducted under the auspices of a steering committee with representatives from sites in North-America, Europe, South-America and Asia (co-authors of this poster). All necessary formal procedures at the respective participating sites are currently in preparation. By pooling data from multiple sites, one will be able to conduct large sample observational and cohort studies. The IMN also plans to seek funding to conduct randomized clinical trials in the field of mood disorders.

Results (present status): Initial cross-sectional observational results from the first 40 sites in the IMN will be presented. The expected sample for the initial analysis will be about 500 subjects or more. Clinical and demographic characteristics of treatment for depressive and bipolar patients will be provided. Cross-cultural comparisons will be made.

Discussion: The IMN will be committed to being user-friendly for its component sites. Data will be openly accessible to all participating sites via the IMN website and assistance with data analysis will be provided. The only goal of IMN members will be to advance our knowledge collaboratively. The IMN will not be limited to focus on academics, but will also provide a forum for clinicians who have active large clinical practices to be able to analyze and publish data from their clinical work. It is thus hoped that the IMN will serve as an important means for collaboration between researchers and clinicians.

Keywords: international network, mood, database

P147

Add-on memantine to valproate treatment increase HDL in recently depressed patients with bipolar II disorder-a placebo-controlled 12-week study

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Objective: Memantine is an uncompetitive NMDA receptor antagonists which has exhibited antidepressant-like and mood stabilizing effect as an augmenting agent. Studies also found memantine to be effective in reduction of binge episodes and weight. We investigated whether adding memantine to valproate (VPA) is more effective than VPA alone for treating BP-II depression and improve the metabolic profile.

Methods: This was a randomized, double-blind, controlled study. BP-II patients undergoing regular VPA treatments were randomly assigned to groups given either add-on memantine (5 mg/day) (n = 62) or placebo (n = 73) for 12 weeks. The Young Mania Rating Scale (YMRS) and Hamilton Depression Rating Scale (HDRS) were used to evaluate clinical response. Height, weight, waist circumference, blood pressure, fasting serum glucose, fasting total cholesterol, high-density lipoprotein (HDL), low-density lipoprotein (LDL) and triglycerides were followed regularly. To adjust within-subject dependence over repeated assessments, multiple linear regression with generalized estimating equation methods was used to analyze the effects of memantine on clinical performance.

Results: No significant difference in change of YMRS and HDRS was found between VPA + memantine and VPA + placebo groups. Although no significant difference in change of most metabolic indexes was found between the VPA + memantine and VPA + placebo groups, we found that VPA + memantine group was associated with significant increase of HDL (p = 0.020) compared to the VPA + placebo group.

Conclusions: We conclude that add-on memantine to VPA treatment of BP-II depression may increase blood level of HDL.

Keywords: bipolar II disorder, memantine, treatment, HDL, valproate

P148

Risk scale bipolar disorders – usefulness in primary care

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Background: The joint prevalencia of all the bipolar disorders has been valued cecana to 2.6% of the population. There are in the habit of being familiar precedents well of two-pole disorder or of another type of mood disorder. Also they recover an important paper in the psycopathology of the disorder. The objective of study is to propose a scale of risk for the development of bipolar disorder, departing from the determination of variables associated with his diagnosis.

Methods: It will be considered to be a population to all the subjects by diagnosis of bipolar disorder, attended, in stable phase, in an equipment of mental health of urban area, being includes, previous informed assent, throughout 1 year.

There will be registered tools of basic psychometry, universal variables, related to familiar precedents related to disorders of the spirit, antedecentes personnels related to disorders of the spirit, genograma relative, previous medical pathologies and consumption of related medicaments, number of episodes of depression, hypomania or both, duration of the same ones and received treatments. Also comorbidities current.

Results: The statistical analysis of results was fulfilling with the program SSPS 15.0.Variables will decide for descriptive statistics, as well as estimations of percentage of occurrence of variables that are described as factors of risk for the appearance of the bipolar disorder as variable dependent.

Conclusions: These estimations will be represented by means of odds ratio (OR). Later to his estimation and depending on the analysis of logistic regression multivariant, there will weight influences of OR's determinations for every variable in relation to variable result by means of weighting and puntaje, expressed in table or scale of risk. Being precise with posteriority, the validation and estimation of the above mentioned scale of risk, with the determination of his specificity and sensibility to discriminate against the existence of the disorder, by means of centiles ideal for his confirmation.

Keywords: bipolar, disorder, risk, primary care

P149

An Egyptian comparative study of patients with bipolar disorder and those with unipolar recurrent major depressive disorder from a personality perspective

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Background: The challenge of an under diagnosed disorder, tilting toward another, cannot be overemphasised. In Bipolar disorder, the potential consequences of misdiagnosis can adversely affect long term prognosis by causing destabilization of mood and to treatment resistance. It is clinically desirable to recognize or at least suspect bipolar depression at an early stage of bipolar illness. The aim of the work was to test the utilizabilty of personality profile to distinguish between the two types of disorder: Unipolar depression vs. Bipolar Depression.

Methods: Sixty patients were recruited for the study diagnosed clinically and confirmed by SCIDI. Eysneck personality questionnaire (EPQ), SCID II-PQ and SCID II detailed structured clinical interview for axis II were administered. Patients with first episode MDD without history of mania or hypomania were excluded.

Results: Fifteen % of the total participants had diagnosable personality disorder on DSM IV. On the EPQ, the introversion score was significantly higher in the MDD group (p = 0.014). According to SCID II, mixed personality disorder was the most common disorder in the two groups, while narcisstic personality disorder (23%) followed by borderline was the highest for bipolar depression. In recurrent MMD, obsessive (21%) were the most common personality disorders found. Passive aggressive personality disorder was more signifanctly found in MDD (p = 0.011) than in Bipolar disorder.

Conclusion: Cross sectional assessment of personality during a depressive disorder may be a prophylactic method to protect patients from a shift. Follow up studies are needed aiming at confirming the course, prognosis and March of the process of illness. It is highly recommended that a personality screening is conducted when assessing Depressive disorder using simplified methods.

Keywords: bipolar depression, recurrent MDD, personality, mixed personality disorder

P150

Risk of recurrence of bipolar disorder in postpartum periods: a retrospective study of 374 female patients

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Introduction: The postpartum period is a time of increased risk of recurrences in women with bipolar disorder. The aims of this study were to evaluate the frequency of postpartum episodes in bipolar women with children and to investigate the relationship between postpartum episodes, type of bipolar disorder (I or II) and type of bipolar cycle.

Methods: This retrospective investigation was performed by reviewing the charts of 374 women with a diagnosis of bipolar disorder I or II admitted to the Mood and Anxiety Disorders Unit of the Department of Neuroscience, University of Turin, from January 1995 until December 2009.

Results: 276 women with children and have been considered for the data analysis. All pregnancy had been concluded without any mood stabilizer treatment. The mean age at onset of bipolar disorders was 28.0 ± 7.8 years and 53.3% of the sample was bipolar II. An irregular type of bipolar cycle (IRR) was in 128 (46.4%) patients, while 84 (30.4%) and 64 (23.2%) patients respectively had a depressive-manic (DMI) and a manic-depressive (MDI) bipolar cycle. Among bipolar patients with children, 207 (75.0%) had at least one recurrence during the post-partum period. the percentage of women experiencing a depressive episode during postpartum was higher (79.7%) than other episodes (2.9% hypomanic, 13.5% manic, 3.9% mixed). Both (hypo) manic (or mixed) and depressive postpartum episodes were significantly associated with bipolar I disorder diagnosis and with lower age at onset of bipolar illness; (hypo) manic or mixed postpartum episodes were also associated with MDI cycle. The recurrence rates of postpartum episodes were higher after subsequent pregnancies: The recurrence rate of patients with more than one postpartum episode was 86.5% (n = 45) and exclusively of the same polarity.

Discussion: The relative risk during postpartum comparing treated patients with non-treated patients remains uncertain.

Keywords: postpartum, bipolar disorder, bipolar cycle, women, childbearing years

P151

Bipolar affective disorder and substance use: the dual diagnosis in treatment seeking patients experience from chronic conflict zone, Kashmir, India

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Introduction: Interest in the study of co-occurrence between mood, anxiety disorders and substance use disorders has grown tremendously in past decade and a half. It has become clear that co-occurrence of these disorders is common and has definite impact on treatment of dually diagnosed patients.

Methods: Total of 561 Patients registered in the outpatient department of psychiatric diseases hospital, Srinagar were screened by MINI PLUS for comorbid Axis I psychiatric disorders.

Results: Total of 561 substance use disorder patients were included in the study, out of which 62.56% (n = 351) patients had an associated psychiatric disorder. Concurrent BPAD as dual diagnosis was present in 23.64% (n = 83) patients. The age of

cases ranged from 19–55 years with mean age 27.17 years $\pm$ S.D $\pm$ 5.23. The maximum number of patients 39.75% (n = 33) belonged to 19–26 age group followed by 30.12% (n = 25) 27–34 years of age group. This study was dominated by male sex as there were 63.85% (n = 53) males and 36.14% (n = 30) females. Graduates and postgraduates constituted 48.84% (n = 41) followed by matriculates 39.75% (n = 33) and illiterates constituted only 10.84% (n = 9) of our dually diagnosed Substance Use Disorder and BPAD patients. 50.60% (n = 42) were government employees followed by 39.75% (n = 33) Laborers/ unemployed and 9.63% (n = 8) were students.
Discussion: The significant finding was lower percentage of BPAD patients in our substance using population. The reason for lower percentage of bipolar affective disorder patients in our study as compared to other studies from rest of the world could be alcohol being less commonly used substance in our valley, as it's not a socially approved beverage in this part of the world. In addition there are many studies which show strong relationship between co-occurrence of alcohol use and BPAD. This further establishes the fact that there is a strong co-relation between alcohol use and BPAD.
Key Words: substance use, comorbidity, BPAD

P152
Pregnancy planning and reproductive health care in women with bipolar disorder

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Background: Women with bipolar disorder (BD) are considered a group at risk of practicing unsafe sex and having unplanned pregnancies (UP). However, reproductive health and family planning in women with BD has not been systematically studied. Objective of this study was to investigate reproductive health measures of women with BD diagnosis in usual treatment condition.
Methods: 63 euthymic women, with BD type I, II or not otherwise specified diagnosis, were included and were matched with a control group of 63 healthy women. Demographic and clinical data and structured reproductive health measures (previous history of reproductive events, reproductive care during the euthymic period, and level of planning of every pregnancy) were obtained and compared with control group.
Results: No differences were found in reported current contraceptive use or in frequency of gynecological visits during euthymia. A significantly higher frequency of BD women with previous history of pregnancies reported having had electively interrupt pregnancies when compared to control group (BD = 41.9% vs. controls = 13.5%; p = 0.008). Level of planning of pregnancies and age of pregnancies were lower between BD women. UP were more frequent in BD group.
Conclusions: Euthymic BD women in usual treatment conditions keep an adequate reproductive health care. The previous adverse reproductive history of BD women underscores the need of more awareness between health professionals of sexually risky behaviour when unstable illness.
Keywords: bipolar disorder; women; reproductive health; unplanned pregnancy

P153
Advancing stage of female reproductive life associated with bipolar illness exacerbation

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Objectives: Late perimenopause and early postmenopause confer an increased risk of depression in the population, yet bipolar disorder mood course during these times remains unclear.
Methods: Clinic visits in 519 premenopausal, 116 perimenopausal including 13 women transitioning from perimenopause to postmenopause, and 133 postmenopausal women with bipolar disorder who received naturalistic treatment in the multisite STEP-BD study over 19.8 $\pm$ 15.5 months were analyzed for mood state. History of postpartum and perimenstrual mood exacerbation and current hormone therapy were evaluated as potential mood predictors.
Results: Advancing female reproductive stage (premenopause, perimenopause, and postmenopausae) was significantly associated with percent of visits decreasing in euthymia (29.3%, 27.0%, 25.0%, respectively, p < 0.05) decreasing in syndromal mood elevation (5.3%, 4.1%, and 3.0%, respectively, p < 0.001), and increasing in subsyndromal symptoms (47.3%, 50.7%, and 52.7%, respectively, p = 0.05). Thirteen women transitioning from peri- to postmenopause had a significantly greater proportion of visits in syndromal depression (24.4%, p < 0.0005) compared to premenopausal, perimenopausal and postmenopausal women, while depression in the latter three groups (18.1%, 18.1%, and 19.3%, respectively) did not differ. Perimenstrual and/or postpartum mood exacerbation, or hormone therapy did not significantly alter depression during perimenopause.
Conclusions: Advancing stage of female reproductive life was associated with bipolar illness exacerbation. Women transitioning from perimenopause to postmenopause had significantly greater depression than other female reproductive groups. Euthymia and mood elevation decreased with advancing female reproductive stage. Menstrual cycle or postpartum mood exacerbation, or current hormone therapy use, was not associated with perimenopausal depression. Future studies, which include hormonal assessments are needed to confirm these preliminary findings.
Keywords: bipolar disorders, depression, menopause, reproductive stage

P154
Treatment-resistant bipolar depression (TRBD): definition and therapeutic strategies

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Introduction: Depressive polarity has been neglected for a considerable time. Today much data supports the idea that depression (the major depressive relapses or the subdepressive chronic syndrome) worsens the long-term outcome of the bipolar disorders (even for type I) and impairs the patient's quality of life.
Methods: We will overview the attempts to define Resistant-Treatment Bipolar Depression (TRBD). The Sach's definition of the unipolar treatment-resistant depression (resistance to two courses of antidepressant treatment) was extended by Gitlin *et al.*

to mood-stabilisers. Yatham *et al.* preferred to limit the definition of the TRBD to lithium resistance. More recently, Pacchiarroti *et al.* proposed to define the TRBD as a six-week lithotherapy resistance or 6 week lamotrigine combined with an other moodstabiliser resistance, or a resistance to 600 mg of quetiapine treatment which has been administrated for at least 6 weeks.

Discussion: According to the latest guidelines (CANMAT and ISBP) we will also discuss the therapeutic strategies (for acute and maintenance management) including: the association of mood-stabilisers, the place of antidepressants (IRSS, IMAO, TCA), of antipsychotic drugs (first and second generation), of Electroconvulsivotherapy and of the novel therapeutics agents (such as bupropion, topiramate, eicosapentaenoic acid, riluzole, Nacetyl-cysteine, omega3-fatty-acids).

Keywords: treatment-resistance, bipolar depression, pharmacological treatment

P155
GROUP-based trajectory modeling (GBTM): a good model for understanding patterns of symptom change in acute bipolar mood episodes

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Background: Pattern analysis has proved important in aiding our understanding of trajectories of symptom evolution in clinical populations such as those treated with antidepressants or antipsychotics. We explored the utility of group-based trajectory modeling (GBTM) in defining patterns of short-term outcome in acute episodes of bipolar disorders.

Method: In a naturalistic observational study, we used GBTM to define trajectories of symptom change in 118 bipolar cases recruited during an acute DSM IV episode: major depression (56%), mania or hypomania (26%), and mixed states (18%). Symptoms were assessed weekly for a month using the MATHYS, a self-report clinical measure that allows assessment of mood, cognition, behavior and activation levels independent of episode polarity.

Results: Four trajectories of symptom change were identified. At baseline, two of these began with MATHYS scores < 100 (indicative of inhibition); one of these trajectories showed persistent inhibition whilst the other demonstrated a curvilinear pattern of improvement. The other two trajectories both had baseline MATHYS scores > 100 (being distinguished from each other by level of activation), both showed linear shifts in symptoms towards euthymia over time.

Conclusion: The GBTM approach allows different trajectories of improvement to be distinguished within a heterogeneous sample of acutely unwell bipolar cases. Bipolar depression cases were distributed approximately equally between trajectories that commenced with inhibition and activation, highlighting the potential importance of techniques such as GBTM in response pattern analysis.

Keywords: mood, trajectory, inhibition, activation, acute episode

P156
Interest of multifamiliy psychoeducation groups

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Background: The current international recommendations for the treatment of bipolar disorder emphasize the important role of psychoeducation. Moreover, many studies have shown positive impact of such support on the course of the disease (Colom *et al.*, 2003, 2009). Most research is focused on psychoeducation to patients however few of them focused on families (Miklowitz, 2004). Yet beyond the acceptance of diagnosis, this disease leads to damage in everyday family as well objectives than subjective ones (Reinares et Vieta, 2004). The disorder and its characteristic are therefore influence the family ecology and the family in turn has an influence on the course of the disorder. This observation encouraged to advise an appropriate involvement of the family in care. No study, at present, does the interest groups involving patients and families. But multifamily group, of grouping several families with an identified patient around a given pathology and with therapeutic purposes, showed interest in other diseases (Cook-Darzens, 2007).

Aim: The objective of this research is to demonstrate the value of multifamily psychoeducation for families and patients with bipolar disorder.

Method: A total of 59 participants were enrolled in our preliminary study, 48 of them were patients and 11 were families. Participants were recruited through the psychiatric hospital of Bordeaux in France during the last 5 years. The design of the study proposes 2 times of evaluation: the first one is just before the psychoeducation session and the second one is just after the psychoeducation. Questionnaire on knowledge about bipolar disorders, on satisfaction of life and on quality of life (WHOQOL-26) were proposed.

Results: Show a significant increase in the sample of knowledge about bipolar disorders, on satisfaction of life and on quality of life between before and after psychoeducation sessions. Whereas the increase concern quality of life for patients, satisfaction of life is concerned for families.

Discussion: This preliminary study shows that multifamily psychoéducation have an interest for patients and families both. Multifamily group have an educational dimension, with transmission of knowledge on the disease and have psychological dimension with improvement of daily life. Moreover we can propose some indication for inclusion in a multifamily group.

Keyword: multifamily group, psychoeducation

P157
Reproductive characteristics of female outpatients of childbearing age with affective disorders

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Introduction: Reproductive health of women with psychiatric disorders has been poorly studied. Affective disorders are prevalent in women during childbearing age. This needs special attention by health professionals, taking into account issues

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relating to contraception, family planning, and potential risks associated with the disease and its treatment in pregnancy and postpartum. The aim of the present study is to describe some reproductive and clinical characteristics of female outpatients with affective disorders, including contraception, use of potentially teratogenic treatments, and information about reproductive risks.
Methods: Eligible patients were women of childbearing age, diagnosed with bipolar disorder or major depression in ambulatory treatment at private health care centers of cities of La Plata and Buenos Aires (Argentina). Clinical diagnosis was made using structured diagnostic questionnaire for DSM IV TR (MINI 500). Participants completed a survey on reproductive data.
Results: 67 women of childbearing age (mean age 32) were included in this study. Most patients were of middle socioeconomic level, had received tertiary or college education and were single or divorced. 64.2% were diagnosed as bipolar and 35.8% as unipolar, and were with good levels of global functionality (mean GAF score of 70). Regarding treatment, antidepressants were indicated to 54% of the sample, followed by lamotrigine (42%), lithium (23%) and valproate (15%). The use of any contraceptive method was reported by 82% of the sample. Half of women had been informed about reproductive risks of treatment..
Discussion: Most of these patients in treatment for affective disorders were using some form of contraception in the year before the survey, probably related to good level of functionality, older age, and higher socioeconomic class and educational level. Even if a half of women had been informed about reproductive risks of psychopharmacological treatment, only very few were able to specify the source of information.The main limitation is the small sample size.
Keywords: bipolar disorder, depression, contraceptive

P158
Genetic contribution to individual variation in binocular rivalry, an endophenotype for bipolar disorder

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Introduction: Binocular rivalry occurs when conflicting images are presented in corresponding locations of the two eyes. Perception alternates between the images at a rate that is relatively stable within individuals but that varies widely between individuals. In addition, slow binocular rivalry has been demonstrated in bipolar disorder, a psychiatric condition with high heritability.
Methods: To see whether there is a genetic contribution to individual variation in binocular rivalry rate we employed the twin method and studied both monozygotic (MZ) twins (n = 128 pairs) who are genetically identical, and dizygotic (DZ) twins (n = 220 pairs) who share roughly half their genes.
Results: MZ and DZ twin correlations for binocular rivalry rate were 0.51 and 0.19, respectively consistent with a heritability of 52%.
Discussion: Further characterization of slow binocular rivalry as an endophenotype for bipolar disorder is now warranted in large clinical psychiatric and control populations, using high-strength stimuli, to examine potential clinical, gene-finding and sub-typing utility. The slow BRR trait may ultimately contribute to a more biologically based psychiatric nosology.
Keywords: bipolar, binocular rivalry, endophenotype, twins, genetics

P159
First manic episode patients – drug consumption, cognitive and general functioning: 1 year follow-up

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Objectives: 1. To compare cognitive functioning in patients with a first manic episode with healthy controls. 2. To explore baseline drug consumption in these patients and its relationship with general functioning after 1 year follow-up.
Methods: 42 patients with a first manic episode were included in the study and followed-up during 1 year. We included also 42 healthy controls matched by age, gender and socioeconomic status. A battery of neurocognitive tests were done both in patients and controls. We assessed drug use of patients and their general functioning 1 year after the manic episode through the FAST scale.
Results: Healthy controls showed a significantly better cognitive functioning in tests of processing speed, working speed, working memory, executive function and memory than patients. A 36.9% of patients were drug users at admission moment. Through a lineal regression model we found a relationship between this drug consumption at baseline and a worse general functioning of patients after 1 year (B = −13.8925, p = 0.029)
Conclusions: First manic episode patients showed a worse cognitive functioning than age, sex and socioeconomic status matched healthy controls. Drug consumption at baseline time in these patients was significantly related with a worse general functioning after 1 year of the first manic episode.
Keywords: bipolar, manic episode, cognitive functioning, drug, functioning

P160
Employment outcomes in people with bipolar disorder: A systematic review

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Background: Employment outcome in Bipolar Disorder is an under investigated but important area.We conducted a systematic review in order to identify the long term employment outcomes of people with Bipolar Disorder.
Methods: We searched Medline, PsychInfo and Web of Science databases and used a predetermined decision tree to select papers for full text usage.
Results: Out of 1410 abstracts retrieved, a total of 119 papers were selected for full text retrieval and 19 papers identified which met the full criteria for inclusion and data extraction. An assessment framework to assess the quality of papers was used to aid the analysis. There were very few high quality studies.
Discussion: Most studies with samples of people with established Bipolar Disorder suggest that over a period of 5–15 years of follow-up, approximately 40–60% of people were in employment. However Bipolar Disorder appears to lead to underperformance whilst in employment and 40–50% of people may suffer a slide of their occupational status over time. Those with a first episode of Bipolar Disorder had a higher rate of employment than those with multiple episodes.
Conclusion: Bipolar disorders damage employment prospects for sufferers in the short and longer term, but up to around 60% of people may be able to recover to the extent that they are in paid

work. Maximal damage to employment functioning may occur in the early phases of Bipolar Disorder. In comparison to those with Schizophrenia, people with Bipolar Disorder have a better employment outcome.

Keywords: bipolar disorder, employment, work, outcome, course

P161

The difference of morphometric abnormalities in unaffected first-degree relatives of bipolar and major depressive disorder

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Introduction: The evidence of neuroimaging studies in patients with mood disorders and unaffected first-degree relatives of the patients (FDR) suggests that abnormalities in the fronto-limbic structures are candidates of endophenotypes for mood disorders. However the difference of the findings in bipolar disorder (BD) and major depressive disorder (MDD) is unknown. The aim of this study is to exam the differences of volumetric abnormalities in FDR and patients with mood disorders.

Methods: Twenty-seven patients with mood disorders (10 with BD and 17 with MDD), 27 FDR (10 of BD and 17 of MDD) and 27 healthy control subjects (HC) were studied. This study was approved by IRB of Yamaguchi University Hospital. Trail making test (TMT) B-A was performed to assess frontal function. The images were acquired on a Philips 1.5 T MR system. Preprocessing was performed using DARTEL for voxel-based morphometry in SPM8.

Results: The patients with mood disorders had significantly lower scores of the TMT B-A compared to the FDR and HC (Ps < 0.05). The whole brain analysis revealed that left inferior frontal gyrus (IFG) and insula had a significant main effect of diagnosis ($x = -44$, $y = 15$, $z = -8$, $F = 18.4$, $k = 410$; $x = -45$, $y = 2$, $z = -2$, $F = 10.7$, $k = 60$, p$s < 0.001$). The patients with mood disorders had smaller GM volume of left IFG and insula compared to the HC and FDR (Ps < 0.01). The FDR of BD had smaller GM volume of left IFG and insula compared to the FDR of MDD (U = 39.0, P < 0.05; U = 28.5, P < 0.01, respectively). The FDR of BD and patients with BD showed negative correlation between the score of TMT B-A and the left IFG GM volume ($r = -0.63$, P < 0.05; $r = -0.64$, P < 0.05, respectively).

Discussion: The GM volumes of left IFG and insula showed differences between the patients with mood disorders and HC subjects and between the FDR of BD and MDD. The FDR of BD and patients with BD with smaller left IFG volume showed poorer frontal function. The results suggest that morphometric abnormality impacts on genetic vulnerability in BD greater than in MDD.

Keywords: first-degree relatives, bipolar disorders

P162

Bipolar disorder and eating disorder: a frequent comorbidity involving several treatment concerns

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Introduction: Recent data indicate clinical, biologic and familial overlap between Eating Disorders (ED) and Bipolar Disorders (BD). Patients with BD frequently have an earlier age of onset and more severe course, leading to important concerns about management.

Methods: We reviewed literature with 'pubmed' using medical subject heading terms 'eating disorder', 'anorexia nervosa', 'bulimia nervosa', 'binge eating'; each of these terms was combined with 'bipolar disorder'.

Results: The reviewed literature indicates that ED may influence in different ways both clinical characteristics and treatment of the illness. In patients with bipolar spectrum, lifetime ED comorbidity is associated with increased BMI and obesity, current illness severity and suicidal ideation, greater number of depressive episodes and residual symptoms, more psychiatric comorbidity than patients with no history of clinically significant ED. Moreover, comorbid BED or BN may be an important source of weight gain in bipolar patients. BD and ED may have some similar pharmacotherapy responses and evidence suggests that some mood stabilizing agents may have a therapeutic role in the treatment of AN and BN. However, some of the medications used to treat BD (e.g. mood stabilizing, atypical antipsychotics) might induce or exacerbate ED.

Discussion: There are high rates of ED and BD comorbidity, which is a correlate of an increased symptom load and illness burden. Recognition of comorbid ED in patients with mood disorder has important implications for treatment and interventions should be developed to minimize distress and suicide risk and to improve treatment outcome. Nevertheless, the prevalence and correlates of BD and ED comorbidity remain poorly understood and screening for ED in bipolar patients is warranted, as intervention may minimize distress and improve treatment outcome. Further perspective studies are necessary to better define the relationships between different ED and BD.

Keywords: bipolar disorder, anorexia, bulimia, binge eating

P163

Cognitive impairment in bipolar disorder: an endophenotype or a result of disease? A study in bipolar offspring

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Background: Patients with bipolar disorder (BD) frequently also have cognitive deficits, especially impairments in verbal memory and executive function. In children and adolescents with BD similar findings have been reported. It has also been suggested that cognitive impairment is a possible endophenotype for BD, thus also being present in first degree family relatives without BD. However, results in the literature are inconsistent and face many methodological limitations. In this study we assessed verbal learning and memory and inhibitory control (as a marker for executive function) in the adolescent and young adult offspring of parents with BD, both affected with lifetime mood disorders and without such a history as well as healthy controls.

Methods: This study is part of the ongoing prospective Dutch bipolar offspring study started in 1997. Over the past 12 years bipolar offspring were evaluated 4 times with the K-SADS PL/SCID. Gender and age matched healthy controls were recruited through the community via free publicity and were screened via an online screening. Verbal learning and memory were assessed with the Verbal Learning and Memory Task, inhibitory control with the Stroop Color Word Task) and psychomotor speed with the CANTAB, reaction time bipolar offspring (age range: 22–32 years) both affected with lifetime mood disorders (n = 49), and unaffected (n = 26) and healthy controls (n = 52).

Results: Groups did not differ significantly on the control variable psychomotor speed. Affected, but not unaffected offspring performed poorly on verbal learning and short term memory compared to healthy controls. Both affected and unaffected bipolar offspring did not perform worse on inhibitory control.

Conclusion: Our data that compared to healthy controls verbal learning and memory is impaired in bipolar offspring affected with lifetime mood disorders but not in the unaffected offspring, suggests that cognitive deficits as found in patients with BD is more likely a consequence of the illness than an endophenotype.

Keywords: bipolar disorder, offspring, cognition, high risk

P164
Yoga as a complementary therapy for the improvement of quality of life in perinatal women with bipolar disorder

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Objectives: Bipolar disorder (BD) in the perinatal period is correlated with increased risk of mood episodes (60–70%) and is often comorbid with other mental health disorders. While remission is used as a gauge to determine treatment efficacy, measurement of quality of life (QoL) is important in understanding overall well-being. Multiple treatment approaches are often required to restore functionality. Pharmacotherapy has been proven effective for BD I and BD II; however, several barriers may present themselves to accessing this treatment. Alternative therapies, often more cost-effective and easier to access, may be recommended by clinicians alongside standard treatment. Patients themselves tend to be receptive to adjunctive therapies, including yoga, which has been correlated with improved QoL in depressed populations. BD spectrum is characterized by fluctuating moods of mania and depression, with those experiencing BD I spending more time in the manic phase and those with BD II experiencing more bipolar depressive episodes. Thus, effective treatment for perinatal unipolar depression may indicate treatment possibilities for BD. The purpose of this study is to examine the current literature on the effect of yoga on BD perinatal populations and potential improvement in QoL.

Method: Relevant online databases were searched using a combination of words specific to yoga, depression, QoL, and BD in the perinatal period.

Results: Systemic reviews, clinical trials and case studies were reviewed based on specified selection criteria. Articles were grouped into those that used a bipolar patient population and those that only examined depressed patients. Findings showed reductions in anxiety and depressive symptoms, cortisol levels, stress, and an increase in QoL after yoga therapy. Results specific to a BD patient population were scarce and rarely included a perinatal sample.

Conclusions: While several studies have suggested that yoga is efficacious as a supplement to conventional therapy for depression, more research is required specifically in the treatment of BD as it may prove to have long-term benefits, including increased QoL, for those suffering from the illness.

Keywords: yoga, bipolar disorder, perinatal, quality of life, depression

P165
Efficacy of life skills training on reducing depressive symptoms in student population

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The purpose of this study was to investigate the efficacy of life skills training to reduce depressive symptoms in a student population in the city of piranshahr. For this reason, the investigator randomly selected 64 high school students.

Participants were selected based on multistage randomized sampling, which their depression scores on children depression scale was ranged 96 to 140 .these participants were randomly distributed between two groups A) experimental group and B) control group.12 session of group life skills training were conducted for the experimental group, and no intervention for the control group. Both groups complete children depression scale pre and post intervention. UNISEF educational life skills package was conducted.

Results of analyze of covariance showed that life skills training is effective in reducing depressive symptoms and significantly reduce social problems,

Keywords: self awareness, communication skills, decision making, problem solving skills

P166
Abstract Withdrawn

P167

Breaking bad news in bipolar disorders: an interview study of patients and physicians

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Introduction: Research on the breaking bad news mainly focused on cancer disease. Few studies investigated this issue in mental diseases like bipolar disorders. We are exploring factors influencing the breaking bad news process in bipolar disorders.
Methods: Patients and physicians involved in bipolar disorders are interviewed. Patients/physicians are considering eligible if they received/broke bad news in the few months preceding the interview. A semi-structured interview is conducted by psychologists. The main issues tackled are: needs, emotions, cognition, behavior/attitude before, during and after the breaking. TA will be used as data analysis.
Results: We are proceeding to do the interviews of both patients and physicians. We will display the first results of this study during the ISBD meeting.
Discussion: These qualitative data should help us to respond to the needs of the bipolar disorder's patients as well as those of the physicians who have to break them bad news.
Keywords: Breaking bad news, Bipolar disorders, Patients, Physicians

P168

Coping strategies for stressful situations in remitted bipolar patients

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Background: It is important to cope with stress properly, which may influence on the course of bipolar disorder. However, there have been few studies on coping strategies for stressful situation and associated factors in bipolar patients. This study aimed to investigate coping strategies in bipolar patients compared to those in controls, and to examine whether the levels of anxiety can influence on coping strategies.
Methods: Forty patients who met DSM-IV-TR criteria for bipolar disorder and forty controls that were matched by age and sex were included. Coping strategies and the levels of anxiety were measured by Coping Inventory for Stressful Situations (CISS) and Spielberger State-Trait Anxiety Inventory (STAI).
Results: Emotion-focused coping strategy was significantly higher in bipolar patients than controls ($p = 0.008$) State and trait anxiety scores were positively correlated with emotion-focused coping strategy in bipolar patients. (state: $r = 0.446$; trait: $r = 0.506$) There were no significant differences of coping strategies between the two groups after adjusting the levels of state and trait anxiety.
Discussion: Results in this study suggested that bipolar patients have a tendency to use emotion-focused coping strategy, which can be influenced by the level of anxiety. Large-scale study might be needed to confirm the findings of this study.
Conclusion: Bipolar patients may take emotion-focused coping strategies for stressful situation, which can be associated with the levels of anxiety.
Keywords: bipolar disorder, stress, coping strategies, anxiety

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Psychoeducation efficacy and symptomatic and functional recovery in severe bipolar disorder

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Background: Despite increasing recognition of the effectiveness of psychoeducation in the treatment of mood disorders, some factors related to severity of illness can negatively influence intervention results.
Objective: To evaluate the efficacy of psychoeducation in the symptomatic and functional recovery, and quality of life improvement, of severe bipolar disorder (BD) patients.
Methods: The sample comprised 55 patients with BD I and II in remission (Young Mania Rating Scale ≤ 6, and Hamilton Depression Rating Scale ≤ 7). Eighty percent of the patient sample had severe BD (6 or more mood episodes). Outpatients were randomly assigned to receive 16 sessions of psychoeducation (experimental group - EG) or 16 sessions of placebo without psychoeducation (control group - CG). Groups were evaluated at study baseline, midpoint, endpoint, and at 6 and 12 month follow ups.
Results: No significant differences between the groups was found for the variables evaluated (mood symptoms, functioning and quality of life), except for overall clinical improvement, subjectively perceived by EG subjects. Both groups showed a trend towards improved clinical global impression and quality of life (environmental). No reduction in mood symptoms or improvement in psychosocial functioning was observed. Psychosocial treatment compliance was positively correlated with global functioning, social adjustment, sociability, and global clinical impression. These factors emerged as predictors of poor adherence.
Limitations: The main limitations of the study were small sample size and disease severity.
Conclusion: psychoeducation seems to be ineffective to improve symptoms (mood episodes) or functioning but led to an improvement of clinical global impression scores and quality of life (environment domain). Specific psychoeducation programs need to be developed for severe bipolar patients.
Keywords: bipolar disorder, psychoeducation, psychosocial approaches, psychotherapy, adherence

P170
BDNF levels in first-degree relatives of patients with bipolar disorder: preliminary data

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Background: Brain Derived Neurotrophic Factor (BDNF) has a negative correlation with manic and depressive symptoms in Bipolar Disorder (BD); however, in late stages of illness it is also decreased during euthymia. Whether it becomes a trait marker as BD progresses or it is associated with vulnerability to BD remains unclear. This possible role of BDNF in BD
can be better understood through the study of first-degree relatives of patients with BD, who seem to share some of the biological susceptibility to BD.
Methods: This report presents preliminary data from the Bipolar Disorders Program of Hospital de Clínicas de Porto Alegre, Brazil. We compared BDNF serum levels in patients with BD (n = 10), their unaffected first-degree relatives (n = 14) and healthy controls (n = 30). Patients fulfilled DSM-IV criteria for BD – type I and were euthymic; also, first-degree relatives and controls were free of psychiatric symptoms.
Results: Demographic variables including gender and years of education were not significantly different across the three groups, except for age. Therefore with did an ANCOVA model including age as covariate. Serum BDNF levels (pg/uL, Mean ± **SD**) were significantly higher in healthy controls (34.42 ± 10.58) when compared to either patients (20.41 ± 8.02; p < 0.01) or first-degree relatives (16.28 ± 8.05; p < 0.05). There was no significant difference between patients and their relatives. Of note, patients were on medication and at different stages of illness, with a mean duration since first episode of 14.11 years (**SD** = 11.07).
Discussion: Our findings show decreased BDNF levels in first-degree relatives of patients with BD when compared to healthy controls. However, it needs to be considered in light of its limitations: small sample size and the fact that patients were all chronically medicated.
Keywords: BDNF, bipolar disorder, relatives, endophenotype

P171
The lifetime prevalence of bipolar disorders and the use of antidepressant drugs in bipolar depression in Italy

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Background: The prevalence of bipolar disorders in the community is still under debate and the prescription of ADs in Bipolar Depression appears to be another largely underestimated problem.
Objectives: To evaluate the prevalence of bipolar disorders by means of a screening instrument in seven communities within six regions of Italy and evaluate the appropriateness and number of prescriptions for ADs in Bipolar Depression.
Methods: Study design: community survey. Study population: samples randomly drawn, after stratification from the adult population of municipal records. Sample size: 4999 people from seven community centres within six regions of Italy. Tools:
questionnaire on psychotropic drug consumption, prescription, health services utilization; Structured Clinical In−terview NP for DSM-IV modified (ANTAS); Mood Disorder Questionnaire (MDQ); Training: interviewers were trained psychologists or medical doctors.
Results: 3398 subjects were interviewed (68% of recruited sample). Positivity at MDQ (MDQ+) was higher in males (3.4% vs. 2.8%) but the dif−ference was not statistically significant (OR = 1.2, p = 0.37). The association between MDQ+ and Major Depressive Disorder (MDD) was statistically significant for males (OR = 14.9, P < 0.0001) and females (OR = 8.3, P < 0.001); 30% subjects with MDQ+ and DE lifetime diagnosis were taking ADs.
Conclusions: The positivity prevalence at the MDQ+ was similar to community surveys in USA. The use of ADs in people with MDQ+ and MDD diagnosis needs to be taken into account.
Keywords: bipolar disorders, antidepressant drugs, lifetime prevalence

P172
Sub-threshold depression and antidepressants use in a community sample: searching anxiety and finding bipolar disorder

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Introduction: To determine the use of antidepressants (ADs) in people with sub-threshold depression (SD); the lifetime prevalence of mania and hypomania in SD and the link between ADs use, bipolarity and anxiety disorders in SD.
Methods: Study design: community survey. Study population: samples randomly drawn, after stratification from the adult population of municipal records. Sample size: 4999 people from seven areas within six Italian regions. Tools: Questionnaire on psychotropic drug consumption, prescription; Structured Clinical In−terview NP for DSM-IV modified (ANTAS); Hamilton Depression Rating Scale (HAM-D); Mood Disorder Questionnaire (MDQ); Short Form Health Survey (SF-12). SD definition: HAM-D > 10 without lifetime diagnosis of Depressive Episode (DE).
Results: SD point prevalence is 5.0%. The lifetime prevalence of mania and hypomania episodes in SD is 7.3%. Benzodiazepines (BDZ) consumption in SD is 24.1%, followed by ADs (19.7%). In SD, positive for MDQ and comorbidity with Panic Disorder (PD) or Generalized Anxiety Disorders (GAD) are associated with ADs use, whereas the association between a positive MDQ and ADs use, without a diagnosis of PD or GAD, is not significant. Only in people with DE the well-being (SF-12) is higher among those using first-line antidepressants compared to those not using any medication. In people with SD no significant differences were found in terms of SF-12 score according to drug use.
Conclusions: This study suggests caution in prescribing ADs to people with SD. In people with concomitant anxiety disorders and SD, it should be mandatory to perform a well-designed assessment and evaluate the presence of previous manic or hypomanic symptoms prior to prescribing ADs.
Keywords: sub-threshold depression, antidepressant drugs, anxiety, bipolar

P173
State related alterations of gene expression in bipolar disorder: A systematic review

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Background: Alterations of gene expression in bipolar disorder have been found in numerous studies. It is unclear whether such alterations are related to specific mood states. As a biphasic disorder, mood state related alterations in gene expression have the potential to point to markers of disease activity, and trait related alterations might indicate vulnerability pathways. This review therefore evaluated the evidence whether gene expression in bipolar disorder is state or trait-related.

Methods: A systematic review, using the PRISMA guideline for reporting systematic reviews, based on comprehensive database searches for studies on gene expression in patients with bipolar disorder in specific mood states, was conducted.

Results: A total of 17 studies were included, comprising 565 patients and 418 control individuals. Six studies evaluated intra-individual alterations in gene expression across mood states. Two of five studies found evidence of intra-individual alterations in gene expression between a depressed state and a euthymic state. No studies evaluated intra-individual differences in gene expression between a manic state and a euthymic state, while only one case study evaluated differences between a manic state and a depressed state, finding altered expression of seven genes. No study investigated intra-individual variations in gene expression between a euthymic state and multiple states of various polarities (depressive, manic, hypomanic). Intra-individual alterations of gene expression of the same genes were not investigated across studies. Only one gene (BDNF) was investigated across two studies, showing no alteration between bipolar patients and control individuals.

Conclusion: There is evidence of some genes exhibiting state-related alterations of expression in bipolar disorder; however, this finding is limited by the lack of replication across studies. Further prospective studies are warranted, measuring gene expression in various affective phases allowing for assessment of intra-individual differences.

Keywords: bipolar disorder, gene expression, systematic review, genetics, biomarker

P174
Clinical data on co-morbid bipolar symptoms in patients with internet addiction

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Background: Since it has first been described as a potential clinical disorder (Young, 1998), scientific research on Internet Addiction (IA) has expanded rapidly. Recently IA has been proposed to be included in the upcoming revision of DSM (Holden, 2010). Although there are still debates on nosological features, recent neuroimaging studies as well as reported symptoms (e.g. craving, withdrawal) suggest, that IA might be regarded as a non-substance related addiction disorder (Müller & Wölfling, 2011). Studies on IA often come to the conclusion, that there are high rates of co-morbidity with ADHD and affective disorders. However, to date there have been only few systematic investigations on the co-morbidity of bipolar disorders in patients with IA (Shapira *et al.*, 2000), though co-morbidity with bipolar disorders seems logical, comparing IA with a further non-substance related addiction, pathological gambling. Patients with IA and bipolar symptoms might represent a distinct clinical subgroup within IA and might require specific psychotherapeutic intervention.

Methods: For the period of 12 months patients with IA that were seeking treatment in a specialized outpatient clinic for behavioural addictions in Germany were screened systematically for bipolar symptomatology, using the Mood Disorder Questionnaire (MDQ; Hirschfeld, R. *et al.*, 2000). In addition, Symptom Checklist-90 Revised (Derogatis, 1983) was administered to measure associated psychopathological symptoms.

Results: Nearly one third of these patients exceeded cutoff in the MDQ, suggesting that they additionally suffer from hypomanic symptoms. These patients were of higher age, used distinct internet applications in an uncontrolled manner and showed increased additional psychopathology in eachs subscale of SCL 90R.

Discussion: The results indicate that bipolarity seems to be a common co-morbid disorder among patients with IA. These might represent a distinct subgroup within population of patients with IA.

Conclusions: With regard to assumable additional psychiatric burden among this subgroup of internet addicts, it is reasonable that specialized therapeutic interventions should be developed and applied.

Keywords: bipolarity, co-morbidity, internet addiction, mood disorder questionnaire

P175
Neural correlates of trait personality in patients with mood disorders

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Introduction: Patients with mood disorders have a characteristic of trait personality. Regarding with the association of the personality with morphometric abnormalities, the difference in patients with bipolar disorder (BD) and major depressive disorder (MDD) remain unclear. We examined a temperamental trait and gray matter (GM) volume using voxel-based morphometry (VBM) in patients with BD and MDD.

Method: Twenty-one patients with BD (mean ± SD = 49.6 ± 15.6 year, 57.1% female), 36 patients with MDD (48.9 ± 11.4 year, 61.1% female) and 54 healthy control subjects (HC) (45.4 ± 16.1 year, 50.0% female) underwent 1.5T MRI imaging. We used the score of harm avoidance (HA) in the Temperament and Character Inventory. Current mood states were evaluated using the Montgomery Asberg Depression Rating Scale (MADRS). Preprocessing of images used DARTEL for voxel-based morphometry in SPM8. Multiple regression analysis was applied to see the correlations between GM volumes and HA. We tested the correlation between the regional GM volume and the MADRS score in patients with mood disorders. Fronto-limbic structure was defined as region of interest (ROIs) for the analysis.

Results: BD (24.0 ± 6.5) and MDD patients (25.0 ± 5.0) showed high HA scores compared to the HC (19.0 ± 6.1) (Ps < 0.01). The score of HA in BD patients was negatively correlated with the GM volumes of right medial orbital prefrontal cortex (mOFC) ($t = 4.93$, k = 87, $P_{FWE} = 0.01$), right dorsolateral prefrontal

cortex ($t = 5.95$, $k = 171$, $P_{FWE} < 0.01$), and left medial frontal gyrus ($t = 5.85$, $k = 54$, $P_{FWE} < 0.01$). The score of HA in MDD patients was negatively correlated with the GM volumes of left anterior cingulate cortex ($t = 4.10$, $k = 59$, $P_{FWE} < 0.01$). The HC did not have a region of the ROI correlated with the HA score. The BD patients with smaller right mOFC showed higher MADRS score ($r = -0.63$, $P < 0.01$).

Conclusions: The results suggest that high HA may show distinct brain pathophysiology in patients with BD and MDD.

Keywords: bipolar disorder, major depressive disorder, temperament and character inventory, harm avoidance, orbital prefrontal cortex

P176
Personality disorders in patients with mood disorders: are they stable over time?

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Background: personality disorders (PD), viewed as stable and enduring, and mood disorders, perceived as episodic (although they frequently have chronic course), are classified on separate axes, even though important classical and contemporary authors have pointed out that the relationship between them is complex and overlapping. The objective was to examine temporal categorical stability of axis-II disorders in mood disorder patients

Methods: 340 patients hospitalized for DSM-III-R major depression were followed-up for a period of 10–20 years. Patients with adequate personality and those no longer meeting criteria for PDs during the follow-up were compared with those who remained at the diagnostic threshold, according to demographic and biographic characteristics, family history, change of polarity, comorbid axis I and II disorders, dexamethasone non-suppression (DSTNS), clinical features and treatment response by the means of univariate analysis. Variables separating three groups were included in forward step-wise discriminant analysis.

Results: Instability of PD diagnosis was strongly associated with the change of polarity. Discriminant analysis model was overall significant (Wilk's lambda = 0.44163;F = 9.5312;p < 0.0000). The first discriminant function (84% variance) was associated with stable PD were: self-pity, poor social functioning, lack of DSTNS, poor treatment response, familial alcoholism, fewer previous episodes, co-occurring anxiety disorders, previous alcohol use/dependence, slow onset of symptoms, less pronounced depressed mood and retardation, evident hostility and blame-others. Variables associated with unstable PDs were (22% variance): DSTNS, familial loading for mood disorders, better response to treatment, more previous episodes, co-occurring anxiety disorders, acute onset of symptoms, blame-others and hostility. The percent of correct classification was low.

Discussion: variables associated with instability of PDs in mood disorder patients might reflect the 'dark side' of bipolarity, therefore a proportion of these patients might be included in the bipolar spectrum.

Conclusions: Results point out that it is virtually impossible to identify the patients in whom PDs would 'remit' over time. Furthermore, characteristics of patients with unstable PDs, might be the expression of major mood disorders.

Keywords: mood disorders, personality disorders

P177
Met and unmet needs: evidence of significant health and social problems in bipolar II disorders from the MRC UK, 'ABC' Cohort study

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Introduction: For many years bipolar II disorder has been misinterpreted as a more minor, less disabling variant of bipolar disorders. It is increasingly realized that this is far from the case and the MRC UK funded a cohort project specifically targeted at the longitudinal study of 180 bipolar II cases.

Needs assessment is an important clinical and research tool that has been used to identify gaps in service provision and support for individuals with severe mental disorders (Slade 2005). Only a small amount of this research has included any individuals with bipolar disorders and virtually all were focused on bipolar I. This is the first known study of bipolar II disorders using an established internationally recognised assessment tool – the CANSAS (Camberwell Assessment of Needs).

Method: Cohort participants meeting DSM IV criteria for bipolar II disorder asked to complete the CANSAS interview, which measures met and unmet needs across 22 health and social dimensions (Phelan et al 1995). Some comparisons were made to CANSAS interviews with bipolar I cases (Gormley et al, 2010).

Results: Overall, individuals reported from 1–12 needs, with a mean of 5.3 needs of which just over half (3.1) were currently met. The top three ranked needs in bipolar II were- psychological distress (100%), safety of self (42%) and physical health (39%). The top two needs were more likely to be unmet in bipolar II than in bipolar I cases, whilst the latter had significantly more physical health problems.

Conclusions: There were many similarities in the levels of needs expressed by bipolar II compared to bipolar I cases. This study again confirms that distress and risks to self are highly are prevalent and under-treated in bipolar II disorders.

Keywords: bipolar II, needs, health, social, cohort

P178
Gamma band neural synchronization deficits for auditory steady state responses in bipolar disorder

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Introduction: The functioning of the neural circuitry can be assessed using the auditory steady state response (ASSR). The ASSR seems to show resonant frequencies at around 40 Hz and 80 Hz with a larger power at 40 Hz. In recent years, research on both low (30–60 Hz) and high (> 60 Hz) gamma band oscillations has become of increasing interest, and it has been reported that schizophrenics showed specific neural synchronization deficits at 40 Hz and 80 Hz. However, in patients with bipolar disorder, neural synchronization for ASSR has received less attention. In the current study, we investigated high and low gamma ASSR and beta (20 Hz) ASSR in bipolar disorder.

Methods: 14 (4 males) bipolar disorder patients and 25 (10 males) healthy controls participated. Auditory steady state response (ASSR) was recorded by presenting 20 Hz, 30 Hz, 40 Hz and 80 Hz click trains using a whole-head 306-channel magnetoencephalography. ASSR powers and phase locking factor (PLF) were calculated.

Results: Bipolar disorder patients showed significantly reduced mean ASSR power and PLF bilaterally at the 30, 40, and 80 Hz frequencies ($p < 0.05$ for these frequencies). At the 20 Hz, bipolar patients showed intact mean ASSR power and PLF. For clinical correlations, no significant associations were observed between the ASSR variables and the demographic data.

Conclusions: The current study indicated that bipolar patients may be characterized by overall gamma ASSR reduction, suggesting possible abnormal neural circuitry of bipolar disorders.

Keywords: bipolar, auditory steady state response, magnetoencephalography

P179
Neuropsychological profiles of impulsivity in bipolar I and II disorders

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Backgrounds: Impulsivity is associated with clinical features of bipolar disorders (BDs) and often considered as a complex trait composed of attentional, planning, and motor impulsiveness. We examined whether neuropsychological profiles of impulsivity may differ between clinically stable patients with BDs and healthy controls, and explored the relationship between BD subtypes and neuropsychological pattern of impulsivity.

Methods: Study participants included 61 patients with BDs (31 BD I and 30 BD II) and 41 healthy controls. Assessment included auditory continuous performance task, Rey Osterrieth complex figure test, and California verbal learning test.

Results: Compared with healthy controls, clinically stable patients with BDs showed increased attentional and motor impulsiveness. Effect size analysis revealed relatively severe impairments of these two impulsiveness constructs in BD I group compared with BD II group. No significant difference was found in planning impulsiveness among the three groups.

Discussion: A differential pattern of impulsivity between clinically stable patients with BDs and healthy controls indicates a trait-like deficit in impulse control of patients with BDs. A level of impulsivity is higher in patients with BD I compared with patients with BD II. Planning impulsiveness, which is closely associated with executive function, is not prominent in clinically stable patients with BDs.

Conclusion: A high level of impulsivity may continuously influence on behavioral characteristics of patients with BDs while clinically stable. In addition, patients with BD I may have more severe deficits in impulse control than patients with BD II.

Keywords: impulsivity, neurocognition, bipolar I disorder, bipolar II disorder

P180
Support for the involvement of Calreticulin gene in the evolution of cognition in humans

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Introduction: Development-dependent, tissue-specific expression of the calreticulin (CALR) gene in the gray matter coincides with the expression of psychoses phenotypes. We have recently reported instances of mutations within the core promoter sequence of the gene in schizoaffective disorder.

Methods: In view of the mounting evidence on the genetic overlap in the psychiatric spectrum, we investigated this gene in 546 patients afflicted with schizophrenia, schizoaffective disorder and major affective disorder by PCR/SSCA.

Results: We found that a unique mutation at nucleotide -220 from the transcription start site, located at a conserved genomic block in the promoter region of the gene, co-occurs with the spectrum of psychoses (pb0.005). This mutation reverts the human promoter sequence to the ancestral type observed in chimpanzee, mouse, and several other species, implying that the genomic block harboring nucleotide -220 may be involved in the evolution of human-specific higher-order functions of the brain (e.g. language, conceptual thinking, and judgment), that are ubiquitously impaired in psychoses.

Discussion: We propose that CALR is not only a promising candidate in the spectrum of psychoses, but also, a gene that may be important in the human-unique brain processes.

Keywords: calreticulin, evolution, mutation, promoter, psychosis

P181
Cognitive impairment in first-episode bipolar I disorder: the processing speed hypothesis

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Introduction: Cognitive impairment in bipolar disorder has been well documented. Specifically, processing speed has been recognized as a core cognitive impairment in several disorders, including bipolar disorder. The aim of this study was to determine whether processing speed underlies cognitive impairment on verbal memory, visual memory, verbal fluency, working memory, motor speed and executive functioning in first-episode bipolar disorder. We also tested if controlling for the rest of cognitive domains independently would show similar results to those found after controlling for processing speed.

Methods: Twenty-nine patients with first-episode bipolar I disorder and 56 healthy controls were assessed in terms of sociodemographic, clinical and cognitive variables. Cognitive domains included processing speed, verbal memory, visual memory, verbal fluency, working memory, executive functioning and motor speed.

Results: Patients showed significant impairment on all cognitive domains. Most impaired domains were processing speed (effect size; $\eta^2 = 0.45$) and visual memory ($\eta^2 = 0.42$). However, after controlling for the effect of processing speed, significant differences in verbal fluency, executive functioning, motor speed and working memory disappeared. Differences in verbal and visual memory remained significant although effect size considerably diminished. In contrast, when other cognitive domains were entered as covariates, differences remained significant for all domains, except for executive functioning.

Discussion: Processing speed may be considered a core deficit in bipolar disorder that underlies other higher cognitive functions. Future treatment guidelines should target this underlying feature of the illness to improve quality of life of patients with bipolar disorder.

Keywords: cognition, speed of processing, functioning, quality of life

P182

Differential clinical characteristics of prescription of lithium vs. valproate: What do clinicians expect for lithium and valproate?

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Introduction: There is an increasing awareness of effectiveness of mood stabilizers. Although both lithium and valproate are used as classical mood stabilizer, the real world prescriptive condition is not well known. Our study aimed to explore how common the use of lithium and valproate in psychiatric conditions of Japanese outpatients and to describe the difference of characteristics of the patients.

Methods: We investigated prescriptions for lithium and for valproate given for psychiatric conditions to the first visit from 2005 till 2010 in Showa University Fujigaoka Hospital, Japan. Psychiatrist who sees new outpatients changed depending on the day of the week. Clinical records were assessed retrospectively. As valproate is also used as antiepileptic drug, subjects with diagnosis of epilepsy were excluded from the analysis.

Results: 5474 patients came to the first visit during the time. 29 patients were excluded from analysis for the reason of diagnosis of epilepsy. The numbers of the patients with prescription of lithium and valproate at the date of the first visit were 39 and 48, respectively. 2 patients were prescribed both lithium and valproate. There was no significant difference of age and sex between the groups. Patients with lithium prescription showed significantly more frequency of diagnosis of bipolar disorder (rate of bipolar disorder: lithium 71.8%; valproate 31.3%, p < 0.001). Among bipolar subjects, patients prescribed lithium were significantly younger compared with those prescribed valproate (50.08 ± 16.82 years old vs. 63.62 ± 12.63 years old, p = 0.020).

Discussion: Lithium appears to be more expected as mood stabilizer for bipolar disorder rather than valproate in clinical practice.

Keywords: mood stabilizer, lithium, valproate, prescription, bipolar disorder

P183

Lamotrigine for adults with bipolar II disorder and comorbid attention deficit/hyperactivity disorder: a case series

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Background: Attention-deficit/hyperactivity disorder (ADHD) is frequently comorbid with mood disorders in both children and adults. Lamotrigine is an anticonvulsant indicated for the maintenance treatment for bipolar depression. In this study we aimed to present patients with ADHD who were on stimulants and lamotrigine for bipolar II disorder.

Methods: Ten patients (6 women, 60%) with ADHD and bipolar II disorder who were on lamotrigine were identified by retrospective chart. Treatment response was evaluated by Clinical Global Impression –Severity (CGI-S) and Clinical Global Impression –Improvement (CGI-I) scores.

Results: Mean age was 19.1 ± 4.2 (Range 16–30) when lamotrigine treatment was started. All patients had recurrent depressive episodes with at least one hypomanic episode. ADHD diagnoses were based on clinical interview and information from at least one relative. Diagnosis was supported by neuropsychological tests in selected cases. Three patients (30%) had inattentive, 7 had combined type ADHD. Nine patients were on various forms of methylphenidate (30–72 mg; 46 ± 15 mg). All patients were markedly or severely ill regarding mood symptoms (mean CGI-S score: 5.3 ± 0.8) in the beginning of treatment. Eight patients (80%) improved with lamotrigine, there was no change in 2 patients (mean CGI-I score: 2.6 ± 0.9). Mean dose of lamotrigine was 145 ± 55 (100–250 mg) and mean treatment duration was 13.7 ± 14 months (1–48 months). In some patients, improvement with lamotrigine started even after one moth of treatment. One patient reported skin rash which resolved after treatment cessation and 1 patient reported weight gain.

Conclusion: Although naturalistic and retrospective, to our knowledge this is the first study showing that lamotrigine might be an effective and safe treatment option for adults with ADHD and comorbid bipolar II disorder. Prospective and controlled studies are needed to support our findings.

Keywords: ADHD, adult, bipolar II disorder, lamotrigine, treatment

P184

Psychiatric co-morbidity in migraine patients: the role of family history

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Introduction: Several studies have confirmed a substantial familial liability for both affective disorders and migraine. The purpose of the study is to assess the clinical implications of the presence of at least one first-degree relative with a history of mood or anxiety disorders in a sample of migraine patients.

Methods: 102 migraine patients from the Migraine Montreal Clinic were interviewed and family history for migraine and psychiatric disorders was obtained. A Cox proportional-hazard analysis was used to derive the contribution of independent variables to the risk of lifetime psychiatric co-morbidity in migraine patients. Nonparametric and parametric tests were used to compare the clinical differences associated with family history of psychiatric disorders in migraine patients.

Results: 75 subjects (73.5%) had a lifetime psychiatric diagnosis. A migraine diagnosis preceded a diagnosis of psychiatric illness in 79.5% of the affected subjects. Almost 56% of migraine patients had one or more first-degree relatives with a psychiatric diagnosis; and 64.7% had one or more first-degree relative with migraine. In the Cox proportional-hazard model analysis, family history of anxiety disorders and of migraine significantly contributed to the lifetime risk of mood disorders and anxiety disorders in migraine patients (all p < 0.05). Conversely, family history of mood disorders and of suicide significantly contributed to suicide risk in migraine patients (χ^2 (1) = 4.29, p < 0.05; χ^2 (1) = 7.95, p < 0.05, respectively). The survival analysis showed that the morbidity risk for a lifetime diagnosis of psychiatric disorders in migraine patients was significantly different for those patients with family history of both mood and anxiety disorders compared to those without (χ^2 (1) = 5.79, p = 0.01).

Conclusions: Family history of migraine and anxiety disorders significantly contributes to the lifetime risk of mood and anxiety disorders among migraine patients, whereas family history of mood disorders and suicide significantly contributes to the lifetime

risk of suicide in migraine patients. Family history of psychiatric disorders may also have a significant impact on the age at onset of psychiatric illnesses among migraine patients.

Keywords: bipolar, migraine, family history, lifetime, risk.

P185

Can clinical features determine long term monotherapy lithium response?

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Introduction: Predictability of efficacy of long term preventive treatment is a high priority in bipolar disorder Up to data no definite predictors for long term treatment response with lithium have been defined. The aim of the present study was to define clinical features of patients who could stay stable on lithium as monotherapy.

Method: In this multicenter, retrospective, cross-sectional study, clinical features of patients who have been syndromally well for at least 1 year either on lithium monotherapy or on combination treatment with lithium and another psychotrop were assessed. Groups were compared using chi-square test for categoric, t-test for continuous variables. Regression analysis was used for the assessment of association between clinical features and treatment group.

Results: Data from 120 patients (lithium monotherapy n = 67; polipharmacy n = 53) who met the inclusion criteria was evaluated. Lithium monotherapy and polipharmacy groups did not differ significantly with regard to gender (F/M = 60/60), education level, bipolar I or II disorder diagnosis, age of illness onset, duration of illness, total number of past episodes, number of past manic, depressif or mixed episodes, serum lithium level, presence of psychiatric and medical comorbidity, positive family history for psychiatric disorders. There was no significant association between these variables and being in either one of the treatment groups.

Conclusions: Findings reveal no significant clinical feature which may be a predictor for long-term lithium response as monotherapy. This may be due to selection bias for over use of combination treatment in daily clinical practice.

Keywords: maintenance treatment, lithium response, monotherapy, combination treatment, course of illness

P186

Evaluation of first 50 patients in a bipolar disorder unit

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Background: Bipolar disorder is a chronic disorder with high rates of suicide attempt, disturbances in social and occupational functioning and hospitalizations (1, 2). Maintenance and regular follow-up visits deemed to be important in such lifelong complicated disorder. Recent studies showed that 69% of bipolar disorder patients could not be diagnosed at their first visit with

their psychiatrists and comorbid diagnoses complicated the bipolar disorder diagnosis (3). The aim of this study was to determine the sociodemographic characteristics, age at onset, clinical features, treatment methods of the follow-up patient group in our Bipolar Disorder Unit.

Methods: Fifty consecutive patients, from the Bipolar Disorder Unit, are included in this study. 'Affective Disorders Patient Registry Form' was used in this study to collect the data. These forms are completed through interviews with patients and their relatives, and evaluation of inpatient files.

Results: The mean age at the onset of the illness was 23.9 years with a mean duration of 8.4 years. In the majority of the patients (68%) the first affective episode was mania. 84% had mild to severe episodes; 41% had at least one psychiatric axis I comorbidity and 68% had a familial history of psychiatric illness. Age of onset of the Illness was lower than 18 years in 22% of patients, whereas 16% of patients had an onset of first episode after the age of 30 years. Rapid cycling feature was present in 10%, seasonality in 42%, psychotic features in 80%. Of all patients, 22% of the patients had a history of at least one suicide attempt in their lifetime. Bipolar patients with an early onset of disease experienced more psychotic episodes compared to late onset group. Patients with late onset of bipolar disorder had significantly more mixed periods, higher rate of rapid cycling, and comorbidity with axis I disorder.

Conclusion: The characteristics of bipolar disorder as a chronic disorder with a higher rate of lifetime psychological and social consequences should be determined in detail which might lead us to gain important insight to cope with this illness.

Keywords: bipolar disorder, early onset, late onset, course of the Illness, treatment

P187

Efficiency of long term prophylactic treatment in bipolar disorder

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Background: The main problem encountered during the treatment of the bipolar disorder is the difficulty in evaluation and measurement of treatment response. To overcome this obstacle and to put forward objective criteria for treatment response, recently several different variables affecting treatment response have been searched for. In an effort to contribute this research, this study aimed to determine the long treatment response and its relationship between clinical variables at follow-up bipolar disorder patient group in our Bipolar Disorder Mood Unit

Methods: One hundred consecutive patients, from the outpatient Bipolar Disorder Mood Unit, who have been followed up for at least 6 months were included in this study. 'Affective Disorders Patient Registry Form' developed by Bipolar Disorder Mood Unit, SCID-II, Young Mania Rating Scale, Hamilton Depression Rating Scale, Prophylactic Treatment Response Scale were used in this study to collect the data. These forms are completed through interviews with patients and their relatives, and evaluation of inpatient files.

Results: In this study, 156 maintenance periods of 100 bipolar patients (50 female, 50 male) were examine. During 60% of long-term treatment periods mood stabilizers and antipsychotics were used together whereas 31% of cases received mood stabilizer monotherapy during prophylactic treatment periods. Lithium was the most commonly preferred mood stabilizer (44%). There were significant decreases in total number of episodes, episode frequency and time-ill periods during long term treatment. The evaluation of the response to long-term treatment with Grof scale revealed 97%

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partial response rate and 43.8% full response rate. The necessity for antipsychotics increased as the time-ill periods were prolonged and the ratio of episode/year increased.

Discussion: As bipolar disorder is a lifelong disorder with a great impact on overall functionality, efficacy and maintenance of long-term prophylactic treatment carries an important role. Stabile and careful maintenance of such treatment would lead to significant decreases in overall time-ill periods. Another crucial point in the treatment is choosing drugs effective to unique patients and their illness course.

Keywords: bipolar disorder, mood stabilizer, long-term treatment

P188
Assessment of axis II burden in a sample of patients affected by bipolar disorder

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Introduction: The relationship between mental disorders classified in Axis I ('major' psychiatric disorders) and those classified as Axis II (personality disorders and mental retardation), according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), is one of the most controversial areas in psychiatric nosography. Bipolar disorder (BIP) is among the most studied Axis I disorder in comorbidity studies between Axis I and personality disorders (PD).

Methods: This work aims to evaluate the relationship between BIP and PD using the Structured Clinical Interview developed for multiaxial diagnosis according to DSM-IV (SCID-I and SCID-II).

Results: In agreement with literature data, our preliminary results confirm a frequent overlap among Axis I disorders and Axis II disorders, with an increased prevalence of Cluster B PD in patients with BIP. We also found significant differences in the distribution of PD among patients affected by type I bipolar disorder (BIP I) and those affected by type II bipolar disorder (BIP II).

Conclusions: The increase of personality pathology in patients affected by BIP could help to explain treatment difficulties and worst prognoses in these patients. An assessment of PD in these patients could contribute to an improvement of efficacy and specificity of treatments. The expansion of this sample may allow a greater understanding of the complex relationships between Axis I and Axis II disorders.

Keywords: personality, bipolar, anorexia, bulimia

P189
Protein expression profiles in hippocampus of sleep-deprived mice, the manic-like animal model

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Introduction: Recently much attention has been given to the stress-related risk in bipolar disorder. Sleep deprivation (SD) is a neurobiologic and physiologic stressor. We investigated herein the effect of stress in acutely 72 h SD C57BL/6J mice on protein expression levels in the hippocampus by two-dimensional (2D) gel electrophoresis.

Methods: Eleven week old male C57BL/6 mice were used and randomly assigned to two groups, SD (n = 24) and control mice (n = 24). The animals were subjected to SD for a period of 72 h using the modified multiple platform cage method. Body weight was measured at 0, 24, 48, and 72 h after SD. The Y-maze was made of a three-arm horizontal maze. Mice were placed in one arm, and the sequence and number of arm entries were measured for each mouse for 8 min. Hippocampal tissues were washed twice with ice-cold PBS and sonicated in sample lysis solution. Protein spots were selected for the significant expression variation deviated over 1.5 fold in its expression level compared with control or SD sample. Following the 2D study, selected proteins were confirmed by RT-PCR.

Results: Body weight was decreased and memory function by Y-maze test was reduced in SD mice. Nine up-regulated proteins were identified by matrix-assisted laser desorption ionization time-of-flight (MALDI-TOF) analysis. Of 9 identified proteins [thioredoxin-like 1 (Txnl1), 60S acidic ribosomal protein P0 (Rplp0), S-adenosylhomocysteine hydrolase (Ahcy), toll interacting protein (Tollip), serine-threonine kinase receptor-associated protein (Strap), tryptophane aspartate-containing coat protein (Coro1a), ARP1 actin-related protein 1 homolog B (Actr1b), dihydropyrimidinase-like 3 (Dpysl3), and enolase 1 (Eno1)], Txnl1, Rplp0, and Ahcy are known as cell/organism defense proteins and Tollip, Strap, and Coro1a as immunity-related proteins. Little is known concerning the functions of Actr1b, Dpysl3, and Eno1.

Discussion: In summary, this work is the first report to identify changes in defense or immunity-related proteins caused by exposure to SD.

Keywords: hippocampus, sleep deprivation, stress, two-dimensional gel electrophoresis

P190
The prevalence of metabolic syndrome in Korean patients with bipolar disorder

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Introduction: Antipsychotics and mood stabilizers increase the risk of metabolic syndrome(MetS). But there are few studies on the relationship of these drugs to metabolic syndrome, especially regarding patients with bipolar disorder.

Methods: This study was retrospective chart review. We reviewed the electronic medical records of patients with bipolar disorder who admitted department of psychiatry of Asan Medical Center from December 2009 to July 2011. Those patients received a therapy with antipsychotics or mood stabilizers. We evaluated the prevalence of MetS in our sample.

Results: The prevalence of MetS in our sample (n = 107) was 39.3%. Male patients had a higher prevalence of MetS than female patients (M = 52.5%, F = 31.3%). And patients who received medication before had a higher prevalence of MetS than drug naive patients (received medication = 42.2%, drug naive = 31. 8%).

Discussion: Bipolar patients had a higher MetS rate than general population. And patients who received medication had a higher MetS rate than drug naive patients.

Keywords: bipolar disorder, antipsychotics, mood stabilizers, metabolic syndrome

P191
Concordance with treatment guidelines for bipolar disorder

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Background: Many treatments have become available in the last years to treat bipolar disorder and to improve its outcome. In order to improve the quality of care, several guideline

recommendations have been developed, but they are not always implemented. The purposes of this study were to examine the prescription of psychotropic drugs in individuals having bipolar disorder and referred to a tertiary care service and to assess the degree of concordance of the treatment with specific guidelines.

Methods: Between December 2006 and February 2009, we assessed 113 individuals suffering from Bipolar Disorder (BD) referred to the ROMHC Mood Disorders Program by physicians in community, general practitioners for the most part. The Structured Clinical Interview for DSM-IV-TR was used to assess diagnosis. During the initial interview, information was gathered on the pharmacological treatment prescribed by the treating physician. The prescribed treatment was compared with specific Canadian guidelines (CANMAT, 2007).

Results: Thirty two subjects had BD type I, 81 subjects had BD type II. All subjects with BD-I were taking at least one psychotropic, and 90% of the group with BD-II. Lithium was prescribed more often in subjects with BD-I (62%) than BD-II (19%). The percentage of subjects taking antidepressants was high in both groups (53% in BD-I and 67% in B-II). Only one bipolar I patient and 43% of bipolar II patients didn't take any treatment recommended by guidelines. In most cases, non concordance to guidelines was due to absence of any psychotropic treatment or to treatment with antidepressants in monotherapy or associated with anxiolytics.

Discussion: Several factors can affect the concordance of the prescribed treatment to published guidelines: knowledge or adherence of general practitioners to the existing guidelines; correct diagnosis; compliance of patients to treatment.

Conclusion: Future research should explore the causes of non-concordance of treatment to guidelines, in order to find appropriate strategies to implement use of guidelines in clinical practice.

Keywords: bipolar, pharmacological treatment, guidelines

P192
Cognitive impairment in patients with bipolar disorder during depressive episodes

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Introduction: Bipolar disorder is a common and disabling condition; its lifetime prevalence in general population is estimated by several studies to 1–5%. Lifetime prevalence for bipolar disorder type II ranges from 0.5 to 3% and the entire bipolar spectrum disorders has a lifetime prevalence of 2.8 to 6.5%. Within bipolar disorder, bipolar depression occurs more frequently, lasts longer and has a higher rate of relapses than mania. There are data that prove that patients with bipolar disorder show cognitive deficits in all stages of the disorder, but also during remission phases. Although those deficits are less expressed than in other psychiatric conditions (dementia, schizophrenia), they seem to affect the prognosis, outcome and global functioning of the patients suffering from bipolar disorder.

Objective: The purpose of the study was to assess cognitive functions (attention, memory, speech, psychomotor performances, executive functions) in patients with bipolar disorder during the depressive episodes of the disorder.

Method: 20 patients with bipolar disorder and depression (DSM IV-TR criteria for bipolar disorder and major depression, Hamilton Depression Rating Scale and Beck Depression Inventory > 17) and 20 healthy subjects were evaluated with a neuropsychological battery test. The persons in the control group had no history of neurological or psychiatric disorders and no somatic disorders that could affect cognitive performances.

Results: Patients with bipolar disorder showed during depressive episodes dysfunctions in attention (difficulties in focusing and maintaining attention), memory (deficits of declarative and nondeclarative memory, affected verbal recall and recognition), speech (bradyphemia with longer moments of pause during the interview), psychomotor performance (psychomotor inhibition, slowness of motor functions when the number of tasks increased), executive functions (limited ability to acquire or relearn different skills) and general intellectual functioning (information processing deficits) when compared to the control group.

Conclusions: The cognitive impairment observed in patients with bipolar depression alongside with a higher rate of relapse for depressive episodes may play an important role for the outcome and the global daily functioning of the patients.

Keywords: cognitive impairment, depression, bipolar disorder

P193
Phenomenology of first episode bipolar affective disorder

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Introduction: The first episode and early phase of mood disorder offers opportunity for early intervention, which can minimize severity, relapse and disability. Mood symptoms including bipolarity are presenting complains in early stages for a number of psychiatric disorders. Patients with the duration of illness of 1 or 2 years represent a group of non-converters from early phase since their diagnosis can change in significant number of patients during the course of the illness.

The definitive diagnosis and clinical profile of such patients with mood disorder has implications for treatment and relapse prevention. We report a phenomenological study of first episode bipolar mood disorder from Mumbai, India

Methods: This cross-sectional study was carried out in a teaching general hospital in Mumbai. 80 patients of clinically diagnosed Bipolar affective disorder were recruited with specific inclusion criteria of 1 years duration of illness. A semi-structured interview was conducted for assessment with collateral data from relatives. Diagnosis was established using DSM -IV. Data was analyzed using SPSS.

Results: the study showed that mean age of the cohort was 26 years, 72% were male, 72% married, and 41% were emoployed.7.5% patients had family history of bipolar disorder, 15% had family history of other psychiatric disorder and more than 50% subjects were abusing drug and alcohol. Mean duration of illness was 120 months; mean duration of untreated illness was 7.5 months for Bipolar I and, 29 months for Bipolar II & other bipolar syndromes. Majority of patients were diagnosed as mania (48.7%) followed by non-affective psychosis in 17.5%. Hypomania, mixed mania and mania with psychosis grouped together was seen in 23% whereas 17.5% patients remained without any diagnosis.

Conclusion: The study shows that majority of patients with bipolar affective disorder of more than one-year duration had a diagnosis of mania. Significant number of these patients was having non-affective psychotic disorder (17.5%) Interestingly 17.5% patients did not qualify for any diagnosis. More research is required to ascertain diagnosis and clinical characteristic of bipolar affective disorder in first episode.

Keywords: bipolar, first episode, phenomenology

P194

Diagnostic variability amongst the 'minor bipolar disorders' by classification systems

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Introduction: Syndromes of bipolar affective disorder except BP1 and BP II are common in clinical practice. These disorders have definite clinical manifestation, course and outcome however there is significant overlap within the subgroup of syndromes like hypomania with or without psychotic symptoms, hypomania with depression, affective symptoms associated with substance abuse, cyclothymia, persistent hypomanic states Bipolar disorder NOS and bipolar spectrum disorder. Clinical relevance of such classification remains questionable in the background of common biological origin and endophenotypes of 'bipolarity'. We report a phenomenological cross-sectional study of clinically diagnosed bipolar affective disorder with special reference to minor bipolar disorders. We propose that these subgroups can be grouped together in one category.

Methods: This cross-sectional, inpatient, study was carried out in a teaching general hospital in Mumbai. 80 [out of 200 screened] patients of Bipolar affective disorder were recruited A semi-structured interview was conducted with collateral data from relatives. Assessment was done using clinical data, and diagnosis of these patients was established using 4 different classification systems namely: DSM IV – TR, ICD 10, Akiskal's and Jules Angst's classification.

Results: 62 (77.5%) patients received a diagnosis of BPI and BPII as per all four systems. 18 (22.5%) patients who received diagnosis of minor (as described above) bipolar disorder differed amongst various subgroup across the diagnostic groups DSM IV and ICD 10 system diagnosed 100%, Akiskal's diagnosed 90% and Jules Angst 19% suggesting diagnostic variability. Amongst all the subjects shared common symptom constellation.

Conclusion: The study shows that reasonable variability exists, particularly using Jules Angst criteria, within the minor bipolar disorders. There is significant overlap symptom constellation. Both findings suggest an argument for possibility of keeping these syndromes under one category of bipolar affective disorders.

Keywords: bipolar, diagnosis, spectrum

P195

Neurocognitive functioning prior to the first manic episode

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Background: Cognitive deficits have been well documented among persons with Bipolar Disorder (BD) after the first episode of mania. However, little is known about neurocognitive functions prior to the initial manic episode, and their course subsequently.

Methods: We compared the cognitive functioning of 11 young people who at baseline were considered to be at ultra high-risk of development of psychosis (UHR), and who later developed bipolar I or II disorder (median time to onset 328 days – UHR-BP), with 11 matched UHR participants who had no psychiatric diagnosis after at least 12 months of follow-up (UHR-NT) and 11 matched healthy controls (HC). Furthermore, we compared the baseline neuropsychological scores of the UHR-BP subjects with the scores on same neurocognitive tests after they had developed their first manic episode. Tests of neuropsychological functioning included National Adult Reading Test, Wechsler Adult Intelligence Scale, Wechsler Memory Scale- Revised, Rey-Auditory Verbal Learning Test, Controlled Oral Word Association Test and Trail Making tests.

Results: No significant differences were observed between UHR-BP and UHR-NT on any measure of cognition at baseline. The UHR-BP subjects had a significantly lower score on visual reproduction task compared with HC [31.50 (9.91) vs. 39 (2.11) $p = 0.01$].

Discussion: The sample size may not have been adequate to differentiate the ultra high-risk groups at baseline. Also, these subjects were at risk of developing psychosis and five of the 11 UHR-BP subjects transitioned to psychosis. This might have confounded the finding of reduced visual reproduction in these subjects. However, visual memory and reasoning have been found to be reduced in familially or retrospectively defined 'at-risk' subjects for BD.

Conclusion: Young people with bipolar disorder have deficits in their neurocognitive functioning prior to developing threshold disorder, compared with healthy controls. However, the specificity of these deficits for bipolar illness is not clear. A larger sample of subjects who are better characterized to be at high risk for BD need to be studied in a longitudinal manner to clarify the severity and course of these deficits.

Keywords: bipolar, at-risk, prodrome, cognition, psychosis

P196

Clinical predictors of response vs. non-response to risperidone: CGI-21 scores after 1 week of treatment in a bipolar disorder population with co-occurring panic disorder or generalized anxiety disorder

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Introduction: Clinical characteristics predicting response and remission to psychopharmacological treatment of bipolar disorder (BD) and co-occurring anxiety disorders have been understudied. We hypothesized that non-response to risperidone or placebo in individuals with co-occurring BD and anxiety symptoms would be associated with a more severe clinical course of BD. We found a significant difference in Clinical Global Improvement Scale for Anxiety (CGI-21 Anxiety) scores at week

1 of treatment between responders and non-responders, indicating possible early clinical predictors of non-response to risperidone.

Methods: This study was a secondary analysis of a randomized, double-blind, parallel, 8-week study comparing risperidone monotherapy and placebo in individuals with BD plus current panic disorder, current generalized anxiety disorder (GAD), or lifetime panic disorder (n = 111) (Sheehan *et al.*, 2009). CGI-21 Anxiety scores of responders (defined as 50% improvement on the Hamilton Anxiety Scale (HAM-A)) and non-responders were compared in risperidone treatment (n = 54) and placebo (n = 57) groups.

Results: There was a significant difference in week 1 CGI-21 Anxiety scores between non-responders and responders. Non-responders across groups had a mean CGI-21 Anxiety score of -.08 (**SD** = 3.03), while responders across groups had a mean CGI-21 Anxiety score of 2.08 (**SD** = 2.70) (p ≤ 0.001). Similarly, the same trend was present at the end of the study when non-responders had a mean score of −0.31 (**SD** = 4.25) and responders had a mean CGI-21 Anxiety score of 5.21 (**SD** = 4.65) (p ≤ 0.001).

Discussion: Few significant differences were found in this population, however a significant difference at week 1 in CGI-21 Anxiety scores for anxiety indicates a possible clinical indicator of non-response early in treatment. Kemp *et al.* (2011) discuss that the lack of early partial symptomatic improvement may be predictive of non-response, although not reliable as a predictor for response. More research is needed with larger sample sizes and a longer study duration.

Keywords: risperidone, treatment response, predictors of response, anxiety symptoms, co-occurring

P197

Prevalence of hypercalcemia in lithium-treated patients with bipolar disorder

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Background: Hypercalcemia associated with lithium-induced hyperparathyroidism (LIH) is a common, but underrecognized, complication of lithium therapy. Therefore, monitoring of serum calcium levels is recommended in the ISBD consensus guidelines for the safety monitoring of bipolar disorder treatments (2009). Prevalence of hypercalcemia in patients on lithium therapy varies among studies, from 15% to 60%. The aim of this study was to determine the prevalence of hypercalcemia in a cohort of patients using lithium, and to examine whether there were any predictors to identify patients who are more prone to develop hypercalcemia.

Methods: We collected data of 314 patients diagnosed with bipolar disorder and treated with lithium at an outpatient clinic for bipolar disorder in the Netherlands. Patient characteristics, history of lithium use and several laboratory results were collected from January to July 2011.

Results: The mean serum calcium level was 2.49 mmol/L (references value 2.10–2.55 mmol/L). The point prevalence of hypercalcemia (>2.60 mmol/L) was 15.6% (n = 49 patients). The length of the period lithium was used was the only significant predictor for the development of hypercalcemia (13.7 years vs. 9 years, p = 0.004). All other factors (gender, lithiumdosage, creatinine and thyroid function) were not significant.

Conclusions: To our knowledge, this is the first study in which the prevalence of hypercalcemia in lithium patients has been assessed in a group of patients of this size. We conclude that serum calcium levels should be routinely tested in patients using lithium for timely detection of hypercalcemia. In persisting hypercalcemia we recommend testing of serum parathyroid hormone and exclude other causes of hypercalcemia. When lithium cannot be safely discontinued or when discontinuation does not resolve the hypercalcemia, parathyroidectomy or calcimimetics may be necessary.

Keywords: lithium, hypercalcemia, lithium-induced hyperparathyroidism, prevalence

P198

Treatment of bipolar disorder in the Netherlands and concordance with treatment guidelines

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Introduction: In 2008, a revised guideline for the diagnosis and treatment of bipolar disorder was published by the Dutch Psychiatric Association. The current study is an ongoing nation-wide study among patients with bipolar disorder and their psychiatrists. The purpose of the study is to investigate 'care as usual' for patients with bipolar disorder in various treatment settings, and its concordance with treatment guidelines in relationship to symptomatic and functional outcome.

Methods: Between December 2009 and February 2010 all psychiatrists registered as member of the Dutch Psychiatric Association received a questionnaire in which they were asked whether they treat patients with bipolar disorder and whether they were willing to participate in further research. Psychiatrists treating adult patients with bipolar disorder in an outpatient setting were invited to participate in the study. Consenting psychiatrists subsequently approached all patients treated for bipolar disorder to participate. The study includes all consenting patients. At two consecutive years the organisation of care is investigated with questionnaires among participating psychiatrists. The individual level of 'care as usual', its concordance with treatment guidelines, and symptomatic and functional outcome is investigated by providing participating patients with a questionnaire about treatments they received in the prior 12 month and self-rating scales for symptomatic and functional outcome.

Results: Of all 2525 psychiatrists originally approached, 616 (24%) were willing to participate in further research. Currently 92 psychiatrist and 468 patients are enrolled in the study and completed the baseline assessment. Data from these questionnaires are currently being analysed and results will be presented at the conference.

Discussion: Patients with bipolar disorder represent a highly heterogeneous group needing different levels of care. This study will provide insight whether current treatment guidelines help clinicians to organize their treatments, and whether adherence to these guidelines is associated with better outcomes for individual patients.

Keywords: bipolar, treatment guidelines

P199

A functional MRI investigation of the neural correlates of declarative and recognition memory in obese patients with bipolar disorder

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Background: Bipolar disorder (BD) can cause impairment in cognitive functioning across multiple domains. There is emerging evidence for an association between subtle cognitive dysfunction and widespread endocrine disturbances such as obesity. Given that patients with BD experience higher rates of obesity than the general population, this may play a role in the cognitive dysfunction seen in patients with BD. The goal of this study is to examine the impact of obesity on declarative and recognition memory in patients with BD, cognitive areas known to be susceptible to impairment in BD patients.

Methods: This study compared declarative and recognition memory functioning in 18 obese individuals (BMI > 35 kg/m^2) with BD, 18 obese individuals without BD and 18 healthy non-obese controls prior to intervention at St. Joseph's Healthcare bariatric surgery program. Participants (ages 18–64) received a psychiatric diagnosis via the Structured Clinical Interview for the DSM-IV. Mood ratings, physical measurements, and nutritional questionnaires were also administered in order to obtain relevant psychosocial and health data for later covariate analyses. A standardized battery of neuropsychological tests aimed at establishing performance on tests of declarative memory and intellectual functioning was administered. Warrington's *Recognition Memory Task* (RMT) words subtest was adapted to be performed in a 3T functional magnetic resonance imaging (fMRI) scanner and was used to determine if recognition memory performance was associated with specific patterns of neural activation. In addition, anatomical fMRI data was obtained to investigate potential changes in the hippocampus and prefrontal cortex, neural structures thought to be critical in declarative and recognition memory.

Results: Performance on neuropsychological measures indicated that obesity exerts a moderate negative effect on declarative and recognition memory; this effect is further exacerbated in patients' bipolar disorder (adjusting for age and gender).

Discussion: Obesity may have a negative impact on memory 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.

Keywords: bipolar, memory, obesity, imaging

P200

A review of services for bipolar disorder offered by community mental health teams (CMHT) in Vancouver, Canada

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Background: Bipolar Disorder (BD) is a common psychiatric illness and a core service area for CMHT. BD has a high morbidity, mortality and social cost associated. Appropriate diagnosis and effective management is available, early identification and treatment is recommended. Hence BD is worthy of being a high priority area for service provision by CMH teams. The objective of this review was to determine the range of services offered to patients with BD by CMHT in the greater Vancouver region of British Columbia, Canada.

Methods: Experienced team members from the 27 adult CMHT in the greater Vancouver region were interviewed. Information was collected from each team regarding any specific BD services they offered. An outline was also collected of any other individual and group psychosocial therapies or psychiatric rehabilitation programs.

Results: Only one CMHT offered programs specifically designed for patients with BD. These included a 6 week BD psycho-education group delivered in ongoing cycles and a long established weekly BD support group facilitated by an experienced psychiatrist. All CMH teams offered a range of other programs including some specific to other diagnoses (EG: depression, anxiety, eating disorders) and more generic programs to address areas of general functioning.

Discussion: Services designed to meet the specific needs of patients with BD are extremely rare in the greater Vancouver region. Instead, patients with BD must choose from a range of more generic services provided by their CMHT. Along with better screening and early identification of BD it is time to encourage CMHT to develop treatment programs that will address the specific needs of patients with BD. One local team offers BD programs that are simple, inexpensive, sustainable and valued by patients. Development of similar programs in other CMHT's could be achieved fairly easily if encouraged and supported by management and staff. Expansion of these services would be strongly supported by those currently offering specialist BD services in Vancouver.

Keywords: bipolar, community mental health team, psychosocial therapy, support, psycho-education

P201

Abstract Withdrawn

P202
Psychosocial functioning in first versus multiple-episode bipolar patients

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Introduction: Poor psychosocial functioning may be the result of multiple bipolar episodes. The main aim of this prospective, 12-month follow-up study was to compare the clinical features and the functional outcome between first and multiple episode bipolar patients.

Methods: A total of 119 bipolar patients in acute episode (60 first episode, 59 multiple) were recruited from two hospitals in Spain. The Hamilton Depression Rating Scale (HDRS) and the Young Mania Rating Scale (YMRS) were used to assess mood symptoms. The Functioning Assessment Short Test (FAST) was used to assess functioning.

Results: First-episode patients showed better overall functioning than patients with multiple episodes. Specifically, they presented higher levels of autonomy, greater work and cognitive performance as well as greater capacity to enjoy their relationships and leisure time. However, after adjusted analysis to control for potential confounders, not only group but also depressive symptoms were significantly associated with poor occupational functioning ($F = 9.736$, d.f. $= 4, 102$; $p < 0.001$), interpersonal relationships ($F = 6.041$, d.f. $= 4, 102$; $p < 0.001$), leisure time ($F = 8.399$, d.f. $= 4, 102$; $p < 0.001$) as well as overall functioning ($F = 9.553$, d.f. $= 4, 102$; $p < 0.001$) at 6-month follow-up. Finally, at endpoint differences between groups on cognitive functioning, ($F = 8.406$, d.f. $= 4, 103$; $p < 0.001$), interpersonal relationships ($F = 7.711$, d.f. $= 4, 103$; $p < 0.001$), leisure time ($F = 12.012$, d.f. $= 4, 103$; $p < 0.001$) and overall functioning ($F = 14.145$, d.f. $= 4, 103$; $p < 0.001$) were also associated with age.

Conclusion: The findings suggest that patients with first episode are more likely to achieve functional recovery that those with multiple episodes in specific areas of functioning. However, clinical (depressive symptoms) and demographic (age) factors appear to have an important role on the functional recovery at 6-month and 12-month assessments, respectively.

Keywords: functioning, functional impairment, functional recovery, first-episode bipolar, multiple-episode bipolar

P203
Pharmaco-epidemiology of dually diagnosed US veterans with bipolar disorder

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Background: It is believed that dually diagnosed patients with bipolar disorder and substance abuse are at risk of failing to fill prescriptions for psychotropic medications. This study examined this risk in a national sample of bipolar patients treated in the US Department of Veterans Affairs system compared the risk among bipolar and schizophrenia patients.

Method: National prescription files from 2010 were used to identify all patients diagnosed with bipolar disorder (n = 98.894) and those diagnosed with schizophrenia (n = 80.654) excluding overlapping diagnoses. Among bipolar patients 33,226 (33.6%) had co-morbid alcohol or drug abuse/dependence as compared to 19,652 (24.4%) among those with schizophrenia. Dually diagnosed and non-dually diagnosed patients were compared on the total number of psychotropic prescriptions and 6 prescription subgroups. The ratio of the number of prescriptions written for dually diagnosed to non-dually diagnosed patients was computed.

Results: Contrary to our hypothesis dually diagnosed bipolar veterans filled 1.52 times more prescriptions for psychotropic medications than other bipolar veterans (31.5 vs. 24.3); 1.7 times as many prescriptions for antidepressants; 4.6 time as many prescriptions for antipsychotics; 1.2 times as many prescriptions for anxiolytic-sedative hypnotics; 0.88 times as many prescriptions for stimulants; 1.5 times as many prescriptions mood stabilizers; and 1.4 times as many prescriptions for lithium. Ratios were similarly higher for dually diagnosed veterans with schizophrenia who filled 1.4 times more prescriptions than non- dually diagnosed veterans with schizophrenia (34.7 vs. 28.8). Among dually diagnosed patients with schizophrenia the ratio for antipsychotic prescriptions only 1.2 as compared to 4.6 for bipolar patients.

Conclusion: Contrary to our hypothesis dually diagnosed veterans with bipolar disorder filled _more_ prescriptions for psychotropic medications than those without co-morbid substance abuse, especially for antipsychotics, a patterns that was also found among patients diagnosed with schizophrenia. While dually diagnosed patients are generally viewed as non-adherent to medications, we believe that they fill more prescriptions because of their greater levels of distress and dysfunction.

Keywords: pharmaco-epidemiology, bipolar disorder, health services research

P204
Intramuscular aripiprazole in mania – clinical experience in the UK

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Introduction: RCTs have demonstrated the efficacy of Intramuscular Aripiprazole in the control of agitation in mania. RCT data suggested that IM-Aripiprazole had rapid onset of action and posed lower risk of extrapyramidal side-effects. Our literature search did not reveal any publications on practical experience of IM-Aripiprazole in the UK. We would like to present four cases where IM Aripiprazole was administered with beneficial effect in manic patients, in a UK NHS hospital.

Methods: We present four case studies with Bipolar Affective Disorder-Manic Episode. They presented with mania and associated agitation. They were administered IM-Aripiprazole in a dose range between 9.75 mg–19.5 mg. All showed significant improvement within 24 to 48 hours and demonstrated symptom control within 7 days. No side effects related to the IM Aripiprazole were reported.

Discussion: Pubmed literature search revealed approximately 22 studies on IM-Aripiprazole. Zimbroff et al reported that IM-Aripiprazole was superior to placebo. Currier.GW et-al, concluded that improvements in mania with IM-Aripiprazole appeared to be specific to improvement in core agitation and patients benefited from a repeated Aripiprazole injection if required. Citrome compared the efficacy and safety of intramuscular Ziprasidone, Olanzapine and Aripiprazole for control of agitation and concluded that although the strongest therapeutic effect was seen for Ziprasidone and Olanzapine vs. Aripiprazole, head-to-head controlled studies directly comparing these agents were needed.

Our clinical experience demonstrates that Aripiprazole has fast onset of action when administered intramuscularly, is well tolerated and easy to administer in an acute setting, without the need

for ECG monitoring. The selective receptor profile helped achieve anti-manic action without the risk of EPSEs. In clinical practice, we found that patients became calmer with IM Aripiprazole alone without the need for concomitant benzodiazepine use.

Conclusion: Current evidence supports the use of IM-Aripiprazole in agitated manic patients. Our practical experience indicates that IM-Aripiprazole demonstrated fast and adequate symptom control, and was well tolerated, without any reported side effects.

Keywords: aripiprazole, intramuscular, mania

P205

Is serum matrix metalloproteinase-9 (MMP-9) related to staging in bipolar disorder?

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Introduction: Elevated levels of blood MMP-9 were demonstrated in cardiovascular, neoplastic, and neurological diseases being associated with an intensity of the illness. Blood levels of MMP-9 in psychiatric disorders have not been studied so far. In our previous research on the functional -1562 C/T polymorphism of the *MMP9* gene we demonstrated an association of the polymorphism with a predisposition to bipolar mood disorder. The aim of this study was to estimate serum MMP-9 in patients with bipolar disorder both during depression or mania as well as during remission after these episodes.

Methods: The study was performed on 54 in-patients with bipolar mood disorder (19 males, 35 females), mean age 42 ± 14 years, mean age of onset of illness 26 ± 11 years and the mean duration of the illness 15 ± 9 years. Thirty bipolar patients were studied during acute episode and remission after depression, and 24 during acute episode and remission after mania. All patients were receiving various antidepressant, antipsychotic and mood stabilizing drugs. Control group consisted of 15 males and 14 females aged 40 ± 11 years. They were healthy volunteers without any present or past psychiatric history, not having any autoimmune conditions and acute or chronic somatic illnesses which could influence MMP-9 activity in 4 weeks prior to the study. The assay of serum MMP-9 was performed using enzyme-linked immunosorbent assay.

Results: In bipolar patients, a negative correlation of MMP-9 levels was obtained with age, duration of illness, and number of depressive episodes. Patients with depression below 45 years of age, had significantly higher MMP-9 levels both during acute episode and in remission after depression, compared with acute episode and remission after mania and with control subjects.

Discussion: This is the first attempt to measure blood MMP-9 levels in psychiatric patients. The findings obtained could corroborate a pathogenic role of MMP-9 in bipolar illness, and elevated serum MMP-9 in depression during earlier period of bipolar disorder could make a staging marker of the disorder.

Keywords: matrix metalloproteinase – 9, bipolar mood disorder, depression, staging

P206

Hypomania Checklist and postpartum depression

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Introduction: In a previous Polish DEP-BI project, the frequency of postpartum depression (PPD) was higher in patients with bipolar than in unipolar mood disorder. Also recent research points to an association of PPD with bipolar illness. The Hypomania Checklist-32 (HCL), introduced in 2005, has been increasingly used research tool to detect bipolarity. Therefore the aim of the study was to assess the relationship between PPD and HCL results.

Methods: One hundred and forty nine women (mean age 30 ± 5 years), were examined at 8–12 weeks following delivery using the Edinburgh Postpartum Depression Scale (EPDS), the Hypomania Checklists (HCL-32 and HCL-16), and the NEO-Five Factor Inventory (NEO-FFI).

Results: Positive score in EPDS, suggesting the presence of PPD was found in 27 women (18%). Significant positive correlations were obtained between EPDS value and HCL-32 ($r = 0.36$; $p < 0.05$), and HCL-16 ($r = 0.22$; $p < 0.05$) scores. Positive results in HCL-16 were significantly more prevalent among women with PPD compared to those without PPD (67% vs. 45%; $p = 0.04$). Women with PPD had significantly higher mean scores both in HCL-32 (16.4 vs. 13.4; $p = 0.02$) and HCL-16 (8.1 vs. 6.7; $p = 0.04$). compared to women without PPD. Participants with positive results in EPDS, HCL-32, and HCL-16 reported significantly more depressed mood in the first trimester of pregnancy, more severe anxiety in the second trimester, more frequent crying in the second and third trimester, and greater irritability in the third trimester of pregnancy. The scores of HCL-32 and HCL-16 were positively correlated with the NEO-FFI personality dimension of neuroticism (for HCL-32: $r = 0.28$, $p < 0.05$; for HCL-16: $r = 0.25$, $p < 0.05$), and negatively correlated with the dimension of conscientiousness (for HCL-32: $r = -0.17$, $p < 0.05$; for HCL−16: $r = -0.21$; $p < 0.05$).

Conclusions: The results support the hypothesis of PPD as a part of bipolar spectrum disorders. The results of HCL were also related to some psychopathological symptoms in pregnancy and with some personality dimensions in women studied.

Keywords: postpartum depression, hypomania checklist, bipolarity

P207

The influence of emotional stimuli on time perception of manic patients

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Objective: Time perception during information processing plays a fundamental role in judging external environment and decision making. Manic patients have a disrupted circadian rhythm which gives rise to dysfunction of sleep-arousal cycle. In addition, increased psychomotor, executive and motor speed in manic patients is frequently observed in clinical settings. This study investigates the difference of time perception between bipolar disorder manic patients and normal control group after presentation of affective stimuli.

Method: 22 manic patients and 24 control group were recruited. Task consists of two sessions, which were a time estimation task

and a time production taks, with affective stimuli of International Affective Picture System (IAPS). We used affective stimuli of four different categories, 1) high arousal, pleasant, 2)low arousal, pleasant, 3)high arousal, unpleasant, 4)low arousal, unpleasant, according to level of arousal and valence. In time estimation task, subjects were required to guess the duration of presenting stimuli. In time production task, subjects were required to produce the proposed time which were randomly assigned 2, 4, 6 seconds. We used results of a transformation, expressed as a proportion of the target period ($T_{corrected} = (T_{estimated} - T_{target})/T_{target}$. We also evaluated YMRS, MADRS, BPRS and CGI of the participants.

Results: Repeated measures ANOVA revealed that while manic episode-patients and control group had no difference in correction value of time perception, interaction according to arousal and group ($F = 34.6$, $p < 0.001$), to time and group ($F = 26.2$, $p < 0.001$) has been observed. The severity of manic symptoms and clinical impression was correlated with the overestimation of time perception.

Conclusion: In manic patients, overestimation was observed in response to hyperarousal and pleasant stimuli. This results was compared with control group, in which time underestimation was represented in control group. This results suggests the abnormal time perception in hyperarousal and positive emotional processing in manic pations.

Keywords: bipolar disorder, time perception, arousal, emotional process

P208

Lithium and tamoxifen modulates GSK−3β changes in striatum of rats induced by d-amphetamine in an animal model of mania

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Background: Recently, several studies have shown protein kinase C (PKC) inhibitors as a promising treatment for bipolar mania. In addition, preclinical evidence implicates the modulation of Glycogen synthase kinase−3β (GSK−3β) in either the direct or downstream mechanism of action of many mood stabilizers currently in use. The present study aimed to investigate the effects of tamoxifen (TMX) and lithium (Li) - two inhibitors of PKC - on locomotor behavior and GSK−3β levels and GSK−3β phosphorylation in striatum of rats subjected to an animal model of mania induced by d-amphetamine (d-AMPH)-reversion and prevention protocols.

Methods: In the reversal treatment, Wistar rats were first given d-AMPH or saline for 14 days, and then, between days 8 and 14, rats were treated with Li, TMX or saline (Sal). In the prevention treatment, rats were pretreated with Li, TMX or Sal. Locomotor behavior was assessed using the open-field task and GSK−3 levels and GSK−3 phosphorylation were measured in striatum of rats by immunoblot.

Results: The d-AMPH administration increased locomotor activity in saline-treated rats under prevention and reversion; furthermore, there was evident reduction in the locomotion in the d-amphetamine group treated with TMX and Li. Western blot analyses showed that d-AMPH significantly increased GSK−3 levels and decreased GSK−3 phosphorylation in the striatum of rats in both; reversion and reversion protocols. Li and TMX were able to prevent and reverse these changes in GSK−3 induced by d-AMPH in striatum of rats. In addition in both experiments, Li and TMX alone decreased GSK−3 levels and increased GSK−3 phosphorylation.

Conclusion: The present study demonstrated that Li and TMX modulates the alterations in behavioral and GSK−3 induced by d-AMPH, reinforcing the need for more studies about inhibitors of PKC as possible targets for new medications in the treatment of bipolar disorder.

Keywords: PKC inhibitors, animal model, d-amphetamine

P209

Substance use disorders among Iranian bipolar inpatients

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Introduction: Bipolar disorder (BPD) is a common, severe, and persistent psychiatric illness affecting 1.3% to 1.7% of the population [1,2]. Substance use disorders (SUDs) are also common. A community-based study found a lifetime prevalence of 17% for alcohol abuse or dependence and 6% for other substances [1]. BPD and SUDs occur together more frequently than would be expected by chance alone.

This study was conducted to determine the pattern of substance abuse among Iranian bipolar disorder inpatients.

Methods and Materials: This descriptive-analytical cross-sectional study was conducted among 322 consecutive patients with bipolar disorder attending to Imam-Hossein Hospital.

Results: In this study, 84 patients (26.1%) had substance abuse. 40.5% were using opioids, 6% mood elevators, 7.1% alcohol, and 46.4% were using multiple substances. The mean duration of substance abuse was 104 months plus 23 days.

Conclusions: Totally, it may be concluded that substance abuse frequency among patients with bipolar disorder is high and may lead to deteriorated prognosis.

Keywords: bipolar disorder, substance abuse

P210

Abstract Withdrawn

P211
Bipolar disorder (BD) presented with personality disorder (PD) comorbidity: a prevalence preliminary study

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Introduction: Comorbidity between BD and PD is a complex and no well explored field at the present time. Comorbidity seems to be a risk factor for symptomatic and functional impairment in BD.
Objectives: The aim of the study is to estimate the BD-PD comorbidity prevalence in a BD outpatient sample.
Methods: Twenty-two clinically stable and euthymic BD patients were assessed with the SCID-I, SCID-II, the HAM-D−21 items and YMRS. Also, more detailed information was achieved from the clinical chart and attending professionals involved in the treatment of every patient regarding the personality features of them. Statistical correlations between BD patients with and without a PD comorbid were also made with clinical features as history of suicide attempts and traumatic events, and family history of suicide, depression, bipolarity and alcoholism.
Results: Six males and 16 females, aged 21–65 years were assessed. Of those, 7 (32%) BD patients presented with a comorbid PD. Six of them were women. The Personality Disorders tan appears in comorbidity were: Narcissistic (n = 2), Borderline (n = 1), Obsessive-Compulsive (n = 2), Avoidant n = 1) and Not Otherwise Specified (n = 1).
85% subjects with comorbidity have a history of suicide ideation, and 28.5% reported at least a traumatic event. About family history, 28.5% had suicide precedents, 71% depression, 71% alcoholism and 28.5% bipolar. In contrast, in the BD patient without a PD comorbid group (n = 15), 53% had history of suicidal ideation and 33% had traumatic events; 6.6% had a family history of suicide and 20% alcoholism.
Discussion: The present pilot study show that a 32% of BD suffers from a comorbid PD. It suggests the comorbid group could have greater statistic probability than the non- co-morbid group of family history of depression and alcoholism. Enhancing the n of the study could increase the statistical power.
Keywords: bipolar disorder, comorbidity, personality disorder

P212
Neurocognitive impairment of euthymic bipolar patients in a Chilean outpatient clinic: a cross-sectional pilot study

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Introduction: Studies have reported neurocognitive impairments in stable patients with bipolar disorders (BD). These deficits have not yet been clearly associated with specific clinical features.
Objectives: The aim of the study is to characterize neuropsychological impairment in a euthymic BD sample and to find correlations between these impairments and clinical features presented in the sample.
Methods: Thirty-two stable BD outpatients (SCID-I) were evaluated by neuropsychological batteries assessing attention, processing speed, verbal and executive functions. The neuropsychological evaluation was carried out by a trained neuropsychologist who was blind to the diagnostic and clinical features of patients. No control subjects were assessed at the present preliminary study. The sample consisted in 17 women and 15 men, 23 BDI (72%) and 9 BDII, aged 18–70. The mean age was

41 years, the mean age of onset was 23 years-old, 18 years of illness media, and 71% achieved college/university education. All patients were euthymic (HAM-D−21 and YMRS) and had no medication changes for the last 3 months. BDI versus BDII performance were compared using U-Mann Whitney. Spearman correlations were carried out to estimate the association between neuropsychological performance and some clinical features.
Results: BDI group did not differ significantly from BDII subject on neuropsychological test (p < 0.05). Patients with earlier illness age onset performed worse in attention (p = 0.003), and executive functions (p = 0.00). A higher number of manic episodes was associated with deficits in executive functioning (p = 0.04). Patients with a higher number of admissions due to BD performed worse in executive function (p = 0.000) and episodic verbal memory (p = 0.032). Patients with a longer duration of admission, performed worse in executive functions (p = 0.000), working memory (p = 0.037) and verbal memory (p = 0.026).
Conclusions: These findings suggest there is executive, verbal and working memory impairments associated to certain clinical features. Attention appears to be the only cognitive domain associated to early illness age onset.
Keywords: bipolar disorder, neurocognition, euthymia

P213
Clinical features of bipolar disorder (BD) subjects in a Chilean specialist outpatient clinic

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Objectives: Our aim is to assess clinical features in BD patients.
Methods: The sample included 105 BD patients according to the DSM-IV (SCID-I) from the Bipolar Disorders Program of the P. Catholic University in Santiago of Chile. Assessments were made by senior clinicians using semi-structured interviews to patients and relatives.
Chi-square, Fisher exact probability test and Mann-Whitney test were used.
Results: The mean age was 39 years and 66% were women. Also, 66% of the 105 subjects had BDI and 34% had BDII. The mean age of onset was 23 years-old and diagnostic delay was 8 years. Sixty-seven percent of patients reported history of suicidal ideation and 22% at least one suicide attempt. No difference between gender and BD type was found. A lifetime history of psychosis, mood-congruent psychosis, seasonal pattern and antidepressant-induced mania was reported in a 29%, 15%, 29% and 15% respectively. No difference between male and female sample was found. A 24% of patients were rapid cyclers. Women had a higher rate than men (30% vs. 11%, p < 0.05) and BDII patients had a higher rate than BDI (p < 0.01). Mixed episodes history was reported in 18% of patients, having women a higher rate than men (p < 0.05).
Conclusions: This Chilean report highlights commonalities and distinctions of clinical characteristics of BD regarding others BD samples.
Keywords: bipolar disorder, clinical features, diagnostic delay, antidepressant-induced mania

P214

Co-morbidity and psychiatric family history in bipolar disorder (BD) from a Chilean specialist outpatient clinic

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Objectives: The study aims to assess co-morbidity rates and family history in bipolar disorder.

Methods: The sample included 105 BD patients according to the DSM-IV (SCID-I). Assessments were made in detail using semi-structured interviews to patients and relatives. Chi-square, Fisher exact probability test and Mann-Whitney test were used.

Results: The mean age was 39 years and 66% were women. BDI were 66% and BDII were 34% of the sample. A lifetime history of psychiatric co-morbidity and hypothyroidism were reported in 44% and 36% respectively. No difference was found between gender and BD type. Hypothyroidism was greater in female (43.5%) than male (22%) ($p < 0.05$) but no difference were found between BDI and BDII. Depression, bipolar, alcohol, and suicide family history were reported in 64%, 50%, 35% and 31% respectively. No difference was found in gender except in suicide family history being male rate greater than women ($p < 0.05$). BDII had greater rates than BDI in alcohol dependence family history ($p < 0.001$).

Conclusions: BD is often co-morbid with other axis I disorders and co-morbidity rates seem to be similar between gender (except for hypothyroidism) and BD type. Besides, family history of mood disorders, alcohol and suicide is one of the most elevated rates in psychiatric illnesses.

Keywords: bipolar disorders, co-morbidity, family history

P215

Suicide by overdose in a bipolar disorder cohort

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Background: Suicide rates are elevated among people with Bipolar Disorder (BD), yet there is limited research on the nature of suicide in this population. Intentional overdose (OD) is a common method of suicide, and the objective of this study was to characterize the specifics of OD suicides in a BD cohort, and compare with non-BD suicides.

Methods: Coroner records for all cases of OD suicide in Toronto, Canada over a 10-year period (1998–2007) were examined. Data collected included demographics and all substances present at lethal levels determined by the coroner to have caused death. Psychiatric diagnoses were recorded by the coroner based on documentation and collateral information obtained during case investigation. Data analysis focused on comparisons between the BD cohort and non-BD suicides.

Results: Suicide by overdose was recorded in 34 people with BD (61.8% female) and 343 people without BD (46.9% female). There were numerous differences between the BD and non-BD suicide cohorts. The BD suicide group was younger (mean age = 44.9 years vs. 49.1 years, $p = 0.03$), was more likely to have made a prior suicide attempt (61.8% vs. 39.4%, $p = 0.01$), was less likely to have a comorbid medical condition (17.6% vs. 42.0%, $p < 0.01$), and was more likely to overdose on mood stabilizers (29.4% vs. 2.0%, $p < 0.001$) or antipsychotics (32.4% vs. 11.4%, $p = 0.001$). Carbamazepine was the most frequently identified lethal substance among BD suicides, with lethal levels recorded in 20.6% of cases. Next most common among the BD group were diphenhydramine (14.7%) and codeine (14.7%), while lithium was found at lethal levels in only one BD suicide (2.9%) and 3 non-BD suicides (0.9%). Lethal non-TCA antidepressant levels were identified in 20.6% of BD suicides and 13.4% of non-BD suicides, a non-significant difference ($p = 0.3$).

Discussion: Key differences exist between BD and non-BD groups who suicide by OD, including the types of ingested medications. Improving our understanding of suicide in people with BD will ultimately aid in development of effective, targeted prevention strategies.

Keywords: bipolar disorder, suicide, overdose

P216

Switch rates from unipolar disorder to bipolar disorder and associated risk factors: results from a 2-year naturalistic follow-up

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Introduction: Aim of this analysis was to investigate the rate and predictors of a diagnostic switch from unipolar to bipolar disorder as well as the rate of bipolar misdiagnose during a three years follow-up.

Methods: Data of the acute and follow-up phase of a large naturalistic follow-up on 1017 in patients with major depression have been analyzed. Patients had full diagnostic assessments (SCID-I and II) at admission, discharge and at the 1, 2 and 3-year follow-ups. Several sociodemographic variables were analysed as predictors for a diagnostic switch.

Results: For patients with unipolar disorder (both recurrent and episode) the transition rate to bipolar disorder after from admission to discharge, one and two years was 1.9%, 4.7% and 2.4%.

Among others variables switch into bipolar disorder was significantly associated with age at onset and male gender.

Limitations: The follow-up period of 2 years is only moderately long for investigation of a phenomenon that may occur even after decades of follow-up.

Discussion: Within psychiatric tertiary care centres, diagnostic stability of bipolar and unipolar disorder was rather high. This diagnostic stability for unipolar major depression using standardized diagnostic interviews across two years is satisfactory.

Keywords: unipolar, bipolar, diagnostic stability, diagnosis, switch

P217

A longitudinal study of fronto-limbic brain structures in patients with bipolar I disorder during lithium treatment

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Objectives: To assess the association between therapeutic response to lithium treatment and fronto-limbic brain volumes in patients with bipolar I disorder (BPI).
Method: Twenty-four BPI and 11 healthy comparisons underwent MRI scans at baseline and 4 weeks later. The BPIs received lithium during the 4 weeks period with a goal of achieving therapeutic blood levels of > 0.5 mEq/L (mean level 0.67 ± 0.29). Mood symptoms were rated with the Hamilton Depression and the Young Mania Rating Scales at baseline and after 4 weeks, and response was defined as $>50\%$ decrease on either scale. Hippocampus, amygdala, prefrontal (PFC), dorsolateral prefrontal (DLPFC), and anterior cingulate cortex (ACC) volumes were obtained by Freesurfer image analysis suite. According to baseline symptoms and treatment response, patients were assigned to three groups: euthymics (n = 6), responders (n = 12) and non-responders (n = 6).
Results: Taken over both time periods non-responders had smaller right amygdala than healthy comparisons and euthymic BPI (p = 0.035 and p = 0.003, respectively). When baseline and after treatment volumes were compared, there was a significant enlargement in left PFC and left DLPFC in BPI who responded (p = 0.002 and p = 0.006, respectively). Left hippocampus and right ACC volumes decreased in non-responders (p = 0.02 and p = 0.0001, respectively).
Conclusion: Decreased left hippocampus and right ACC volumes may be markers of non-response to lithium amongst BPI. Smaller right amygdala may reflect symptomatic remission and be a marker of treatment non-response. Increases in left PFC and left DLPFC as a result of lithium treatment may relate to lithium's neurotrophic effects.
Keywords: bipolar disorder, lithium, prefrontal cortex, amygdale, hippocampus

P218

Several peripheral oxidative biomarkers in bipolar disorder

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Background: Recent researches suggest oxidative stress and generalized inflammatory state to be associated with bipolar I disorder (BID) and several oxidative stress marker levels have been evaluated in BID before. Most of the previous researches lack evaluating the diagnostic performance. Myeloperoxidase

(MPO) is classified as an oxidative agent and Catalase (CAT) is classified as an antioxidant in the body. Both biomarkers have little been studied in BID. Our aim is to evaluate MPO and CAT activities in bipolar disorder and test their diagnostic performance in our study
Methods: 73 BID I patients diagnosed according to DSM-IV Criteria and 73 healthy controls were enrolled. Approval was given by the local ethics committee of the Harran University. Serum MPO and CAT activities were measured in patients and controls via venous sampling. Hamilton Depression Rating Scale and Young Mania Rating Scale were applied to the patients. Patients were classified into three groups into their current state as manic (N = 22), depressive (N = 24) and euthymic (N = 27) bipolar patients.
Results: CAT activity was significantly lower in controls than manics, depressives and euthymics (p < 0.001). MPO activity was significantly higher in controls compared to euthymic bipolar patients (p = 0.007) and it was significantly higher in depressives compared to euthymics (p = 0.023). CAT activity was negatively correlated with disease duration ($r_0 = -0.248$, p = 0.034, N = 73) and MPO activity was positively correlated with disease duration ($r_0 = 0.338$, p = 0.003, N = 73) in overall the patients. Positive Predictive Value was 94.5% and Negative Predictive Value was 100% above the cutoff point 14.12 U/L for CAT activity.
Conclusion: MPO and CAT activities are impaired in BID, which may be associated with oxidative stress. CAT activity may be a trait marker for diagnosing BID. CAT activity may also show the chronicity of BID.
Keywords: bipolar disorder, oxidative stress, myeloperoxidase, catalase, diagnostic tests

P219

No impairmant on executive functions and memory in bipolar disorder over time

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Objective: Despite evidence that individuals with bipolar disorder have neurocognitive impairment that persists during euthymia, decline in cognitive functioning during the illnes has not been well established. Here, we sought to explore the course of cognitive functioning in a sample at 2 time points at least 1 year a part.
Methods: Eleven individuals with DSM-IV bipolar disorder who were eutymic and on monotherapy participated in this study. All participants were assessed for depressive and manic symptoms at baseline and follow-up. Neurocognitive assessment included executive functioning, memory, and 3 subtests of the Wechsler Adult Intelligence Scale- Revised. Course of cognitive functions and clinical features were analyzed.
Results: The mean assessment time period was 43.0 (20.0) months and the mean age was 37.1 (12.1) at baseline and 41.0 (13.9) at follow –up. Mean education level was 12.4 (3.9) years. HAM-D scores 3.2 (3.9), 2.5 (2.5), YMRS scores 1.4 (2.6), 0.8 (1.3) at baseline and follow-up assessments respectively. Baseline and follow-up performances were not significantly different for WCST completed categories (4.8 + **SD**. vs. 5.0 + **SD**.), perseverative errors (20.3 + **SD**. vs. 15.1 + **SD**.), non-perseverative errors (11.2 + **SD**. vs. 12.1 + **SD**.), WMS logical memory immediate (10.7 + **SD**. vs. 9.8 + **SD**.), WAIS-R block design (26.9 + **SD**. vs. 26.2 + **SD**.), WAIS-R digit symbol substitution (43.0 + **SD**. vs. 44.7 + **SD**.), and WAIS-R arithmetic (10.5 + **SD**. vs. 12.9 + **SD**.).
Conclusions: Individuals with bipolar disorder showed no decline on executive functions and memory over time. However there

might be type II error due to small sample size. Lack of significant cognitive decline in a sample of euthymic bipolar patients on monotherapy might point out the role of other factors, in samples where decline was found (e.g, clinical prognosis of the disorder, medication effect). Failure to defect possible differences due to small sample size can not be ruled out. Follow-up of heterogenous samples and possible role of other factors deserve further investigation.

Keywords: bipolar dysorder, neurocognition, eutymia, monotherapy, prospective design

P220
Comparisons of prevalence of catatonic symptoms and clinical characteristics between schizophrenia and bipolar disorder

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Introduction: Catatonia is a syndrome of motor dysregulation, accompanying many variable symptoms. And it is found in 10% or more in acute psychiatric admissions. Until DSM-IV, catatonia was regarded as a subtype of schizophrenia. However, there have been several reports of catatonia in other psychiatric and general medical conditions as well as several psychotic disorders. Also, some psychiatrists suggest some changes in the diagnosis criteria of catatonia. We performed the pilot study to evaluate the difference of symptomatology of catatonia between bipolar disorder and schizophrenia.

Methods: To identify catatonia's distinguishing features, we compared the clinical characteristics and catatonic symptoms between schizophrenia group and bipolar affective disorder group by chart review. The variables are 1)Demography 2)Psychotic symptoms(auditory hallucination, delusion, disorganized behavior, formal thought disorder, mannerism, bizarre posture) 3) mood symptoms 4) vital sign instability 5) inter- episodic function (occupational history, social relationship) 6) concomitant Axis I disorders 7) residual symptoms 8) course (age of onset, onset type, change of diagnosis, total duration of administrations, number of administration) 9) etc (insight, stressor, compliance, cognitive impairment)

Results: We compared the prevalence of clinical and catatonic symptoms between 36 patients with schizophrenia catatonic subtype and 9 bipolar patients with catatonic features. The range (schizophrenia vs. bipolar disorder, respectively) of prevalence of catatonic symptoms varied: motoric immobility (100%), excessive motor activity (34.3 vs. 44.4%), negativism (88.9 vs. 77.8%), peculiar movements (71.4 vs. 77.8%), and echolalia/echopraxia (5.7 vs. 0%). However, there was no significant difference of prevalence of catatonic symptoms and clinical characteristics

Discussion: We found the range of catatonic symptoms varied but we failed to find the difference of clinical and catatonic feature between schizophrenia and bipolar disorder. Due to the limitations of this study such as small sample size and chart review, further study will be warranted.

Keywords: catatonia, schizophrenia, nosology, bipolar disorder

P221
Diagnostic conversion of major depressive disorder to bipolar disorder in pregnancy and postpartum

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Objectives: To determine the rate of and risk factors for a change in diagnosis from major depressive disorder to bipolar disorder, and from bipolar II to bipolar I disorder in pregnancy and postpartum.

Methods: Patients with a prior history of major depressive disorder or bipolar II disorder were recruited between 24 and 28 weeks gestation and followed through to one year postpartum. Diagnostic interviews were conducted using the Structured Clinical Interview for DSM-IV at study intake and repeated using the Mini-International Psychiatric Interview at 1, 3, 6 and 12 months after childbirth. Fisher's exact test was used to assess the association between various risk factors and diagnostic switch.

Results: There were a total of 146 participants who completed the intake interview and at least one follow-up interview postpartum. Of these, 92 were diagnosed with major depressive disorder and 54 with bipolar II disorder at intake. Six women (6.52%) experienced a diagnostic change from major depressive disorder to bipolar II disorder during the first 6 months after childbirth. There were no cases of switching to bipolar I disorder but in 1 participant the diagnosis changed from bipolar II to bipolar I disorder during the three months after childbirth. Bipolar switch was associated with a family history of bipolar disorder.

Conclusions: Postpartum appears to be a time of high risk for new onset of hypomania in women with major depressive disorder. Our rate of diagnostic switching to bipolar II disorder (6.52%) is at least 11 to 18-fold higher than the rates of switching in similar studies conducted in both men and women.

Keywords: major depressive disorder, bipolar disorder, childbirth, diagnostic conversion, family history

P222
Revisiting the association between endometriosis and bipolar disorder

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Objective: To study the association between endometriosis and bipolar disorder.

Study Design: Using the Structured Clinical Interview for DSM-IV Axis I Disorders, the prevalence of bipolar disorder was compared

in 27 patients with endometriosis, and 12 women with non-endometriosis pelvic pain who were seen at a speciality gynaecology clinic for chronic pelvic pain.

Results: A significantly greater proportion of women in the endometriosis group were found to have bipolar disorder and a poorer quality of life, compared to women with non-endometriosis pelvic pain.

Conclusion: There may be an association between endometriosis and bipolar disorder. An optimal approach to managing endometriosis should include evaluation and treatment of psychiatric comorbidity, particularly bipolar disorder.

Keywords: bipolar disorder, depression, endometriosis, women's health

P223

A randomized, double blind, placebo-controlled study of adjunctive quetiapine SR in the treatment of mixed states (MS) in bipolar disorder (BD)

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Background: MS, an intrinsic presentation of BD, are severe, complex, involve concurrent symptoms of mood elevation and depression/dysphoria and constitute > 50% of all syndromal episodes in BD. The majority of all suicides in BD occur either during a major depressive episode (79%) or a MS (11%). Observational evidence indicates that MS are frequently associated with psychosis and co-morbid substance use disorders. Despite the preponderant manifestation of MS in BD and associated psychosocial impairment, treatment options, acutely and long term, are limited. Quetipaine has demonstrated efficacy in the acute treatment of bipolar mania and depression as well as in prophylaxis of BD. To our knowledge no study assessing the efficacy of quetiapine has been conducted in MS of BD. We hypothesize that the addition of quetiapine to ongoing treatment with mood stabilizers will lead to reduction in both the depressive and manic components of patients with an index episode of MS.

Methods: This prospective 24-week, double-blind, randomized study (n = 44) assesses the safety and efficacy of quetiapine XR added to ongoing treatment regimen with mood stabilizers, lithium, valproate or lamotrigine any combination of the three thereof, in the acute and maintenance treatment of patients with MS. Primary efficacy was assessed by Mixed effects repeat measure of change from baseline in Bipolar Inventory of Signs and Symptoms (BISS) total score and, secondarily, manic and depression subscale scores. Response defined as 50% reduction in YMRS and MADRS and time to intervention or discontinuation for any mood episode were additionally used as efficacy measures. Assessments were performed at weeks 1, 2, 4, 8, 12, 16, 20 and 24.

Results: The authors will present results of a study assessing the safety and efficacy of adjunctive quetiapine to ongoing treatment with mood stabilizers.

Keywords: mixed states, mixed mania, quetiapine, biss, efficacy

P224

COMT polymorphisms as predictors of cognitive dysfunction during manic and mixed episodes in bipolar I disorder

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Introduction: The dopaminergic system plays an important role in prefrontal cortex (PFC) and is believed to mediate cognitive dysfunction (CD) in Bipolar Disorder (BD). The enzyme catechol-O-methyltransferase (COMT) is involved in the catabolism of dopamine in the PFC, and an association between COMT single nucleotide polymorphisms (snp) and BD has been reported. Also, COMT snp have been associated with executive and working memory performance in healthy subjects, schizophrenics and euthymic BD patients.

Materials & Methods: Sixty-two symptomatic, medication-free Bipolar I Disorder patients and 72 healthy controls were evaluated using neuropsychological tests, and genotyped for *COMT* snp rs4680 and 165599.

Results: Patients undergoing mania and mixed episodes carrying *allele* G of rs4680 or rs165599 had better performance on executive function, memory and intelligence tests.

Conclusion: This is the first study that reports a genetic explanation to why cognitive dysfunction varies in BD episodes. Allele G from COMT snp rs4680 and rs165599 may represent reliable state-dependent predictors of global cognitive dysfunction during manic and mixed episodes in Bipolar I Disorder. Further studies in larger samples are necessary to confirm these findings.

Keywords: bipolar, catechol-O-methyltransferase, dopamine, cognition.

ClinicalTrials.gov Identifier: NCT00969

P225

Atypical antipsychotic use in Bipolar Disorder treatment: Results from the HARMONY study

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Background: Atypical antipsychotics (AAPs) are increasingly being prescribed for Bipolar Disorder management.

Methods: The HARMONY study (NCT00888264) was a multi-centre, prospective, non-interventional study in Belgium that enrolled patients diagnosed with bipolar I or II disorder (BDI/BDII), experiencing a major depressive episode. The objective was to record the parameters of AAP use (dosage, reason for use, treatment starting date) over 4 visits (V): V1, baseline; V2, after 6-weeks; V3, 3-months; V4, 6-months. Safety and tolerability were not assessed.

Results: 152 patients (62.3% female) aged 19–75 (mean ± **SD**: 46.5 ± 11.0) years were recruited: 95 patients (63.3%) with BDI and 55 (36.7%) with BDII, diagnosis was missing for 2 patients. At enrolment, 138 patients (90.8%) were treated with AAPs combined with other antipsychotic medications and 14 (9.2%) with AAP monotherapy. Overall, AAPs were taken by 127 patients (84.7%) for a depressive episode and by 23 (15.3%) for manic/other illnesses. Depressive symptoms were treated with quetiapine (42.7%, 64/150), at least one other AAP (40.0%, 60/150;

olanzapine, aripiprazole, risperidone or paliperidone), amisulpride (2%, 3/150) and the benzodiazepine chlordiazepoxide (0.67%, 1/150). Mean-daily AAP doses were: 229.8 mg quetiapine (range 10–600 mg plus one outlier of 900 mg), 9.3 mg olanzapine, 12.7 mg aripiprazole; 1.8 mg risperidone; 3.9 mg paliperidone; 500 mg amisulpride. Patients who first developed symptoms at ≤30 years-old were prescribed quetiapine less frequently than patients who developed symptoms when older (34.2%, 27/79 vs. 53.6%, 37/69, p = 0.017 Chi-square test). Choice of current treatment was not influenced by prior AAP treatment. More BDII patients (52.7%, 29/55) were treated with quetiapine for depressive symptoms than BDI patients (36.8%, 35/95). Treatment compliance was high; most patients (BDI: 87.7–94.7%, BDII: 92.3–97.4%) were taking their medication 6–7 days/week since the previous visit. Treatment with AAPs for depressive symptoms decreased over time: V1, 42.7% (64/150) taking quetiapine and 40.0% (60/150) other AAPs vs. V4, 15.9% (18/113) taking quetiapine and 10.6% (12/113) other AAPs.

Discussion/Conclusion: AAPs, particularly quetiapine, in combination with other antipsychotic medications were the dominant treatment for BDI or BDII patients experiencing a depressive episode, especially in patients who developed symptoms later in life.

Keywords: bipolar disorder, atypical antipsychotic, choice of treatment, depressive episode

P226

Association between bipolar disorder and family history of psychiatric disorders: an analysis of HUWC patients database

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Introduction: Bipolar Disorder (BD) is caused by biological, genetic, psychological and social factors. Among these, genetic has been a relevant object of many studies.

Objective: This study aims to analyse the impact of family history of psiquiatric disorders in the pathogenesis of bipolar disorder.

Methods: Data was obtained from the records of 75 patients with BD attending the outpatient clinic from the Walter Cantídio University Hospital (HUWC) from the Federal University of Ceará in Fortaleza, Brazil between 2005 and 2011 by GETA (in portuguese, Affective Disorders Study Group), a research project linked to the Federal University of Ceará. Structured scales and questionnaires were performed, among these a social-demographic questionnaire was used to investigate the presence of psiquiatric disorders (PD) among pacient's relatives.

Results: 17% of pacients have one relative with BD (bipolar disorder) and 6.4% have two relatives with BD. 25.5% of pacients have relatives with other PD. About 37.8% have a mother with PD (of which 13.3% of mothers have depression), 20% have a father with PD (of which 4% of fathers have alcohol and drug use disorders), 52.8% have siblings with PD (of which 7.9% of siblings have BD) and 11.5% have children with PD (of which 2.6% of children have BD). About 17.2% have a maternal grandmother with PD (of which 1.3% of maternal grandmothers have depression and another 1.3% of maternal grandmothers have BD) and 11.1% of maternal grandfathers have PD (of which 1.3% of maternal grandfathers have BD and another 1.3% of maternal grandfathers have schizophrenia). Paternal grandmothers with PD were not found and 3.8% of paternal grandfathers have PD (of which 1.3% of paternal grandfathers have alcohol use disorders and 1.3% of paternal grandfathers have drug use disorders).

Conclusion: A strong association between psychiatric disorders among relatives and bipolar disorder was found. This association was higher in patients who had maternal relatives with PD. A large number of patients could not identify which PD their relatives suffered, demonstrating lack of information and/or diagnosis of psychiatric disorders.

Keywords: genetic, family history, psychiatric disorders

P227

Prevalence of depression among indigenous elders from the Santo Antônio pitaguary community – Brazil

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Objectives: The affective disorders are among the most common psychiatric disorders in the elderly. They are associated with loss of autonomy and worsening of preexisting clinical conditions.Depression is the most common affective disorder in this age group. This study aims to estimate the prevalence of depression among indigenous elders from the Santo Antônio do Pitaguary community.

Methods: It was used a 15-itens version of the Yesavage Geriatric Depression Scale (GDS-15) to interview84 elders. A minimum score of 7 suggests depression. Participants who scored 7 or more were considered as having mild depression, whereas participants who scored 11 or more were considered as having severe depression. The interviews were performed in a health center located in the Santo Antônio do Pitaguary Indian Reservation, Fortaleza/Ceará, Brazil, between June and August 2011.

Results: The mean age of the elders was 70 years. The minimum and maximus ages were, respectively,55 years and 96 years. Regarding gender, 71.42% (n = 60) were women. According to the score on GDS-15, 77.38% (n = 65) of the participants had depression. Among them, 20% (n = 13) had severe depression. The prevalences of depression and severe depression was higher among the women,(χ^2 < 0.011) 86.66% (n = 51) and 21.56% (n = 11), respectively. Among the literate participants, the prevalence of depression was 68.75% (n = 44).

Conclusions: Compared with the general population, the elders from the Santo Antonio do Pitaguary community showedhigh prevalence of depression. Depression was found to be more prevalent in women and literate elders.

Keyword: depression, elderly, indigenous

P228

Factors associated to mood disorders during pregnancy in Brazilian Indian women

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Introduction: Pregnancy causes hormonal fluctuation that may exacerbate bipolar symptoms, making pacients more susceptible to manic and/or depressive episodes.

Objective: This study aims to analyze the factors associated to mood alterations during pregnancy.

Methods: Pregnant women were interviewed by a socio-demographic questionnaire, Edinburgh Depression Scale (EDS) and Mood Disorder Questionnaire (MDQ). The interviews were performed in the health center located in Santo Antonio do Pitaguary indigenous reserve in Fortaleza, Ceará, Brasil, between June and August of 2011.

Results: A sample composed by 22 pregnant women (gestational age between 5 and 40 weeks). Mean age of 23 years, 77.3% (n = 17) married, 45.5% (n = 11) completed high school, 54.5% (n = 12) have children and 25% have a paid work.

Concerning the mood evalution 60% (n = 12) presented hypomanic symptoms, 35% (n = 5) severe depression and 68.4% (n = 12) have had both during the current pregnancy.

Conclusion: Many pregnant women from the Pitaguary indigenous community presented symptoms of mood disorders. However, more studies are needed to evaluate mental health during pregnancy in indigenous populations.

Keywords: mood disorders, pregnancy, indigenous

P229

Bipolar and becoming or being pregnant, what to do?

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The pharmacologic and overall management of bipolar disorder in women who wish to conceive or who are already pregnant puts the patient, her partner and the doctor in a difficult dilemma: whether or not to continu medication. By discontinuing medication developing a recurrence during pregnancy is as likely as during non-pregnancy and in the postpartum period the risk of decompensation becomes greater than the chance of remaining well. On the other side: continuing medication carries the risk of teratogenic or developmental anomalies in the child. It is balancing the benefits with the risks of treatment vs. no treatment for both mother and (unborn) child.

In 2010 we started a preconception outpatient clinic for women with psychiatric problems. Information is given to the patient (and her partner) about the medication and non-medical treatments during pregnancy. Part of the consultation is making a relapse prevention plan.

We examined the results of the consultations in terms of treatment decisions made and symptoms experienced during pregnancy and postpartum period and did a satisfaction study.

Keywords: preconception consultation, bipolar, pregnancy

P230

Interferon-α induces nitric oxide synthase expression and heme oxygenase-1 down-regulation in microglia: Implications of IFN-α-induced mood disorders

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Background: Substantiating evidence for the inflammation theory of depression is that interferon-alpha (IFN-α) induces mood disorders. Despite numerous researches on neurochemical and neuroendocrinological mechanisms from human and animal studies, the direct mechanisms of IFN-α at neural level is still lacking.

Methods: In this study, we aim to identify the cellular mechanisms for IFN-α-induced neuroinflammatory response with murine BV-2 microglia cell line.

Results: IFN-α potently induced nitric oxide synthase (iNOS) and nitric oxide (NO) release and down-regulated heme oxygenase-1 (HO-1) expression, which could be dampened by Janus kinase 1 (JAK1) and c-Jun NH2-terminal kinase (JNK) inhibition, respectively. IFN-α activated JAK1, JNK, signal transducers and activators of transcription (STAT) 1 and STAT 3, but not

extracellular signal-regulated kinases (ERK) and Phosphoinositide 3 (PI3) kinase, signal pathways. The transfection with the STAT1 and STAT3 siRNA also inhibited IFN-α-induced iNOS/NO expression and HO-1 down-regulation. The HO-1 activator, CoppIX, reversed iNOS/NO up-regulation and HO-1 down-regulation induced by IFN-α. On the other hand, a knockdown on HO-1 expression enhanced IFN-α-induced iNOS/NO expression.

Discussion: The effects of IFN-α-induced iNOS/NO up-regulation and HO-1 down-regulation in microglia are associated with JAK1/JNK/STAT1 and STAT3 signaling pathways. The different effects between IFN-α and IFN-γ on HO-1 regulation and ERK phosphorylation might provide a possible explanation of different risk in their induction of neuropsychiatric adverse effects in clinical and animal studies. The results from this study add the missing part of direct cellular mechanisms for IFN-α-induced mood disorders.

Conclusion: The results from this study add the missing part of direct cellular mechanisms for IFN-α-induced mood disorders.

Keywords: interferon-alpha (IFN-α), microglia, nitric oxide synthase (iNOS), nitric oxide (NO), heme oxygenase-1(HO-1)

P231

Hypermethylation of serotonin transporter gene in bipolar disorder detected by epigenome analysis of discordant monozygotic twins

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Introduction: Bipolar disorder (BD) is a severe mental disorder characterized by recurrent episodes of mania and depression. Although high concordance rate of BD in monozygotic (MZ) twins supports the contribution of genetic factor in BD, importantly, it is not 100%. Because MZ twins have been regarded as having identical genomes, these facts suggest the importance of environmental or epigenetic factor for the onset of mental disorders.

Methods: We performed promoter-wide DNA methylation analysis of lymphoblastoid cell lines (LCLs) derived from two pairs of monozygotic twins discordant for BD. Promoter-wide DNA methylation profiles of the twins were examined by Affymetrix GeneChip Human Promoter 1.0R tilling arrays after methylated DNA was enriched using MBD2b and MBD3L1 conjugated beads. Fully unmethylated DNA obtained by whole genome amplification was used as a reference. To rule out the possible discordance of copy number variation (CNV) between twins, we performed CNV analysis

Results: We found the copy number profiles were nearly identical between the twin pairs except for immunoglobulin-related regions. Among the three genes we obtained as candidate regions showing distinct difference of DNA methylation between one of the two pairs, hypermethylation of *SLC6A4*, encoding serotonin transporter (HTT), in the bipolar twin was only confirmed by bisulfite sequencing. Promoter hypermethylation of *SLC6A4* in LCLs of BD patients was confirmed in a case-control analysis. DNA methylation of *SLC6A4* was significantly correlated with its mRNA expression level in individuals with the S/S genotype of serotonin transporter-linked promoter region (HTTLPR), and mRNA expression level was lower in BD patients carrying the S/S

genotype. DNA methylation of the same site was also higher in the postmortem brains of BD patients.

Discussion: HTT is a target of antidepressants and is one of the strongest candidate molecules of mood disorder, however, genetic study showed equivocal results. DNA methylation of *SLC6A4* may be an epigenetic mark resulting from a gene-environment interaction that leads to the development of BD. Our findings add a new insight to elucidate the pathophysiolosy of mood disorder.

Keywords: bipolar disorder, monozygotic twins, serotonin transporter, DNA methylation

P232
Pharmacological treatment of bipolar depression: qualitative review of double-blind randomized clinical trials

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Introduction: Randomized clinical trial (RCT) is the best study design for treatment-related issues, yet these studies may present a number of biases and limitations. The objective of this study is to carry out a qualitative analysis of RCT methodology in the treatment of bipolar depression (BD).

Methods: A systematic review covering the last 20 years was performed on PubMed selecting double-blind RCTs for BD. The identification items of the articles, their design, methodology, outcome and grant-related issues were all analyzed.

Results: Thirty articles were included, all of which had been published in journals with an impact factor > 3. While most studies (46.7%) used a very small sample size (< 50 patients), 70% did not describe or did not perform sample size calculation. The Last Observation Carried Forward (LOCF) method was used in 2/3 of the articles and 53.4% of the items had high sample losses (> 20%). Almost half the items were sponsored by the pharmaceutical industry and 33.3% were sponsored by institutions or research foundations.

Conclusion: Articles on the pharmacological treatment of BD have several limitations that hinder the extrapolation of the data to clinical practice. Methodological errors and biases are common and statistical simplifications compromise the consistency of the findings.

Keywords: systematic review, bipolar depression, pharmacotherapy, clinical trials

P233
Incidence, onset, and duration of treatment-emergent somnolence with asenapine in patients with schizophrenia or bipolar disorder

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Background: Somnolence (including sedation and hypersomnia) is an adverse event (AE) associated with the use of certain antipsychotics in patients with schizophrenia or bipolar disorder. We assessed somnolence in placebo- and/or active-controlled asenapine schizophrenia and bipolar I disorder trials to understand its incidence, onset, and duration.

Methods: Data were from schizophrenia (4 short-term [6 week]; 3 long-term [26–52 week]) and BD (2 short-term [3 week]; one 12-wk adjunct therapy to mood stabilizers) trials. Patient data were pooled across asenapine doses (5 or 10 mg BID); active controls

were risperidone 3 mg BID, olanzapine 5–20 mg QD, and haloperidol 4 mg BID. Incidence, onset time, and duration of treatment-emergent somnolence were assessed.

Results: For schizophrenia, incidence of somnolence was higher with active treatment than placebo in short-term trials (asenapine, 13.1%; placebo, 6.9%; active controls, 5%–20%) and comparable for asenapine and olanzapine in long-term trials (asenapine, 18.4%–18.5%; olanzapine, 19.6%–21.1%); severe somnolence was infrequent (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 BD, incidence of somnolence was higher with active treatment than placebo in short-term (asenapine, 23.8%; placebo, 6.4%; olanzapine, 26.4%) and adjunctive therapy (asenapine, 24.1%; placebo, 10.2%) trials; severe somnolence was infrequent (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; median somnolence duration (days) was brief in short-term (asenapine, 7.0; placebo, 5.0; olanzapine, 8.5) and adjunctive therapy (asenapine, 12.5; placebo, 7.0) trials.

Discussion: Somnolence with asenapine occurred after 1–9 treatment days and persisted for 1–4 weeks.

Conclusions: The early onset and limited duration of treatment-emergent somnolence with asenapine and active comparators may be a useful feature in certain clinical situations (eg, managing acute agitation).

Keywords: bipolar disorders, schizophrenia, somnolence

P234
Early improvement predicts later outcome in manic or mixed episodes associated with bipolar I disorder: post-hoc analyses of asenapine studies

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Background: 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 bipolar I disorder patients experiencing acute manic or mixed episodes.

Methods: Data were pooled from intent-to-treat populations of two 3-week randomized, double-blind trials; treatments were asenapine (10 or 5 mg BID; n = 372), olanzapine (5–20 mg QD; n = 391), or placebo (n = 197). Early improvement, defined as reduction from baseline Young Mania Rating Scale (YMRS) total score using cutoffs of ≥15%, ≥20%, and ≥25%, was assessed 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 calculated as previously described by Szegedi et al.

Results: Early improvement was strongly associated with positive outcomes. The earliest positive associations across all cutoffs occurred with asenapine at day 2 (response, all p < 0.04; 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 were higher for asenapine (1.8–9.1) than olanzapine (1.4–3.5) and placebo (1.3–8.0). Respective day 4 remission values for SN, SP, PPV, and NPV 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.

Discussion: Early improvement was strongly associated with response and remission at week 3; high NPVs indicated little chance of stable remission in the absence of early improvement.

Conclusion: Treatment response after 2–4 days may be clinically useful for assessing whether a patient will benefit from a recently initiated treatment.

Keywords: bipolar disorders, early improvement, predictor

P235

The sociodemographic, clinical, temperament characteristics and childhood trauma of bipolar disorder compared to unipolar disorder

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Introduction: The purpose of this study is to evaluate sociodemographic data, clinical features, affective temperaments, the psychometric properties of temperament-character and childhood trauma in patients with unipolar and bipolar disorder compared to healthy controls.

Methods: This study was conducted at the outpatient clinic in the Department of Psychiatry of Maltepe University Hospital between February–July 2010. Thirty five patients with unipolar disorder, 38 patients with bipolar disorder that were diagnosed according to DSM-IV criteria and 36 healthy controls, totally 109 people were included in this study. The patients were in remission at least 8 weeks. All the patients and healthy controls were selected randomly. Patients and controls completed several psychometric questionnaires, including TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris, San Diego Autoquestionaire), Temperament and Character Inventory (TCI) to evaluate the properties of temperament-character and Childhood Trauma Questionnaire (CTQ-28) for childhood trauma.

Results: In comparision of the mean scores of TEMPS-A; the scores of the depressive, irritable, cyclothymic and anxious factors were significantly higher in the patients' groups than the control group. The scores of depressive temperament were significantly higher in unipolar disorder group than the other groups. The scores of anxious, irritable and cyclothymic temperaments are higher in unipolar patients than bipolar patients. The scores of hypertymic temperament were similar both in unipolar and bipolar disorder groups. In comparision of the mean scores of TCI; harm avoidance (HA) scores were higher in unipolar disorder group, novelty seeking (NS) and self-transcendence (ST) scores were higher in bipolar disorder group. And, in comparision of the mean scores of CTQ-28; the scores of emotional neglect were significantly higher in unipolar disorder group than the other groups.

Discussion: In conclusion, there are different views that temperament and character properties may either predispose to mood disorders or be the reflection of mood disorders. The differentiation between these situations based on unipolar and bi-polar disorders is important for clinicians to determine the treatment choices and the progress of ilness.

Keywords: bipolar, temperament, unipolar, character

P236

A clinical study on bipolar disorder and chronic depression

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Background: The differential diagnosis of bipolar disorder from major depressive disorder(MDD) is important to the treatment strategy and a prognosis. One of the reasons why depressive states become chronic might be missing the diagnosis of bipolar disorder. We examined the prevalence of chronic depression and aimed at reviewing relations with clinical characteristics that contribute to chronic depression and bipolar disorder. We hypothesized that the prevalence of chronic depression would be higher in bipolar disorder compared with MDD.

Methods: We investigated the total outpatient who came to Department of psychiatry Showa University Fujigaoka Hospital from March 8, 2010 to April 19. By clinical records, we investigated pharmacotherapy, sex, age at onset, a family history, and duration of treatment.

Results: 1,043 patients came during all over the period. 147 were MDD, and 40 were bipolar disorder. At the time of investigation, 66 MDD and 23 bipolar outpatients had continued visiting hospital more than two years. Among 89 patients with mood disorder, 20 patients met the diagnostic criteria of the chronic depression. Among 20 patients with chronic depression, 17(25.8%) MDD and 3(13.6%) bipolar disorder were observed. Number of the patients who was diagnosed as MDD at initial visiting, but was changed for bipolar disorder during the course was 15 (18.5%). The age at onset was significant earlier in the patient with bipolar disorder compared with whom with MDD (p = 0.017).

Discussion: Contrary to the hypothesis, the prevalence of chronic depression in the bipolar outpatient was low. It was thought that the bipolar disorder might be hard to become chronic, and because the bipolar disorder traced the episodic progress, and was used sufficient quantity of mood stabilizer. Chronic depressive state may be a result that patients had not received enough mood stabilizer.

Keywords: bipolar disorder, chronic depression, major depressive disorder

P237

Suicidality in bipolar affective disorder: the nature of impulsivity and impulse control disorders - A cross sectional controlled study

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Background: Patients with bipolar disorder have a higher risk of committing suicide(15–20%) Poor impulse control might be the mechanism by which suicidality may become manifest in bipolar disorder. This has also been implicated in high prevalence of co-morbid disorders in these patients. Understanding the nature of the impulsivity and poor impulse control is important to identify and manage suicidal risk more effectively.

Aims: 1. To determine the nature of poor impulse control 2. To assess suicidal behaviour

3. To understand the relationship between poor impulse control, co-morbid diagnosis and suicidal behaviour in patients with bipolar disorder

Method: A cross sectional study was carried out in 40 patients with bipolar disorder in remission. Diagnosis was confirmed using SCID-I. The patients were assigned into three groups (Near- fatal, Less severe and No self harm) based on their past history using validated

criteria. Literature suggests that 'near – fatal self harm' can be used as a proxy measure for completed suicide. Clinical parameters were established using semi-structured interview, co-morbid diagnosis and impulse control disorders using SCID. All patients completed multidimensional impulsivity questionnaire (UPPS) and Suicidal behaviour questionnaire (SBQ). The three groups were compared using ANOVA. Pearson's correlation was performed to understand the relationship between impulsivity scores and suicidal behaviour. **Results:** The mean age of the sample was 47.7 yrs.62% of them had type I disorder. There was a high degree of co-morbidity in the sample (55% anxiety disorders, 30% substance use, 13% emotionally unstable personality disorder and 47% impulse control disorder). 45% (n = 18) of study population did not have a past history of self harm, while 40% (n = 16) had history of less severe self harm and 15% (n = 6) had near fatal self harm history. There was statistically significant difference between the three groups with regards to items on suicidal behaviour questionnaire (p < 0.05). Past suicidal ideation emerged as single most predictor variable for future attempt. With regards to impulsivity scores there was no intra group difference but the sample mean showed significant difference compared to population mean(p < 0.05) with marked difference noted for near fatal self harm group (p < 0.01) indicating that patients with bipolar disorder might have a high degree of trait impulsivity . The three items on impulsivity scale namely lack of premeditation, urgency and lack of perseverance correlated significantly (p < 0.01) with the future likelihood of dying in the correlation analysis. **Conclusion:** This study supports the view that there is a high degree of suicidal behaviour in bipolar disorder. About 15% of the sample had a past history of near-fatal self harm. The rates of co-morbid anxiety disorder are similar to other reports (~50%) while the rate of impulse control disorder is less(47%)compared to other studies(50–60%). High scores of trait impulsivity in sample are akin to scores for patients with borderline personality and addiction problems. There is a clear correlation between impulsivity scores and future risk of completed suicide. We hypothesise that trait impulsivity might be a common risk factor and understanding how it may become manifest in individuals and situations is important. We also suggest that there might be a role for early psychological intervention.

Comments: Suicidality in bipolar disorder is underestimated and unexplored. This is a sensitive topic and poses significant challenges for researchers around study design, method and recruitment.

Keywords: bipolar affective disorder, suicide, impulsivity, impulse control disorder, co-morbidity

P238
Electrodermal hyporeactivity is a valid indicator of suicidal propensity in bipolar disorder

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Background: Electrodermal hyporeactivity has previously been shown to be extraordinarily valid in the detection of suicidal propensity in depressed patients. A metaanalysis of 279 depressed patients in publications from three independent international laboratories (Karolinska Institute, Stockholm and Linköping University in Sweden and University Hospital Ulm, Ravensburg-Weissenau, Germany) showed 97% sensitivity and 93% specificity for suicide and a highly significant difference (p = 0.000000047)

between highly suicidal depressed patients (i.e. those who later committed suicide) and patients who were considered non-suicidal (i.e. those who were treated in open care).

The aim of the present study is to study the relationship between electrodermal hyporeactivity and severe suicidal behavior in more detail in the today largest material existing of depressed patients tested by electrodermal method.

Methods: An analysis is made of all 818 depressed patients at the Weissenau Hospital, who have been examined by a standardized test of habituation of the electrodermal response to repeated non-significant tone stimuli. Information from clinical diagnosis and other characteristics (age, gender and more) is set into relation to habituation rate of the electrodermal response to tone stimuli.

Results: One of the results of this analysis is that the prevalence of electrodermal hyporeactivity and the sensitivity for suicide is higher in patients with bipolar depression than in patients with unipolar depression.

Discussion: The result indicates a central dysfunction in particularly patients with bipolar disorder that is strongly related to the risk of committing suicide. Both the details and implications of this and other results will be discussed.

Conclusion: Electrodermal hyporeactivity is a valid indicator of suicidal propensity in bipolar disorder.

Keywords: electrodermal hyporeactivity, bipolar disorder, depression, suicide

P239
Impulsivity in bipolar disorder and co-occurring alcohol dependence: relationship to current vs. past alcohol use

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Background: Alcohol dependence is common in people with bipolar disorder and often portends or contributes to a more severe course of illness. Impulsivity is a core feature of both bipolar disorder and alcoholism. Previous research has shown that past alcohol dependence in patients with bipolar disorder is associated with higher impulsivity and more lifetime suicide attempts. The relationship between impulsivity and ongoing alcohol abuse in this population is unknown. The current study evaluated impulsivity and other clinical characteristics of bipolar alcoholics with variable lengths of abstinence from alcohol.

Methods: Adults aged 18–65 who met DSM-IV criteria for bipolar I or bipolar II disorder and lifetime alcohol dependence were eligible. Substance use and psychiatric history were evaluated with the SCID-IV and supplemental structured clinical interview. The Alcohol Dependence Scale (ADS), Timeline Follow-Back (TLFB), and Montgomery-Asberg Depression Rating Scale (MADRS) were used to assess current alcohol use severity, frequency, and mood. Impulsivity was evaluated using the Barratt Impulsiveness Scale (BIS-11) and the Balloon Analogue Risk Task (BART).

Results: Twenty-five subjects were enrolled, 16 with ongoing alcohol dependence and use in the past 30 days, and 9 with abstinence ranging from 34 days to 4 years. Subjects with ongoing alcohol use reported earlier bipolar onset (15.4 vs. 22.9 years, p < 0.05), higher ADS scores (21.9 vs. 9.6, p < 0.05), higher MADRS scores at the time of testing (13.8 vs. 5.0, p < 0.055) than abstinent subjects. Relative to abstinent bipolar alcoholics, BIS-11 scores were significantly higher in currently drinking subjects across all domains. These subjects also earned less remuneration on the BART but otherwise no group differences were evident in this measure of risk taking. Whereas BART scores were unrelated to

severity of alcoholism, BIS-11 total scores were significantly correlated with ADS scores across both groups and correlated with days since last use in currently drinking subjects.

Discussion: Abstinent alcoholics with bipolar disorder exhibit lower impulsivity than their actively drinking counterparts as measured by the BIS-11. Prospective longitudinal studies will be necessary to determine whether BIS-11 scores change with abstinence or may be a stable trait marker with predictive validity for alcoholism prognosis in this clinical population.

Keywords: addiction, barratt impulsiveness scale, balloon analogue risk task, comorbidity, suicide

P240

Comparison of the frontal function in bipolar disorder and major depressive disorder: near-infrared spectroscopy study

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Background: It's important and difficult to distinguish depressive state of the bipolar disorder from major depressive disorder at the first time. We investigated the frontal lobe function of patients with depressive state by near-infrared spectroscopy (NIRS) for determining the differences of activation between major depression and bipolar disorder.

Method: Fifty eight patients with depressive state had been evaluated with the Hamilton Rating Scale for Depression (HRS-D), and they were diagnosed with bipolar disorder (n = 11) or major depressive disorder (n = 47). All those patients were measured the changes of oxy-hemoglobin (Oxy-Hb) in the prefrontal area by NIRS while they were performing the word-fluency task. This study was approved by the Ethics Committee of Showa University. After the purpose of the study was fully explained, written informed consent was obtained from each patient.

Results: Patients with bipolar disorder showed the more increase of Oxy-Hb in the medial area than bilateral area. In the other hand, patients with major depressive disorder showed the increase in the bilateral cortex. There were little differences of the HRS-D, the score of word fluency task and the increase of amount of Oxy-Hb between two groups.

Discussion: We suggested that there were the differences of the increase pattern of Oxy-Hb between bipolar disorder and major depressive disorder. The results of NIRS imaging would be useful to distinguish the bipolar disorder from major depressive disorder.

Conclusion: In this study, we considered the usefulness of NIRS findings for diagnosis of depression. And we will apply measuring by NIRS to assessing the change of state in patients with depression or reaction to treatment.

Keywords: bipolar disorder, major depressive disorder, near-infrared spectroscopy, word fluency task, frontal lobe

P241

Functioning in remission phase of bipolar disorder: a controlled study

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Objective: Due to the fact that bipolar disorder (BD) markedly impairs quality of life by affecting occupational and social functioning of BD patients, cirteria such as functioning and quality of life have come into the limelight, recently. In the most patients with BD, significant loss of functioning is observed by many authors even in remission. In the study, it was aimed to compare the levels of functioning in remitted BD patients with healthy volunteers.

Material and Method: Sixtyeight patients who were diagnosed with BD according to DSM IV-TR and met remission criteria, after referring to Ankara Dıskapı Yıldırım Beyazıt Training and Research Hospital, Psychiatry Clinic between January 2010 and April 2010, and 45 healthy volunteers were enrolled in the study. Bipolar Disorder Functioning Questionnaire (BDFQ), Young Mania Rating Scale (YMRS), Hamilton Depression Rating Scale (HDRS) and Global Assessment of Functioning (GAF) Scale were administered to the patients and the volunteers.

Results: The patient group consisted of 41 female, 27 male; the healthy volunteer group consisted of 30 female, 15 male individuals. It was found that there were no statistically significant differences in terms of mean age, gender, marital status, occupational status, monthly income category distributions between the groups. In BD patients, scores of BDFQ subscales including emotional functioning, intellectual functioning, feelings of stigmatization participation to social activities and total score were significantly lower than those of healthy volunteers. There were no significant differences between gender subgroups of BD group in scores of BDFQ subscales and BDFQ total score.

Conclusion: As amelioration of BD symptoms development of functioning also becomes increasingly important in BD, especially in remission. In a study, functional recovery has been determined only 24% of patients diagnosed with BD who had been followed up for 12 months after discharge. McQueen and colleagues (2001) have reported that there was social and occupational functional impairments in 30–60% of BD patients. In our study, it was determined that the levels of functioning of BD patients were lower than controls even in remission and many functional areas were affected.

Keywords: remission phase, functioning

P242

Differentiation between bipolar and major depressive disorders: a NIRS study

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Introduction: Bipolar disorder (BD) and major depressive disorder (MDD) have distinct pathophysiologies but similar depressive appearances. The aim of the study is to determine the differences of the frontal and the temporal lobe activation between the disorders using multichannel near-infrared spectroscopy (NIRS).

Methods: Twenty-two BD patients and 60 MDD patients were participated in the study. Changes in oxy hemoglobin concentration ([oxy-Hb]) during verbal fluency task were monitored using frontal and temporal probes of the 47-channel NIRS machines. Two parameters in the activation task periods, (1) the value of the integral calculus of the increase [oxy-Hb] concentration and (2) the value of the center of gravity of the increase [oxy-Hb] concentration, were calculated for the differentiation between two groups.

Results: The value of the integral calculus in the frontal probes and the temporal probes of the BD group were significantly larger than those values of the MDD group (p < 0.001 and p < 0.05, respectively). The value of the center of gravity in the frontal probes, but not the temporal probes, of the BD group was significantly larger than those values of the MDD group (p < 0.001). The value of the center of gravity in the temporal

probes of the BP group was correlated with self-reported measures of depressive symptoms (BDI-II; $r = 0.465$, p < 0.05) and that of the MDD group was correlated with the clinician-rated depressive symptoms (HAMD; $r = 0.304$, p < 0.05). The dosage of antidepressants in both groups did not correlate with any these values.

Conclusions: In our NIRS study, MDD showed the reduced frontal probes activations, while BD showed the delayed frontal probes activations. BD and MDD showed different temporal probes activations, in terms of the association with objective or subjective depressed symptoms.

Keywords: bipolar, near-infrared spectroscopy, neuroimaging

P243
Abstract Withdrawn

P244
Could continuous cycling pattern identify a specific type of bipolar disorder?

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Introduction: Baillarger and Falret described a specific variety of manic-depressive illness characterized by the direct and continuous transition from depression to mania or viceversa without free interval. "Circularity" was sometime associated to a poor response to lithium prophylaxis but, to our knowledge, no studies have valuated whether this episode pattern identifies a specific type of bipolar disorder. The aim of this study is to verify if continuous (CC) and non continuous cycling (NCC) bipolar patients differ in demographic and clinical characteristics and in prophylactic treatment response.

Methods: 104 consecutive outpatients with BPI (55%) or II disorder were enrolled; 39 (28%) have a CC pattern. We compared the demographic and clinical characteristics and the response to a naturalistic prophylactic treatment of the two groups. The χ^2 test was used to compare categorical variables and the t-test or the Mann-Whitney test (skewed variable) was used to compare continuous variables. Post-hoc tests were performed following significant χ^2 test for categorical variables with > 2 categories.

Results: CC bipolar patients differ significantly from NCC bipolar patients with respect to: age at onset, polarity at onset, number of episodes prior to study entry, number of switchers, comorbidity with alcohol abuse or drug use, time spent ill during the year before entering the study, and severity of illness at study entry as assessed by CGI-severity score. CC and NCC bipolar patients showed no significant differences with respect to: prophylactic treatment, follow-up duration, adherence to treatment, and dropout rate. Patients's rate with no new episodes during the follow-up was significantly lower for CC than for NCC bipolar patients.

Discussion: The results of the present study show that CC differs from NCC bipolar patients for clinical characteristics and response to prophylactic treatments. More studies are needed to clarify whether CC pattern delineates a distinct subtype or a more severe form of bipolar illness.

Keywords: bipolar disorder, continuous cycling, course of illness, prophylaxis

P245
Post-partum Bipolarity: Missed and dismissed

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Depressive illness in the post-partum period is experienced by a significant number of women. It is estimated that somewhere between 20% and 40% of mothers will have sufficient symptoms to be considered depressed in the baby's first year, requiring clinical intervention. This paper will discuss the difficulties of detecting Bipolar Disorder (II) in women presenting with depression in the post-partum period, and put forward a number of non-DSMIV features which may alert the clinician to underlying Bipolarity. It also emphasizes the importance of screening for bipolar symptoms in all patients presenting with depression, and the confounding effects of treatment with anti-depressants, often prior to initial consultation.

This clinical dilemma has been presented by Sharma V, *et al* BipolarDisorders 2008: 10, and Heron J, *et al* Bipolar Disorders 2009: 11

Keywords: bipolar II, post-partum, screening

P246
Adherence and depression in bipolar patients with suicidal risk

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Introduction: The aim of this study was to investigate factors related to suicide in a sample of bipolar patients followed-up during 10 years. We hypothesized that age and age at onset, bad adherence to medication, previous suicide attempts, severity of illness, alcohol abuse and depressive episodes were related to suicide attempts.

Method: Patients diagnosed with DSM-III-R (later updated to meet DSM-IV criteria) type I bipolar disorder, based on the Structured Clinical Interview-Patient version (SCID-P), were initially evaluated as outpatients while on long-term prophylactic treatment. Logistic regression modelling was used to analyze the factors associated with suicidal behaviour in the total sample adjusting by age and previous suicide attempts. The same factors were analyzed in the group of patients with previous suicide attempts.

Results: The risk of attempting suicide had a decrease of 74% during the follow-up) Patients with suicidal behaviour were those who were less adherent (5 fold), had previous suicide attempts (11.4 fold) and had more severe disease; they also had more depressive relapses during follow-up. Younger age and younger age at onset were related with suicidal risk, but the association was stronger with actual age after adjusting by confounding factors.

Conclusions: Adherence to treatment is the strongest modifiable protective factor against suicide in bipolar patients. Depression is a challenge for treatment, and is also related with suicidal risk both in all and in high risk patients. Older age seems to have a small and positive effect in protecting against suicide attempts.

Keywords: suicide, suicide attempts, bipolar, depression, adherence

P247

Towards an educational theory of self-management for outpatients with a bipolar disorder: a stratified phenomenological and hermeneutical study design from The Netherlands

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Introduction: Recent developments in non-pharmaceutical treatment for patients with bipolar disorder (BD) are educational programmes to promote self-management. Nursing care is aiming on lengthening the period of decline through patient education about recognising and reacting timely and adequately on early signs and symptoms of BD. The results of these educational strategies, commonly used by nurses are of varying success. How recognition of prodromes determines the results of patient care and which educational factors of self-management are beneficial is basically unknown.

Method: This research design is a three-phased qualitative approach. The first phase is an phenomenological study wherein clinical experiences and tacit knowledge of outpatients with BD, nurses and informal caregivers will be described. The second phase is divided in a) a systematic review and b) a narrative review about patients' expertise based on experience. The third phase is a hermeneutic study of thorough in-depth interviews with patients and relatives about the existential meaning of being diagnosed with BD. Nurses will be interviewed through a think-aloud method in focus groups about decision-making in patient education to describe the underlying mechanisms that determine success or failure of self-management education to outpatients with BD.

Discussion: In contrast with most other qualitative study designs precedes the phenomenological part of this study the reviewing part to avoid the issue of premature interpretation, which often leads to a superficial investigation. The study ends with a hermeneutical phase. The outcome of this study will be an empiric grounded theory about self-management education for outpatients with a BD.

Keywords: bipolar, self-management, patient education, theory

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From self-care to hospitalization: bipolar patients' health care practices in Mexico

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Background: Bipolar disorder (BD) is a major psychiatric disorder that has important consequences for patients and their families. New research is continually improving the diagnosis and treatment of BD. However, many challenges remain to be addressed, such as understanding the pathways to care chosen by bipolar patients and the determinants of seeking treatment. This study aims to describe the selection of health care practices (HCPs) in BD and additional related subjective factors.

Methods: Using a qualitative approach, we studied the HCPs of six patients with BD through focused interviews.

Results: We found that even patients who report using primarily allopathic care usually test out and combine different health care forms. This approach allows each patient to build his/her own pathway to care to address both his/her needs and the suffering involved in living with BD.

Discussion: We found that HCPs are selected in a framework of socially shared meanings in which the patient's and his or her family's perceptions seem to be important factors. For future research it will be necessary to inquire in depth about ''therapeutic silences'' (those periods when patients did not use any type of care) and to explore perceptions of BD and its treatment in the other participants of the health-disease process (physicians, friends, and especially family).

Conclusion: Pathways to care in BD are composed of a combination of HCPs because the patient needs to develop a stock of potential treatment alternatives to maximize his/her curative resources. In addition, using a variety of treatment modalities helps people with BD to deal with the different issues that are part of their life experiences.

Keywords: health care practices, perception of disease, bipolar disorder

P249

Bipolar disorder: patients' perceptions of people attitudes

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Introduction: Despite the impact of bipolar disorder (BD), perceptions and attitudes towards this disease and towards those who have this diagnosis are not always favorable. Unfortunately negative attitudes can be an important obstacle for care-seeking and care-providing. This study aimed to analyze, from a qualitative perspective, how patients with BD perceive people attitudes toward bipolarity.

Method: We performed focused interviews with six patients diagnosed with BD type I. Through these interviews we got information about perception of disease from the perspective of the patients, and *People's Perceptions and attitudes toward BD* was one of the categories of the study. Data was analyzed following the Meaning Categorization proposal.

Results: Respondents perceived different reactions from people around them. Most of the attitudes were related to rejection. But they said that their families usually stand next to them, facing the crisis of the disease, making decisions, and providing support and care. Among family members, parents are those who gave more support.

Discussion: Both, the characteristics of a sociocultural context and the prevailing perceptions of psychopathology, diagnosis, treatment and psichyatric patients, influence the way in which each society builds a particular set of ideas and reactions toward diseases such as BD.

Conclusion: Psychiatrists, psychologists and health care providers must recognize the perceptions and attitudes that has our social context and the way each patient perceives them, since they are important for the way the patient experiences his suffering and makes decisions to address it.

Keywords: bipolar disorder, patient perceptions of disease, stigmatization, people attitudes

P250
Effects of personality and gender on recognition of emotions in bipolar disorder

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Introduction: Patients with Bipolar Disorder (BP) are significantly impaired during episodes, but even in remission functioning often remains less efficient compared to the performance of control participants. Cognitive abilities and personality factors both contribute to functional difficulties. In particular, the ability to process emotional expressions may impact negatively on social interactions, because emotional cues such as facial expressions may be misinterpreted. Differences in personality may also influence facial recognition. This study investigated the effect of personality on emotional recognition in BP participants and healthy controls.

Methods: 94 BP participants and 57 control participants filled in the Temperament and Character Inventory (TCI) and took part in a computerized emotional recognition task. The TCI measures four temperament dimensions (Harm Avoidance, Novelty Seeking, Reward Dependence, and Persistence) and three character dimensions (Self-Directedness, Cooperativeness, and Self-Transcendence). In the emotional recognition task, faces of persons displaying anger, disgust, fear, happiness, sadness, surprise, or a neutral expression were briefly presented. Accuracy, reaction times and the tendency to misinterpret a neutral face as an emotional face were measured.

Results: We conducted an ANCOVA with gender, group (BP vs. controls), and personality (all 7 dimensions divided by median split into those with high and low scores) as fixed factors and age and depression scores as covariates. BP participants were not different from controls in their ability to recognize emotions, but differed in the speed with which recognition took place. Amongst participants with high reward dependence and high cooperativeness BP participants were overall slower than control participants to recognise emotions. BP participants with low harm avoidance were slower than controls with low harm avoidance in their response to surprise, but BP participants with high harm avoidance were faster than controls with high harm avoidance in their response to neutral faces and faces displaying disgust. Self-directedness in combination with gender also impacted differentially on the speed of recognition. In addition, BP participants showed different patterns of misinterpretation from control participants.

Discussion: Both personality characteristics and gender affect the speed with which participants with BP recognise emotions.

Keywords: bipolar, personality, emotion recognition

P251
Outcomes and treatment practices in bipolar disorder: results from a large multinational longitudinal study (WAVE bd)*

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Background: WAVE-bd (Wide AmbispectiVE study of the clinical management and burden of bipolar disorder [BD]) aims to reliably describe management of patients with BD in daily clinical practice, and determine factors influencing clinical outcomes.

Material and Methods: Multinational, multicentre, non-interventional, longitudinal study of patients diagnosed with BD-I or BD-II, with ≥1 mood event in the preceding 12 months (retrospective data collection from index mood event to enrolment, followed by a minimum 9 months' prospective follow-up). Site and patient selection provided a representative sample of patients in each country.

Results: Results are presented from 2896 patients (1989 BD-I [68.7%], 907 BD-II [31.3%]) recruited March–September 2010. In BD-I patients, following index mood event, the incidence rate (person-years, [95% CI]) of different types of episodes was 0.14 [0.13; 0.16] (manic), 0.15 [0.13; 0.16] (hypomanic), 0.34 [0.32; 0.37] (depressive) and 0.13 [0.11; 0.14] (mixed). Antipsychotics were the most commonly prescribed drug class in BD-I patients during manic events (85.2% of patients), hypomanic events (77.8%), depressive events (67.7%), mixed events (74.0%) and euthymia (74.4%). Anticonvulsants were the second most commonly prescribed drug class in BD-I patients for all event types except depressive events, where antidepressants were more commonly prescribed. For BD-II patients, following index mood event, the incidence rate of depressive and hypomanic events was 0.49 [0.45; 0.53] and 0.19 [0.16; 0.21], respectively. Antipsychotics were the most commonly prescribed treatment during hypomanic events (65.2%), while antidepressants were most commonly prescribed during depressive events (79.3%) and euthymia (69.7%). The percentage of patients (BD-I and BD-II) prescribed no medication during an episode ranged from 6.3% during a mixed event to 11.0% during a manic event.

Discussion: WAVE-bd addresses limitations of longitudinal BD studies to-date that have focused on single disease phases or treatments.

Conclusions: In this longitudinal study, the observed incidence of depressive episodes was higher than that of other episodes in both BD-I and BD-II patients. Antipsychotics were the most commonly prescribed drug class for both BD-I and BD-II patients regardless of event, except in BD-II patients during depressive events and euthymia.

Keywords: bipolar disorder, multicentre, longitudinal, wave bd

P252
Self-report predictors distinguishing bipolar disorders from borderline personality

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Introduction: In clinical practice, patients with maladjusted behavior, unstable interpersonal relationships, and occasional affective symptoms can be difficult to accurately diagnose. These clinical features can be shared by bipolar or borderline personality disorders. This study was undertaken to distinguish between both entities using items of MDQ.

Methods: 260 patients were collected between 2006 and 2008 at the Mood Disorder Clinic of the Psychiatric Institute of Santiago. Mean age was 41 year ± 13.34, 68% were female. The whole sample was divided using SCID I for bipolar diagnosis and SCID II for borderline personality diagnosis. Clinical variables and MDQ items were assessed in a bivariate analysis using bipolar and borderline diagnosis as dependents variables. Those that reached p-values ≤ 0.1 were then allocated in a multivariable logistic regression modeling to obtain predictors of bipolar and borderline personality disorders.

Results: Bipolar disorder was strongly predicted by euphoria (item1) (OR 4.2 95%, CI 1.80, 9.15), increased activities (item 9) (OR 3.90 95%, CI 1.73, 8.96) and episodicity of mood symptoms (question 2) (OR 3.48 95%, CI 1.49, 8.39). For borderline personality disorder, only female gender was a strong predictor (OR 3.41 95%, CI 1.29, 13.70)

Conclusions: We conclude that in patients in whom the bipolar-borderline differentiation is at issue, the best clinical approach is to look for the triad of euphoric mood, increased activities and episodicity. If present, then the diagnosis of bipolar disorder is likely, if absent, then patients could still have either bipolar disorder or borderline personality disorder and other lines of clinical investigation are needed. Finally, borderline personality disorder, based on this analysis, cannot be positively diagnosed based on any of the MDQ items. It appears that it can only be ruled out, not ruled in.

Keywords: differential diagnosis, bipolar disorder, borderline personality disorder, predictors)

P253
Relationship between cognitive impairment and history of psychosis in bipolar disorder

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Background: Patient with bipolar disorder often suffer from debilitating cognitive deficits which are more likely to be present in patients who has a more severe course of illness. Psychosis has come into focus, as it often constitutes an important clinical marker for a more severe course of bipolar disorder. There are previous studies which suggested that bipolar patients with a history of psychosis might have more severe cognitive impairment than bipolar patients without history of psychosis.

Objective: The objective of this study was assessing of the relationship between cognitive impairment and history of psychosis in bipolar disorder.

Methods: We examined 60 bipolar patients (according to the DSM IV TR) with or without a history of psychosis. All the patient was free of psychotic symptoms (defined by the present of either hallucinations or delusions) at the moment of neurocognitive evaluation. The cognitive battery included standardized test of IQ, attention, working memory, visual memory, verbal memory and executive functioning. Demographic data were systematically obtained and included gender, age, years of education, socioeconomic status and current employment. Data about family history and information about psychiatric history, past and current treatment, history of psychosis, duration of illness and age of onset (defined as the age when subjects first experienced an episode of either polarity) were collected. We analyzed statistically these data and assessed the relationships between cognitive deficits and history of psychosis in bipolar patients from this study.

Results: Bipolar patients with history of psychosis had younger onset of illness, more inpatient admission, more frequent use of antipsychotics and longer history of non adherence to the psychiatric treatment than bipolar patients without previous psychosis. Patient with a history of psychosis obtained lower scores on measures of attention, verbal memory and executive function and had significantly weaker performance on measures of spatial working memory than patient without such a history.

Conclusion: The results of the current study indicate that the history of psychosis is associated with greater severity of cognitive impairment in bipolar disorder.

Keywords: bipolar, psychosis, cognitive, impairment

P254
Assessment of neuropsychological functioning in euthymic bipolar disorder

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Background: There is substantial evidence which indicates that neuropsychological functioning is impaired in individuals with bipolar disorder. Recent studies have suggested that the presence of the cognitive impairment in bipolar patients persist even during remission states. Assessing cognitive functioning during euthymic phase of bipolar disorder focuses attention on the most enduring of these deficits, relatively free of the influence of acute symptomatology.

Objective: The objective of this study was assessing of the neuropsychological functioning of bipolar patients during the euthymic phase of the illness.

Methods: We examined 50 bipolar patients (according to the DSM IV TR) during the euthymic phase of illness (at least 6 months of remission, Hamilton Depression Scale HDRS < or =8 and Young Mania Rating Scale YMRS < or =6). Psychosocial functioning was assessed through General Assessment of Functioning GAF. The cognitive battery included standardized test of IQ, attention, working memory, visual memory, verbal memory and executive functioning. Demographic data were systematically obtained and included gender, age, years of

education, socioeconomic status and current employment. Data about family history and information about psychiatric history, past and current treatment, duration of illness and age of onset (the age when subjects first experienced an episode of either polarity) were collected. We analyzed statistically these data and assessed the neuropsychological functioning of euthymic bipolar patients from this study.

Results: Cognitive impairment appears to persist durind the eutymic phase of bipolar disorder and may be characterized by impaired performance on task involving executive function. Also, euthymic bipolar patients had impairments of verbal memory, psychomotor speed and sustained attention. Poor verbal fluency was related to a poor social outcome. Age, gender, education, onset of illness, bipolar disorder duration and clinical course may moderate these broad cognitive deficits.

Conclusions: The results of the current study indicate that the cognitive dysfunction characterizes euthymic phase of bipolar disorder. There is growing need for further studies and clarification regarding the importance, clinical relevance and confounding variables of cognitive dysfunction in euthymic bipolar patients.

Keywords: cognitive, bipolar, neuropsychological, euthymic

P255

Investigating impulsivity in bipolar II disorder: more state than trait?

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Background: There has been a growing interest in the relationship between Bipolar Disorder and impulsivity. It has been postulated that high impulsivity levels are characteristic and a stable trait in individuals with Bipolar Disorder. However, others see impulsivity more as a state-like feature. The primary aim of this study was to specifically examine whether impulsivity is better conceptualised as trait or state in patients with Bipolar II Disorder.

Methods: This is an on-going study. To date 28 participants with Bipolar II Disorder have completed the Barratt Impulsivity Scale (BIS-II) using its original instructions. Additionally a SCID interview was conducted in order to assess current state. Currently euthymic participants (n = 14) were then asked about a past major depressive episode (emotional recall) and asked to fill in the BIS-II again according to how they felt at that specific time. The same procedure was then followed for a past hypomanic episode. If participants were currently depressed (n = 5) or hypomanic (n = 5) they were asked to fill in the BIS-II again in a randomised order but only accounting for current state.

Results: Average impulsivity levels (BIS-II) were in the normal range (M = 64.50, **SD** = 8.925).There were also no significant differences found between trait impulsivity and euthymic state impulsivity scores ($t = 0.27$, p = 0.79). Past hypomanic impulsivity scores were significantly higher than euthymic impulsivity scores ($F = 22.69$, p < 0.001), and impulsivity scores for depressed states were different as well but this did not reach significance (p = 0.072). Trait impulsivity scores also differed significantly from both past depressive episode ($F = 11.71$, p = 0.04) and past hypomanic scores ($F = 21.0$, p < 0.001).

Discussion: The first analyses suggest that Bipolar II Disorder is not associated with elevated trait impulsivity levels. Mood states, however, affect the levels of impulsivity reported during hypomania and also to some degree during depression.

Keywords: bipolar disorder, impulsivity, depression, hypomania

P256

Alexithymic features among bipolar affective disorder patients

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Aim: The aim of this study is to put forth the alexithymic features of bipolar affective disorder (BPD) patients compared to healthy volunteers.

Backgrounds: Several studies report that alexithymia is seen so often among psychiatric disorders. Alexithymia has been found to be associated with personality disorders, eating disorders, alcohol and substance abuse and dependence, depression, disorders of sexual functions, social phobia, panic disorder and childhood traumas. To our knowledge, alexithymia has not been researched among BPD patients before.

Method: Seventy subjects meeting DSM-IV-TR diagnostic criteria for BPD who admitted to Department of Psychiatry of GATA Haydarpasa Training Hospital and seventy, age and sex matched healthy control subjects were included in the study. Taking into accuont the possibility of attention focusing problem, all of the patients were selected to be eutyhmic at the study time. The patients and control subjects were assessed by a semistructured sociodemographic form, Structured Clinical Interview Diagnosis for DSM-IV (SCID-I), and Toronto Alexithymia Scale (TAS-20).

Discussion and conclusion: TAS-20 has three subscales. Higher subscale and total TAS-20 scores suggest more alexithymic features. Subjects with BPD had greater numbers of TAS-20 total and subscale scores than the control subjects.These findings suggest that individuals with BPD have more evident alexithymic features than the healthy volunteers

Keywords: bipolar affective disorder, alexithymia

P257

Correlation of selective serotonin reuptake inhibitor (SSRI) use, weight gain and metabolic parameters

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Aim: Antidepressant drugs maight cause a paradoxical weight gain in contrast to the expected weight loss via increased serotonergic activity. Aim of this study is to investigate correlation of selective serotonin reuptake inhibitor (SSR*i*) use, weight gain and metabolic parameters.

Methods: In this study the resting metabolic rates (RMR) of 16 subjects, who were required to use a SSR*i* for at least 3 months, were measured before treatment and at the end of the first and third months. Body weight, percentage body fat, body mass index and waist/hip ratio were measured before treatment, at the end of the first and second weeks and the first, second and third months. Laboratory tests including total cholesterol, LDL, HDL, VLDL, triglycerides and fasting blood glucose were performed before treatment and at the end of the third month.

Results: RMR has not changed significantly in the measurements performed at the beginning, the first month and the third month. Although no statistically significant change was found in RMR between the beginning and the third month, in the increased-dose group RMR significantly decreased while in the constant-dose

group it significantly increased. No correlation was found between RMR changes and body weight changes. The LDL and total cholesterol levels increased significantly between the beginning and the third month. Body weight gain was not correlated with either treatment response or elevated dose.

Conclusions: The increase third month waist / hip ratio, total cholesterol and LDL cholesterol measurements from beginning of the study suggests that studies are needed in which individuals SSRI treatment examined in more detail in terms of fat metabolism.

Keywords: SSR*i*, resting metabolic rate, weight gain

P258
Changes in mania features among Iranian bipolar inpatients
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Introduction: Bipolar mood disorders may have different features in the longitudinal course of illness. It may be due to possible psychosocial precipitants and different causes. Furthermore, treatment of each episode is based on the clinical presentation so clinicians need to be familiar with specific changes and variations in the clinical features.

Our research aims at studying subtypes of bipolar mood disorder (BMD) diagnosed in archived files of our psychiatric ward.

Methods: Files of nine hundred patients with history of bipolar mood disorder archived at the psychiatric ward of Imam Hossein hospital during 1991 to 2006 were studied. 322 patients had definite diagnosis of bipolar I disorder. Information found in the files was evaluated by a psychiatrist.

Results: There were a significant percentage of mixed episodes diagnosed among others. The exact percentage of our results will be presented in the poster during the congress.

Conclusion: There does appear to be an increase in reported prevalence of mixed episodes over time. It has postulated this might be due to anti-depressant drugs or interaction of probable substance use in bipolar I disorder, although several factors complicate determining their causes.

Keywords: mania features, iranian, bipolar inpatients

P259
Herbal medicine and acupuncture for unipolar and bipolar depression: randomized controlled trials
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Introduction: The clinical outcomes of conventional pharmacotherapy are unsatisfactory in the treatment of mood disorders, including bipolar conditions. Alternative medicine, particularly herbal medicine and acupuncture may provide an option for patients. Our research team has completed several controlled trials of herbal medicine and acupuncture for unipolar and bipolar depression.

Methods and Results: Free and Easy Wanderer Plus (FEWP) is a Chinese herbal medicine that has long been used in alleviating various mood symptoms. In one controlled trial, 124 bipolar depressed patients were randomized to carbamazepine (CBZ) alone, CBZ plus FEWP (36 g/day) and placebo for 12 weeks. Additional FEWP resulted in significantly better outcomes on depression measures at week 4 and week 8 and a greater response compared to CBZ alone (84.8% vs. 63.8%, p = 0.032). FEWP-treated patients had fewer incidences of dizziness and fatigue. In

another separate trial, 87 unipolar and 62 bipolar depressed patients were randomly assigned to FEWP alone and placebo for 12 weeks under double-blind condition. Both unipolar and bipolar patients treated with FEWP displayed significantly greater improvement on depression symptoms and significantly higher clinical response rate than those treated with placebo (74% vs. 42%, p < 0.001) at endpoint. In a controlled trial of dense cranial electroacupuncture stimulation (DCEAS), 73 patients with major depressive disorder (MDD) were randomly assigned to 9-session sham or active DCEAS combined with fluoxetine (FLX) for 3 weeks. Patients in active DCEAS group had significantly greater reduction from baseline in HAMD-17 scores at day 3, day 14 and day 21 and in Self-rating Depression Scale (SDS) scores at day 3 and day 21 compared to sham DCEAS (p ≤ 0.002). Active DCEAS also produced a higher rate of clinically significant response compared to sham DCEAS (19.4% (7/36) vs. 8.8% (3/34)).

Conclusions: FEWP alone and in combination with CBZ is effective in reducing unipolar and bipolar depression. DCEAS is effective in enhancing the antidepressant efficacy and could be considered as an additional therapy in the treatment of bipolar depression.

Keywords: bipolar depression, unipolar depression, herbal medicine, acupuncture, clinical trial

P260
Polarity change: is it predictable?
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Background: difficulties in the detection of bipolar spectrum disorders are multiple, and they arise in particular when the illness starts with depressive episode(s). The objective of this study was to identify variables associated with the bipolar conversion and to examine if, and to what extent it is possible to predict a change of polarity in patients whose illness commenced with an episode of depression.

Methods: 340 patients hospitalized for DSM-III-R major depression were followed-up for a period of 10–20 years, change in polarity was recorded, and patients switching to bipolar-I, bipolar-II and remaining depressed were compared according to demographic and biographic characteristics, family history, characteristics of the course of the illness, comorbid axis I and personality disorders (PD), dexamethasone non-suppression, clinical features and treatment response by univariate analysis. Variables separating three groups were included in forward step-wise discriminant analysis.

Results: Overall significant model (Wilk's lambda = F = 8.0l48, p < 0.00001) consisted of two discriminant functions. Variables associated with the change of polarity were: younger age at onset, more previous episodes, cluster B PD, fewer residual symptoms, psychotic features, dexamethasone non-suppression, psychomotor retardation, familial loading for mood disorders and poor social functioning prior to the onset of depression (78% variance). Characteristics distinguishing bipolar-II from bipolar-I patients were less previous episodes, cluster B PD, better income, more suicide attempts, non-endogenous features, more monoideism and psychomotor agitation, and less sadness. Low percent of correct classifications and unimodal distribution of patients along discriminant function do not confirm the categorical distinction between bipolar and non-bipolar depression.

Discussion: our ability to predict subsequent course and the eventual change of polarity (even examining multple variables) is, at best, modest. Furthermore, in evaluating patients clinicians should pay more attention to characteristics such as age at onset, family history and dexamethasone non-suppression, and look for

the signs of subtle bipolarity before diagnosing young, treatment non-responsive patients as PDs.

Conclusion: these results are in line with the idea of the existence of the bipolar spectrum.

Keywords: bipolar spectrum, switch process, polarity of depression

P261

Depression: does it affect the comprehension of receptive skills?

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Introduction: Nowadays, depression is a widespread disorder which interferes in daily activities, moods, and behaviors of the learners. Depression blocks learners' memory and prevents them from recalling, focusing, thinking, and stringing necessary input. As a foreign language learner, the need for acquiring comprehensible input from receptive skills is necessary and unavoidable. Focusing on depression, giving perception and warning about its side effects, causes, treatments, and its prevalence provide more clear view to this widespread disorder which contribute to the modification in foreign language learning through encouraging teaching and testing methods which are more concerned with students' affection and emotional ability.

The aim of the present study was to compare the comprehension of depressed and non-depressed male and female Iranian EFL learners in listening and reading.

Methods: To achieve this goal, in spring 2011, 222 high school learners including 126 boys and 96 girls in Kerman, Iran, aged between 15 and 18 were selected randomly. After the administration of Beck Depression Inventory (BDI), it was found out that 93 were non-depressed, 65 had minimal, 48 mild depression, and 16 severe depression.

Results: The statistical analyses of the participants' scores on reading and listening from Key English Test (KET), in relation to their depression level, through Pearson product moment correlation of coefficient, indicated a significant relation between depression and the comprehension of listening ($r = -0.141$), and depression and reading ($r = -0.167$). Males got higher scores in both reading and listening in comparison to females. As far as the listening skill is concerned, it was found to be no significant difference among the levels of depression. Besides, there was no significant difference between males and females. Regarding the reading skill, the study showed that there was no significant difference among levels of depression. However, there was a significant difference between the reading comprehension of males and females.

Conclusion: So, the study suggested that for the EFL learners with weakness in comprehension of receptive skills, the probability of depression should be checked.

Keywords: depression, listening skill, reading skill

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* Abstracts P28, P62, P108, P135, P166, P201, P210, P243 have been withdrawn as the authors were not able to attend the conference.