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Subjective well-being with antipsychotic treatment

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Objectives: The factors that influence compliance with antipsychotic treatment in schizophrenia are related to the patient, the patient's environment, the attending physician, and the treatment itself (2). Important causes of nonadherence are adverse effects (AEs) of antipsychotics. Initial dysphoric reaction, extrapyramidal symptoms, akathisia, sexual dysfunction and obesity belong to the most frequent AEs (1,2,5,8,9). The patient's subjective well-being and attitude toward antipsychotic medication are considered important for compliance (8,10).
Methods: Severity of symptoms was estimated using the PANSS (Positive and Negative Symptoms of Schizophrenia) and CGI (Clinical Global Impression) scales**.** Self-rating Subjective Well-being under Neuroleptic scale (SWN) was applied to evaluate the patients' subjective well-being (6,7). We also administered the Drug Attitude Inventory (DAI) scale to evaluate the attitude of the study subjects toward antipsychotic medication (3,4).
Results: Seventy-five outpatients (women $n = 25$) at the mean age of 34.6 years (median 32 years) with the diagnosis of schizophrenia were included into the study. The patients with the most pronounced subjective well-being were in remission, treated with monotherapy, and low doses of antipsychotic drugs.
Conclusion: Subjective well-being is increasingly being accepted as a valid and important measure of antipsychotic treatment outcomes and tolerability. Meaningful way of antipsychotic treatment with minimal AEs can increase the patient's subjective well-being and compliance.
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EEG-based brain imaging techniques in psychiatry

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Abstract: Electroencephalography has probably represented the first modern and scientifically sound attempt to functionally explore the *in vivo* activity of the human brain and it has, since ever, attracted attention of psychiatrists, from both the clinical and the research viewpoint.
Probably due to the limitations implied by their traditional low spatial resolution, the use of psychophysiological techniques in psychiatry has been not continuous over the last century; however, the availability of newer EEG-based brain imaging techniques has recently renovated some interest (1). Furthermore, recent theories proposed that psychopathology may result from the failure to integrate the activity of different areas involved in cognitive processes, rather than from the impairment of one or more brain areas (2); within this view, a reliable brain imaging tool should be able to explore the dynamics of complex interactions among brain regions, with high sensitivity to the subtle deviation in complex processes that last fractions of seconds; psychophysiological techniques, indeed, offer the possibility to explore the functional correlates of major psychiatric illnesses, as well as to understand of the effects of psychotropic drugs on the central nervous system, with incomparable time resolution. Finally, the recent technical possibility to combine different brain imaging approaches has further fostered a renovated enthusiasm to ward the use of EEG-based techniques in psychiatry.
This contribution will provide an historical overview of the EEG-based brain imaging techniques and an update on some recent advances concerning the use of such techniques within the psychiatric field. Finally, some examples of psychophysiological and ''multimodal'' imaging investigations in subjects with different psychiatric conditions will be provided.
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Differences in cholesterol and metabolic syndrome between bipolar disorder men with and without suicide attempts

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Abstract: Patient with mental illnesses such as schizophrenia and bipolar disorder have an increased prevalence of metabolic syndrome (MetS) and its components compared to general population. Among psychiatric disorders, bipolar disorder ranks highest in suicidality with a relative risk ratio of completed suicide of about 25 compared to the general population. Regarding the biological hypotheses of suicidality, low blood cholesterol level has been extensively explored, although results are still conflicting. The aim of this study was to investigate whether there were differences in the serum cholesterol levels in hospitalized bipolar disorder men patients with history of suicide attempts (n = 20) and without suicide attempts (n = 20). Additionally, we investigated if there were differences in the prevalence of MetS according to NCEP ATP-III criteria in these two groups of patients. Results of the study indicated significantly lower serum cholesterol levels (P = 0.013) and triglyceride levels (P = 0.047), in the bipolar disorder men with suicide attempts in comparison to bipolar disorder men without suicide attempts. The overall prevalence of MetS was 11/40 (27.5%). On this particular sample it was higher in the non–attempters 8/20 (40.0%) than in attempters 3/20 (15.0%) bipolar men group, but without statistical significance. Lower concentrations of serum cholesterol might be useful biological markers of suicidality in men with bipolar disorder.

Introduction: Patient with mental illnesses such as schizophrenia and bipolar disorder have an increased prevalence of metabolic syndrome (MetS) and its components, risk factors for cardiovascular disease and type 2 diabetes (Ryan and Thakore, 2002; Newcomer, 2007) compared to general population in which incidence of MetS is also rising at an alarming rate (Nuggent, 2004). Although in the past years more attention has been devoted to the medical burden suffered by patients with schizophrenia, very recently similar concern have arisen for bipolar disorder patients. Previous studies on the prevalence of MetS in bipolar patients found 30% and 49% prevalence of MetS in US bipolar patients (Fagiolini et al., 2005; Cardenas et al., 2008), 32% prevalence of MetS in Turkish bipolar patients (Yumru et al., 2007) and 22.4% in Spanish bipolar patients (Garcia-Portilla et al., 2008). The etiology associated with this increased risk of MetS in bipolar disorder is unknown. In addition to psychosocial factors such as poverty, poor diet, lack of physical activities, increasing concern has focused on the association between second generation antipsychotics, weight gain and subsequent risk of hyperlipidaemia and diabetes.

Among psychiatric disorders, bipolar disorder ranks highest in suicidality with a relative risk ratio of completed suicide of about 25 compared to the general population (Baldessarini and Tondo, 2003). During their lifetime 80% of patients with bipolar disorder exhibit suicidal behaviour and 51% attempt suicide (Valtonen et al., 2005).

Suicidal behavior varied markedly between different phases of bipolar disorder and it is predominantly associated with depressive and mixed phases of the illness, rarely with pure manic phase. (Goldberg et al., 1999; Oquendo et al., 2000; Valtonen et al., 2007). Numerous studies showed lower cholesterol levels in patients hospitalized after suicide attempt as compared to non attempters hospitalized patients (Sarchiapone et al., 2001; Guillem et al., 2002; Kim et al., 2002) .On the other hand, there are some other studies showing no relationship between low cholesterol levels and suicide attempt (Roy et al., 2001; Tsai et al., 2002; Deisenhammer et al., 2004; Fiedorowizc et al., 2007) .

The current study was created to investigate if serum cholesterol level is decreased in male bipolar disorder patients with suicide attempts compared to non-attempters. Additionally, the aim of this study was to estimate if there were differences in the prevalence of metabolic syndrome between bipolar disorder male patients with and without lifetime suicide attempts.

Methods:

Sample Subjects were male patients (n = 40) with bipolar disorder treated at the Department of Psychiatry, University Hospital Centre Zagreb during the period of 36 months. Within patients, 20 patients were consecutively admitted men with bipolar disorder with history of suicide attempt, and 20 patients were consecutively admitted men with bipolar disorder without history of suicide attempt. Needed sample size was calculated respected the following parameters: alpha error level of 95% ($P < 0.05$), large effect size (Cohens d ≥ 0.8), infinite population, t-tests for two independent samples with homogenous variances)

. The diagnosis of bipolar disorder was made according to diagnostic criteria of the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10), (WHO, 1996). According to ICD-10 criteria in suicide attempter group 7 patients were in depressive, 5 in manic and 8 in mixed episode. In non attempter group 6 patients were in depressive, 12 in manic and 2 in mixed episode.

Intensity of depressive symptoms was assessed by Hamilton Depression Rating Scale, HDRS-17 (Hamilton, 1960), while manic symptoms were assessed by Young Mania Rating Scale, YMRS (Young et al., 1978). Brief Psychiatric Rating Scale (BPRS-18) was used to estimate a broad range of psychopathology (Overall and Gorham, 1962). Clinical Global Impression severity, CGI sev (Guy, 1976) was performed to asses the severity of illness, and Suicide Assessment Scale, SUAS for symptoms of suicidality (Stanley et al., 1986). Suicide attempt, by definition, included intent to die, self –harm did not count. The trained psychiatrist performed clinical evaluation.

All participants were free of all psychotropic medication for the previous 3 months. Two groups of patients were closely matched for age. All subjects gave written consent for participation in the study after detailed information about the procedures. This study was approved by Clinical Hospital Center Medical Ethics Committee.

Venous blood samples were collected within 24 h of admission. The exclusion criteria were: hypertension, diabetes mellitus, inherited disorders of lipoprotein metabolism, diagnosis of substance abuse, including alcoholism, eating disorder and organic brain syndrome.

Assessment Venipuncture was performed for all subjects between 8 and 9 a.m. after 12 hours overnight fast. Immediately after collecting blood samples, serum concentration of total cholesterol, High density lipoprotein cholesterol (HDL-C), low density lipoprotein cholesterol (LDL-C), triglycerides and serum glucose were determined using enzyme methods and commercial kits (Olympus Diagnostic, GmbH, Hamburg, Germany) on Olympus AU 600 automated analyzer. Inter- assay laboratory coefficients of variation were 3.2% for cholesterol, 2.5 for triglycerides and 3.0% for HDL- cholesterol. Reference intervals for the measured parameters were as follows: cholesterol < 5.0 mmol/L, LDL < 3.0 mmol/L, HDL > 1.0 mmol/L, triglycerides < 1.7 mmol/L and glucose > 6.1 mmol/L.

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