

EPV0099

Clinical validation of EDIT-B test for the diagnosis of bipolar disorder

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Introduction: Bipolar disorder (BD) is a psychiatric disorder characterized by alternating episodes of high mood and low mood similar to depression. To differentiate BD patients from unipolar (UN) depressed patients remains a challenge and the clinical scales available failed to distinguish these 2 populations. ALCEDIAG developed EDIT-B, the first blood test able to make a differential diagnosis of BD. Based on RNA editing modifications measurement and AI, the test requires a simple blood draw and equipment available in most central laboratories. A first study on 160 UN and 95 BD patients allowed a differential diagnosis with an AUC of 0.935 and high specificity (Sp=84.6%) and sensitivity (Se=90.9%). A multicentric clinical study has been set up to validate these performances.

Objectives: The objective of this project is to run a multicentric clinical study in Europe and assess the performances of the test.

Methods: The EDIT-B project, led by Alcediag, is supported by EIT-Health grant (European institute of Innovation and Technology) and gathers 4 clinical centers in 3 countries (France, Spain, Denmark), a CRO for the clinical study management (Aixial), a CRO for the development of a diagnostic kit (Veracyte), a diagnostic lab for molecular biology analyses (Synlab), and a regulatory company (PLG).

Results: At the end of the study, the EDIT-B performance will be confirmed and the test will be CE-marked.

Conclusions: This test will address the needs of millions of patients suffering from misdiagnosis and therefore allow them to receive the correct treatment.

Disclosure: JDA, NS and DW are employees of Alcediag.

Keywords: bipolar disorder; diagnostic; clinical study; epigenetics

EPV0098

Treatment-resistant Bipolar Disorder and Thyroid Cancer

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Introduction: Bipolar disorder (BD) is a chronic and recurrent illness frequently associated with functional deterioration and

treatment challenges. High rates of thyroid dysfunction have been found in patients with BD, compared to the general population.

Objectives: To illustrate through a case-report the therapeutic challenges of treatment-resistant bipolar disorder and its relationship with thyroid dysfunction.

Methods: Case report of a 41-year-old male patient with BD and comorbid anxiety disorders who has been diagnosed with thyroid cancer and underwent total thyroidectomy.

Results: Mr B is a 41 year old patient diagnosed with BD and comorbid anxiety disorders (panic disorder, social anxiety disorder and generalized anxiety disorder) at age 18. He has presented in total 17 relapses and was hospitalized 7 times between the ages of 18 and 24. He experienced predominantly major depressive episodes with mixed features and debilitating anxiety symptoms. He was put on several treatments including a combination of mood stabilizers, antidepressants and benzodiazepines. Due to unsatisfactory treatment response, he was put on clozapine 150mg to 175mg/d combined with valproic acid, clonazepam. In 2009, the patient developed a nodular goiter caused by papillary thyroid carcinoma and underwent total thyroidectomy and radioactive iodine therapy. Following the surgical operation and stabilization of thyroid functioning, a decrease in the number of relapses and the severity of mood and anxiety symptoms have been noted.

Conclusions: This case reports highlights the importance of thyroid function assessment in patients with bipolar disorder and the possible correlation to treatment resistance and symptom severity.

Disclosure: No significant relationships.

Keywords: bipolar disorders; thyroid function; resistance; Anxiety disorders

EPV0099

The Effects of Emotional Dysregulation and Impulsivity on Suicidality in Patients with Bipolar Disorder

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Introduction: Bipolar disorder (BD) is a prevalent, often severe, and disabling illness that affects about 1-5% of the general population and has the highest risk of suicide among psychiatric disorders. Impulsivity and, emotion dysregulation have been emphasized due to their role in facilitating suicide acts among those with suicide ideation.

Objectives: This study aimed to examine the relationship between emotional dysregulation, impulsivity, and suicidality in patients with bipolar disorder by comparing bipolar patients with healthy individuals

Methods: The study included 85 patients (59 women, 26 men) with bipolar disorder and education and age-matched 65 (44 women, 21 men) healthy volunteers. The patient group was divided into 3 subgroups according to have suicide attempt history, have suicide ideation without attempt, and have neither suicide attempt nor ideation. Sociodemographic Form, The Difficulties in Emotion Regulation Scale (DERS), Barratt Impulsivity Scale (BIS-11), Scale

for Suicide Ideation, Suicide Behaviors Questionnaire scales were applied to the participants.

Results: Patients with bipolar disorder had significantly higher scores for emotion dysregulation and impulsivity than the healthy control group. A statistically significant correlation was found between emotion dysregulation, impulsivity, suicide ideation, and suicide behavior scores. DERS Total and Barratt Total scores were found higher for bipolar patients with suicide attempts than bipolar patients with suicide ideation and bipolar patients with neither attempt nor ideation. The hierarchical regression analysis has indicated that strategies, clarity, and non-planing impulsiveness were the predictors of suicide ideation in bipolar patients.

Conclusions: The results suggested a strong association between emotional dysregulation, impulsivity with suicide ideation, and behavior in patients with bipolar disorder.

Disclosure: No significant relationships.

Keywords: bipolar disorder; emotional dysregulation; Impulsivity; Suicide

EPV0100

Comorbidity of CRHR2 gene variants in type 2 diabetes and depression

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Introduction: The corticotropin-releasing hormone receptor 2 (CRHR2) gene encodes CRHR2, which is an important element in the hypothalamic-pituitary-adrenal physiologic response towards stress culminating in hyperglycemia, insulin resistance, mood disorders and depression (MDD). CRHR2^{-/-} mice are hypersensitive to stress, and the CRHR2 locus in humans has been linked to type 2 diabetes (T2D) and MDD.

Objectives: Several variants in the CRHR2 gene have been reported in patients with bipolar disorder, post-traumatic stress disorder, and T2D, but variants in the gene have not been investigated in families with T2D and MDD.

Methods: We genotyped 212 Italian families with T2D and MDD. We tested 17 SNPs in the CRHR2 gene using two-point parametric-linkage and linkage-disequilibrium (LD) analysis with the following models: dominant with complete-penetrance (D1), dominant with incomplete-penetrance (D2), recessive with complete-penetrance (R1) and recessive with incomplete-penetrance (R2).

Results: We detected linkage to and/or LD with: MDD for 3 SNPs/D1, 2 SNPs/D2, 3 SNPs/R1, and 3 SNPs/R2; and, T2D for 3 SNPs/D1, 2 SNPs/D2, 2 SNPs/R1 and 1 SNP/R2. Two independent SNPs were comorbid. Interestingly, the variants linked to or in LD with MDD had in general higher statistical significance level than the variants linked to T2D, despite that the families were primarily ascertained for T2D.

Conclusions: Our study shows for the first time that the CRHR2 gene which encodes CRHR2 is in linkage to and linkage disequilibrium with MDD and T2D, thereby contributing, in families with T2D, to both disorders and underlying the shared genetic pathogenesis of their comorbidity

Disclosure: No significant relationships.

Keywords: Type 2 diabetes; Depression; CRHR2; MDD

EPV0101

A Case of Ruminative Hypomania Induced by High Dose Venlafaxine

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Introduction: Obsessive phenomena, when present, are usually seen in the depressive phase of bipolar disorder.

Objectives: The peculiar case with aggravation in ruminative and obsessive thinking with simultaneous hypomania may widen our understanding of the phenomenology of antidepressant induced hypomanic symptoms.

Methods: We present a case of ruminative hypomania induced by high dose venlafaxine. Young Mania Rating Scale (YMRS), Hamilton Depression Rating Scale (HAM-D) and Yale Brown Obsessive Compulsive Scale (YBOCS) were used for symptom ratings.

Results: The patient was 30 years old and she had treatment history of depression for 3 months. She had two consecutive suicide attempts with drugs in the week before she was hospitalized for suicidal risk. She was using venlafaxine 300 mg/day and olanzapin 2,5 mg/day; continuous ruminative thinking about the past and imaginary sexual affairs with former friends were apparent with an unremitting pattern, leading to intense psychomotor agitation and suicide attempts. Irritable mood, and increased energy was observed with continuous ruminations. She was diagnosed with bipolar-II-disorder, with mixed features and anxious distress (YMRS:17, HAM-D:22, YBOCS:34). After discontinuing venlafaxine and starting anti-manic treatment with haloperidol 10 mg/day in the first week, both affective symptoms and ruminations were improved (YMRS:2, HAM-D:4, YBOCS:8). Aripiprazol 20 mg/day and quetiapine 100 mg/day which were given for continuation treatment were also effective for preserving full remission.

Conclusions: When prescribing high dose venlafaxine for treatment resistant depression, it should be remembered that this may