Genetic underpinnings of YMRS and MADRS scores variations in a bipolar sample

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59-63). Intestinal bacterial translocation has been postulated as one of the causes of this inflammation (Nguyen et al. J Psychiatr Res 2018;99 50-61). A possible pathway is through the lipopolysaccharide, which is presented to CD14 through lipopolysaccharide binding protein (LBP) leading to a release of systemic inflammatory markers like C-reactive protein (CPR) (Funda et al. Infect Immun 2001;69 3772-81).

Objectives: 1) Describe gut permeability in patients with BD through the determination of intestinal inflammatory markers (LBP, sCD14) in plasma; 2) Analyze variables associated with intestinal inflammation.

Methods: Cross-sectional study of 38 patients with BD [mean age=45.50 (SD=10.93; range 23-68); males=15 (39.5%)], recruited from mental health outpatient clinics in Oviedo (Spain).

Assessment: Pro-inflammation biomarkers [CRP (mg/dL), Erythrocyte Sedimentation Rate (ESR) (mm/h), Neutrophil/Lymphocyte, Monocyte/Lymphocyte, Platelet/Lymphocyte and Systemic Immune Inflammation Indexes]. Indirect markers of intestinal bacterial translocation [LBP, soluble CD14 (sCD14)]. Dichotomous variables were created for LBP, considering LBP ≥15 µg/dL as increased gut permeability; and for CPR, considering CRP≥0.3 as systemic inflammation. Metabolic syndrome [ATPIII criteria: glucose, HDL, triglycerides (mg/dl), arterial pressure (mmHg), abdominal circumference (cm)], body mass index (BMI) (kg/m2), smoking, cannabis or alcohol use.

Statistical analyses: t-Student test, multiple linear regression analyses.

Results: Average LBP was 14.60 µg/dL (SD=6.4) and 15 patients (39.5%) had increased gut permeability. Moreover, average CPR was 0.40 mg/dL (SD=0.58) and 16 patients (47.1%) showed systemic inflammation. There were no patients with increased levels of sCD14.

Associations were found between LBP and CPR (r=0.357; p=0.032), cannabis use in the last month (t=-2.293; p=0.029), BMI (r=0.433; p=0.008) and abdominal obesity (t=3.006; p=0.005); but no with age or sex.

Subsequently, a multiple linear regression model for LBP was calculated with variables previously mentioned, and age (based on expert criteria). The overall regression was statistically significant (R2=0.49, F=9.273, p<0.001). It was found that CPR, abdominal obesity, and cannabis use in the last month significantly predicted LBP levels (table 1).

Table 1. Multiple linear regression analyses to LBP

	B	SE	β	t	p
CPR	4.842	1.529	0.439	3.167	0.004
Abdominal obesity	4.810	1.849	0.362	2.601	0.014
Cannabis use	-5.048	2.273	-0.296	-2.221	0.034

Conclusions: More than one third of patients with BD had increased gut permeability. Almost 50% had systemic inflammation. Intestinal permeability was directly related to abdominal obesity and systemic inflammation, but inversely related to cannabis use.

Disclosure of Interest: None Declared

EPP0534

Genetic underpinnings of YMRS and MADRS scores variations in a bipolar sample

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Introduction: Bipolar disorder (BD) is a chronic hereditary disorder. Trial and error principles and long period of untreated disorder mandate further research. Relatively recent advances in statistical computing and techniques introduced Polygenic risk scores (PRS) as predictors of the genetic susceptibility to diseases. Although they provide an estimate of the risk of developing specific pathologies, they are a genome-wide measure. PRS do not provide specific information on the biological meaning of the variants. The use of subsets of risk variants (limited to one or few related biological pathways) to calculate pathway-PRS (pPRS) may provide an estimate of the functioning of specific molecular cascades.

Objectives: In the present study we calculated pPRS and tested them as potential predictive factors which, together with other clinical/environmental features, may estimate the treatment outcome of BD individuals in a clinical realistic treatment environment.

Methods: 1538 BD (41.39+/-12.66 years, 59.17% females) individuals from STEP-BD were included in the analysis. A latent class analysis identified three groups of patients according to the YMRS and MADRS scores variations during ˜ 1 year (308.47+/-293.83 days YMRS, 357.78+/-367.76 days MADRS). A GWAS analysis with clinical covariates provided the input for pPRS calculation. SNPs with best nominal significance and biologic relevance were prioritized through GTEx. A molecular pathway analysis (MPA) based on the interaction network of drugs used for treatment provided the genetic data needed for pPRS calculation. A Neural network was built using pPRS as features together with other variables (including Sex, Age, Scores at baseline) to predict the 3 groups previously identified. Performance was evaluated through 5-fold cross-validation, Python, R and Bash served for environments. Gene Ontology, ReactomePA and Bioconductor were key packages together with Cytoscape, Plink, impute and gtool.

Results: Ten biological networks were retrieved from MPA: 1) GO:0016705 + GO:0016641, 2)GO:0019585, 3)GO:003018, 4) GO:0099589 + GO:1904014, 5)GO:0015464 + GO:1905144, 6) GO:0004935 + GO:0004364 + GO:00031690, 7)GO:1903351 + GO:1903350, 8)GO:0016917 + GO:0007214, 9)GO:0008066 + GO:0007215, 10)GO:0048016. Risk variants within the genes contained in each group were used to compute pPRS. The ten pPRS were used to compute a neural network to predict treatment outcomes.

Conclusions: BD treatment is influenced by socio-demographic, clinical and genetic factors. To tackle this complexity, we tried to implement an approach where the multivariate analysis encompasses clinical analysis and the biologic background of treatment

response. As a result, we can infer through a hypothesis-free approach potential pathways whose alterations may estimate treatment. At the time of writing the analyses are still undergoing, the final results will be presented and discussed at the congress.

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EPP0535

Organic affective disorder due to meningioma, case report

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Introduction: Brain tumors can be associated with psychiatric symptoms in up to 50% of cases. The most frequent primary is meningioma and the clinic will depend on its location. Since surgical treatment does not always guarantee complete resolution of the condition, concomitant psychopharmacological treatment is usually recommended.
Objectives: To review about organic mania and its differential diagnosis.
Methods: We carry out a literature review about organic affective disorder accompanied by a clinical description of one patient with organic mania.
Results: A 50-year-old woman admitted due to psychotic symptoms. She had a diagnosis of frontal and parietal meningioma treated with surgical treatment 10 years ago. In this context she had a diagnosis of Organic Affective Disorder and 3 previous psychiatric admissions due to affective or psychotic symptoms. Current episode consisted in dysphoria, magalomanic ideation, delusional ideation of harm and mystical-religious content, high speech pressure and insomnia with little awareness of the disease. Cranial magnetic resonance showed postoperative right frontal changes and stability in parietal meningioma, with no significant differences compared to the previous study. Diagnosis of Organic Affective Disorder is maintained and reintroduced treatment with aripiprazole withdrawaled by the patient weeks before. Because of adverse effects and persistence of the symptoms described, it was changed to olanzapine with good response and tolerability. The behavior was progressively adapted with improvement of the dysphoria and without psychotic symptoms at discharge.
Conclusions: Affective symptons due to organic disorders such as brain tumors can be treated surgically and with psychopharmacological treatment.

Disclosure of Interest: None Declared

EPP0536

A family history of suicide in bipolar disorders: powerful, powerless

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Introduction: When completing the medical record of a patient with bipolar disoder (BD), hardly anything is more impacting than a family history of completed suicide (FHS). In fact, FHS is a main risk factor for personal suicide attempts and death in this population. There are few modifiable protective factors against suicide in BD, such as lithium treatment and absence of substance abuse.
Objectives: We aimed to explore the relationship between a FHS and clinical characteristics in patients with BD. Given the impact that FHS has on the individual and on healthcare professionals, we hypothesized that it would modify behaviors towards a higher prevalence of the modifiable protective factors against suicide, namely more treatment with lithium and less drug addiction.
Methods: This is a cross-sectional study that included all patients with BD that were followed up in a specialised unit between 1998 and 2020. Only subjects with complete information on FHS were retained for the analysis. We assessed sociodemographic and clinical data and described it with measures of frequency, central tendency and dispersion. Differences between subjects with and without FHS were calculated with χ^2, Fisher's exact test and Student's t-test as appropriate. We set the significance level at $p \leq 0.05$. All tests were two-tailed.
Results: The sample consisted of 480 subjects with a mean age of 45.9 years (standard deviation 14.4, range 18-88), of which 54.4% (n=261) were women. 69.2% (n=332) had a diagnosis of BD type I and 30.8% (n=148) of BD type II. 77 subjects (16%) had a FHS. Regarding differences between groups, those with relatives who had committed suicide did not show statistically significant differences in terms of sociodemographic variables (age, gender, civil status, employment) or key clinical features (type of BD, illness duration, psychotic features, predominant polarity, rapid cycling, number of lifetime manic and depressive episodes, comorbid personality disorder), neither did they have a higher use of lithium (55.8% vs 59.3%, p=0.572) nor lower substance use disorder (10.9% vs 15.5%, p=0.34). Predictably, people with FHS had a higher prevalence of family history of mental and affective disorders (96.1% vs 70.9%, p<0.001; 86.3% vs 56.3%, p<0.001) and of stressful life events (71.6% vs 58.9%, p=0.05). Personal lifetime suicide attempts also tended to be higher (36.4% vs 26.7%, p=0.088).
Conclusions: Contrary to our hypothesis, in our sample of subjects with BD a FHS was not associated with a higher prevalence of the modifiable protective factors against suicide. Therefore, although suicide has a major impact both in families and healthcare professionals, our results suggest it does not modify attitudes towards prevention in a real-life scenario. The main limitation of our study is its cross-sectional design, which does not allow for causal inference. In conclusion, there is room for improvement in the fight against suicide.

Disclosure of Interest: None Declared