EPP0920

The RNA editing patterns are different in blood of euthymic and depressed bipolar patients

M. Hayashi[1]*, N. Salvetat[2], C. Cayzac[2], F. J. Checa-Robles[2], C. Lozano[2], J.-D. Abraham[2], B. Dubuc[2], S. Mereuze[2], J. V. Nani[1], F. Molina[2], E. Brietske[3] and D. Weissmann[2]

[1]UNIFESP, SAO PAULO, Brazil; [2]ALCEDIAG/Sys2Diag, Montpellier, France and [3]Queen's University School of Medicine, Kingston, Canada
*Corresponding author.
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Introduction: Bipolar disorder (BD) is a severe mental disorder associated with functional impairment, high disability and premature mortality. Modifications of editing in mRNA of serotonin receptor subtype 2C (5-HTR2c) was reported by us in depressed suicide decedents. We have also identified a panel of RNA editing-based blood biomarkers for the diagnosis of BD, which also allowed to discriminate unipolar depression from BD with high sensivity and specificity.
Objectives: Herein, aiming to confirm the diagnostic value of this panel, a new cohort of BD patients was recruited in Brazil.
Methods: This study is based on the analysis of 47 control patients (CTRL) compared to 40 patients with bipolar disorder (BD). BD patients (BP) were classified into 4 subgroups: euthymic (BP_EUT, n = 17), depressive (BP_DEP, n = 11), manic/hypomanic (BP_HM, n = 7) and mixed (BP_MIX, n = 5). The diagnostic value of a panel of RNA editing-based blood biomarkers for the diagnosis of BD, which includes a set of eight genes, namely PDE8A, CAMK1D (calcium/calmodulin-dependent protein kinase type 1D); GAB2 (growth factor receptor bound protein 2-associated protein 2); IFNAR1 (interferon alpha/beta receptor 1); KCNJ15 (ATP-sensitive inward rectifier potassium channel 15); LYN (tyrosine-protein kinase Lyn); MDM2 (E3 ubiquitin-protein ligase Mdm2); PRKCB (protein kinase C beta type), which was able to discriminate unipolar depression from BD with high sensivity and specificity, was confirmed here by testing an independent cohort of patients suffering from BD recruited in a well-known genetic admixed ancestry population, which is typical in South America, more specifically in Brazil.
Results: We identified new combinations allowing a clear discrimination of euthymic versus depressed bipolar patients, and euthymic versus healthy controls, confirming that RNA editing is a key mechanism in the physiopathology of mental disorders, in particular in BD.
Conclusions: In conclusion of this study, we confirm that RNA editing is a key mechanism in the physiopathology of mental disorders in general, and in BD in particular, and that measuring changes in this mechanism at the peripheral level allowed us to stratify BD patients not only with respect to their symptomatology, but also with respect to the pathophysiology, thus paving the way for personalised medicine in psychiatry.

Disclosure of Interest: None Declared

EPP0921

A healthy dietary pattern is associated with microbiome diversity in bipolar patients: the Bipolar Netherlands Cohort (BINCO) study

M. A. Riedinger[1,2]*, R. Mesbah[1,3], M. Koenders[4,5], M. Geleijnse[6], M. de Leeuw[1,7], N. van der Wee[1] and E. Giltay[1,8,9]

[1]Psychiatry, Leiden University Medical Center; [2]Psychiatry and mental disability, GGZ Rivierduinen, Leiden; [3]Bipolar disorders outpatient clinic, PsyQ, Rotterdam; [4]Psychology, Leiden University; [5]Outpatient Clinic, PsyQ, Leiden; [6]Human Nutrition & Health, Wageningen University, Wageningen; [7]Bipolar disorders, GGZ Rivierduinen, Leiden, Netherlands; [8]Biomedical Sciences, University of Antwerp, Antwerp and [9]VZW Emmaüs, University Psychiatric Hospital Duffel, Duffel, Belgium
*Corresponding author.
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Introduction: The gut microbiome is one of our most prominent surfaces interacting with the outside world through the food we eat. It is influenced in terms of composition and diversity by our diets and life style habits and, in turn, affects us through the 'gut-brain axis'. Cardiovascular risk, which is one of the main causes of death in Bipolar Disorder (BD), is affected by diet. The association between diet and microbiome in BD patients has not been studied.
Objectives: We aimed to assess whether [1] dietary quality is associated with the microbiome's diversity, and [2] what changes and interactions occur during in both the dietary quality and microbiome diversity during the subsequent year of onset BD.
Methods: 39 recently diagnosed patients with BD of the 'Bipolair Nederlands Cohort' (BINCO) (mean age 36 years, 61.5% female) were included. Food Frequency Questionnaires (FFQ) and corresponding Dutch Healthy index (DHD-15) were analyzed at baseline and one year follow-up. Feces samples corresponding to the FFQ were analyzed using 16S rDNA gene amplicon sequencing to attain the Shannon Diversity index and the Chao1 diversity index. Multivariate regression analyses were performed.
Results: The Shannon diversity index significantly correlated to the DHD-15 total score after adjusting for sex and age (beta = 0.451; P = 0.004). The Chao1 index showed the same trend, but did not reach significance (beta = 0.264; P = 0.11). These positive correlations seemed to be driven by the positive effect of fish, beans, coffee, fruits and nuts. There was neither a significant change in DHD-15 index nor in the diversity measures after one year.
Image:

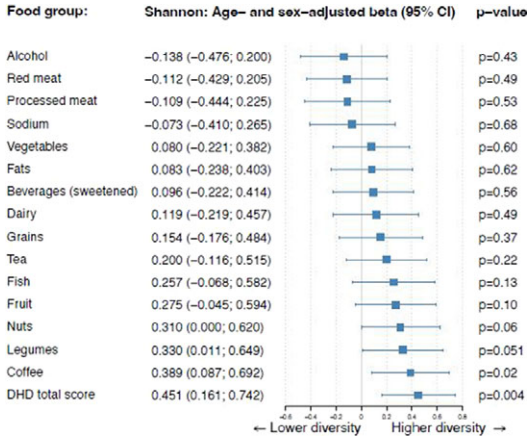
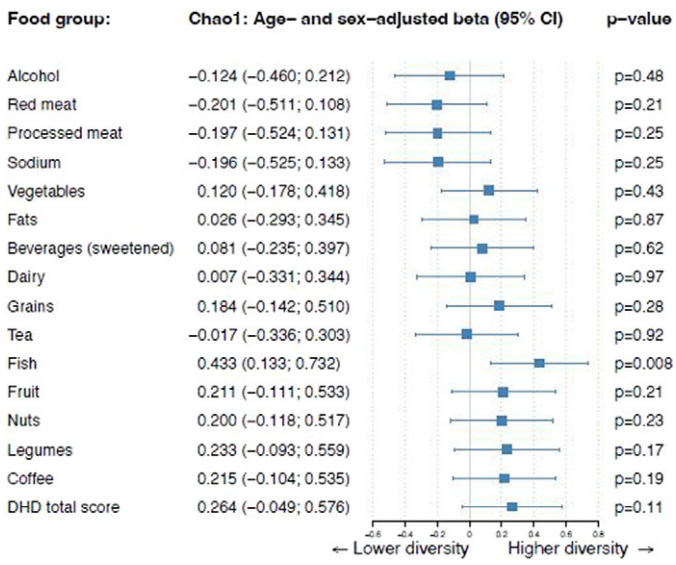


Image 2:



Conclusions: Diversity of the microbiome is positively associated with a healthy and varied diet in BD patients, which could have consequences on mood episodes and cardiovascular risk.

Disclosure of Interest: None Declared

EPP0922

Mixed States and Suicidality in Bipolar Disorder: Results from the Stanley Foundation Bipolar Treatment Network

M. Macellaro[1]*, R. Cafaro[1], B. Dell'Osso[1] and T. Suppes[2]

[1]Department of Mental Health, Department of Biomedical and Clinical Sciences Luigi Sacco, Milan, Italy, University of Milan, Milan, Italy and [2]Department of Psychiatry and Behavioral Sciences, Stanford University, Stanford, United States

*Corresponding author.

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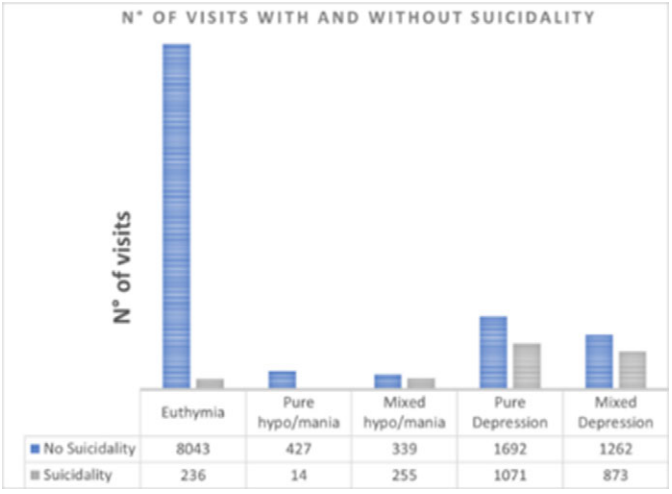
Introduction: Mixed states in bipolar disorder (BD) are characterized by the simultaneous occurrence of both manic and depressive features. Growing evidence suggests that they are associated with longer duration of illness, increased relapse risk, and higher prevalence of comorbidities. Suicide risk among BD patients is up to 20–30 times greater than in the general population, although there is not a univocal consensus in whether mixed states should be considered as a high-risk state for suicide.

Objectives: The objective of this study was to identify whether depressive and hypo/manic episodes with mixed features, are associated with more frequent suicidal behavior or ideation when compared to pure hypo/manic and depressive ones. We hypothesized that suicidal ideation or behavior would be more common in those experiencing mixed symptoms. We subsequently also tested whether gender or bipolar subtype moderated the relation between mood and suicidality.

Methods: In a naturalistic study, 903 adult BD outpatients participating in the Stanley Foundation Bipolar Network were followed longitudinally across 14,213 visits for 7 years. The scores at the Inventory of Depressive Symptomatology–Clinician-Rated Version (IDS-C) and at the Young Mania Rating Scale (YMRS), administered at each visit, were used to define the mood episode. Given partial overlap of items between these scales, analyses were also conducted by removing overlapping items. The presence of suicidality was evaluated through the 18th item of the IDS-C (Suicidal Ideation).

Results: During the observation period, up to 60.7% of subjects had at least one visit with suicidal ideation or behavior, broadly defined as a score ≥ 1 at the 18th item of the IDS-C. The distribution of suicidality among visits in different mood states is reported in Figure 1 (N° of visits in which suicidality was detected by mood state at the time of visit). Depressive symptoms were associated with suicidal ideation and behavior either during mixed depression and hypo/mania ($p < 0.0001$). Hypomanic or manic symptoms appeared to be related to suicidality only during hypo/mania, either pure or mixed (p 0.007). When overlapping items between the two psychometric scales were removed results seemed to confirm these hypotheses. Moreover, male gender appeared to have a protective role against suicidal ideation when hypo/manic (p 0.002).

Image:



Conclusions: The primary role of depressive symptoms in predicting suicidal risk was confirmed by our results, which however suggest that mixed symptoms relate to suicidal ideation and behavior more intensely than pure hypo/manic symptoms. More importantly, hypo/manic symptoms did not appear to have a protective role during mixed episodes. Future studies considering also deaths by suicide are required in order to better clarify the role of mixity on suicidality.

Disclosure of Interest: None Declared