BIOLOGICAL PSYCHIATRY AND NEUROSCIENCE

[Abstract:0149] Biological psychiatry and neuroscience

Is the neutrophil-to-lymphocyte ratio indicating inflammation in bipolar disorder?

Ahmet Unal\textsuperscript{1}, Esen Savas\textsuperscript{2}, Zeynel Abidin Sayiner\textsuperscript{2}, Gokay Alpak\textsuperscript{1}, Bahadir Demir\textsuperscript{1}, Hilal Kaya\textsuperscript{1}, Zeynel Abidin Ozturk\textsuperscript{2}

\textsuperscript{1}Department of Psychiatry, Gaziantep University, Faculty of Medicine, Gaziantep-Turkey
\textsuperscript{2}Department of Internal Medicine, Gaziantep University, Gaziantep-Turkey
e-mail address: drahmetunal@hotmail.com

Objective: Neutrophil-to-lymphocyte ratio (NLR) has been shown to be a useful marker of inflammation in many inflammatory diseases. NLR may be a useful marker to determine an inflammatory state during Bipolar Disorder (BD) episodes. The aim of the current study is to determine the inflammation during BD episodes, using NLR as an indicator of inflammation.

Methods: 157 patients with bipolar disorder were included in this cross-sectional study. The NLR was calculated from the differential count, dividing the absolute neutrophil count by the absolute lymphocyte count. Inclusion criteria for neutrophil and lymphocyte counts were being in the 2500-7500/mm\textsuperscript{3} and 1500-3500/mm\textsuperscript{3} interval, respectively. Patients with end stage renal disease, malignant diseases, severe liver failure, active infection diseases, and active smoking were excluded from the study.

Results: NLR levels were highest in patients with manic episode and lowest in the control group (2.68±1.27, 1.82±0.65). ESR and CRP levels of manic patients were significantly higher than other groups (p=0.261, p=0.199).

Conclusion: NLR during periods of mania is higher than during depression and euthymic periods of the BD. It is possible to say that the degree of the inflammation during the period of disease could be different, and exacerbation of inflammation during the period of mania in BD could explain systemic cardiovascular comorbidities of disorder.

Keywords: bipolar disorder, inflammation, neutrophil lymphocyte ratio


[Abstract:0444] Biological psychiatry and neuroscience

Platelet volume variation in major psychiatric disorders

Murat Ilhan Atagun\textsuperscript{1}, Sukru Alperen Korkmaz\textsuperscript{2}, Caglar Soykan\textsuperscript{1}, Serdar Suleyman Can\textsuperscript{1}, Semra Ulusoy Kaymak\textsuperscript{2}, Ali Caykoylu\textsuperscript{1}

\textsuperscript{1}Yildirim Beyazit University, Faculty of Medicine, Ankara-Turkey
\textsuperscript{2}Ankara Ataturk Training and Research Hospital, Ankara-Turkey
e-mail address: dr.alperen88@gmail.com

Objective: Mean platelet volume (MPV) is one of the indicators of platelet function. Changes in platelet function have been reported in many psychiatric disorders. Increased intra-platelet calcium mobilization, upregulation of 5-HT2 receptors or α2-adrenoreceptors, down-regulation of 5-HT transporter number, changes in second messenger signal transduction and intra-platelet concentrations of monoamines or catecholamines are some potential underlying factors. Psychotropic medications could also be one of the main factors of altered platelet volumes. It was aimed to compare MPVs of different psychiatric disorders in order to find out whether this effect is due to medications in this study. Since treatment regimes of these disorders vary, differences between groups may show the effects of medications on MPV.

Methods: Records of the first hemogram tests (CBC) of the patients (n=954) admitted to the psychiatry outpatient unit of the psychiatry department of Ankara Ataturk Training and Research Hospital were obtained. According to ICD-10, patients with depressive disorders (n=389), bipolar disorders (n=338) and psychotic disorders (n=227) were included in the study. Mean platelet volume (MPV), platelet distribution width (PDW), platelet count (PLT), leukocyte count (WBC) and erythrocyte count (RBC) were obtained from laboratory records. Groups were compared with One-way ANOVA test. Tamhane and Bonferroni tests were the post-hoc tests.

Results: Statistically significant differences were found between age (F(2,953)=11.31, p=0.000014), gender (p=0.000103, χ\textsuperscript{2}=23.44), platelet count F(2,953)=3.45, p=0.032, leukocyte count F(2,953)=461.01, p<0.0000001 and erythrocyte count F(2,953)=351.11, p<0.0000001. There were no significant differences between MPV F (2.953)=2.29, p=0.102 and PDW F(2,953)=1.29, p=0.277. Platelet count was significantly higher in the bipolar disorders group (260.03±66.66 K/μL) than the depressive disorders group (247.30±67.30 K/μL) (p=0.00001).