

COMPARISON OF INFLAMMATORY BURDEN INDEX (IBI) VALUES ACROSS DIAGNOSTIC GROUPS IN PSYCHIATRIC INPATIENTS

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BACKGROUND AND AIM: Recently, the role of inflammation in the etiology and pathophysiology of mental disorders has become a major focus of research. This study aimed to examine whether basic inflammatory biomarkers and the Inflammatory Burden Index (IBI) differ across diagnostic groups among psychiatric inpatients and to investigate the relationship between these biomarkers, symptom severity, and length of hospitalization.

METHODS: The study included 184 patients hospitalized in the psychiatry clinic (Major Depression: 51, Bipolar Disorder: 43, Anxiety: 41, Schizophrenia: 38). On the first day of hospitalization, laboratory values for leukocytes, neutrophils (NEU), lymphocytes (LYM), and C-reactive protein (CRP) were obtained. The Inflammatory Burden Index was calculated as $CRP \times (NEU/LYM)$. Symptom severity was assessed using the Beck Depression Inventory, Beck Anxiety Inventory, Montgomery-Åsberg Depression Rating Scale, Young Mania Rating Scale, and the Positive and Negative Syndrome Scale.

Comparisons of inflammatory parameters among diagnostic groups were performed using the Kruskal–Wallis test, while correlations between clinical variables were analyzed using Pearson or Spearman correlation analyses. A significance level

of $p < 0.05$ was considered for all analyses. Research necessary permissions were obtained from the local ethics committee (IRB Date/Number: 2025/197).

RESULTS: No significant differences were found among diagnostic groups in terms of inflammatory parameters ($p > 0.05$). There were no significant correlations between CRP, LYM, or IBI values and clinical variables. However, WBC and NEU levels showed a significant positive correlation with both length of hospitalization ($r = 0.214$ and $r = 0.209$, respectively) and MADRS scores ($r = 0.220$ and $r = 0.223$, respectively).

CONCLUSION: The findings suggest that inflammation may represent a transdiagnostic biological process rather than a marker specific to a single psychiatric disorder.

Responsive inflammatory markers such as WBC and NEU appear to be associated with both the duration of hospitalization and the severity of depression. Studies with repeated measurements are needed to clarify the longitudinal changes in inflammatory biomarkers and their relationship with symptom dynamics across psychiatric diagnoses.

Keywords: Burden, index, inflammatory, IBI