

THE RELATIONSHIP BETWEEN ANTIPSYCHOTIC DOSE AND BLOOD IMMUNE MARKERS IN ACUTE PSYCHOTIC EPISODE PATIENTS REQUIRING HOSPITALIZATION: A RETROSPECTIVE STUDY

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BACKGROUND AND AIM: The role of the immune system in psychotic disorders dates back to 1967, with several studies showing its involvement. Inflammatory ratios like NLR and LMR are useful and inexpensive biomarkers. No studies have explored the relationship between NLR and LMR in hospitalized psychosis cases. This study examines the association between these immune markers and the need for acute intervention due to agitation, hypothesizing that this will be reflected in the equivalent doses of antipsychotics and benzodiazepines. Thus, it is hypothesized that immune biomarkers could help determine the optimal drug dose for pharmacological intervention in acute agitation in psychiatric patients, thereby preventing the administration of unnecessarily high doses of medication.

METHODS: The study included 100 patients admitted to psychiatric wards between July- December 2024, diagnosed with schizophrenia or non-organic psychosis and requiring acute pharmacological intervention. Blood samples were analyzed for hemogram parameters; NLR and LMR were calculated. The study protocol was approved by the Ankara University Faculty of Medicine Ethics Committee (Date:29.01.2025 No:İ01-58-25) and conducted following the Declaration of Helsinki. Statistical

analyses were performed using SPSS, with normality assessed via skewness and kurtosis tests. For the correlation and comparison of the data, t-test and Pearson tests were used for parametric cases, while Mann-Whitney-U and Spearman tests were applied for nonparametric cases.

RESULTS: No statistically significant correlation was observed between LMR and Equivalent Antipsychotic Dose ($p=0.388$) or Equivalent Benzodiazepine Dose ($p=0.136$). Similarly, the correlation between NLR and Equivalent Antipsychotic Dose ($p=0.960$) or Equivalent Benzodiazepine Dose ($p=0.356$) was not found to be statistically significant. There was no statistically significant difference in NLR ($p=0.826$) and LMR ($p=0.136$) values between psychotic cases requiring acute intervention and those not requiring it.

CONCLUSIONS: The correlation between NLR, LMR, and equivalent antipsychotic and benzodiazepine doses on the first day of hospitalization was evaluated. Findings were inconclusive, highlighting the need for further studies on immunity in acute agitation during psychotic episodes.

Keywords: Acute intervention, LMR, NLR, psychotic attack