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Evaluating Absolute Eosinophil Count as a Diagnostic and Prognostic Marker in Sepsis: Correlation with SOFA and qSOFA Scores

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Abstract

Introduction : Sepsis is a dysregulated host response to an infection that causes organ failure that poses a serious risk to life. Although culture results are not always available right away and the majority of patients continue to test culture negative, microbial culture is still the gold standard for diagnosing sepsis. Therefore, the objective of the current study was to assess absolute eosinophil count as a new marker for diagnosing sepsis and also to assess the prognosis of the patient in relation to Sequential Organ Failure Assessment (SOFA)/quick Sequential Organ Failure Assessment (qSOFA) score.

Methodology : In this study, 100 patients with sepsis were enrolled. The other 100 patients without any evidence of sepsis were taken as controls. Absolute eosinophil count (AEC), SOFA/qSOFA scores of all the patients were measured on the 1st, 3rd, and 7th day and data was analyzed statistically.

Results: The mean AEC on admission day in sepsis patients was 49.5. The mean AEC among survivors was >50 and nonsurvivors was <50. AEC and SOFA/qSOFA scores exhibit a statistically significant and inverse correlation on the 1st, 3rd, and 7th day of illness.

Conclusion: Absolute eosinophil count (AEC) is a simple and cost-effective marker that may be helpful in diagnosis as well as in predicting the prognosis of sepsis as evidenced by its linear inverse correlation with SOFA/qSOFA score.

Keywords: Absolute eosinophil count, Sepsis, SOFA, qSOFA