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Diagnostic value of the mean platelet volume in the prediction of respiratory syncytial virus in acute bronchiolitis

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Introduction: Respiratory Syncytial Virus (RSV) is an important pathogen of childhood that causes lower respiratory system infection. The aim of this study was to evaluate whether the Mean Platelet Volume (MPV) changes are significant in the prediction of acute bronchiolitis with RSV.

Method: A standard protocol was followed, and the patients were divided into groups based on being RSV positive and other respiratory viruses positive. Using the Receiver-operating Characteristic Analysis (ROC), the accuracy was evaluated according to the Area Under the Curve (AUC) for the diagnosis of RSV bronchiolitis. A p value of <0.05 was considered statistically significant.

Result: The median MPV of patient with RSV was lower than those negative counterparts [median (IQR) 6.8 (1.5) vs. 7 (1.3), $p>0.05$, respectively] but not significantly. Receiver-operating characteristic analysis suggested that MPV level cut-off point for making the diagnosis of RSV bronchiolitis was 6.34 fL with sensitivity, specificity of 72%, 79% respectively. The median AUC was 0.457 for the MPV (95 % CI 0.354-0.560, $p>0.05$).

Conclusion: Mean platelet volume may be a useful marker to provide a prediction on RSV bronchiolitis. However, measurement of mean platelet volume might not be sufficient to provide a prediction on type of respiratory viruses in acute bronchiolitis.

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