

LETTER TO THE EDITOR

Mean platelet volume may not change in chronic obstructive pulmonary disease patients with pulmonary heart disease

We read carefully the retrospective study of Tao and Bai was to investigate mean platelet volume (MPV) combined red cell distribution-standard deviation as biomarkers in patients with chronic obstructive pulmonary disease (COPD) with pulmonary heart disease (PHD).¹ We would like to emphasize the existence of other factors that may have affected the MPV results of this study.

Although it has been stated by the authors that MPV is being investigated as a biomarker in heart diseases and cancers, it is not recommended being used for purposes such as diagnosing or determining prognosis in acquired diseases due to the fact that MPV measurement standardization has not been achieved until today.² Important variables that lead to significant deviations in MPV measurement results are factors such as the time from blood collection to MPV measurement, the type of anticoagulant used in whole blood tubes, and which devices are used in MPV measurement.³⁻⁷ It has been reported that there may be a deviation of 2%-50% in MPV results due to the difference in the time from blood collection to MPV measurement and the anticoagulant used.³⁻⁵ Similarly, the difference in the devices used in MPV measurement can lead to deviation of up to 40%.⁵⁻⁷ In this study, it was not stated which anticoagulant was used in MPV measurement, which device was used for measurement, and how long after the MPV measurement was taken, the reliability of MPV results was negatively affected. It was especially emphasized that it is important to prevent the errors that negatively affect the analysis in MPV measurements,⁸ and it is an important handicap that the analytical errors could not be prevented due to the retrospective nature of the study. In addition, study groups consist of COPD patients with or without PHD, and there was no healthy control group in the study. Since there was no healthy control group in this study, it is impossible to understand the equivalent of MPV results in the normal population. Another point was that the age of COPD patients with PHD was significantly higher than the patients with COPD without PHD, and it was reported that the age difference was also a factor that could lead to a difference in MPV values.²

As a result, MPV values may not change in COPD patients with PHD.

KEYWORDS

chronic obstructive pulmonary disease, mean platelet volume, predictive value of tests, pulmonary heart disease

CONFLICT OF INTEREST

The authors have no conflict of interest.

AUTHOR CONTRIBUTIONS

All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by Cengiz Beyan and Esin Beyan. The first draft of the manuscript was written by Cengiz Beyan and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in references.

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