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## NLR, d-NLR and PLR can be affected by many factors

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## ABSTRACT

We have read the article by Yang et al, entitled “The diagnostic and predictive role of NLR, d-NLR and PLR in COVID-19 patients” with great interest. The authors emphasized that the NLR (Neutrophil to lymphocyte ratio) is an independent prognostic biomarker for COVID-19 patients. First of all, we congratulate the authors for their valuable contribution to the literature in these difficult conditions. However, we would like to add on a few cases that need more attention.

We have read the article by Yang et al. [1], entitled “The diagnostic and predictive role of NLR, d-NLR and PLR in COVID-19 patients” with great interest. The authors emphasized that the NLR (Neutrophil to lymphocyte ratio) is an independent prognostic biomarker for COVID-19 patients. First of all, we congratulate the authors for their valuable contribution to the literature in these difficult conditions. However, we would like to add on a few cases that need more attention.

The effects of drugs on hematological parameters are known. It is well known that glucocorticoids, the most known of these, can cause leukocytosis and a decrease in other circulating cells such as monocytes and lymphocytes [2]. This is an indication that it will affect NLR, lymphocyte-to-monocyte (LMR) ratio, platelet-to-lymphocyte ratio (PLR). Therefore, the authors were required to indicate at the time of admission how many patients were using drugs that could affect laboratory parameters. In addition, it has been shown that NLR, PLR and LMR can be affected in patients with hematological disorders, cardiovascular disease, chronic organ failure, and malignancy [3,4]. Therefore, other medical treatments and additional diseases that may affect blood parameters should be stated more clearly or excluded.

Plasma inflammatory biomarkers such as white blood cell count, NLR, PLR, LMR and C-reactive protein are time-sensitive variables and these parameters are the dynamic process that accompanies the course

of the disease [5]. Accordingly, the time elapsed since the onset of symptoms may also affect NLR, PLR and LMR values and it is important that this time be included in the study protocol. As a result, NLR, PLR and LMR can be affected by many factors; The routine clinical use of these parameters is not yet reasonable. Prospective, multi-center studies with large patient populations are needed to access clearer information.

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