Letter

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Letter to the editor: Predictive value of the neutrophil-lymphocyte ratio and mean platelet volume in testicular torsion

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To the editor:

We have read the article "Predictive role of hematologic parameters in testicular torsion" by Gunes et al. [1], which was a very interesting study. In their very well-designed and presented study, Gunes et al. [1] tried to assess the potential relationship between hematologic parameters and testicular torsion (TT). They showed significant differences in the neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio, and platelet count between TT patients and healthy controls. There was no predictive role of mean platelet volume (MPV) in the diagnosis of TT. They also reported significantly high sensitivity and specificity for the NLR in the prediction of TT diagnosis. In addition, the NLR was significantly correlated with the duration of symptoms in TT patients.

Routine peripheral blood counts may be useful in the diagnosis and prognosis of many disorders such as TT. White blood cell (WBC) count is one such beneficial inflammatory biomarker in clinical experience. Even if the WBC count is in the normal range, hematologic parameters, especially subtypes of WBCs like the NLR, have been shown to play a predictive role in the prognosis of acute and chronic inflammatory processes. Neutrophil and lymphocyte counts can be obtained with a basic hemogram test [2,3]. The NLR may be an indicator of systemic inflammation. The NLR is measured by dividing the neutrophil count by the lymphocyte count. In an acute setting, lymphopenia is a common finding during a stress response secondary to increased levels of corticosteroids. Also, lymphopenia is observed in inflammatory states due to increased lymphocyte apoptosis [2].

Another simple blood count marker like the MPV value is also considered to be a useful indicator of thrombocyte activity. The level of platelets is enhanced in acute inflammation, leading to a decrease in the MPV level as result of the migration of a majority of the large reactive platelets to inflammatory sites, where they are consumed [4]. Cicek et al. [5] compared serum MPV levels in patients with TT and healthy control subjects. They concluded that the MPV may be useful as a test for the diagnosis of TT. The NLR and MPV are easily measured laboratory markers used to evaluate systemic inflammation, but these markers can be associated with many conditions. Because abnormal thyroid function, renal or hepatic dysfunction, hypertension, diabetes mellitus, metabolic syndrome, known malignancy, previous history of local or systemic infection, inflammatory diseases, and certain medications can change the inflammatory status of patients, so too is the measurement of the NLR and MPV affected in all of the above conditions [3]. In this context, it would be better if the authors had mentioned these factors.

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In conclusion, the NLR and MPV may be influenced by many situations. The NLR and MPV themselves without other obvious inflammatory markers may not give a full picture of the prognosis of the patient. We believe that these findings will guide further studies about the NLR and MPV as an alternate marker of early diagnosis in patients with TT.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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