



## EDİTÖRE MEKTUP/LETTER TO THE EDITOR

### Platelet-to-lymphocyte ratio as a cost-effective and easily measurable marker

Uygun maliyetli ve kolay ulaşılabilir bir belirteç olarak platelet/lenfosit oranı

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Dear Editor,

Platelet to lymphocyte (PLR) is one of the complete blood count parameters such as neutrophil to lymphocyte (NLR) and mean platelet volume (MPV). PLR has been evaluated in patients with several diseases including chronic inflammatory diseases, malignancies, myeloproliferative disorders, cardiovascular diseases and infectious diseases<sup>1-13</sup>.

Platelet counts or lymphocyte counts can be affected by chronic inflammatory diseases, malignancies and myeloproliferative disorders. Furthermore, elevated PLR levels have been shown in patients with several diseases such as cancer (e.g., prostate, colorectal, cervical, ovarian, malignant pleural mesothelioma and surgically resected gastrointestinal stromal tumors), peripheral artery disease, hypertension, coronary artery disease, limb ischemia, poor prognostic myocardial infarction, infective endocarditis, exacerbation of chronic obstructive pulmonary disease (COPD), systemic lupus erythematosus (SLE), psoriasis vulgaris, Behçet's syndrome, pseudoexfoliation syndrome<sup>1-13</sup>. On the contrary, reduced PLR levels have been reported in patients with obstructive sleep apnea syndrome (OSAS)<sup>6</sup>.

Except from the evaluation only PLR levels, in some trials PLR has been also investigated as a predictor of disease prognosis. PLR has been described as an independent predictor of in-hospital mortality in patients with infective endocarditis<sup>2</sup>, an independent risk factor for morbidity and mortality after coronary arter bypass grafting<sup>12</sup>, and an

independent prognostic factor for surgically resected gastrointestinal stromal tumors<sup>10</sup>, or useful for predicting the prognosis of in patients with pseudoexfoliation syndrome and progression to pseudoexfoliation glaucoma<sup>7</sup>, malignant pleural mesothelioma<sup>8</sup> and recurrent cervical cancer<sup>9</sup>. And PLR more than 107 has been suggested to be independent predictor of non-dipper hypertension<sup>11</sup>.

PLR values have been also reported to decrease gradually from the control group to the severe OSAS group<sup>6</sup>. In a different study to evaluate the significance of PLR for the prediction of the viscosity of otitis media with effusion due to prevent unnecessary surgeries and additional costs, it has been suggested that if the PLR value was less than 97.96, the effusion was mucoid<sup>13</sup>. However, whereas PLR levels have been showed to be significantly higher in exacerbation of COPD than stable COPD, NLR values were found to be more sensitive<sup>3</sup>.

PLR has been shown to be associated with inflammation and also inflammation severity<sup>4,5</sup>. Recently, PLR has been reported to be positively correlated with SLE disease activity index (SLEDAI) scores and also psoriasis area and severity index (PASI) scores<sup>4,5</sup>. PLR has been described as a predictor for the presence of psoriatic arthritis among psoriasis patients<sup>5</sup>. And, higher PLR levels has been showed in SLE patients with nephritis than in those without nephritis<sup>4</sup>. On the other hand, although PLR was statistically significant in patients with Behçet's syndrome when compared with healthy controls and it has been reported that PLR was significantly different among severity groups,

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there were no correlation between the severity score of Behçet's syndrome and PLR<sup>1</sup>.

In conclusion, it is a fact that PLR is positively correlated with inflammation and, in the light of these studies, it can be said that PLR may be a cost-effective, useful and easily accessible marker for monitoring and predicting outcomes in patients with systemic inflammatory diseases. However, in order to highlight the role of PLR and cut-off values for PLR in patients with especially chronic inflammatory diseases, malignancies, myeloproliferative disorders and cardiovascular diseases, there is also need for large-scale studies.

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