The Evaluation of the Neutrophil-to-Lymphocyte Ratio in Coronary Chronic Total Occlusion

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Dear Editor,

We read with great interest the recently published article on the relationship between the neutrophil-to-lymphocyte ratio (NLR) and coronary collateral circulation (CCC) in patients with coronary chronic total occlusion in which the authors concluded that NLR correlates with the impaired development of coronary collaterals [1]. However, we think that there are some points that should be emphasized about this study.

First, as indicated in the original study, some clinical conditions (active and ongoing infection, chronic inflammatory disease, etc.) that may affect the total and differential white blood cell (WBC) count were excluded to avoid possible confounders for NLR. However, in such studies aimed to determine predictive markers by using laboratory results, it would be better to identify a specific WBC count range that may affect the total and differential white blood cell (WBC) count or a high neutrophil count. However, neutrophil and lymphocyte counts were not provided in this study [1]. Therefore, it cannot be said that inflammation alone is responsible for this increase in NLR. As is known, a decreased lymphocyte count has been associated with malnutrition and lymphopenia and is used as an indicator of malnutrition [7]; hence, a decrease in lymphocyte count increases NLR. However, the nutritional status of participants has not been evaluated, and there is no effective laboratory indicator identifying malnutrition as the cause of lymphopenia in the original study. As is known, serum proteins, particularly albumin, have often been used to assess malnutrition. Albumin has a relatively long half-life, approximately 14–20 days, and because of this it has been touted as a marker of chronic nutritional status. Therefore, it would be better to at least assess albumin levels to evaluate the correlation between albumin levels and nutritional status in the current study.

In conclusion, not identifying a specific WBC count range within the exclusion criteria, as well as not providing neutrophil and lymphocyte counts directly, may lead to improper interpretations about the presence of inflammation in these patients.

References