

## Predictors of poor coronary collateral development in patients with stable coronary artery disease: Neutrophil-to-lymphocyte ratio and platelets

To the Editor,

We read with great interest the paper titled "Predictors of poor coronary collateral development in patients with stable coronary artery

disease: Neutrophil-to-lymphocyte ratio and platelets" by Akin et al. (1) that was published in the April issue of the Anatol J Cardiol 2015; 15: 218-23. In this original article, the authors revealed that the neutrophil/lymphocyte (N/L) ratio is independently associated with the presence of coronary collateral circulation (CCS) in patients with stable angina pectoris. Also, they found that an N/L ratio higher than 2.55 could predict a good collateral circulation with 76% sensitivity and 63% specificity using ROC analysis.

Data in current scientific literature reveal that CCS is associated with metabolic syndrome and serum cholesterol levels (HDL and especially triglyceride) (2, 3). There are similar findings in the present study (1). In particular, the study found that a lower triglyceride level is significantly related with good CCS and is an independent predictor in multivariate regression analysis.

Exercise has a positive effect on the lipid profile, and it does improve metabolic syndrome parameters. Furthermore, Wang et al. (4) showed in their study that diet and exercise improve the N/L ratio. The study also demonstrated that a decrease in the N/L ratio is positively correlated with interleukin-6 levels. As a result, they concluded that diet and exercise have a positive impact on pro-inflammatory mediators.

The positive impact of exercise on CCS development has been well known for some time (5). As the positive effect of exercise on lipid parameters and the N/L ratio is already known, the questions that come to our mind are whether patients who have good CCS exercise more, and could a lower triglyceride level and a lower N/L ratio be related to exercise? However, for us to answer these questions, more information about the functional status and exercise capacity of the study patients is required, and this was not mentioned in the article. Furthermore, body mass index data for these patients are unavailable. In our opinion, the findings from this study could be related to the amount of exercise, and further studies in this area could answer this question.

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