Can neutrophil-to-lymphocyte ratio be a valuable marker in defining peripheral artery disease severity?

To the Editor,

I read with great interest the article entitled "Neutrophil-to-lymphocyte ratio may be a marker of peripheral artery disease complexity," which was published online in Anatol J Cardiol 2015 by Aykan et al. (1). In their study, the authors reported that LDL and HDL cholesterol levels and neutrophil-to-lymphocyte ratio (NLR) were independent factors for predicting a higher TASC class in patients with peripheral artery disease (PAD). However, they did not include the severity of coronary artery disease (CAD) in the multivariate logistic regression analysis. Sönmez et al. (2) demonstrated that NLR was an independent predictor of high SYNTAX score and strongly associated with the complexity of CAD. I think that the severity of CAD should be considered in the statistical analysis instead of the presence of CAD. Therefore, I was wondering if there was any difference between the groups in terms of the severity of CAD?

Moreover, obesity is associated with higher levels of inflammatory cytokines in the circulation (3). Ix et al. (4) demonstrated that higher body mass index is associated with PAD in patients who had never smoked. Because NLR is a new biomarker in cardiac and non-cardiac disorders, authors should state the body mass index for each group. To verify whether NLR is an important predictor of PAD complexity, the abovementioned factors should be taken into consideration.

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Author`s Reply

To the Editor,

We thank the authors for the interest they have shown in our article entitled "Neutrophil-to-lymphocyte ratio (NLR) may be a marker of peripheral artery disease complexity" published online in Anatol J Cardiol 2015 (1).

NLR is associated with both obstructive coronary artery disease (CAD) and CAD ectasia (2, 3). We previously showed that CAD is common in patients with peripheral artery disease (PAD) and the severity and complexity of CAD was associated with the severity and complexity of PAD (4, 5). Evaluation of SYNTAX score together with NLR may give additional information for calculating a probability score. However, this study is not designed that way. The objective of this study was to evaluate the relationship between PAD severity and complexity, as evaluated by TransAtlantic Inter-Society Consensus-II (TASC-II) classification, and NLR. Therefore, we evaluated if gender was associated with CAD severity. Body mass index, presence of metabolic syndrome, and waist-to-hip ratio were important markers for CAD (6). Our study was a retrospective cross-sectional study.

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