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Ali Erayman, MD¹ and Nihat Sen, MD²

Keywords

coronary artery ectasia, neutrophil/lymphocyte ratio, C-reactive protein

We read the article entitled “Association Between Coronary Artery Ectasia and Neutrophil–Lymphocyte Ratio” by Balta et al, with interest.¹ The study concluded¹ that the neutrophil/lymphocyte (N/L) ratio and mean platelet volume (MPV) were significantly higher in patients with coronary artery ectasia (CAE) and coronary artery disease (CAD) than in the control group. There was also a positive correlation between N/L ratio and MPV.

In 85% of the cases, CAE is accompanied by atherosclerotic CAD.^{2,3} Multiple factors contribute to the pathogenesis of atherosclerosis, including endothelial dysfunction, dyslipidemia, inflammation, immunologic factors, plaque rupture, and smoking. Evidence of inflammation in atherosclerotic lesions has been noted, and inflammation is central to the pathogenesis of atherosclerosis.⁴ C-reactive protein (CRP) is an acute phase protein that is produced predominantly by hepatocytes under the influence of cytokines such as interleukin 6 and tumor necrosis factor α .⁵ Whether serum CRP is a nonspecific marker, which is increased as part of the acute phase response to inflammation or a direct participant in the progression of atherosclerosis has been widely discussed and remains an unresolved question, although evidence has mounted that it is not causal.⁶ The most extensively studied biomarker of inflammation in cardiovascular diseases is CRP, for which standardized high-sensitivity (hsCRP) assays are widely available.⁷

Balta et al¹ showed that the N/L ratio and MPV levels were significantly higher in patients with CAE and CAD than in the control group. But there was a weak positive correlation between N/L ratio and MPV ($r = .30$, $P = .04$). Balta et al¹ considered that the etiology of the relationship between N/L ratio and CAE may be inflammation and atherosclerosis. Therefore, the N/L ratio was used as an inflammatory marker. As we know, MPV may be a link in the pathophysiology of diseases prone to thrombosis and inflammation.⁸ The MPV is the most commonly used measure of platelet size.⁸ Currently, CRP is the most extensively studied biomarker of inflammation. Elevated N/L ratios on admission were strongly correlated with hsCRP ($r = .71$, $P < .01$) in patients with ST-segment elevation myocardial infarction who underwent primary percutaneous coronary intervention⁹. In another study,¹⁰ there was a positive

correlation between hsCRP and N/L ratio in patients with metabolic syndrome ($r = .388$, $P < .01$).

In conclusion, if hsCRP, a powerful inflammatory marker, had also been considered together with the N/L ratio in patients with CAE, the results of the Balta et al study¹ would have been more comprehensive.

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¹ Department of Cardiology, Pazarcik State Hospital, Kahramanmaraş, Turkey

² Department of Cardiology, Mustafa Kemal University School of Medicine, Hatay Turkey

Corresponding Author:

Nihat Sen, Department of Cardiology, Mustafa Kemal University, Tayfur Ata Sokmen Medical School, Serinyol, Hatay 31005, Turkey.

Email: nihatrdsen@yahoo.com

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