

Neutrophil-lymphocyte ratio and right ventricular dysfunction

We have read the article “Neutrophil/lymphocyte ratio is associated with right ventricular dysfunction in patients with acute inferior ST-elevation myocardial infarction” by Yaylak et al. [1]. They aimed to prove the relationship between the neutrophil/lymphocyte ratio (NLR) and right ventricular (RV) dysfunction in patients with inferior ST elevation myocardial infarction (STEMI) who underwent primary percutaneous coronary intervention (pPCI). They concluded that NLR was an independent predictor of RV dysfunction in patients with inferior STEMI having undergone pPCI.

Based on this particular study, some important issues should be emphasized. Firstly, inferior STEMI is related to short-term morbidity and mortality, especially in patients with coexisting RV involvement. In the present study, Yaylak et al. [1] claimed that the groups were divided into two groups according to tricuspid annular plane systolic excursion levels. However, RV function is measured by many methods [2]. Secondly, because patients with STEMI have increased stress, which can change the subgroups' leukocyte levels, NLR may change from time to time. Also, the features of the tube which contains blood specimens may alter complete blood count (CBC) parameters. Therefore, CBC parameters may be altered by measurement time and features of the tube [3]. Furthermore, although NLR is a simple, cheap, widely used inflammatory marker, major confounding factors should be considered [4]. One of the confounding factors would be certain cancers — inflammatory disease may alter NLR levels [5, 6]. Another factor, NLR, is significantly changed by many conditions, such as dehydration, overhydration, diluted blood specimens, or in-vitro blood specimen handling [7]. Also, the relation between widely accepted inflammatory markers, particularly C-reactive protein and NLR levels, should have been assessed; the recent study might have provided unique information. Finally, it might have investigated the relation between NLR and widely used inflammatory markers, e.g. red cell distribution width [8].

As a conclusion, the role of inflammatory markers in cardiovascular disease (CVD) has been reviewed extensively and a significant relationship between NLR and CVD has been established [6, 9, 10]. NLR is an independent predictor of RV dysfunction in patients with inferior STEMI undergoing pPCI as presented in the current study, however, when assessing the relation NLR and RV function, the clinicians should consider the abovementioned factors.

Conflict of interest: None declared

References

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