

LETTER TO THE EDITOR

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## The prognostic value of white blood cell count-to-mean platelet volume ratio in patients with acute coronary syndrome

We have read the article entitled "White blood cell count to mean platelet volume ratio as a novel non-invasive marker predicting long-term outcomes in patients with non-ST elevation acute coronary syndrome" [1] with great interest. Both leukocytes and platelets have been reported to be involved in several cardiovascular (CV) diseases through inflammatory pathways. The close relationship between inflammation, aggregation, and atherosclerosis progression has become a field of intensive research. The study by Dehghani et al. [1] evaluated the predictive role of white blood cell count/mean platelet volume (WBC/MPV) ratio (WMR) in long-term outcomes of acute coronary syndrome (ACS) patients. However, we have some comments regarding the presented study.

Previous studies revealed an association between higher rates of major adverse cardiac events and poorer outcomes with both higher platelet and lower lymphocyte counts [2–4]. The advantage of the platelet-to-lymphocyte ratio (PLR) is that it reflects both hyperactive aggregation and inflammatory pathways, and it may be superior to either the individual platelet or the lymphocyte counts in the prediction of long-term outcome in CV diseases. Azab et al. [5] showed that higher PLR values are associated with higher long-term mortality in patients presenting with non-ST segment elevation ACS. Several additional studies have appeared recently, that integrate the predictive risk of this novel marker, PLR, in ACS settings [6–9]. As increased platelet count and decreased lymphocyte levels are associated with poor CV outcome, it is logical to integrate these 2 parameters into 1. White blood cell count and its differential, C-reactive protein and the neutrophil-to-lymphocyte ratio are some of the inflammatory markers that were demonstrated to have predictive and prognostic significance in a wide range of CV diseases including ACS [10–12]. On the other hand, MPV is another recent hematologic parameter being extensively investigated. A number of studies have demonstrated that higher MPV values are associated with poorer long-term outcome in patients presented with ACS [13–15]. Therefore, increased levels of both WBC and MPV levels were shown to be associated with adverse CV outcomes; the proposed novel marker, WMR, would most likely blunt the predictive power of these parameters, as a result of dividing WBC by MPV.

## Conflict of interest: None declared

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