Red Cell Distribution Width in Patients with Coronary Artery Disease

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To the Editor We read with interest the article entitled, “Relationship between the Red Cell Distribution Width and the One-year Outcomes in Chinese Patients with Stable Angina Pectoris,” by Chen et al. (1). In this article, the authors concluded that an elevated red cell distribution width (RDW) value is associated with an increased risk of one-year adverse outcomes in patients with stable angina pectoris.

The above study provides important information regarding this clinically relevant condition. The ready availability of this parameter at no additional cost may encourage its wider use in clinical practice in the future. However, we think that some points should be discussed. Measuring the levels of markers of inflammation, such as high-sensitivity C-reactive protein, natriuretic peptides and neurohormones, as well as markers of remodeling and oxidative stress is beneficial for determining the diagnosis and prognosis. Newly identified inflammatory markers are considered to reflect major risk factors predisposing patients to cardiovascular morbidity and mortality (2). Recently, a number of studies have reported that an elevated RDW value is associated with a poor prognosis in patients with stable angina, acute coronary syndrome (ACS), a history of coronary bypass surgery, heart failure, stroke, peripheral arterial disease or an older age and those with or without coronary artery disease (CAD) (3). Furthermore, the RDW can be affected by ethnicity, neurohumoral activation, renal dysfunction, thyroid disease, hepatic dysfunction, nutritional deficiencies (i.e. iron, vitamin B12 and folic acid), bone marrow dysfunction, inflammatory diseases, chronic or acute systemic inflammation (4) and the use of various medications.

The RDW values are instrument-dependent, forcing each laboratory to establish its own reference ranges. Additionally, the RDW as well as the mean platelet volume, neutrophil lymphocyte ratio and CRP and uric acid levels are easy to obtain parameters for evaluating the development and progression of cardiovascular disease (5). These markers are useful in clinical practice. Finally, it would be helpful if the authors specified the timing of the methods used to measure the RDW values, as delays in blood sampling can result in abnormal RDW measurements.

In conclusion, we strongly believe that the findings obtained in the current study will lead to further studies examining the relationship between RDW and ACS. However, it should be kept in mind that measuring the RDW value alone, without taking into consideration other inflammatory indicators, may not provide exact information regarding the inflammatory status and prognosis of the patient. Therefore, we believe that this parameter should be evaluated in context with other serum inflammatory markers.

The authors state that they have no Conflict of Interest (COI).

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References