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Red Cell Distribution Width in Patients with Intermediate Coronary Artery Disease

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Dear Editor,

We have read the article ‘Red cell distribution width can predict the significance of angiographically intermediate coronary lesions’ by Açıkgöz et al. [1] with interest, in which they reported that increased red cell distribution width (RDW) levels were related to the functional significance of angiographically intermediate coronary artery stenosis.

This study provided important information on this clinically relevant condition. However, some minor comments should be emphasized. Firstly, coronary artery disease is well known as one of the most common and fatal diseases worldwide. Because of this, clinicians should scrutinize the significance of intermediate coronary artery stenosis. Therefore, fractional flow reserve and intravascular ultrasonography are both important for the assessment of intermediate coronary artery stenosis. After all, intravascular ultrasonography should be considered while assessing the intermediate lesions.

Secondly, RDW levels may encourage its wider use for many diseases such as endothelial dysfunction [2] and familial Mediterranean fever patients in clinical practice [2]. The ready availability of this parameter has no additional cost. Indeed, RDW is a simple, routinely available, cheap and suitable marker in clinical practice.

However, RDW could be affected by ethnicity, neurohumoral activation, renal dysfunction, thyroid disease, hepatic dysfunction, nutritional deficiencies, bone marrow dysfunction, inflammatory disorders, chronic or acute systemic inflammation, transfusion and use of some drugs like antihypertensive medications [2]. Also, it would be better if the authors were to define how much time they specified on measuring RDW levels, because a delay in blood sampling can cause abnormal results in RDW measurements [3].

Finally, some novel available markers including platelet distribution width, mean platelet volume, neutrophil lymphocyte ratio, platelet lymphocyte ratio and red cell distribution width-platelet ratio will be considered as inflammatory markers in clinical practice [4].

In summary, although increased RDW levels were related to functional significance of angiographically intermediate coronary artery stenosis, as presented in the current study, one should keep in mind that RDW alone without other related conditions may not give exact data to clinicians about the clinical significance of the patients [5].

References

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Reply

Red Cell Distribution Width Can Predict the Significance of Angiographically Intermediate Coronary Lesions

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Dear Editor,

We thank Dr. Balta and his colleagues for their interest and comments about our study which demonstrated the association between red cell distribution width (RDW) and the functional significance of intermediate coronary stenoses [1].

In their letter, Balta et al. suggested that intravascular ultrasound (IVUS) should be considered during the assessment of intermediate coronary stenoses in order to scrutinize their significance. IVUS is a technique which offers excellent visualization of intraluminal and transmural coronary anatomy [2]. It is especially useful in planning percutaneous coronary intervention strategy in high-risk subsets, such as left main stenosis, calcified lesions and bifurcations. IVUS is also useful in situations in which angiographic imaging is considered unreliable, such as the presence of ostial lesions or segments with multiple overlapping vessels [3]. However, IVUS is not indicated in determining the functional significance of coronary lesions [2]. Furthermore, IVUS has only a class IIb recommendation for the assessment of non-left main coronary arteries with angiographically intermediate coronary stenosis [2]. Therefore, the nonuse of IVUS is not a limitation of our study.

Dr. Balta et al. further discussed other factors that influence RDW levels, such as co-morbidities and delay after blood sampling. Although it was not possible to exclude all factors that influence RDW because of the retrospective nature of our study, we excluded patients with the most important factors, namely previous myocardial infarction, history of heart failure, severe arrhythmia, anemia according to WHO criteria, blood transfusion in the last 6 months, acute infection, chronic kidney disease, hematological diseases, malignancy and any other chronic systemic dis-

ease. Since our study was conducted in a tertiary care center with well-established blood sampling and transport protocols, a delay after blood sampling was not anticipated.

In summary, RDW is a cheap and readily available marker that may play a role in determining the functional significance of angiographically intermediate coronary stenosis. However, we agree with Balta et al. that RDW should be interpreted with other relevant clinical, laboratory and angiographic data to assess the functional significance.

References

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