LETTER TO THE EDITOR

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Novel Indices for Vascular Inflammation and Risk Assessment

Vasküler Enflamasyon ve Risk Değerlendirmesi için Yeni Endeksler

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To the Editor,

We read with great interest the article by Aydın et al.[1] examining the prognostic value of the pan-immune-inflammation value in predicting saphenous vein graft (SVG) patency after coronary artery bypass surgery. Their findings underscore the critical role of systemic inflammation in the development of graft failure, and we congratulate the authors on highlighting this emerging biomarker.

We thank the authors for their important contribution. We would like to add a point about body composition. Body mass index (BMI) is still often used in risk prediction. However, BMI does not show body fat distribution or muscle mass. This can cause underestimation of risk in people who are not overweight but still have metabolic issues[2]. Visceral fat, not total weight, drives inflammation and vascular problems. The triglyceride-glucose (TyG) index is a simple marker. It indicates insulin resistance and is associated with an increased risk of heart disease, stroke, and atherosclerosis[3]. Inflammation may explain part of this link[4]. Another combined index, called chemotherapy-induced toxicity (CTI) (C-reactive protein-triglyceride-glucose index), combines TyG and inflammation markers. High CTI levels are associated with a higher risk of heart attacks, stroke, and death[5]. CTI gives a better view of overall cardiometabolic stress. The body roundness index (BRI) is another helpful measure. It uses waist and height to estimate body fat pattern. BRI works better than BMI for predicting metabolic syndrome and artery stiffness[6]. People with high BRI levels also show more inflammation[7]. This makes BRI more reliable than BMI for cardiovascular risk[7]. Additionally, the importance of combining inflammatory and nutritional indices in vascular risk prediction has been further supported by recent findings by Luo et al.[8] In their large-scale analysis of elderly adults, they found that both the systemic inflammatory response index (SIRI) and the geriatric nutritional risk index were independently associated with stroke risk. Notably, SIRI accounted for a significant portion of the relationship between dietary factors and stroke, highlighting the importance of systemic inflammation in vascular outcomes. Recently, we evaluated the prognostic value of the BRITISH ratio, which we newly defined, with a particular focus on its relationship with thyroid function and body composition[9]. Therefore, the BRITSH ratio can be used to assess prognosis in terms of coronary artery disease in all patients, not only those with hypothyroidism.

We believe future studies should use these indices TyG, CTI, BRI, BRITSH and SIRI to improve risk assessment. They are easy to calculate and can detect hidden risk. This can lead to better monitoring, especially after bypass surgery. Collectively, these findings support the notion that fat quantity alone is insufficient to capture cardiovascular risk - fat quality and localization, alongside metabolic and inflammatory context, are critical determinants. As the authors of the current study rightfully emphasize the role of systemic immune-inflammatory activation in SVG disease.

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Footnotes

Authorship Contributions

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