



Letter to Editor

Beyond Biomarkers: The Overlooked Role of Anticoagulation and Thrombus Burden in Mechanical Valve Thrombosis

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To the Editor,

We read Yilmaz et al.'s study with great interest, investigating albumin-based and inflammatory markers in left-sided mechanical heart valve thrombosis (MHVT).¹ The authors offer insightful information on the possible involvement of albumin-based biomarkers and systemic inflammation in thrombus formation, an issue that is both clinically significant and poorly understood.

Despite encouraging findings, some methodological issues remain. Firstly, the indicators based on inflammation and albumin are not specific by nature and can indicate malnourishment or systemic disease instead of direct thrombotic activity.² For instance, hepatic function or nutritional status might affect albumin levels, whereas acute or chronic inflammatory diseases indicate increased NLR or PLR values.

Secondly, the number or anatomical position of thrombi was not taken into account, which can influence hemodynamic impact and inflammatory response.³ This made it difficult to correlate biomarker levels with thrombus burden.

Finally, it is important to standardize the anticoagulation regimen because thrombosis risk can be influenced by differences in warfarin control (INR), compliance, or off-label usage of direct oral anticoagulants.^{4,5} Prior studies emphasize that inadequate anticoagulation remains the predominant cause of MHVT and that maintaining a steady vitamin K antagonist therapy greatly reduces the risk.⁶

We appreciate the authors for tackling this important topic. However, further studies combining inflammatory biomarkers with specific anticoagulation parameters, valve properties, and thrombus morphology could yield a more reliable predictive model.

Authors' Contribution

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Competing Interests

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Ethical Approval

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