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New-onset postoperative atrial fibrillation after coronary artery bypass graft surgery

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We have read the article by Smukowska-Gorynia et al. [1], entitled “Neopterin as a predictive biomarker of postoperative atrial fibrillation following coronary artery bypass grafting” with great interest. First of all, we congratulate the authors for their valuable contribution to the literature. However, I would like to discuss some points about inflammatory biomarkers and postoperative atrial fibrillation (PoAF) after coronary artery bypass graft (CABG) operations.

This is a well-designed single-center study. And the reliability of the diagnosis of PoAF, which is a very important limiting point in PoAF studies, has been resolved by continuous telemetry follow-up in patients. In addition, patients who underwent elective surgery were included in the study, and patients with a history of atrial fibrillation or flutter were excluded [1]. In this study, which included prospectively planned elective surgery patients, was telemetry recording of at least 24 hours performed in the preoperative period? Could patients with preoperative atrial fibrillation attacks be missed?

The negative effects of thyroid dysfunctions on cardiac surgical operations are known [2]. In this current study, while patients with preoperative hyperthyroidism were excluded from the study, a

total of 10 patients with hypothyroidism were included in the study [1]. Why did you not exclude patients with hypothyroidism from the study? Low levels of the active thyroid hormone triiodothyronine levels are known to be associated with poor outcomes in cardiac surgery patients. The positive effects of triiodothyronine replacement on clinical outcomes have been demonstrated in these patients [3].

In this current study, the authors investigated the predictive role of the biological marker neopterin in predicting the risk of PoAF after isolated CABG operations. And neopterin blood levels were measured at three different times (before operation, on the 1st day after operation, and between the fifth and eighth day after operation). PoAF is frequently detected in the first five days after the operation and peaks, especially on the second day [4]. For what purpose did you measure the neopterin between the fifth and eighth days in your study? Did you intend to predict the recurrence of PoAF here? Because recurrence of PoAF was detected in 10 patients in your study [1].

And in this study the authors stated that the multivariable models were divided into three models: preoperative (5 variables), surgical (2 variables), and echocardiographic (5 variables). Here, the patient groups were determined as 30 patients who developed PoAF and 71 patients who did not [1]. In two multivariable models, five variables were included in the analysis. Could this be the cause of overfitting [5]?

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