

# Postoperative atrial fibrillation and coronary bypass graft surgery: like two peas in a pod

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Dear Editor,

We have read the article entitled “Inflammatory prognostic index predicts new-onset atrial fibrillation and mortality after on-pump coronary artery bypass grafting” by Badem et al.<sup>1</sup> with great interest. First of all, we congratulate the authors for their valuable contribution to the literature. However, we would like to discuss some points about postoperative atrial fibrillation after coronary artery bypass graft (CABG) surgery.

First of all, we think that the diagnosis of PoAF in the study should be clarified. The study was planned retrospectively. Also, the authors stated that they performed rhythm monitoring from the day of operation until discharge. Do you routinely follow the continuous rhythm in patients undergoing CABG in your clinic? Are you using continuous wearable telemetry monitoring on all patients? It should be stated more clearly how rhythm monitoring is done during the intensive care unit and service. In addition, the authors defined PoAF as atrial fibrillation (AF) rhythm lasting longer than 10 min or an unstable hemodynamic condition. Why did you set the duration as 10 min? According to many studies in this literature, it has been determined as 30 min or 60 s<sup>2</sup>. Therefore, I would like to ask this question as well. Among the patients who did not develop PoAF, how many patients developed an attack of AF between 5 and 9.9 min?

Various inflammatory values obtained from routine blood parameters are widely used in the diagnosis of cardiovascular diseases and prediction of prognosis. Among these, C-reactive protein (CRP), neutrophil-lymphocyte ratio (NLR), parameters related to platelet, and albumin values are found to be important<sup>3-5</sup>. In their study, the authors revealed that the inflammatory prognostic index (CRP×NLR/Albumin) value obtained from the preoperative blood values of the patients may be a predictor for PoAF<sup>1</sup>. Also, all patients underwent coronary artery bypass graft (CABG) surgery accompanied by cardiopulmonary bypass (CPB). The effects of CPB systems on blood parameters are

known<sup>6</sup>. As a result, each patient’s CRP, NLR, and albumin values will change after CPB. We think that the fact that postoperative blood values were not included in the study should be stated as an important limiting point.

In addition, CPB systems can be used in different forms today. Were standard CPB systems used in all patients? Were the pump line lengths the same in the patients? Is albumin added to prime solutions in all patients? How did you achieve initial and maintenance diastolic arrest in your patient group? As is known, different initial cardioplegia solutions may affect the PoAF rates and other clinical results<sup>7,8</sup>. Recently, minimally invasive extracorporeal circulation (MiECC) circuits have also been used in CABG operations<sup>9</sup>. Was MiECC used in your patient group? Since these situations may affect PoAF development rates, clarification of these points will increase the value of the study.

Finally, we would like to mention some points about the multivariate logistic regression analysis. In the study, a multivariate analysis model was created based on the values that were significant in univariate analysis. So why was the aspartate aminotransferase value, which was not significant in univariate analysis, included in the multivariate model? Apart from that, why were not variables such as reintubation, low cardiac output, and infection, which could affect the development of PoAF and were significant in univariate analysis, not included in the multivariate model? The use of inotropic agents due to low cardiac output and respiratory infections may affect the development of PoAF<sup>10,11</sup>.

## AUTHORS’ CONTRIBUTIONS

**ME:** Conceptualization, Data curation, Investigation, Methodology, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **NKK:** Investigation, Methodology, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

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