The risk of developing AF after cardiac surgery

Kalp cerrahisi sonrası AF gelişme riski

We would like to congratulate the authors for their original and interesting study (1). Numerous different markers have been demonstrated for AF development in many studies conducted about atrial fibrillation (AF) which is the most common arrhythmia after cardiac surgery (2). Interestingly, there is no consensus on some of (a considerable number of) these markers. For example, in this study by Çetin et al. (1), female gender was reported as a risk factor for AF, while in some other studies male gender is stated as a risk factor (2). Other relevant examples to give are cardiopulmonary bypass time and cross-clamp time. While Çetin et al. (1) did not show these parameters as risk factors, these operative data were stated as very strong risk factors in many other studies (2). We would like to state that we wonder the views of the authors about the causes of the differences in these similar parameters.

The main theme of this article, effect of the preoperative electrocardiographic (ECG) data on postoperative AF development is a really original subject. In few studies on this subject, generally P wave amplitude and PR interval on ECG were studied (3-5). In one of these studies, preoperative P wave to be longer than 110 msec was stated to be a risk factor for AF development (4), while in another study PR interval to be longer than 120 msec and P wave than 110 msec were reported to be risk factors (5). In contrast, there are several studies indicating that negative P wave is also a risk factor (3). In this context, we think that any ECG data available out of the fragmented QRS complexes will add value to the study if specified.

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Author`s Reply

To the Editor,

We thank the authors for their constructive comments on our article in their letter entitled as 'The risk of developing AF after cardiac surgery'. They criticized that the study is focused only on the fragmented QRS, but other some electrocardiographic (ECG) parameters such as p wave duration and amplitude or PR interval may also important to predict postoperative atrial fibrillation (POAF). In addition, it is also said that male gender rather than female and cardiopulmonary bypass time and cross-clamp time are found as predictors for POAF in previous studies.

We accept that it could be included additional ECG signs besides fQRS and performed a comparison among the parameters in a multivariate analysis. While p wave and PR interval are related to diastolic phase, fQRS is related to systolic phase of the cardiac cycle. Therefore, these signs on surface ECG would have different mechanisms on development of AF, and to know more important sign may provide more important mechanism and target to prevent POAF.

On the other hand, we selected patients from a limited population and excluded patients who have additional comorbidities, thus our study population has relatively a low EUROSCORE. Therefore, our results do not apply to all patients, and gender and difference in inotropic support time for prediction of POAF may be related to above mentioned factors.

Based on previous arguments, we believe that further studies on ECG signs are needed to clarify more accurately the mechanisms of individual different POAF rates and to confirm the importance of modulating real underlying mechanism to improve clinical outcome.

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Coronary collateral development might be impaired by decreases in glomerular filtration rate

Koroner kollateral gelişimi glomerular filtrasyon hızındaki azalmalardan etkilenebilir

We have greatly enjoyed reading the article by Zorkun et al. (1) entitled "Determinants of coronary collateral circulation in patients with coronary artery disease". In that well-designed study, the authors aimed to define the demographic and baseline determinants of coronary collateral development (CCD), and found that male gender, prior statin usage, and elevated levels of high-sensitive C-reactive protein (hs-CRP) are associated with development of coronary collateral. They