

## Predictors of Atrial Fibrillation After Conventional and Beating Heart Coronary Surgery

To the Editor:

Ascione and colleagues<sup>1</sup> contribute a valuable prospective, randomized study of perioperative predictors of atrial fibrillation after coronary artery surgery and conclude that cardiopulmonary bypass, including cardioplegic arrest, is the main independent predictor of fibrillation. It is odd, however, that the 16 well-matched baseline characteristics for those on-pump and off-pump did not include the presence of interatrial block on the routine 12-lead ECG. This is a well-known predictor of atrial fibrillation and flutter.<sup>2-4</sup> Indeed, in this general hospital, my colleagues and I demonstrated this association in 41% of consecutive patients in sinus rhythm (in press). The mean age of Ascione et al's patients in both groups was 63 years, and this easily recognized electrocardiographic finding is especially prevalent in older patients. Perhaps the authors could look at their groups again and inform *Circulation's* readers whether the groups were balanced for interatrial block.

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### Response

We thank Dr Spodick for his interesting comments. The original analysis of baseline characteristics in our study popula-

tion<sup>1</sup> did not include the presence of interatrial block. After reading Dr Spodick's comments, we asked an independent cardiologist at our institution to review all the preoperative ECGs from the same groups of patients<sup>1</sup> to investigate the potential role of P-wave prolongation as a predictor of atrial fibrillation. Because a diagnosis of interatrial block on the routine 12-lead ECG was not possible, we evaluated intraatrial conduction time by measuring P-wave duration. To evaluate any relation between P-wave prolongation and the occurrence of atrial fibrillation, the analysis was performed using 2 different end points for P-wave duration (140 and 120 ms). The result of this new analysis showed that only 3 patients (1.5%) had a preoperative P-wave duration  $\geq 140$  ms, and none of them developed postoperative atrial fibrillation. Furthermore, 32 patients (16%) had a P-wave duration  $\geq 120$  ms, and only 5 of these patients had postoperative atrial fibrillation (all were in the on-pump group).

This analysis shows that the incidence of interatrial block, if defined by a P-wave duration  $\geq 140$  ms, in selected patients undergoing coronary artery surgery is far less than the 41% reported by Spodick in his unpublished observations. Furthermore, in our study, P-wave prolongation was not a predictor of postoperative atrial fibrillation.

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