We wonder of Lin et al. having a different patient population to our institute [3], as we have a 12-year survival of 75% for left internal mammary artery (LIMA) and saphenous vein grafts and 85% for LIMA with the radial as the second graft, compared with theirs of 31 and 49%, respectively. Obesity differences between the USA and Europe may be an issue [4]. It should not be forgotten that speculation on hormone status and outcomes remains an association and not a mechanism. In addition, we are wondering why no patients after 2001 are included in their study.

As pointed out in our work, males and females should be analysed separately to identify the gender differences in outcome, and we wonder if Lin et al. [2] would consider doing the same with their cohort. We have written to Buxton on this issue, but received no response.

Buxton, who conducted a randomized trial regarding the radial artery and its effect on survival, failed to identify the radial artery as a beneficial factor affecting long-term survival [5, 6], and needs to be remembered by both of our groups when interpreting retrospective extensively statistically manipulated data.

REFERENCES


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Pericardial fat and postoperative atrial fibrillation after coronary artery bypass surgery

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We read with great interest the work by Drossos et al. published in a recent issue [1]. They found that postoperative atrial fibrillation (POAF) patients had significantly more pericardial fat compared with sinus rhythm (SR). It is surprising that the prevalence of several traditional risk factors for AF including hypertension, diabetes, body mass index (BMI), myocardial infarction and cross-clamp time was lower (though statistically not significant) among patients with POAF compared with SR [1]. Pericardial fat volume (PFV) was the only independent variable (apart from left atrial dimension) associated with the development of POAF. The authors, however, did not account for the effects of distribution of pericardial fat. In a previous study, only pertrial epicardial fat located between the mid-left atrium and the oesophagus was found to be the risk predictor for atrial fibrillation [2]. Also, in one of our prospective investigations (AFIST-III study), we found that anterior fat pad maintenance did not reduce POAF incidence [3]. The results of previous studies thus show that posterior left atrial fat pad thickness may be a better predictor of arrhythmogenic propensity rather than whole PFV/pericardial thickness [2, 3]. Yet another surprising observation in this study appears to be a lack of correlation between BMI and PFVs. EISNER registry data demonstrated at least moderate correlation between PFV and other obesity markers (BMI, body weight and waist circumference).

It is unclear as to how many patients were treated with statins, which is an independent predictor of POAF. Statin use is particularly important, given the hypothesis that inflammation may have a causative role in the pathogenesis of POAF. Echocardiographic criteria, such as right ventricular myocardial performance index (RV-MPI), a measure of systolic and diastolic function, have been shown to be associated with POAF, and inflammatory mediators are postulated to have a causative role in both RV dysfunction and POAF [4].

While the authors point out that the likely mechanism of arrhythmogenesis could be an inflammatory response incited in the epicardial fat related to CABG, we believe that the mechanism of POAF may be more complex. Patients with higher PFV may have had a higher incidence of undiagnosed asymptomatic paroxysmal AF preoperatively. It would be prudent to compare the preoperative incidence of interatrial blocks in both groups, as dense pericardial fat is known to independently affect/prolong the interatrial conduction [5]. Also, comparison of preoperative RV-MPI may be of value in both study groups [4].

Pericardial fat inflammation can often accompany acute pericarditis; however, we have found in our previous studies that the incidence of AF was not higher in acute pericarditis than the general population and the only real predictor of AF was the presence of concomitant left heart disease rather than pericarditis itself [6].

Future large prospective studies are needed to confirm the association of these findings and should account for other variables that may affect the occurrence of POAF.

REFERENCES


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