Factors affecting the left atrial diameter

To the Editor,

We read with interest the article by Mansour et al. (1) published entitled "Echocardiographic predictors of atrial fibrillation after mitral valve replacement." in Anatol J Cardiol 2017;17:334-6. As expected, postoperative atrial fibrillation (POAF) is more likely to occur in patients with mitral valve disease when the preoperative left atrial diameter increases. However, there is a particular aspect that draws our attention when both groups are evaluated in the study of Mansour et al. (1). That aspect is the body mass index (BMI) difference that can affect the left atriums of patients independent of valve pathologies. BMI of patients who develop POAF in particular is higher than that of patients in the other group. Many studies show that enlargement in the diameter of the left atrium occurs as the weight increases (2–5). In some studies, obesity alone is a risk factor for AF (5). In a study of the effects of the changes in the left atrium on POAF in particular, we believe that a parameter (BMI) that affects the left atrial diameter independently of the valve pathology should be similar between the two groups. We are convinced that learn the authors' ideas on this subject will add value to their study.

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DOI:10.14744/AnatolJCardiol.2017.7909

Author`s Reply

To the Editor,

We would like to thank you for your interest in our study and the valuable comments regarding the same. In our study published entitled "Echocardiographic predictors of atrial fibrillation after mitral valve replacement." in Anatol J Cardiol 2017;17:334-6 (1). all selected patients with mitral valve disease who were scheduled for mitral valve replacement had BMI that ranged from 27 to 30 kg/m^2 (overweight). In addition, multivariable logistic regression analysis of data, including preoperative clinical data (age, sex, BMI, DM, HTN, dyslipidemia, Beta-blockers, statins, ACE inhibitors, heart rate, and systolic and diastolic blood pressure), revealed that the preoperative clinical data associated with POAF were sex (p=0.059), Beta-blockers (p=0.006), heart rate (p=0.006), and diastolic blood pressure (p=0.006). The area under the curve was 0.9659. Gottdiener et al. (2) reported that obese patients (BMI, >30 kg/m^2) had a greater LA size (44.2±5.7 mm) than overweight (41.6±5.9 mm) or normal weight (38.9±6.2 mm) patients. They defined left atrial enlargement as an LA dimension of ≥43 mm. BMI was a parameter of the STS score, which was statistically non-significant between the two groups.

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