**IS LEFT ATRIAL SIZE A HIGH RISK FOR POST-OPERATIVE ATRIAL FIBRILLATION AFTER AORTIC VALVE REPLACEMENT**

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Objectives: Whether left atrial (LA) size is a risk factor for postoperative atrial fibrillation (POAF) remains controversial. We aimed to reevaluate this issue in patients who underwent aortic valve replacement (AVR) for aortic stenosis.

Methods and results: We retrospectively studied 168 consecutive aortic stenosis patients (mean age 70.5±12.5 years, men 58.9%) who underwent AVR operations, with respects to age, gender, body surface area (BSA), body mass index, LA dimension, area and volume, left ventricular ejection fraction (LVEF), aortic valve area, peak and mean gradients, interventricular septum thickness, posterior wall thickness, pulmonary artery systolic pressure, mitral early inflow velocity to annulus early tissue velocity ratio (E/E’), concomitant coronary artery bypass grafting (CABG), and history of hypertension or diabetes. Patients with a history of AF, mitral stenosis, or ≤ moderate mitral regurgitation were excluded from the study. POAF occurred in 45.2% patients. Univariate analysis identified advanced age and concomitant CABG as risk factors for POAF (*P* < 0.05). There were no significant differences in gender, LA dimension, area, or volume with or without BSA correction, or other echocardiographic parameters between POAF and non-POAF patients (*P* > 0.05). Multivariate logistic regression analysis showed advanced age was the only independent predictor of POAF

(*r* = 0.02, OR = 1.03, 95% CI = 1.00-1.06).

Conclusions: POAF after AVR operation for aortic stenosis is unrelated to LA size, assessed by LA dimension, area and volume, with or without BSA correction. Advanced age is the only independent predictor of POAF in this study population.