

ECHOCARDIOGRAPHIC ESTIMATES OF LEFT VENTRICULAR REMODELING IN MITRAL REGURGITATION ACCORDING TO THE TYPE OF SURGICAL CORRECTION: MITRAL VALVE REPAIR OR REPLACEMENT

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The pathophysiology of chronic primary mitral regurgitation (MR) is primarily based on a degenerative process. Inadequate adaptation of the left ventricle (LV) due to volume loading leads to gradual dilatation and weakness. The only complete therapeutic option in this case is surgical intervention. This study was aimed at evaluating early echocardiographic parameters of LV remodeling in chronic primary MR between two types of operative correction, a mechanical mitral valve replacement (MVR) and mitral valve prosthetic ring annuloplasty (MVA). Using 2D and M-mode echocardiography, a number of variables were measured or calculated. In addition, the variables are assessed according to early postoperative LV dysfunction (LVD). Ejection fraction (EF) was $< 50\%$. Thirty-six asymptomatic patients with primary severe MR (grade 3–4) undergoing surgical correction were included. The LV end-diastolic diameter improved significantly (6.11 ± 0.9 vs. 5.50 ± 0.7 cm) in both groups ($p < 0.006$) after interventions, while there were no significant differences in LV volumes between the groups. Immediate postoperative LV systolic dysfunction showed similar incidence in the groups (43%). A significant distinction between the groups was revealed in patients without LVD, that is, a higher preoperative forward LVEF in MVA compared to MVR patients. Interestingly, the opposite direction of forward LVEF change was seen in LVD between the groups. We can conclude that there are subtle differences in early postoperative echocardiographic parameters between the MVA and MVR procedures, reflecting subtle specificities of early LV remodeling in patients with chronic primary MR.

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