

Reverse left ventricular remodelling after surgical correction of ischaemic mitral regurgitation

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Background: Ischaemic mitral regurgitation (IMR) is associated with worsening clinical symptoms, a decrease in exercise capacity and a poor prognosis. It is so because the mitral regurgitation (MR) increased volume overload of the left ventricular (LV) leads to a further progression of MR.

Goals: Surgical correction of IMR is associated with reverse LV remodelling.

Materials and Methods: The population includes 101 patients with ischaemic cardiomyopathy and IMR 3-4+ scheduled for CABG and mitral valve reconstruction (MVR) during the period of 5 with a 2 year follow up. Seventy-seven percent of all the patients were male, mean age 60 of all. All the patients were with New York heart Association NYHA III-IV with mostly three vessel coronary artery disease (CAD). Intraoperative transoesophageal echocardiography (TEE) was made in all patients. After aortocoronary bypass (ACBP) a mitral reductive posterior semicircular suture anuloplasty was made with downsizing rings with 28 ±2 mm. In the patients with moderate to severe tricuspid regurgitation (TR) a tricuspid semicircular suture anuloplasty was made.

Results: Correction of the ejection fraction (EF) of mean 32% preoperative to 40% postoperative, postoperative, NYHA decreased from III-IV to I-III, left ventricular enddiastolic diameter (LVIDd) decreased from 64 mm to 58 mm, left ventricular endsystolic diameter (LVIDs) from 47 mm to 43 mm, left ventricular enddiastolic volume (LVEDV) from

229 ml to 171 ml, (left ventricular endsystolic volume (LVESV) from 155 ml to 107 ml. Left atrial dimensions decreased from 51 mm to 45 mm. Mean mechanic ventilation time was 12 hours, mean hospital stay 7 days. Early postoperative mortality (<30 days) in 2 (1.9%) patients with multiorgan failure.

In 2 year period 2 patients needed reoperation because of heart decompensation. Postoperative NYHA was II.

Conclusions: CABG and MVR in patients with IMR leads to a significant reverse remodelling of LV with improved LV contractility, reduction in LV dimensions, LV volumens, left atrial dimensions.

KEYWORDS: left ventricle, remodeling, mitral reconstruction.

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