

LONG-TERM RESULTS OF MITRAL VALVE REPLACEMENT

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Objectives: Study of myocardial remodeling of left ventricle (LV), depending on the duration of the postoperative period in patients after mitral valve replacement (MVR).

Methods:

The observation involved 105 patients after MVR aged 23 to 57 with circulatory failure (CF) of NYHA Class II and III. 63 of them were women, 42 were men. Depending on the duration of the postoperative period, the patients were divided into 3 groups 1st group included 32 (30,5%) patients with early postoperative period of 1-2 years, 2nd group included 38 (36,2%) patients with postoperative period of 6-10 years, and 3rd group included 35 (33,3%) patients with that of over 10 years.

Results:

In patients of Group 1, LV indicators remained within normal limits. In group 3, compared with group 1, the following were increased: end-diastolic dimension (EDD) - 10,6%; end-diastolic volume (EDV) - 24 %; end-systolic dimension (ESD) - 14,7%; end-systolic volume (ESV) - 32,3%, left atrium (LA) - 16,1%, ejection fraction (EF) was reduced by 11,8%, integral systolic remodeling index (ISRI) - 17,6%. In-group 2, compared with group 1, the following were increased: sphericity index in systole (SIs) - 8, 2%; sphericity index in diastole (SId) - 6,2%, myocardial stress in systole (MSs) - 4,7%, myocardial stress in diastole (MSd) - 1,8%, indexed myocardial mass (IMM) - 11,5%, and in the patients of group 3, SIs - 13,1%, SId - 6,2%, MSs - 23,4%, MSd - 7,4%, IMM - 24,6%. Despite the absence of LV dilatation in patients of group 1, a slight improvement was observed in the indicators of remodeling: SIs - $0,61 \pm 0,1$ cm, SId - $0,80 \pm 0,1$ cm, MSs - $126,9 \pm 20,8$ g/cm², MSd - $71,6 \pm 9,8$ g/cm², IMM - $128,2 \pm 15,7$ g/m² and LA - $4,7 \pm 0,3$ cm, reduction of ISRI - $77,3 \pm 10,2$. For the patients of group 1 and group 2, eccentric LV non-dilated hypertrophy was typical, where for the patients of group 3, it was eccentric LV dilated hypertrophy.

Conclusions:

Thus, in the remote period (over 10 years) in patients after MVR, dilatation of the heart chambers is largely developed as associated hemodynamic load on the LV myocardium.