
ORIGINAL METHODOLOGY OF ANNULOPLASTY
OF THE MITRAL VALVE WITH A STABILIZED AUTOPERICARDIUM
IN DEGENERATIVE HEART DISEASES

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Introduction: We have evaluated the results of using stabilized autopericardium for the correction of the mitral valve (MV) defects in patients with degenerative heart diseases.

Methods: For the period from 2017-2019, MV plasty was performed in 51 patients with a strip of autopericardium according to the original method. Among the patients who underwent surgery, men prevailed 64.7% (33). The average age is 55.6 (36 to 78) years. A strip 12x0.5mm in size was cut from the patient's pericardium. Autopericardium stabilization was carried out by treatment with a 0.6% glutaraldehyde solution for 10 minutes. Processing of the autopericardium with glutaraldehyde allows preserving the positive properties of the autopericardium to eliminate the inconvenience of manipulating the autopericardial strip, increase its strength, reduce the cellular response from the body and prevent denaturation of the collagen fibers. Our proposed technique allows us to determine the optimal length of the strip, individually for each patient. Correction was considered adequate if, after surgery, regurgitation on MV did not exceed I degree.

Results: No mortality was observed at the hospital stage. In one case, an early relapse of MV failure occurred, but the degree of mitral regurgitation did not exceed II degree and the patient was under observation.

Conclusions: The use of a stabilized autopericardium as a material for the reconstruction of MV with an individual selection of the strip length allows increasing the strength of the fibrous ring and achieving optimal MV functioning and significantly improving tissue-specific biocompatibility of the autoimplant. The clinical results obtained using the original MV annuloplasty technique demonstrated high efficiency, low mortality and improved results of the correction of degenerative heart diseases and could be recommended for extensive clinical use in cardiac surgery.