230
POSTERIOR RESTORATION PROCEDURES AND LONG-TERM RESULTS IN INDICATED PATIENTS WITH DILATED CARDIOMYOPATHY

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Objectives: Non-transplant surgery for dilated cardiomyopathy (DCM) has been in the process of development. We have been performing posterior restoration procedures (PRP) in dilated akinetic lesion for patients with DCM and having favourable outcomes. The early and long-term results of PRP are discussed.

Methods: Between 2005 and 2013, PRP for DCM were electively performed in 58 patients (17 with ischaemic and 41 with non-ischaemic). There were 45 men and 13 women with a mean age of 56 ± years. The mean preoperative ejection fraction was 24% and the preoperative NYHA was class III in 24 and class IV in 34 with intravenous inotrope support. The posterior akinetic lesion was determined by speckle-tracking echocardiography with a Vivid 7 ultrasound machine before operation. After the cardioplegic arrest, mitral surgery or CABG was performed and then the posterior left ventricle (LV) muscle between the bilateral papillary muscles was incised or resected. The LV apex was preserved and cryoablation was applied between the cut edge and the mitral anulus. The LV was closed by approximating the bilateral papillary muscles. All patients were followed with echocardiography.

Results: In addition to PRP, there was mitral surgery in 55 (plasty 50, replacement 5), tricuspid plasty in 21, CABG in 17, cardiac resynchronised therapy in 6, and LV lead implant in 27 patients. Perioperative intra-aortic balloon pumping was used in 9 and there was no hospital mortality. After the operation, 35 patients (60.3%) improved their functional class into class I or II. In the late follow-up, there were 14 cardiac deaths (congestive heart failure 10, ventricular tachycardia 4). The 3- and 8-year survival rate was 78.3% or 61.9%, respectively.

Conclusion: DCM with posterior akinesis indicated by speckle-tracking echocardiography can be surgically treated with PRP. Our results demonstrated that in 60% of the selected patients heart transplantation could be avoided, and their symptoms could be relieved.