EC2_8

Mitral Valve Leaflet Augmentation for Ischemic Mitral Insufficiency

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Background:
Chronic Ischemic mitral regurgitation (IMR) is a common complex clinical entity, associated with poor long-term survival. In many cases mitral valve (MV) annuloplasty is not enough and is associated with 25-40% recurrent MR. Numerous surgical techniques have been developed for IMR, but none has resulted in clearly improved patient outcome. Leaflet augmentation allows excellent leaflet coaptation and relief of leaflet tethering. We report our experience of mitral valve repair with anterior or posterior leaflet augmentation.

Methods:
Between March 2006 and August 2012 we used mitral leaflet augmentation technique in 30 patients (26 patients – anterior, 2 patients – posterior leaflet augmentation and 2 patients augmentation of the both leaflets). Mean age was 63 ± 11, 22 were male. The mitral valve leaflets were augmented with a patch of bovine pericardium. 19 patients (64%) presented preoperatively with severe MR and 11 had moderate and moderate + MR. Preoperative ejection fraction was 34 ± 9 % and mean NYHA class was 2.6 ± 0.9. Non restricted annuloplasty with a semi rigid Physio ring was performed in all patients. 84% of patents underwent concomitant CABG with a mean of 3.25 grafts/patients. Additionally, tricuspid valve repair was performed in three patients.

Results:
Patients were retrospectively followed. There was no early mortality. There were 4 late deaths (2 cardiac and 2 non cardiac). 3 patients needed reoperation, 2 early due to technical reasons and one late due to recurrent MR. Echocardiography performed after surgery showed none or trivial mitral regurgitation in all patients. Echocardiography during the follow up demonstrated that 88% of patient was free from moderate or severe MR.

Conclusions:
Leaflet augmentation, with non-restricted annuloplasty with or without revascularization provides promising mid-term clinical results with acceptable mortality. While directly addressing the pathophysiological mechanism of IMR; the tethering, it may provide a more efficacious treatment for patients with advanced Ischemic MR.