

Natural History and Clinical Significance of Tricuspid Regurgitation in Patients with Mitral Valve Prolapse and Significant Mitral Regurgitation

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Objectives The purpose of this study was to evaluate the prevalence, clinical importance and the progression of tricuspid regurgitation (TR) in patients with mitral valve prolapse (MVP).

Background Little information is currently available on the echocardiographic progression of TR in patients with MVP and significant MR.

Methods We studied 477 patients (mean age 65±15 years; 34% females) with MVP and at least moderate MR. 233 (mean age 64±15 years) of 477 patients had 2D echocardiogram with ≥1 year follow-up interval. The mean follow up was 4.04±2.4 years (range 1 to 11).

Results At entry, 85% of 477 patients had non-significant TR and only 4% had significant TR. Tricuspid valve prolapse was uncommon and found in only 4%. Over the follow-up period 200 patients (85%) had no change in TR grade. There were only 2 patients (0.85%) who had non-significant TR and developed severe TR. Twenty four patients (10 %) that had a non-significant grade TR at baseline. developed moderate or more severe TR. Overall, 14% (32) of the study patients had an increase of at least 2 levels in the severity of TR over the follow-up period.

Conclusions The study encompasses the largest reported patient group studied by echocardiography with relatively long-term follow-up. Significant TR is uncommon (4%) in patients with MVP and significant MR and the majority (85%) does not progress during follow-up.

The Impact of Tricuspid Valve Surgery on Right Ventricular Function – a single Center Experience

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Background: Severe tricuspid regurgitation (STR), either organic or functional, is associated with increased morbidity and mortality. A major consideration in fixing STR is to prevent RV dysfunction. This study sought to assess whether surgical repair of STR had indeed a positive impact on RV function.

Methods: Our database was queried for patients who underwent surgery for STR between 2004 and 2007. Data included demographic, clinical (NYHA functional class) and echocardiographic information. The diagnosis of STR and RV dysfunction were made by echocardiography. Patients must have had an echocardiographic study both before surgery and during follow-up at our center.

Results: The study included 16 patients (mean age 64 ± 14 years, 9 females). Six patients (37%) had valve replacement and 10 (63%) had valve repair. The follow-up period was 13 ± 17 months (range: 0.5-48 months). A single patient suffered from STR postoperatively (6%). However, the prevalence of RV dysfunction did not change significantly (12% before surgery vs. 25% after surgery). Data regarding functional class were available only in seven patients. Improvement was noticed in three patients (change of a single grade) but the average change for the entire group was insignificant (2.4 ± 0.5 vs. 1.9 ± 0.7 , $p=0.11$). One patient died 1 month after surgery.

Conclusions: Surgical therapy of STR was associated with significant amelioration of regurgitation. However, this was not translated into a significant improvement in RV function. The long-term impact of these opposite trends on functional class and prognosis need to be determined. Earlier surgical referral with emphasis on subtle changes in RV function, and better patient selection are advocated.