

Tricuspid Valve Repair: Predictors of Late Failure

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Background: Tricuspid valve repair is a common adjunct to other procedures in cardiac surgery due to the appreciation that significant tricuspid regurgitation (TR) is associated with right heart failure and significant morbidity and mortality. The purpose of this study was to assess the durability of tricuspid valve repair during follow up.

Patients and Methods: Between January 2000 and November 2009, 204 patients with a mean age of 63 ± 13 years underwent tricuspid valve repair in addition to several other cardiac procedures (Mitral valve-85%, Aortic valve-21%, CABG-25%). All patients had echo preop, postop and at follow up. Ring annuloplasty was used in all patients (classic Carpentier Edwards-96%, Cosgrove-3%, Duran-1%). Median ring size was 32.

Results: Preop severe TR was present in 63% of patients. Immediately postop moderate to severe TR was present in 2% of patients. Follow up severe TR was present in 7.5% of patients. RV function, pulmonary pressure, degree of TR, ring type, procedures performed and diagnosis were assessed as probable predictors of follow up severe TR. Only immediately postop moderate to severe TR was identified as independent predictor of late severe TR. No predictors of immediately postop moderate to severe TR were identified. In-hospital mortality was 4% and 1 and 5 years actuarial survival were 90% and 73%, respectively.

Conclusions: Tricuspid valve repair with ring annuloplasty is a durable procedure. Late failure of the repair is related to suboptimal immediate postoperative results.