

Tricuspid Valve Replacement: The Effect of Gender on Operative Results

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Background:

Tricuspid valve replacement (TVR) is considered a high risk operation. We aimed to analyze our 7 year experience with tricuspid valve replacement and characterized specific risk factors for this operation.

Methods:

From January 2005 through August 2012, 46 patients underwent TVR in our center, 30 patients (65.2%) were female. Re-do operations has been performed in 36 (78%) patients, 16 (34%) had at least 2 previous surgeries. Mean age was 58.3±13 (range 25-82) years (52.8±15.5 for male and 61.5±11.3 for female). The underlying pathology was rheumatic in 28 patients (61%). Isolated TVR was performed only in 12 patients (26.1%). Follow-up included echocardiography and survival analysis.

Results:

Overall hospital mortality was 19.6% (9 patients), all of them women who underwent re-operations. Post-operative morbidity included prolonged mechanical ventilation (14 pts., 30.4%), low cardiac output (15 pts., 32.6%), and acute renal failure requiring hemodialysis (6 pts., 13%). Univariate analysis revealed that female gender (p=0.02), pre-operative CVA (p=0.04), prolonged mechanical ventilation (p=0.005), and post-operative renal failure (p=0.008) were associated with operative mortality. However, right ventricular function, pulmonary HTN and bypass time were not associated with increased morbidity or mortality. Echocardiography follow-up (mean 34 months) demonstrated 93% of patients with less than grade 2 TR. The mean gradient was 4.7±2.6 mmHg. Overall 5-year survival for males and females was 86% and 66%, respectively, p=0.06. However, 5-year survival for operative survivors was similar between females and males (94% vs. 86%, respectively, p=0.9).

Conclusions:

TVR remains a high risk operation, particularly for re-do surgery. However, the long term survival is satisfactory. Women undergo TVR at an older age with a trend toward higher mortality than men. However, for patients who survived the operation, the long term mortality rate was not associated with gender.