

## **Tricuspid Valve Repair with Various Annuloplasty Rings**

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**Background:** We compared clinical outcomes for different tricuspid valve (TV) annuloplasty ring types, in patients requiring surgical intervention for TV disease with or without concomitant disease of the mitral valve.

**Methods:** From January 2004, 327 patients underwent TV surgery. In this study we included 241 patients, who underwent TV repair with annuloplasty rings. Mean age was 63±13 years, 41% were male and 29% has previous cardiac operations. Concomitant procedures included mitral valve repair (28%), mitral valve replacement (54%), aortic valve replacement (24%), CABG (18%), MAZE (25%), and other procedure in 7% of patients. Patients were assigned to 3 groups: Cosgrove flexible ring annuloplasty was performed in 124 patients (51%) - Group 1, Classic Carpentier rigid ring in 47 patients (20%) - Group 2, and MC3 flexible ring in 70 patients (29%) - Group 3. Preoperative patient's characteristics and logistic EUOROSCORE were similar between all groups.

**Results:** Overall there were 6% in hospital deaths in group 1, 11% in group 2 and 6% in group 3 (p=0.7). Mean follow up was 27±19 month. At follow-up NYHA functional class was 1.4±0.7, 1.6±0.9 and 1.5±0.7, in groups 1, 2 and 3, respectively (p=0.6). Freedom from reoperation was 98% (121/124), 100% and 100%, in groups 1, 2 and 3, respectively. Echocardiography follow-up revealed, similar residual recurrent TR and similar pulmonary hypertension between all groups. Late death was more common in the rigid ring group 17%, versus 10% in the flexible rings groups (p<0.05).

**Conclusions:** Early results are similar between rigid and flexible rings, however rigid rings may have less favorable late outcome versus flexible rings in patients undergoing tricuspid valve repair.