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MEETING REPORT

CORE 6. CATHETER-BASED AND SURGICAL INTERVENTIONS

SESSION TITLE: CARDIAC SURGERY: VALVULAR HEART DISEASE (NOT INCLUDING PERCUTANEOUS VALVES)

Abstract 15989: Eighteen Year Clinical and Echocardiographic Follow up of the Freestyle Stentless Bioprostheses

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Abstract

Objectives: Stentless aortic bioprostheses were designed to provide enhanced hemodynamic performances and potentially greater longevity due to lower mechanical stress on the leaflets. The present report describes the outcomes of the Freestyle stentless aortic bioprostheses in a large single center cohort followed for up to 18 years.

Methods: Between January 1993 and May 2011, 430 patients underwent primary aortic valve replacement with a Freesstyle stentless bioprosthesis in the subcoronary position with (n=146) or without (n=284) coronary bypass graft surgery. There were 233 men and 197 women with a mean age of 68.2±8.2 years. All Clinical and echocardiographic data were collected prospectively. Mean overall follow-up was 9.0±4.4 years (range: 0.1-18 years), and complete in all patients.

Results: Overall hospital mortality was 3.5% (n=15). Overall 10 and 15-year survival were 60.7% and 36.4%, respectively. Fifty patients required re-operation during follow-up: 28 for structural valve deterioration (SVD), 6 for endocarditis, 4 for severe mismatch and 12 for non-structural valve deterioration. Overall freedom from reoperation was 90.8% and 74.4% at 10 and 15 years, while freedom from reoperation for SVD was 95.9% and 82.1 % at the same timepoints. At 10 and 15 years, freedom from reoperation for SVD was 93.7% and 64.0% for patients under 60 years of age, and 96.5% and 88.0 % for patients with 60 years of age and older (p= 0.01). The median time to explantation for SVD was 10.7 years (range: 3.2-15.8-years). SVD presented mostly as severe aortic insufficiency (AI) due to leaflet tear (n=25/28; 89.3%). Freedom from moderate or more severe AI was 92.1% and 80.5% at 10 and 15 years respectively. The independent risk factors for reoperation for SVD were age > 60 years (1.9, CI: 1.6-2.5, p=0.001) and dyslipidemia (3.6, CI: 1.3-10.1, p= 0.01). Mean pressure gradient for the whole cohort at 10 and 15 years was 12.4 and 12.5 mm Hg.

Conclusion: Aortic valve replacement with the Freestyle stentless bioprostheses in a subcoronary position provides good long-term clinical and echocardiographic outcomes after 60 years of age. Severe aortic insufficiency with leaflet tear is the major mode of SVD leading to reoperation in these patients.

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