

Midterm Outcome of Aortic Valve Replacement (AVR) with Stentless Valves

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Background: The presence of stent and sewing ring reduces effective orifice area of bioprosthetic valves. Valves without stents and sewing-ring (stentless valves) were developed in order to overcome this hemodynamic problem.

Methods: From 1996 to 2007, 74 females and 88 males underwent AVR with stentless valves (7 SPV and 155 Freestyle). Mean age was 73±8. Fifty eight (35.8%) of the patients had congestive heart failure (CHF), 16 (9.9%) CRF, 30 (18.5%) had chronic AF, 16 (9.9%) had Aortic Aneurysm and 17 (10.5%) underwent repeat operations. Concomitant Coronary Artery Bypass Grafting (CABG) was performed in 86 (53%). The subcoronary and root replacement techniques were used in 136 (84%) and 26 (16%) patients, respectively.

Results: Early mortality was 6.2% (10 patients). Mortality in primary operations was 4.8% and in reoperations it was 20%. Multivariable logistic regression revealed repeat operation to be the only predictor of early mortality (OR 4.98, 95% CI 1.13-21.73). Mean follow-up was 8.7±0.44 years and eight-year survival (Kaplan Meier) was 69±7%. Survival of patients younger than 65 and older than 80 years was significantly lower than that of patients between 65 and 80 years of age (43±17, 37±15 and 88±5%, p<0.001). Age between 65 and 80 had a protective effect (Cox Model) on late survival (HR 0.203, 95% CI 0.086-0.477). Repeat operations were associated with decreased survival (HR 2.96, 95% CI 0.99-8.93).

Conclusion: Midterm results of AVR with stentless valves are good, especially in primary AVR operations in patients between 65 and 80 years of age.