

C101. Fifteen Years Single Centre Experience With The ATS Bi-leaflet Valve

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OBJECTIVES: Since its first introduction in May 1992 the bi-leaflet ATS Open Pivot® (ATS Med. Inc., Minneapolis, USA) has been routinely implanted at our institution. The objective of this study was to retrospectively analyze the fifteen-year clinical results of all our ATS valves.

METHODS: From May 1992 to December 2005, 1160 ATS valves were inserted into 1047 consecutive patients (749 aortic, 381 mitral, 21 tricuspid and 9 pulmonary). Mean age was 62.1 (+12.4) years with a majority of male patients. Seventy-five percent of the patients were pre-operatively disabled being in NYHA class III or higher (average=3.1). Most frequent comorbidities included: atrial fibrillation (381), coronary disease (288) and diabetes (172).

RESULTS: Follow-up (99.8% completeness) yielded 6887 pt/years and ranged from 24 to 183 months (average=78 months). In-hospital mortality was 4% (43 patients, 3 valve-related). Survival (Kaplan-Meier) at five and ten years was significantly better for aortic valve patients compared to mitral (respectively 84 and 65% versus 75 and 41%) (Mantel-Cox, $p < 0.001$). Log rank analysis detected no statistical difference in the incidence of thromboembolism ($p = 0.182$) nor bleeding ($p = 0.375$) between both groups. Overall linearized incidences were: thromboembolism 1.08%/pt/year, bleeding 0.91%/pt/year, endocarditis 0.22%/pt/year, paravalvular leakage 0.33%/pt/year and valve thrombosis 0.21%/pt/year. Multivariate analysis (Cox regression) selected age above 70 ($p < 0.0001$), NYHA functional class III or more ($p < 0.0001$), non-sinus rhythm ($p = 0.001$), concomitant CABG ($p = 0.008$) and higher INR values ($p = 0.013$) as significant risk factors for death.

CONCLUSIONS: Our fifteen-year experience showed excellent clinical outcomes for our patients with ATS prostheses with no structural failure and an acceptable incidence of adverse events.