

P33. Aortic Valve Replacement With Mitroflow Bovine Pericardial Valve: Early Experience From Single Canadian Centre

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OBJECTIVES: In North America, the second generation Mitroflow Synergy (MF) bovine pericardial valve has not been studied in the clinical setting. This single-centre retrospective study reports the short-term clinical and hemodynamic results of aortic valve replacement (AVR) with the MF.

METHODS: From January 2000 to December 2008, 225 patients with a mean age of 74.0 ± 7.1 years and 35% (78/225) females underwent AVR with MF at the St. Boniface General Hospital. Seventy-five percent (169/225) were in New York Heart Association functional class III or IV. Seventeen (7.6%) had previous cardiac procedures. Concomitant cardiac procedures were performed in 148 patients (70%). Of these, 133 (59%) underwent coronary artery bypass grafting and 12 (5.3%) had mitral valve surgery. Intra-operative transesophageal echocardiogram data obtained from most patients since 2005 (90 patients) was used to evaluate the hemodynamic performance of the MF. Surgery related complications were assessed.

RESULTS: Overall 30 day mortality was 8.9% (20/225) and 2.6% (2/77) for isolated AVR. Fifteen patients (6.7%) had cerebral vascular accidents post-operatively. Reoperation for bleeding was 8.9% (20/225). Permanent pacemaker was implanted in 12/225 patients (5.3%). No patient required aortic root enlargement. Table 1 summarizes the hemodynamics of the MF. No significant paravalvular leaks or structural dysfunction were observed.

CONCLUSIONS: The MF valve is easy to implant with excellent early results and no early structural failures. The mean gradients are low approaching that of stentless valves. Good effective orifice area index (EOAI) can be obtained. Further studies are required to assess durability of the MF.

Table 1

Valve Size	19mm (n=29)	21mm (n=78)	23mm (n=77)	25mm (n=39)	27mm (n=2)
BSA (m ²)	1.77±0.18	1.86±0.26	1.95±0.19	2.08±0.19	2.10±0.2
EOAI (cm ² /m ²)	0.75±0.06	0.86±0.18	0.89±0.1	0.92±0.1	n/a
Mean Gradient (mmHg)	10.5±6.3	7.3±3.5	7.2±3.9	6.2±3.1	2.8±0.5