Aortic Valve Preserving Surgery:Late Valve Related Complications Compared with Composite AVR Surgery

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Objective: The main rational for aortic valve preserving surgery compared to valve replacement is the avoidance of Coumadin and reduction in late valve related complications such as re-operations, thromboembolism, SVD, endocarditis and bleeding. We compared mid term and late clinical outcomes in patients that underwent AV preserving surgery to those that underwent composite AVR.

Patients and methods: From January 2004 86 patients underwent elective valve preserving surgery (group I) and 190 underwent Composite AVR or AVR and replacement of the ascending aorta (group II). In group I 50 underwent replacement of the aortic root (David or Yacoub) and 36 underwent AV repair and separate replacement of the ascending aorta. In group II, 64 underwent mechanical composite AVR, 49 biological and 77 underwent AVR and separate replacement of the ascending aorta.

There where 6 early deaths: 2 (2%) in group I and 4 (2%) in group II. At late follow up mean 22 months ± 19 months, there were 2 (2%) late cardiac deaths in group I and no cardiac death in group II. Freedom from valve related complications (structural and non-structural valve deterioration, valve thrombosis, embolism, bleeding event, operated valve endocarditis, reintervention) was 84% in group I compared to 92% in group II.

Conclusions: Aortic valve sparing surgery is safe but more complex then valve replacement. Mid term results do not support that this approach provides lower rate of late valve related complications. Longer term follow up is needed.