

Isolated aortic valve replacement with mechanical or biological valve in geriatric patients.

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BACKGROUND:

With the advancing age of the population in the western world, more septuagenarians and octogenarians become candidates for aortic valve surgery. This study was designed to evaluate clinical characteristics and outcome of patients aged 70 years or older undergoing isolated aortic valve replacement with mechanical and tissue valve.

METHODS:

From April 1998 to March 2006, data from 244 septuagenarians and octogenarians undergoing isolated aortic valve surgery were prospectively entered into a database. 101 patients (group A) received mechanical and 143 (group B) tissue valve in aortic position. Clinical characteristics, early and late mortality and morbidity were analysed in both groups. Mean follow up in group A was 43.96 months (SD 30.4) and in group B was 37.67 (SD 28.1) (p=0.048).

RESULTS:

There were 48 (47.5%) females in group A and 76 (53.1%) in group B (ns). Mean age was 74.7years (SD 3.5) vs. 76.3 (SD 4.4) (p=0.0013). Parsonnet score [15.8 (SD 8.4) vs. 18.3 (SD 7.9)] and EuroSCORE [6.73 (SD 2.7) vs. 7.5 (SD 2.6)] were higher in tissue valve group (p<0.01). However, logistic EuroSCORE was comparable in both groups 10.7 (SD 9.3) vs. 11.4 (SD 11.7) (ns). Mean size of mechanical valve was 22.24 (SD 2.2) vs. biological 22.32 (SD 2.1) (ns). Mean cross clamp time was 73.7min (SD 13.8) vs. 77.2 (SD 19.7) (p=0.04). Intubation time was longer in mechanical valve 16.7h (SD11.9) vs. 12.8h (SD 7.2) (p=0.05). Readmission to ITU 0 (0%) vs. 8 (5.6%) (p=0.008) and neurological complications postoperatively 1 (1%) vs. 8 (5.6%) (p=0.03) were more frequent in group B. There were no statistical differences in in-hospital 10 (9.9%) vs. 7 (4.9%) and late mortality 16 (15.8%) vs. 26 (18.2%) (ns).

Conclusion

However tissue valves were used in higher risk group of patients required isolated aortic valve replacement there were no differences in early and late mortality compare to mechanical group.