

Outcomes of patients undergoing concomitant mitral and aortic valve surgery: results from an Italian regional cardiac surgery registry

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Abstract

OBJECTIVES:

There are limited reliable data on the long-term survival of patients operated upon with double-valve surgery (DVS) in the literature. In this study, in-hospital mortality and 5-year survival were determined and the potential risk factors for increased mortality were identified and discussed.

METHODS:

This is a report of an observational retrospective study of 1167 patients undergoing concomitant aortic and mitral valve surgery from 2002 to 2011. Data were prospectively collected in a regional database from Emilia-Romagna (Italy).

RESULTS:

The overall in-hospital mortality rate for DVS was 6.9%. Both in-hospital and 1-year mortality were statistically significant between age groups. In-hospital mortality was significantly higher for patients with a smaller body mass index (BMI), for those who had concomitant coronary artery bypass grafting (CABG) and those who received mitral valve replacement (MVR) instead of plasty (MVP). In-hospital and 1-year mortality were highest in patients ≥ 70 who had implantation of mitral and aortic mechanical valves. There were significant differences in 5-year follow-up survival according to age, BMI and concomitant CABG. The choice of MVR and MVP did not affect 5-year survival. Multivariable analysis showed that patient-related factors appear to be the major determinant of late survival, irrespective of the type of operation or other intraoperative variables.

CONCLUSIONS:

Advanced age, smaller BMI and concomitant CABG are significant risk factors for mortality in DVS. MVP provided comparable 5-year outcomes with MVR. Multivariable analysis demonstrates that preoperative and clinical patient-related factors are the real burden in the successful treatment of patients undergoing double-valve procedures.

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KEYWORDS:

Aortic valve; Cardiac surgery; Mitral valve; Valve prostheses