**Surgical management of infective endocarditis: an analysis of early and late outcomes.**

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**ABSTRACT**

**Objectives:**
To review our experience of surgical management of infective endocarditis (IE) over a 13-year period and analyse the outcomes and associated prognostic factors.

**Methods:**
A retrospective review was conducted for 191 consecutive patients who underwent surgery for native and prosthetic valve endocarditis (PVE) between January 2000 and December 2012. Surgical outcomes were reviewed to include survival and postoperative complications. Follow-up was complete for 172 of 179 patients (96.1%) surviving to hospital discharge, with a mean follow-up of 6.6 ± 3.7 years.

**Results:**
Mean age was 47.4 ± 14.9 years with 113 (63.9%) males. Native valve endocarditis was present in 177 patients (92.7%). Sixty-three patients (33.0%) presented with embolic complications. The brain was the most common site of embolism, involving 25 patients (13.1%). Streptococcus viridans was the most common infective organism, isolated in 68 patients (35.7%), followed by Staphylococcus aureus in 30 patients (15.7%). Eighty-seven patients (45.5%) had active endocarditis at the time of surgery. The mitral valve was infected in 136 patients (71.2%), the aortic valve in 66 (34.6%), the tricuspid valve in 29 (15.2%) and multiple valves in 38 (19.9%). Nineteen patients (9.9%) were intravenous drug users (IVDU). Twelve IVDUs (63.2%) suffered from tricuspid valve IE, compared with 7 of 162 patients (4.3%) in the non-IVDU population (P < 0.001). The most common indication for early surgery was intractable cardiac failure. Twelve patients (6.3%) died during the hospital stay for surgical treatment of IE. Logistic multivariate analysis identified preoperative creatinine clearance and stroke as independent predictors of in-hospital mortality. Overall 10-year survival and freedom from valve-related reoperation were 74.8 and 90.3%, respectively. Age, PVE, S. aureus endocarditis and postoperative left ventricular ejection fraction (LVEF) ≤45% were factors influencing long-term survival.

**Conclusions:**
Surgical management of endocarditis continues to be challenging and is associated with significant morbidity and mortality. This report of 191 patients who underwent valve surgery for IE shows that in-hospital mortality is influenced by preoperative renal function and stroke at the time of presentation. The optimal timing for surgery in patients with stroke remains controversial. Long-term survival was negatively influenced by increasing age, moderate to severely impaired LVEF, prosthetic valve IE and S. aureus infection.