Outcome after surgery for prosthetic valve endocarditis and the impact of preoperative treatment

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Objectives
This study examined the outcomes of surgery for active prosthetic valve endocarditis in a recent decade, with special interest in preoperative treatment and predictors for early and late events.

Methods
From 2000 to 2010, a cohort of 149 consecutive patients (mean age, 64 ± 13.9 years; 72% were male) underwent redo-surgery for prosthetic valve endocarditis and were reviewed regarding early (=60 days) and late (>60 days) events (death, reinfection, reoperation). Kaplan-Meier survival curves and Cox regression analysis were used to investigate the impact of preoperative intervals and predictors for events, respectively.

Results
Preoperative status was critical (European System for Cardiac Operative Risk Evaluation >20%) in 121 patients (81.2%). Staphylococci were the most common infecting microorganisms (27.5%). The median interval between onset of symptoms and diagnosis and between diagnosis and operation was 2 days (interquartile range, 1-5) and 8 days (interquartile range, 2-23), respectively. Operative mortality (=30 days) was 12.8%. Mean follow-up was 4 ± 2.9 years. In 53 patients, 47 early (24 deaths, 14 recurrences, 9 reoperations) and 22 late events (11 deaths, 9 recurrences, 2 reoperations) occurred. Overall and event-free survivals at 10 years were 75% ± 3.8% and 64% ± 4.0%, respectively. Freedom from recurrent infection and reoperation at 10 years were 81% ± 3.6% and 91% ± 2.6%, respectively. In multivariate Cox regression, mechanical circulatory support, prolongation between onset of symptoms and diagnosis more than 30 days, and preoperative presence of renal failure predicted early events, and double valve replacement predicted late events.

Conclusions
Cardiac and renal function, need for double valve replacement, and preoperative treatment predicted outcomes. A prolonged interval in which patients were left untreated while symptomatic, but not prolongation of preoperative antibiotic treatment, increased risk.