

Association between valvular surgery and mortality among patients with infective endocarditis complicated by heart failure.

Kiefer T, Park L, Tribouilloy C, Cortes C, Casillo R, Chu V, Delahaye F, Durante-Mangoni E, Edathodu J, Falces C, Logar M, Miró JM, Naber C, Tripodi MF, Murdoch DR, Moreillon P, Utili R, Wang A.

CONTEXT:

Heart failure (HF) is the most common complication of infective endocarditis. However, clinical characteristics of HF in patients with infective endocarditis, use of surgical therapy, and their associations with patient outcome are not well described.

OBJECTIVES:

To determine the clinical, echocardiographic, and microbiological variables associated with HF in patients with definite infective endocarditis and to examine variables independently associated with in-hospital and 1-year mortality for patients with infective endocarditis and HF, including the use and association of surgery with outcome.

DESIGN, SETTING, AND PATIENTS:

The International Collaboration on Endocarditis-Prospective Cohort Study, a prospective, multicenter study enrolling 4166 patients with definite native- or prosthetic-valve infective endocarditis from 61 centers in 28 countries between June 2000 and December 2006.

MAIN OUTCOME MEASURES:

In-hospital and 1-year mortality.

RESULTS:

Of 4075 patients with infective endocarditis and known HF status enrolled, 1359 (33.4% [95% CI, 31.9%-34.8%]) had HF, and 906 (66.7% [95% CI, 64.2%-69.2%]) were classified as having New York Heart Association class III or IV symptom status. Within the subset with HF, 839 (61.7% [95% CI, 59.2%-64.3%]) underwent valvular surgery during the index hospitalization. In-hospital mortality was 29.7% (95% CI, 27.2%-32.1%) for the entire HF cohort, with lower mortality observed in patients undergoing valvular surgery compared with medical therapy alone (20.6% [95% CI, 17.9%-23.4%] vs 44.8% [95% CI, 40.4%-49.0%], respectively; $P < .001$). One-year mortality was 29.1% (95% CI, 26.0%-32.2%) in patients undergoing valvular surgery vs 58.4% (95% CI, 54.1%-62.6%) in those not undergoing surgery ($P < .001$). Cox proportional hazards modeling with propensity score adjustment for surgery showed that advanced age, diabetes mellitus, health care-associated infection, causative microorganism (*Staphylococcus aureus* or fungi), severe HF (New York Heart Association class III or IV), stroke, and paravalvular complications were independently associated with 1-year mortality, whereas valvular surgery during the initial hospitalization was associated with lower mortality.

CONCLUSION:

In this cohort of patients with infective endocarditis complicated by HF, severity of HF was strongly associated with surgical therapy and subsequent mortality, whereas valvular surgery was associated with lower in-hospital and 1-year mortality.