Valvular Surgery Helps Patients With Infective Endocarditis And Heart Failure

Among patients with infective endocarditis (an infection of the heart lining which may involve the heart valves) and heart failure, about two-thirds undergo valvular surgery, which is associated with a significant reduction in the risk of death in the hospital and at one year, according to a study in the November 23/30 issue of *JAMA*.

"Infective endocarditis is associated with substantial morbidity and mortality. Several published studies have reported in-hospital mortality of 15 percent to 20 percent and l-year mortality of 40 percent. In the United States alone, approximately 15,000 new cases of infective endocarditis are diagnosed each year. A variety of complications contribute to the high rates of morbidity and mortality in infective endocarditis, particularly heart failure (HF), which occurs in approximately 40 percent of patients," according to background information in the article. Several observational studies have shown a reduction in the risk of death for infective endocarditis complicated by HF with valvular surgery, and this indication for surgery is strongly recommended in current American College of Cardiology/American Heart Association and European Society of Cardiology guidelines.

Todd Kiefer, M.D., Ph.D., of Duke University Medical Center, Durham, N.C., and colleagues conducted a study to examine the clinical, echocardiography and microbiological variables associated with the development of HF in patients with infective endocarditis and examined variables associated with in-hospital and 1-year mortality, including the use and effects of surgery on outcome. The study included 4,166 patients with native or prosthetic-valve infective endocarditis from 61 centers in 28 countries between June 2000 and December 2006.

Among 4,075 patients with infective endocarditis and known HF status, 33.4 percent had HF, and 66.7 percent were classified as having New York Heart Association class III or IV symptom status. Within the subset with HF, 61.7 percent underwent valvular surgery during the index hospitalization. The researchers found that in-hospital mortality was 29.7 percent for the entire HF cohort, with lower mortality observed in patients undergoing valvular surgery compared with medical therapy alone (20.6 percent vs. 44.8 percent, respectively). In addition, one-year mortality was 29.1 percent in patients undergoing valvular surgery vs. 58.4 percent in those not undergoing surgery.

Factors independently associated with one-year mortality included 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. Valvular surgery during the initial hospitalization was associated with lower mortality.

The authors note that their finding that nearly one-third of patients with HF and high surgical propensity did not have surgery emphasizes the need for multi-disciplinary, guideline-based management of infective endocarditis. "Improved recognition of HF and institutional systems to promote appropriate treatment of infective endocarditis may enhance the rate of surgery for this indication. Additional studies are needed to better risk-stratify patients with infective endocarditis and HF and optimize the use of surgery for this serious condition."

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