Two Procedures Can Be Done at Once, Safely

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TUCSON, ARIZ. — Proximal aortic replacement performed at the time of aortic valve surgery adds no additional risk to the patient, Dr. T. Brett Reece said at the annual meeting of the Southern Thoracic Surgical Association.

A retrospective study of 430 cases involving aortic valve intervention alone and 146 cases involving aortic valve intervention with proximal aortic replacement showed that complication mortality and in-hospital mortality were similar in the two groups, said Dr. Reece of the University of Virginia, Charlottesville.

The 30-day mortality was 4% in the valve intervention–only group, and 3% in the proximal aortic replacement group. The operative complication rate was 7% vs. 9%, respectively. The differences were not statistically significant.

Neurologic, pulmonary, and renal complications, however, were significantly more common in the valve intervention–only group, compared with the proximal aortic replacement group (21% vs. 8%, 23% vs. 12%, and 8% vs. 3%, respectively), Dr. Reece noted, adding that hospital and intensive care unit stays were also significantly longer in the valve intervention–only group.

Patients included in the study were treated electively at the University of Virginia between 1996 and 2004. The mean age was significantly higher in the valve intervention–only group (68 vs. 60 years), but the groups were similar with regard to comorbidities, including rates of diabetes, pulmonary disease, hemodialysis, cerebrovascular disease, coronary artery disease, and heart failure.

Numerous studies suggest proximal aortic replacement is indicated at the time of valve intervention in patients with proximal aorta diameter greater than 5 cm, but in practice this often doesn't occur because of concern that the replacement adds risk for patients who might never need the second procedure.

But many of these patients will indeed develop a problem with their proximal aorta. These patients are at risk for aortic catastrophe and require a second operative procedure.

Recent studies have shown that proximal aortic replacement can be done with acceptable risk in patients with previous surgery, but the perioperative risk is consistently higher than with the original procedure, said Dr. Reece. When considering the risks associated with a second procedure, risks associated with both the first and second procedure should be considered, he said.

The actual numbers in terms of risk related to a single procedure vs. separated procedures are not clear in the literature, but they are high enough that there's secondary literature on revisions in patients who need proximal aortic replacement after prior intervention, he noted.

Thus, although it may be true that not all patients with an enlarged proximal aorta will require later replacement, a large population will, and therefore the findings of the current study show that concomitant replacement at the time of valve intervention is warranted, he said.

"We advocate replacement of the proximal aorta in patients undergoing an aortic valve procedure with a [proximal aorta] diameter of 5 cm," he said. ■

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