Medical, Surgical Therapies Yield Similar Outcomes

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MUNICH — Surgical repair did not show a clear survival advantage over medical management of patients with anomalous aortic origins of the coronary arteries, in a review of 54 patients.

A review of 35 years' worth of case experiences of patients undergoing coronary catheterization at the Cleveland Clinic through the mid-2000s identified 54 patients as having anomalous aortic origins of coronary arteries that had an interarterial course. Of them, 28 were managed by surgical repair, and 26 were managed medically. But the split between these two options over time showed a dramatic shift, with most of the surgical repairs occurring since 2000, while medical management was preferred before then, Dr. Richard A. Krasuski said at the annual congress of the European Society of Cardiology.

The results of his new analysis, showing no added survival benefit from surgical repair, led him to rethink his approach to treating these patients.

"My attitude about 4 years ago, when I got to Cleveland, was that you had to convince yourself why they shouldn't be sent to surgery. But I now think that I need to be convinced that the patient needs surgery," said Dr. Krasuski, director of the adult congenital heart disease service at the Cleveland Clinic. Although the concept of repairing a clear structural defect is appealing, physicians also have to be wary of potential morbidity from surgery, he said.

During the 35 years reviewed, slightly more than 210,000 patients underwent coronary catheterization at the Cleveland Clinic. Of these, 301 (0.14%) could be clearly identified with an anomalous aortic origin of a coronary artery, either a right coronary artery coming out of the left cusp, or a left coronary coming out of the right cusp. Of the 54 of these patients who had an interarterial course and who un-

derwent treatment, 26 were managed medically, and 28 underwent surgical repair.

The average age of all patients was about 53, and about two-thirds were men. The anomalous vessel was a left main coronary artery in about a third of patients. About three-quarters of the patients had chest pain at the time of treatment. Stress tests were done in slightly more than half of the patients, and patients who underwent surgery had a 94% prevalence of a stress-test abnormality, significantly higher than the 46% prevalence among the medically treated patients. The surgery patients also had significantly more atherosclerosis, with an average of 1.3 atherosclerotic coronary arteries, compared with an average of 0.8 affected coronaries in the medical group. No surgical patients had diabetes, compared with a 30% prevalence of diabetes in the medically treated patients.

The most common surgery used was coronary artery bypass grafting with arterial grafting, in 40% of the surgery patients, either as an isolated procedure or with coronary ligation. Coronary bypass with a vein graft was used in 32%, also either as an isolated procedure or with ligation. Coronary reimplantation was used on 18%, and an unroofing procedure was used on 11% with most done during the final 6 years of the series (totals more than 100% because of rounding). No patients died during surgery.

Surgery may not always be the best option for patients with an anomalous aortic origin of a coronary artery.

DR. KRASUSKI

During follow-up, the survival rate was 82% in the surgery patients and 54% in the patients treated medically, but the two subgroups had a marked difference in the duration of follow-up. The median follow-up interval was 61 months in the surgery patients and 137 months in the medical patients. When the analysis examined actuarial 10-year survival, the rates were similar in the two treatment arms, Dr. Krasuski said.

A major limitation of this study is that it was confined to patients who had undergone coronary catheterization. The findings do not address the prevalence of anomalous aortic origins of the coronary arteries in the general population. ■

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