Percutaneous Endovascular Repair of Aneurysm After Previous Coarctation Surgery

To the Editor:

Using percutaneous catheter techniques and endovascular grafts, Ince et al reported successful treatment of aneurysms occurring after previous repair of aortic coarctation with no mortality and minimal morbidity in 6 patients. They contrasted these results with those reported for similar patients with open surgical treatment, in whom the mortality rates ranged between 14% and 23.5%. The 3 references reporting these outcomes were published between 1989 and 1996.

Any comparison of these 2 methods of treatment for recurrent aneurysm after coarctation repair should include contemporary reports that use modern surgical techniques. Two recent studies using the technique of full cardiopulmonary bypass and circulatory arrest in 9 patients with complications following surgical repair of aortic coarctation (including 7 patients with aneurysms or pseudoaneurysms) reported no early deaths and few major complications.

Although minimally invasive endovascular techniques offer important advantages over open surgical procedures and may replace them for some disorders of the thoracic aorta, the outcomes should be compared, in the absence of randomized trials, with those that use contemporary surgical techniques.

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Response

Dr Kouchoukos should be congratulated for his important contributions and continuous efforts to improve both patient safety and surgical techniques. With the recent advent of better perisurgical management by hypothermic cardiopulmonary bypass, previous shortcomings have been partially minimized and results of repair surgery are improved in the hands of experts. Surgical repair, however, cannot avoid circulatory arrest over 2 hours, frequent pulmonary complications, need for blood products in >50% of cases, and prolonged hospital stay. Conversely, percutaneous repair in such challenging cases requires 1 hour of procedural time and no cardiac arrest, and is associated with an uneventful outcome with similar duration of follow-up. Regardless of improved surgical technique, interventional placement of customized stent-grafts offers the potential to avoid any of the associated risks of repeat surgery in selected cases of postsurgical pathology, underlining the need for a multidisciplinary approach to the management of aortic disease.

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