Percutaneous Endovascular Repair of Aneurysm After Previous Coarctation Surgery

To the Editor:

Using percutaneous catheter techniques and endovascular grafts, Ince et al\(^1\) 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.\(^2,3\)

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.

Nicholas T. Kouchoukos, MD
Missouri Baptist Medical Center
St Louis, Mo

---

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,\(^1,2\) previous shortcomings have been partially minimized and results of repair surgery are improved in the hand 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.\(^1,2\) 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,\(^3\) underlining the need for a multidisciplinary approach to the management of aortic disease.

Hüseyin Ince, MD
Michael Petzsch, MD
Tim Rehders, MD
Stephan Kische
Thomas Körber, MD
Frank Weber, MD
Christoph A. Nienaber, MD
Division of Cardiology
University of Rostock
Rostock, Germany

---

Percutaneous Endovascular Repair of Aneurysm After Previous Coarctation Surgery
Nicholas T. Kouchoukos

Circulation. 2004;109:e317
doi: 10.1161/01.CIR.0000129328.23412.1E
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2004 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/109/22/e317

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Circulation can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Circulation is online at:
http://circ.ahajournals.org//subscriptions/