Aortic arch aneurysm associated with coarctation and absence of the main branches of left subclavian artery

Zhenghua Xiao, MD, Hong Qian, MD, and Eryong Zhang, MD

A 40-year-old woman with a 1-month history of hoarseness owing to the left vocal cord paralysis was referred for further evaluation. On admission, the blood pressure in the right upper extremity was 130/78 mm Hg, and 86/45 mm Hg in both the left upper extremity and lower limbs. Computed tomography showed an enlarged aortic arch saccular aneurysm (80×78 mm) coexistent with an absence of the main branches of the left subclavian artery (Figure 1). A subsequent 3-dimensional computed tomographic scan (Figure 2) of the aorta revealed significant stenosis (10 mm in diameter) in the distal aortic arch with poststenotic dilation; it also clearly demonstrated a kinking and stenosis in the descending aorta.

The patient underwent urgent surgery for replacement of the aortic arch and descending aorta with the aid of profound hypothermic circulatory arrest and antegrade cerebral perfusion. The perioperative course was uneventful, and the patient was discharged home on postoperative day 15 in good condition.

FIGURE 1. Computed tomographic scan showing an enlarged aortic arch saccular aneurysm (80×78 mm) coexistent with an absence of the main branches of the left subclavian artery.

FIGURE 2. Three-dimensional computed tomographic scan of the aorta revealed significant stenosis (10 mm in diameter) in the distal aortic arch (part B) with poststenotic dilation (part A) and clearly demonstrated a kinking and stenosis (minimal diameter, 7.4 mm) in the descending aorta (part C). RBCA, Right brachiocephalic artery; LCCA, left common carotid artery.

From the Department of Cardiovascular Surgery, Sichuan University, West China Hospital, Sichuan, People's Republic of China.

Supported in part by grant No. 81170288 from the National Research Foundation of Nature Science, China.

Disclosures: Authors have nothing to disclose with regard to commercial support.

Z.X. and H.Q. contributed equally to this article.

Received for publication Dec 17, 2012; accepted for publication Dec 20, 2012; available ahead of print Jan 21, 2013.

Address for reprints: Eryong Zhang, MD, Department of Cardiovascular Surgery, West China Hospital, Chengdu, Sichuan, P.R. China 610041 (E-mail: zey16@126.com).

J Thorac Cardiovasc Surg 2013;145:1667

0022-5223/\$36.00

Crown Copyright © 2013 Published by Elsevier Inc. on behalf of The American Association for Thoracic Surgery

<http://dx.doi.org/10.1016/j.jtcvs.2012.12.074>