Have you seen an atrium bigger than this?

Khaled E. Al-Ebrahim, MBBCh, FRCSC

A 32-year-old man was seen with shortness of breath on moderate exertion. Chest radiography showed cardiomegaly, a huge left atrium, and a prominent pulmonary trunk (Figure 1). Echocardiography (Figure 2) revealed the biggest left atrium that I have ever seen, 21 cm in transverse diameter and 755 mL in volume. It was compressing the left ventricle and the right atrium, with severe mitral valve regurgitation. The rheumatic irreparable mitral valve was excised and replaced with a size 33 mechanical valve, and the left atrial appendage was ligated. Lateral left atrial wall reduction was done to avoid respiratory compressive symptoms and thromboembolic complications. The left atrial wall was extremely thin, causing bleeding from multiple needle holes on the suture line. Bleeding was controlled with polytetrafluoroethylene pledgets and topical hemostatic agents.

The postoperative left atrial size was reduced to 10 cm (Figure 3). In this patient, the cause of the giant dilatation, in addition to the regurgitation, was the congenitally defective left atrial wall, which consisted mainly of a fibrous layer of loose connective tissue and a few strips of smooth muscles. Posterior reduction would have caused disastrous bleeding.

FIGURE 1. Preoperative chest radiographs. A, The posteroanterior view demonstrates the huge left atrium, the double contour, and the prominent pulmonary trunk. A small part of the anterior pulmonary segment, above the right main bronchus, was dysplastic and so it was excised. B, The lateral view demonstrates the left atrium extending posterior to the paravertebral gutter.

From the Department of Cardiac Surgery, King Abdulaziz University, Jeddah, Saudi Arabia.

Disclosures: Author has nothing to disclose with regard to commercial support.

Received for publication Sept 18, 2012; revisions received Sept 26, 2012; accepted for publication Oct 15, 2012; available ahead of print Dec 6, 2012.

Address for reprints: Khaled E. Al-Ebrahim, MBBCh, FRCSC, Department of Cardiac Surgery, King Abdulaziz University, PO Box 80215, Jeddah 21589, Saudi Arabia (E-mail: dr.k-e@hotmail.com).

J Thorac Cardiovasc Surg 2013;145:874-5

0022-5223/\$36.00

Copyright © 2013 by The American Association for Thoracic Surgery

<http://dx.doi.org/10.1016/j.jtcvs.2012.10.023>

FIGURE 2. Preoperative echocardiogram shows the huge volume of 755 mL. The transverse diameter of 21 cm was measured intraoperatively, because it was difficult to capture the whole left atrium in a single view.

FIGURE 3. Postoperative posteroanterior (A) and lateral (B) chest radiographs demonstrate the marked reduction in the left atrial size and the pulmonary artery trunk.