Right Aortic Arch With Left Aberrant Subclavian Artery

A 38-year-old woman with no relevant clinical history was referred to the cardiology department by the gastroenterologist to assess symptoms of dysphagia. The esophagogram demonstrated a left posterior concave notch in the medial portion of the esophagus, of probable vascular etiology. A transthoracic echocardiogram ruled out associated congenital heart disease. Three-dimensional reconstructions of the great vessels obtained by helical computed tomography of the aortic arch revealed the anatomic relationships of this region in the anteroposterior view (upper right panel). The ascending aorta (AA) curved to the right of the trachea above the right main bronchus. The four main vessels arose independently in the following order: the first, running toward the left cervical region, was the left common carotid (>); the second, ascending to the right of the trachea, was the right common carotid (>>); the third was the right subclavian artery (>>>), which gave rise to the right vertebral artery a point more distal than usual; and the last was the left subclavian artery. The posteroanterior view (upper left panel) showed the left subclavian to be an aberrant artery (ALSA) emerging as the last vessel from a 22 mm aortic diverticulum (dv) which corresponded to an embryonic remnant of the left dorsal aorta. (In cases of left aortic arch with anomalous right subclavian artery, this diverticulum is termed Kommerell’s diverticulum.) The left lateral view (lower right panel) showed left posterior compression of the trachea (T) and particularly the esophagus (e) by the diverticulum. The retroesophageal course of the aberrant left subclavian artery was also apparent. Considering that a ligamentum arteriosum must be present (not visible because it lacks flow), the cranial view (lower left panel) showed a nearly complete vascular ring.

We used a conservative approach with the patient, since the dysphagia did not induce malnutrition and the diverticulum remained stable in size during follow-up. Moreover, the associated morbidity and mortality is high in adults who undergo surgery for this condition.

Carlos Delgado, a Juan Mestre, b and Fernando Barturen c
 aDepartamento de Medicina Interna, Servicio de Cardiología, Policlinica Miramar, Palma de Mallorca, bDepartamento de Radiología, Policlinica Miramar, Palma de Mallorca, cDepartamento de Medicina Interna, Unidad de Cuidados Intensivos, Policlinica Miramar, Palma de Mallorca, Spain.

Full English text available at: www.revespcardiol.org