Arch Bronconeumol. 2020;56(8):525

Sociedad Española de Neumología y Cirugía Torácica SEPAR

ARCHIVOS DE Bronconeumología

www.archbronconeumol.org

Clinical Image

Multiple Unusual Vascular Anomalies Accompanying Aortic Coarctation

Múltiples anomalías vasculares infrecuentes en la coartación aórtica

Fahri Aydin, Alperen Tezcan, Hayri Ogul*

Department of Radiology, Faculty of Medicine, Ataturk University, Erzurum, Turkey

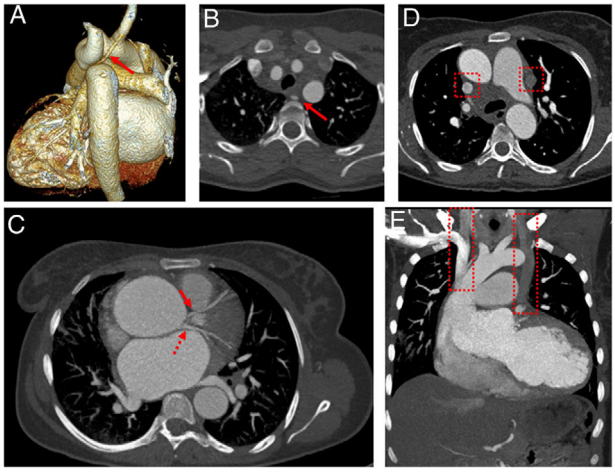

Fig. 1. Posterior view 3D volume rendering CT angiography image (A) and axial CT scan in mediastinal window (B) show a coexistence of the aberrant right subclavian artery (long arrow) and aortic coarctation. The aberrant right subclavian artery originates from the aortic coarctation segment. Axial CT scan (C) reveals the circumflex artery (dashed arrow) and left descending coronary artery (short arrow) originating from aorta directly. Axial (D) and coronal (E) CT angiography scans show a double superior vena cava anomaly (frames). All CT scans also reveal cardiomegaly and ascending aortic aneurysm.

A 21-year-old female patient was admitted to our clinic with complaint of dyspnea. The computer tomography (CT) angiography showed aberrant right subclavian artery and aortic coarctation coexistence (Fig. 1A). Coarctation segment was seen on distal of arcus aorta just after to the originated of the left subclavian artery. There was also an aberrant right subclavian artery originated from the aortic coarctation segment (Fig. 1B). The aberrant subclavian artery was going to the right upper extremity following through to posterior of the esophagus. In addition to that, there was no the left main coronary artery. CT scans revealed the circumflex artery and left descending coronary artery originating from aorta directly (Fig. 1C). The patient had bicuspid aortic valve. There was also a double superior vena cava and an ascending aortic aneurysm (Fig. 1D and E). There were no abnormalities in bronchial distribution. The aortic coarctation segment was treated by stenting.

The bicuspid aortic valve affects about 1–2% of the population.[1] It is frequently associated with the coarctation of the aorta. Aortic coarctation is a common congenital heart disease. It has been reported as 1% the coexistence of aberrant right subclavian artery and postductal coarctation of the aorta.[2] However, the aberrant right subclavian artery that was originated from the coarctation segment of aorta is extremely rare. About this, there are only few case reports in the literature. Today, by means of the advances in CT technology, even the most complex vascular anomalies of the cardiopulmonary system can be successfully demonstrated with CT angiography.

References

1. Fedak PWM, Verma S, David TE, Leask RL, Weisel RD, Butany J. Clinical and pathophysiological implications of a bicuspid aortic valve. Circulation. 2002;106:900–4.
2. Reid DA, Foster ED, Stubberfield J, Alley RD. Anomalous right subclavian artery arising proximal to a postductal thoracic aortic coarctation. Ann Thorac Surg. 1981;32:85–7.

* Corresponding author.
E-mail address: drhogul@gmail.com (H. Ogul).