Kommerell diverticulum associated with aberrant left subclavian artery and right-sided aortic arch

Sait Demirkol1, Sekvet Balta1*, Ugur Bozlar2, Sabahattin Sari2, Murat Unlu1, and Zekeriya Arslan1

1Department of Cardiology, Gulhane Military Medical Academy, School of Medicine, Ankara, Turkey and 2Department of Radiology, Gulhane Military Medical Academy, School of Medicine, Ankara, Turkey

*Corresponding author. Tel: +90 5303274972; fax: +90 3123044250, Email: drsevketb@gmail.com

A-20-year-old man was admitted to our outpatient clinic with a complaint of presyncope and cold hands. On physical examination, right arm blood pressure was higher than the left. Pullations of the left brachial and radial artery were weak. Transthoracic echocardiography four-chamber view showed the descending aorta at the back of the left atrium (Panel A and see Supplementary data online, Video S1A). The transthoracic echocardiography suprasternal view demonstrated an enlarged artery in the proximal descending aorta (Panel B and see Supplementary data online, Video S1B, asterisk). Coronal (Panel C) and axial (Panel D) subvolume maximum intensity projection and three-dimensional coloured volume rendered (Panel E) magnetic resonance angiography images displayed the right-sided aorta and the aberrant left subclavian artery with Kommerell diverticulum (arrow).

A right-sided aortic arch with an aneurysm of the aberrant subclavian artery is a rare congenital anomaly. The aneurysmal diverticulum of the descending aorta at the origin of an aberrant right subclavian artery is called Kommerell’s diverticulum. We herein present a case of a right-sided aortic arch with Kommerell’s diverticulum. However, it is an incidental finding, Kommerell’s diverticulum can cause compression of surrounding structures resulting in dysphagia, dyspnoea, or left subclavian steal syndrome as in our case. Therefore, Kommerell’s diverticulum should be keep in mind in patients with presenting these symptoms.

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.