Computed Tomography of Aortic Coarctation with Patent Ductus Arteriosus

Aort Koartkasyonu ile Patent Duktus Arteryosusun Tomografi Görüntüsü

Aortic Coarctation with Patent Ductus Arteriosus / Aort Koartkasyonu ile Patent Duktus Arteryosus

Şevket Balta, Sait Demirkol, Turgay Çelik
Gülhane Askeri Tıp Akademisi, Kardiyoloji Bilim Dalı, Ankara, Türkiye

A 21-year-old man presented with exertional chest pain and dyspnea. On physical examination, the radial pulses were strong whereas the femoral pulses were weak. On cardiac auscultation, medium-pitched systolic murmur was heard posteriorly in the interscapular area. ECG revealed that left ventricular hypertrophy with systolic strain. Transthoracic echocardiography showed concentric left ventricular hypertrophy. Continous wave doppler demonstrated 40 mmHg pressure gradient with diastolic run-off in the descending aorta. Contrast-enhanced computed tomography(CT) demonstrated coarctation (white arrow) just after left subclavian artery and patent ductus arteriosus (black arrow) between left main pulmonary artery and descending aorta (Figure 1 and 2). Then the patient underwent surgery. Transthoracic echocardiography is the first-step modality for cardiovascular imaging in adults with congenital heart disease. The windows of access with transthoracic echocardiography may be inadequate for all regions of interest. The patients with congenital heart disease should be evaluated the further imaging such as CT and magnetic resonance imaging for this reasons.

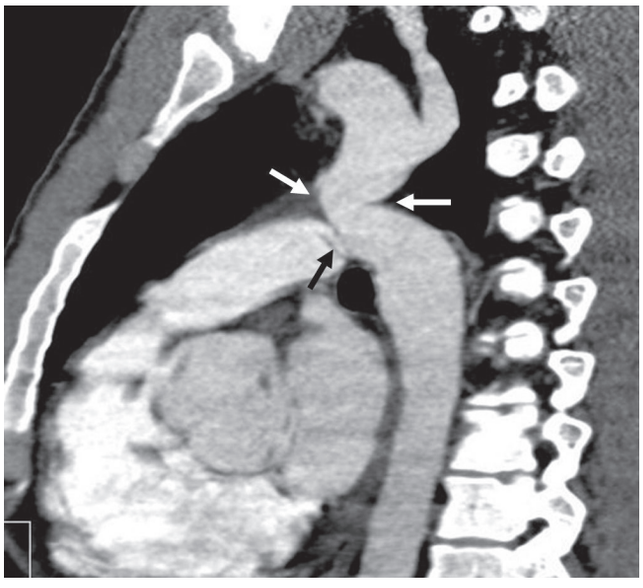


Figure 1. Oblique sagittal maximum intensity projection (MIP) image shows luminal narrowing of descending aorta just after origin of left subclavian artery indicating aortic coarctation (white arrow).

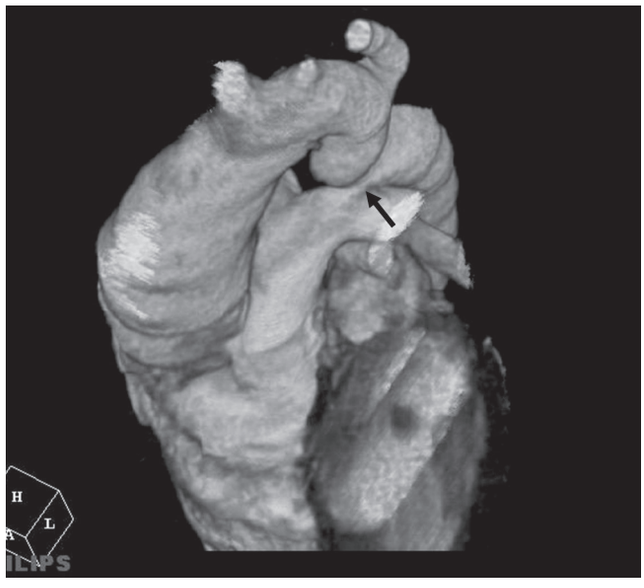


Figure 2. Volume rendered image reveals that patent ductus arteriosus is clearly seen between left main pulmonary artery and aorta (black arrow).

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Corresponding Author: Şevket Balta, GATF Kardiyoloji Bilim Dalı, Etlik, 06018, Ankara, Türkiye.
T.: +90 3123042320 F.: +90 3123044251 E-Mail:drsevketb@gmail.com