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Demonstration of double aortic arch with multislice computed tomography

Çift aortik arkın çok kesitli bilgisayarlı tomografi ile gösterimi

Hatice Nursun Özcan, Fırat Özcan[1], Deniz Adıgüzel, Selim Ardıç
Department of Radiology, Numune Education and Research Hospital Ankara
[1]Department of Cardiology, Yüksek İhtisas Education and Research Hospital, Ankara, Turkey

Address for Correspondence/Yazışma Adresi: Dr. Fırat Özcan,
Yargıç Sok. 19/6 Cebeci 06420, Ankara, Turkey
Phone: +90 312 306 10 00 Fax: +90 312 430 00 58 E-mail: drfo1979@yahoo.com

A 67-year-old male patient was diagnosed with larynx cancer. He had no cardiovascular complaints. Physical examination and electrocardiography were normal. Prior to laryngeal surgery 16- slice computed tomography of the thorax was performed for possible metastasis. The presence of double aortic arch was detected. (Fig. 1-2). Double aortic arch is the most encountered vascular ring abnormality. It completely encircles the trachea and esophagus Aortic arch anomalies that form a vascular ring can compress the trachea and esophagus. It is usually seen as an isolated anomaly. The patients mostly had respiratory and feeding complaints. The anomaly could be missed with transthoracic echocardiography. Besides computed tomography, magnetic resonance imaging is an important diagnostic tool in identifying anomalies of the aortic arch and its branches, and can be considered the imaging technique of choice when planning surgical management, especially when there are associated cardiac anomalies.

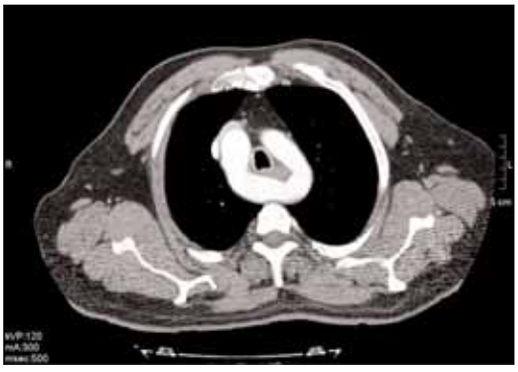

Figure 1. Tomographic image of double aortic arch

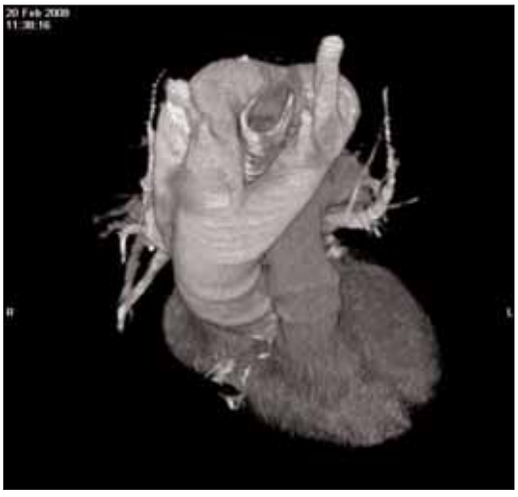

Figure 2. 3-dimensional reconstruction tomographic image of double aortic arch

Spontaneous dissection of the left main coronary artery regressed with thrombolytic therapy: evaluation with multislice computed tomography angiography

Trombolitik tedavi ile gerileyen bir spontan sol ana koroner arter disseksiyonu: Çok kesitli bilgisayarlı tomografi anjiyografi ile değerlendirilmesi

Thirty-one year-old female with no coronary artery disease history was admitted for recent onset chest pain. She was a smoker. She denied other atherosclerotic risk factors, illicit drug use, connective tissue disorder, or recent trauma. Electrocardiogram revealed ST-segment elevation in leads V1-6. Her blood pressure was 110/75 mmHg and lungs were clear to auscultation. She was transferred to catheterization laboratory. Intravenous heparin (5000 IU), 300 mg aspirin and 600 mg clopidogrel were given before angiography. Coronary angiography revealed a linear image suggesting coronary dissection, originating from left main coronary artery (LMCA), and involving left anterior descending (LAD) and circumflex (Cx) coronary arteries (Fig. 1). The coronary flow was completely obstructed after the mid-segment of LAD. There was TIMI II flow in Cx and the right coronary artery (RCA) was normal. Percutaneous coronary intervention was not performed because of the diffuse nature of the dissection. She developed hypotension

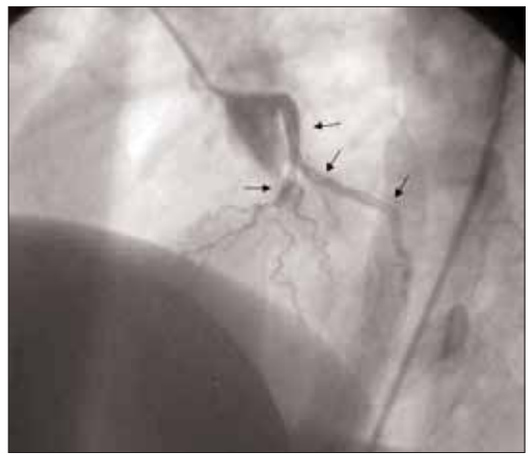

Figure 1. Coronary angiography view of coronary dissection traversing from the left main coronary artery (LMCA) to both left anterior descending (LAD) and circumflex (Cx) coronary arteries

during angiography and intraaortic balloon pump (IABP) was placed, followed by 100 mg tissue plasminogen activator infusion in the intensive care unit. The IABP was discontinued on the 5th day of admission. On the 7th day, coronary angiogram revealed the persistence of the dissection at proximal LAD and mid portion of Cx with TIMI III flow in both arteries (Fig. 2). Multislice computed tomography revealed chronic intimal dissection arising from LMCA ostium and traversing through proximal LAD and Cx arteries with thrombosis and its regression into the false lumen (Fig. 3, 4). She was discharged with medical therapy.

Although aggressive medical therapy including thrombolytics is not routinely used in treatment of spontaneous coronary artery dissections, it may be life saving in the selected patients such as our case.

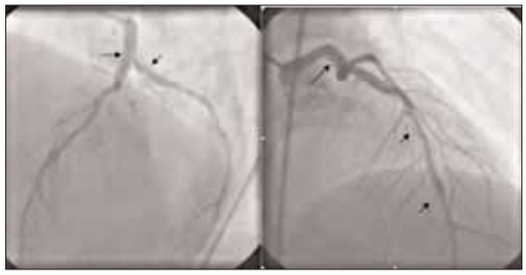

Figure 2. Coronary angiography view of persistent dissection in the proximal LAD and in the mid portion of Cx 7 days after the aggressive medical treatment including thrombolytics

Cx - circumflex coronary artery, LAD - left anterior descending artery

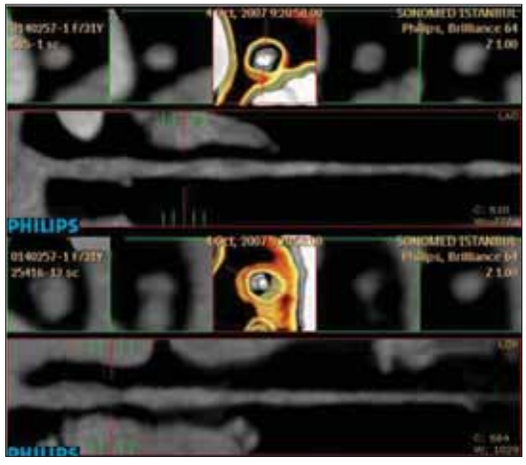

Figure 3. MSCT image consistent with intimal dissection and its false lumen arising from LMCA ostium and traversing through proximal LAD and Cx coronary arteries

Cx-circumflex coronary artery, LAD- left anterior descending artery, LMCA-left main coronary artery, MSCT-multislice computed tomography

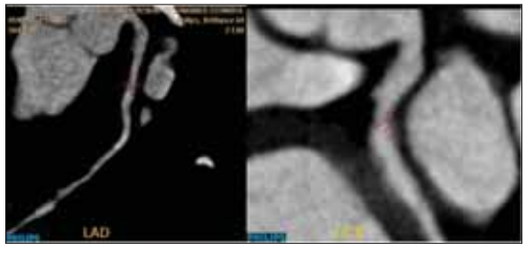

Figure 4. MSCT image of the coronary dissections of LAD and Cx

Cx - circumflex coronary artery, LAD - left anterior descending artery, MSCT – multislice computed tomography

Tansu Karaahmet, Kürşat Tigen, Emre Gürel, Cihan Çevik[1], Bülent Mutlu, Yelda Başaran
Department of Cardiology, Kartal Koşuyolu Yüksek İhtisas Education and Research Hospital İstanbul
[1]Texas Technical University Health Sciences Center, Lubbock, Texas, USA

Address for Correspondence/Yazışma Adresi: Emre Gürel, MD, Tervuursestraat 117 / 12, B-3000, Leuven, Belgium
Phone: +32 475737822 Fax: +32 16343467
E-mail: emregurelctf@yahoo.com

Giant aneurysmal dilation of a native pericardial patch used for reconstruction of the right ventricular outflow tract

Sağ ventriküler çıkım yolunun yapılandırılması amacıyla kullanılan nativ perikardiyal yamada gelişen dev anevrizmal genişleme

A 3-year-old girl had undergone a total corrective surgery for tetralogy of Fallot four months ago at our institution. Although she didn't experience any ongoing complaints. Routine postoperative follow-up investigations revealed a progressing large aneurysm of the autologous pericardial patch. That is why, she was referred to our institution for reoperation due to large aneurysm of the autologous pericardial patch prepared with glutaraldehyde (10 minutes in 0.6%concentration) in transannular position. Chest X-ray showed a large mediastinum due to aneurysm (Fig. 1). Echocardiography demonstrated aneurysmal dilation of the native pericardial patch. Cardiac catheterization and angiography revealed moderate pulmonary insufficiency and a large aneurysmal dilation of the pericardial patch in our patient (Fig. 2). Reoperation was indicated because of progressive distention of the aneurysm. For reconstruction of the right ventricular outflow tract (RVOT), the pericardial patch was excised, and the right ventricular outflow tract (RVOT) was reconstructed using a expanded polytetrafluoroethylene patch (IMPRA e-PTFE Cardiovascular Patch 0.6mm, 50P7506) (Fig. 3 and 4). After the repair, right ventricular pressures were 18/3mmHg. Postoperatively on the discharge day and after 3 months echocardiographic investigations were normal.

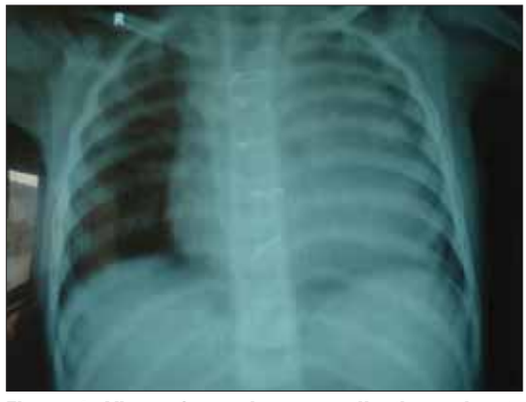

Figure 1. View of very large mediastinum due to aneurysm on chest X-ray