CASE IMAGE

An aberrant patent ductus arteriosus mimicking aortopulmonary window

Aortopulmoner pencereyi taklit eden aberan patent duktus arteriyozus

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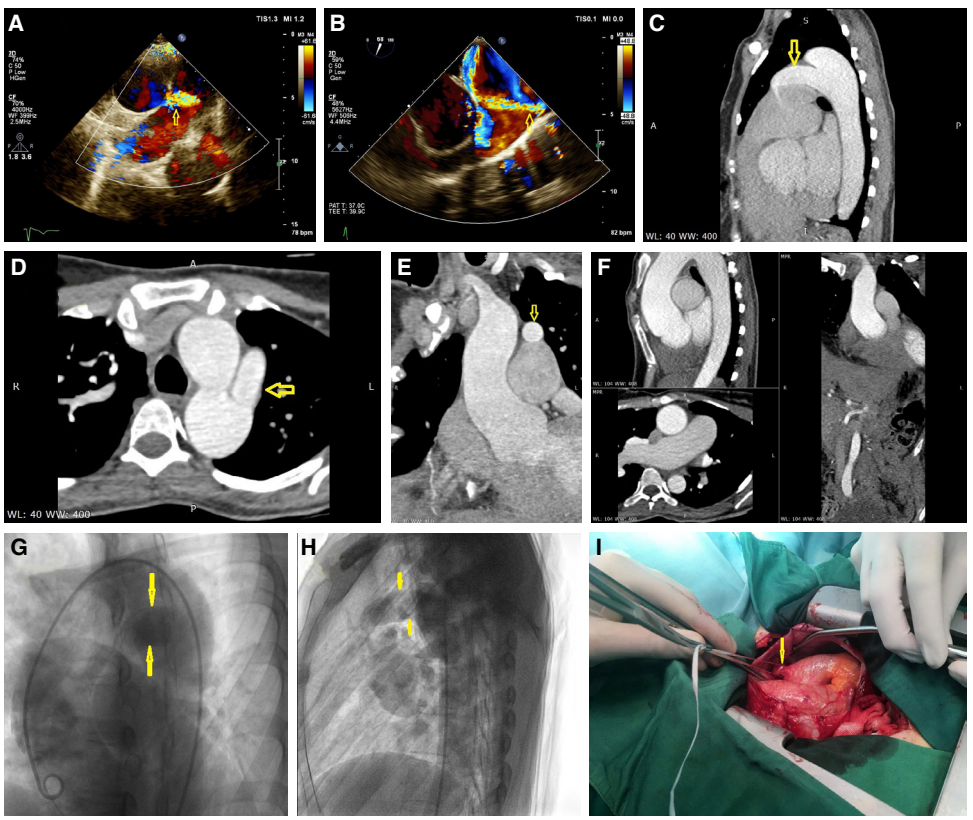
A 41-year-old woman presented at the outpatient clinic with a complaint of dyspnea on exertion. A continuous murmur at the upper left sternal border was heard. Electrocardiography showed T-wave inversion in V1–V4. Transthoracic echocardiography revealed mild left ventricular enlargement with normal systolic function (ejection fraction: 55%) and there was a continuous crossing flow between the medial and lateral walls of the pulmonary artery main trunk (PAMT), simulating an aortopulmonary window (APW) (Fig. A, Video 1*). Transesophageal echocardiography illustrated a defect in the distal part of the lateral wall of the PAMT (orifice: 4 mm) (Fig. B, Video 2*). Computed tomography angiography documented a large connecting artery between the origin of the descending aorta and the PAMT, suggestive of an aberrant patent ductus arteriosus (PDA) (Fig. C–F). Ascending and descending aortograms provided another view of this aberrant communication (Fig. G, H, Video 3, 4*). Catheterization revealed that the pulmonary to systemic shunt ratio was 2:1 and that the pulmonary artery pressure was 45/20 mmHg. These findings were confirmed in the operating room, where this aberrant artery was divided and excised (Fig. I). Although an APW and a PDA are 2 types of connection between the aorta and the PAMT (the ascending aorta to the PAMT, and the proximal descending aorta to the PAMT, respectively), the surgical therapeutic approach to these congenital anomalies is different. Accordingly, when encountering an abnormal turbulent flow in the PAMT, an aberrant PDA should be included in the differential diagnosis.



Figures– (A) Parasternal short-axis view at the level of the aortic valve seen in transthoracic echocardiography indicated a crossing flow in the main trunk of the pulmonary artery (arrow); **(B)** Modified mid-esophageal right ventricular inflow-outflow view in transesophageal echocardiography showed a defect in the distal part of the lateral wall of the main pulmonary artery trunk with a continuous flow, suggestive of a communication between the pulmonary artery and the aorta (arrow). **(C–F)** Computed tomography angiography images of the aorta showing the filling of the pulmonary artery with the contrast agent as well as a large communicating artery between the origin of the descending aorta and the main trunk of the pulmonary artery (arrow). There was no connection between the ascending aorta and the main trunk of the pulmonary artery. Aortography image of the **(G)** ascending and **(H)** descending aorta showing a communicating artery between the descending aorta and the main trunk of the pulmonary artery. **(I)** Aberrant patent ductus arteriosus as observed on the surgical table. **Supplementary video files associated with this presentation can be found in the online version of the journal.*