

A rare case with tracheal compression: Circumflex aorta

Trakea basısı ile seyreden nadir bir olgu: Sirkumfleks aorta

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Circumflex aorta is a very rare cardiac anomaly. A circumflex aorta is described by retroesophageal crossing of the aorta and laying down on the contralateral side of the spine. It is usually seen with right aortic arch and any other intracardiac lesions. Sometimes the patients may present with dysphagia/respiratory distress or both, or may present accidentally.^[1]

A 40 day-old girl was referred to our hospital with the diagnosis of aortic interruption with patent ductus arteriosus (PDA). She was admitted to another center due to respiratory distress and poor feeding. On arrival, she was intubated and hemodynamics parameters were stable. On the examination, she was underweight, and had a holosystolic murmur on her left sternal border. She was taking prostaglandin perfusion. Echocardiography showed ventricular septal defect with inlet from outlet extension, right aortic arch with interruption and PDA. Therefore, computed tomography scan was done, which showed right aortic arch passing from right to left behind the trachea and descending aorta laying down on the left side of the spine. And virtual bronchoscopy was made for showing the compression. Aberrant left subclavian artery was originated from the

kommerell diverticulum (Figure 1). Then, surgery was performed.

Our patient underwent aortic uncrossing procedure due to tracheal compression (Figure 1). After surgery, she could not wean from the mechanic ventilation a long time and required tracheostomy. She was fed with nasogastric tube due to swallowing dysfunction.

To date, various surgical techniques have been developed for circumflex aorta and retroesophageal obstruction. However, these techniques are not sufficient to solve the obstructive symptoms. After many surgeries, Drs. Planché and Lacour-Gayet^[2] performed a surgical technique which named "aortic uncrossing" which was able to solve both aortic and tracheoesophageal compression.^[2] The study of Robotin et al.^[3] showed that early aortic uncrossing procedure would be beneficial in patients with compressive symptoms.

In conclusion, aortic uncrossing surgery with reconstruction of the arch in circumflex aorta with hypoplasia/coarctation can solve the compression symptoms and obstruction. Residual tracheomalacia may cause persistent symptoms. If the anatomy of anomaly is precise, aortic uncrossing procedure should be performed early with major complications.

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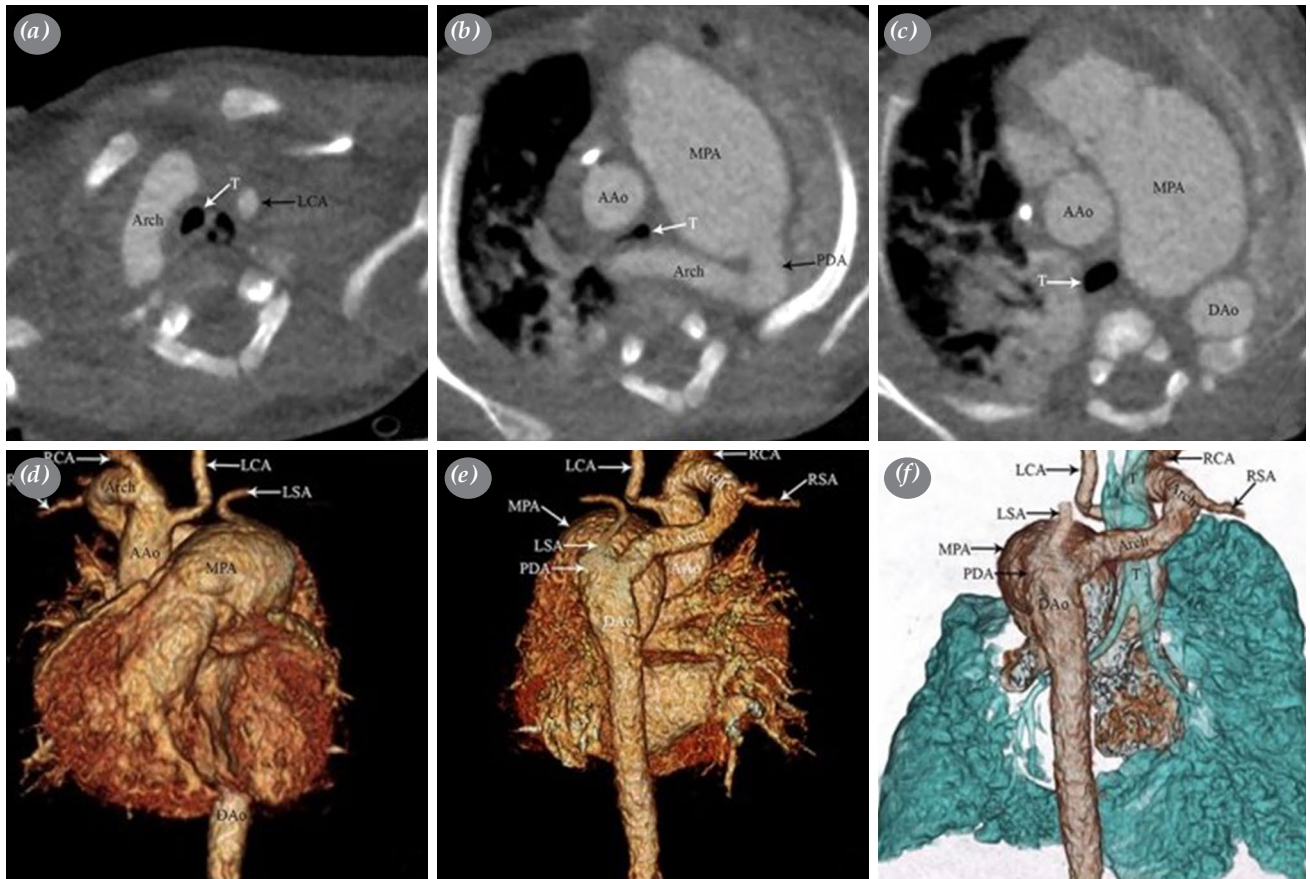


Figure 1. (a-c) Computed tomography showing circumflex aorta and tracheal compression. (d, e) 3D computed tomography showing circumflex aorta, aortic arch anterior and posterior image. (f) Virtual bronchoscopy showing circumflex aorta and tracheal compression. AAo: Ascending aorta; DAo: Descending aorta; LCA: Left carotid artery; LSA: Left subclavian artery; MPA: Main pulmonary artery; PDA: Patent ductus arteriosus; T: Trachea.

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