Incomplete double aortic arch

Fig. 1

Fig. 2

Double aortic arch with atresia of the distal left arch segment is a form of incomplete double aortic arch and represents an unusual cause of a potentially symptomatic vascular ring. As in the case of other vascular rings, this anomaly has the potential of producing stridor, wheezing, or dysphagia [1, 2].

We investigated a one-year-old boy who was admitted with recurring pneumonia. Physical examination revealed stridor and wheezing. Routine contrast-enhanced axial thorax CT images showed right archus aorta and vascular ring. In order to show contact between the tracheobronchial tree and the abnormal vascular structure, contrast-enhanced multi-detector CT angiography was performed. Coronal MIP images shows right archus aorta (star), double aortic arch, incomplete double aortic arch with left arch atresia (arrow), and tracheal narrowing (Ao:aorta) (Fig. 1). Three dimensional reconstructed CT images make it easier to see the incomplete double aortic arch, aorta, and its branches. (Ao: aorta, arrow: left aortic arch; Fig. 2).

As shown with our case, incomplete double aortic arch has distinctive imaging features. Multi-detector CT angiography can provide reliable diagnostic information to aid the surgeon in operative planning.

Mecit Kantarci, Erdem Sagsoz, and Naci Ceviz

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Correspondence: Mecit Kantarci MD, 200 evler Mah. 14. Sok. No 5, Dadaskent, Erzurum, Turkey, E-mail: akkanrad@hotmail.com