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Asymptomatic Balanced-Type Double Aortic Arch in an Elderly Patient: A Case Report

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ABSTRACT

Double aortic arch is a congenital abnormality and sporadic cases have been reported in adult patients, who are usually diagnosed after complaining of asthma-like symptoms or swallowing difficulties because of the compression of the trachea or esophagus by the abnormal aortic arches. We present the case of a 67-year-old male patient with double aortic arch, found coincidentally during coronary angiographic examination.

INTRODUCTION

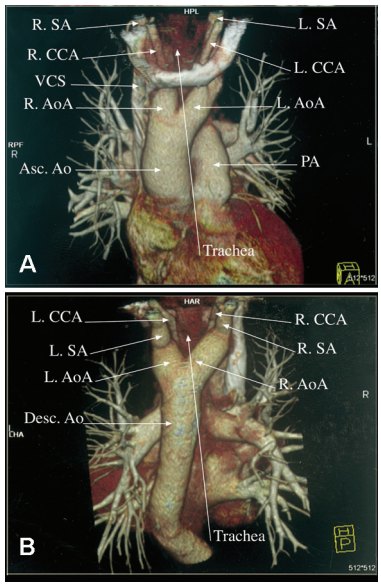
Double aortic arch is a congenital abnormality and sporadic cases have been reported in adult patients, who are usually diagnosed after complaining of asthma-like symptoms or swallowing difficulties because of the compression of the trachea or esophagus by the abnormal aortic arches. Only 4 asymptomatic adult cases have been reported in the English literature and this is the first case that was documented by 64-multislice computed tomography.

CASE REPORT

We present the case of a 67-year-old male patient with double aortic arch, found coincidentally during coronary angiographic examination. The patient was admitted to our outpatient clinic with angina-like symptoms and coronary angiography revealed no critical coronary artery stenosis. Three-dimensionally reconstructed 64-multislice computed tomography revealed a double symmetric aortic arch in both the left and right sides (Figure). The patient had neither respiratory symptoms nor dysphagia. In this particular case, the trachea and esophagus were placed in the middle of the aortic ring without compression because the right and left aortic arches were almost the same size (balanced) and the inner space of the ring was large enough to fit them both inside and there was no tracheal compression identified on native tomography images. We followed the patient without surgical treatment.

CONCLUSION

The most frequent and severe vascular ring is produced by a double aortic arch in which the 4 embryonal aortic arches persist on both sides. In most cases, this abnormality is diagnosed in childhood because of symptoms related to esophageal or tracheal compression, and surgical correction



Three-dimensionally reconstructed 64-multislice computed tomography revealed double aortic arches. Right aortic arch (R. AoA) and left aortic arch (L. AoA) separated at the distal portion of the ascending aorta (Asc. Ao) (A) and joined at the proximal portion of the descending aorta (Desc. Ao) (B). The right subclavian artery (R. SA) and right common carotid artery (R. CCA) originated separately from the right aortic arch (R. AoA), and the left subclavian artery (L. SA) and left common carotid artery (L. CCA) originated from the left aortic arch (L. AoA). PA indicates pulmonary artery; VCS, vena cava superior.

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usually yields a good prognosis. Case reports of elderly patients are very rare, especially symptom-free cases. As Kindler and colleagues [2005] concluded, the incidence and prevalence of this rare pathology may be underestimated.

REFERENCE

Kindler H, Bagger JP, Tait P, Camici PG. 2005. A vascular ring without compression: double aortic arch presenting as a coincidental finding during cardiac catheterization. Heart 91:773.