



IMAGE IN CARDIOLOGY

Unearthing an interrupted aortic arch in an elderly patient – Listen, watch and feel

Descobrimo uma interrupção do arco aórtico num doente idoso – ouvir, ver, sentir

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A 67-year-old male, with a history of hypertension, was investigated for an unquantified weight loss in the previous month. There was reference to an intermittent claudication of the lower limbs with moderate intensity exertion.

On physical examination there was a discrepancy in the blood pressure (BP) assessed in the upper limbs (BP left arm 160/64 mmHg) and lower limbs (BP left leg 83/59 mmHg). The physical examination was otherwise unremarkable.

A cardiac gated computed tomography (Figure 1) demonstrated a left aortic arch with normal origin of the coronary arteries and supra-aortic branches and a type A interruption of the aortic arch with extensive collateral circulation. An angiography was performed (Figure 2) confirming the absence of continuity between arterial lumens. A transthoracic echocardiogram revealed no cardiac abnormalities.

A brain magnetic resonance imaging showed three saccular intracranial aneurysms in the superior branch of the middle cerebral artery. The patient underwent surgery with technical success.

After multidisciplinary meetings, surgical correction was ruled out given the patient's asymptomatic status. After five years of follow-up the patient remains asymptomatic and properly controlled hypertension.

An interruption of the aortic arch is a rare presentation of an aortic arch obstruction. It is diagnosed principally in infancy and most patients have associated intracardiac abnormalities and require surgery at a young age. There is a known association between aortic arch abnormalities and intracranial aneurysms; screening may be warranted.

This case represents a rare presentation of an asymptomatic finding and this patient is, to our knowledge, one of the oldest individuals in whom this condition had been left undiagnosed.

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Figure 1 A cardiac gated CT scan revealed a transverse arch slightly hypoplastic with reduction of the luminal diameter (14 mm×19 mm). “Pencil tip” stenosis of the isthmus area of the aorta without continuity between the two arterial lumens. Collateral circulation, mainly due to the intercostals, internal mammary and epigastric arteries was noted.



Figure 2 An aortic arch angiography demonstrated discontinuity of the aortic lumen distal to the origin of the supra-aortic branches.

Conflicts of interest

The authors have no conflicts of interest to declare.