

Images in Thorax

Aneurysm of aberrant right subclavian artery (arteria lusoria) presenting as cardiac dyspnoea

A 75-year-old Caucasian man presented with a 3-month history of progressive dyspnoea, unrelated to position, with an exercise tolerance of 100 m. He had experienced thrombolysis following an inferior myocardial infarction 8 years previously.

Initial diagnosis was cardiac dyspnoea; transthoracic echocardiogram showed moderate left ventricular dysfunction without significant progression from previous studies. Spirometry demonstrated fixed plateaued flow during forced inspiration and forced expiration. Cardiac MRI demonstrated an ejection fraction of 48% but no reversible ischaemia. Incidental note was made of an aneurysmal aberrant right subclavian artery compressing the trachea, further characterised by CT angiography (figure 1).

Arteria lusoria is an anomaly occurring in 0.5–2% of individuals, but is typically asymptomatic.¹ Aneurysmal dilatation may result in tracheal compression in the absence of dysphagia.

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Learning points

- ▶ Routine cardiac imaging techniques (transthoracic echocardiogram, coronary angiography) were insufficient to establish the correct diagnosis.
- ▶ Cross-sectional imaging has a significant role to play in evaluation of patients with exertional dyspnoea whose symptoms are not explained by echocardiography.
- ▶ Aneurysm of an arteria lusoria is a rare cause of obstructive dyspnoea; however, diagnosis is important to avoid the 19–53% risk of rupture.^{2,3}

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Figure 1 CT with intravenous contrast demonstrating an aneurysm of an aberrant right subclavian artery compressing the trachea. (A) Axial view showing the origin of the aberrant right subclavian artery; blood flow within the aneurysm (1) passes through significant intramural thrombus (2). There is partial compression of the trachea (3). (B) Oblique coronal plane showing the distal outflow beyond the aneurysm (4). (C) 3D reconstruction of the aneurysmal aberrant right subclavian artery. (D) Coronal reconstruction demonstrating the 6.6 cm maximal diameter of the aneurysmal portion.