

The atypical presentation of a giant and compressive aneurysm of the ascending aorta: beyond a worsening dyspnoea

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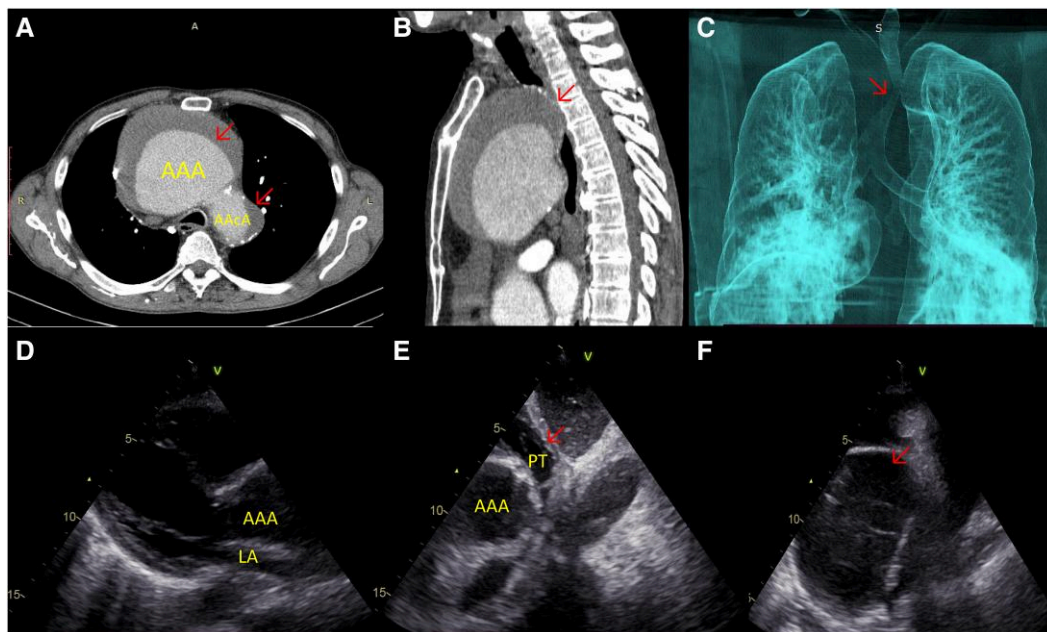


Figure 1 Panel A-F. (A) Computed tomography angiography, axial view, at the level of the thorax, showing two aneurysmal dilations with haematic densities around them, the first one at the level of the ascending aorta ($64 \times 95 \times 112$) and the second one at the aortic arch ($60 \times 50 \times 45$). (B) Angio-computed tomography, sagittal view showing the impressive aneurysm at the level of ascending aorta, compressing the intra-thoracic segment of the trachea. (C) Three-dimensional reconstruction, showing the important tracheal compression, caused by the aneurysm. (D) Transthoracic echocardiography showing the compression of the left atria. (E) Transthoracic echocardiography showing the compression of the pulmonary trunk and valve opening impairment due to high pressure within the artery. (F) Transthoracic echocardiography showing the false lumen inside the dissected aneurysm. AAA, ascending aorta aneurysm; AAcA, aortic arch aneurysm; LA, left atrium; PT, pulmonary trunk.

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A 58-year-old man was admitted to the Emergency Room of a regional Hospital with a 4-week history of dyspnoea, which aggravated progressively, and no thoracic pain.

Clinical examination revealed a highly anxious and tachycardic patient, presenting exhaling stridor, peripheral oxygen saturation of 73%, increased blood pressure (203/100 mmHg), and a diastolic aortic murmur. Laboratory tests revealed increased D-dimers ($>5 \mu\text{g/mL}$) and mild inflammation (C-reactive protein 3.82 mg/dL). Considering a high clinical suspicion of an acute pulmonary pathology, a computed tomography (CT) was performed in an emergency. The results were unexpected, highlighting the existence of two separate dissected aortic aneurysms (AA) surrounded by haematic densities (intramural haemorrhage): a larger one affecting the ascending aorta (maximum diameter: 112 mm) and a second, smaller one (50 mm), at the level of the aortic arch ([Figure 1 Panel A](#), [Supplementary material online, Videos S1 and S2](#)). CT examination also revealed significant compression of the intra-thoracic trachea inflicted by the larger aneurysm, which reduced the lumen of the airways by up to 90% in certain segments ([Figure 1 Panel B and C](#)). The larger AA was also visible on trans-thoracic echocardiography, which additionally showed a massive compression of the left atrium and the pulmonary trunk ([Figure 1 Panel D and E](#)). The false lumen and a subsequent mild aortic regurgitation were also evident ([Figure 1 Panel F](#) and [Supplementary material online, Videos S3 and S4](#)). Within hours, the patient underwent complex

surgery, however, he deceased due to post-operative refractory cardiogenic shock.

Asymptomatic AA is relatively frequent clinical finding. However, there are only a few asymptomatic dissected aneurysms cited in the literature. We reported a rare case of a dissected AA in a patient who presented exclusively for respiratory symptoms.

Supplementary material

[Supplementary material](#) is available at *European Heart Journal – Case Reports*.

Consent: The authors confirm that written consent has been obtained from the patient for the submission and publication of this cardiovascular flashlight, including images and associated text, in accordance with the COPE guidelines.

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Data availability

The data underlying this article are available in the article and in its online supplementary material.