Trepopnoea due to aneurysm of the descending thoracic aorta compressing the heart: an unusual occurrence

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DESCRIPTION

Trepopnoea is a symptom often described in relation to heart failure especially in cases having right-sided pleural effusion or other forms of unilateral lung disease.¹⁻³ A 50-year-old man with a history of development of severe breathlessness, profuse sweating, palpitations and dizziness on right decubitus position for the past 1-2 months was admitted with accelerated hypertension with acute pulmonary oedema. His blood pressure at the time of admission was 180/90 mm Hg, which dropped to 90/60 mm Hg every time the patient turned to the right lateral position. Echocardiography showed a large descending thoracic aortic aneurysm measuring 8.1×6.5 cm with spontaneous echo contrast and thrombus, compressing the left atrium and ventricle (figures 1-3, videos 1-2). CT scan confirmed the presence of a large descending thoracic aortic aneurysm compressing (arrow in figures)

Figure 1 Modified parasternal short-axis view showing the size of aneurysm to be 6.86×8.16 cm.

Figure 2 Parasternal long-axis view showing significant cardiac compression of the left ventricle by the grossly enlarged and aneurysmal descending aorta.

Figure 3 Modified parasternal short-axis view showing compression of the left ventricle by the large descending aortic aneurysm present immediately retrosternally.

Video 1 Modified parasternal long-axis view showing significant cardiac compression of the left ventricle by the grossly enlarged and descending aneurysmal aorta.

Video 2 Modified parasternal short-axis view showing compression of the left ventricle by the large descending aortic aneurysm present immediately retrosternally.

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Figure 4 Sagittal section image of CT scan showing the large aneurysm compressing the left-sided cardiac chambers.

the lateral wall of left atrium and ventricle (figures 4–7). This aneurysm caused cardiac compression that worsened in the right lateral position explaining the postural variation of symptoms and hypotension. The patient underwent emergent surgical correction of the thoracoabdominal aorta because of the risk of

Figure 5 Transverse image of CT scan showing the large aneurysm compressing the left-sided cardiac chambers.

Figure 6 Anteroposterior images showing the large sized aneurysm adjacent to the heart.

impending rupture of the aneurysm; unfortunately, the patient died of disseminated intravascular coagulopathy 4 days later as a postoperative complication of surgery.

The occurrence of this symptom caused by cardiac compression by a large thoracic aneurysm has never been described and is an interesting addition to the list of possible causes, which may be helpful for cardiologists and chest physicians.

Figure 7 Three-dimensional reconstructed images showing the large sized aneurysm adjacent to the heart.

Learning points

- ▶ Trepopnoea is an unusual symptom of an aortic aneurysm compressing the heart.
- ▶ Presence of an aneurysm should be kept as a differential diagnosis in patients presenting with trepopnoea when diagnostic tests for other common causes are negative.
- ▶ Echocardiography can be a useful screening tool for diagnosis of this rare entity, but the index of suspicion should be high to avoid missing the diagnosis.

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