

Straight Back Syndrome Masquerading as a Mass, with Near-Syncope

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A 40-year-old woman with no noteworthy medical history presented with palpitations, atypical chest tightness, and near-syncope. Two-dimensional transthoracic echocardiograms showed a small left atrium (Fig. 1); external compression from a mass was suspected. Cardiac magnetic resonance images revealed no masses (Fig. 2). However, there was a loss of normal thoracic kyphosis (Fig. 3), and the left atrium was abnormally small and elongated because of external compression from the thoracic spine. The diagnosis was straight back syndrome.

Comment

In straight back syndrome,¹ the anterior concavity of the vertebral column in the upper dorsal region is absent. This reduces the anteroposterior diameter of the thorax, causing compression of the heart and great vessels between the spine and the sternum. Skeletal deformities of the thoracic cavity can produce functional disturbances of the cardiovascular system, as in our patient.

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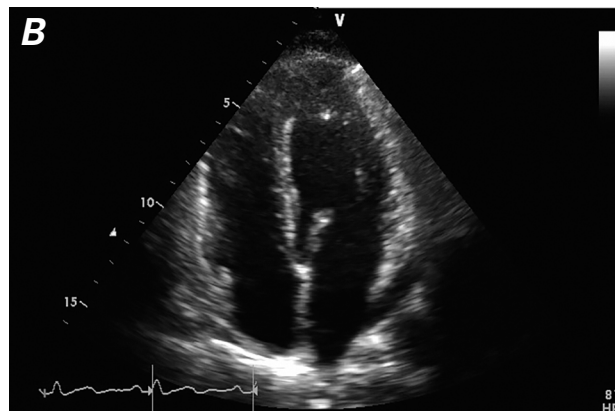
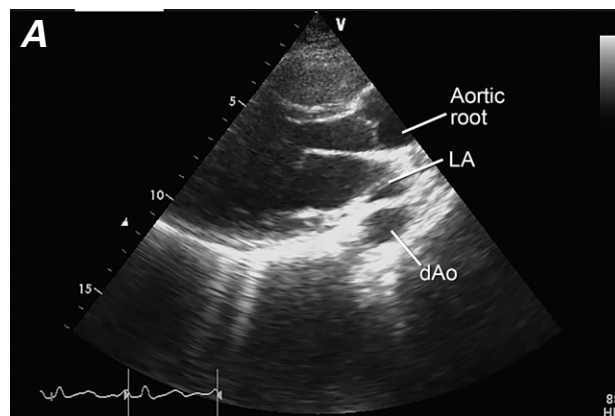


Fig. 1 Two-dimensional echocardiograms in **A**) parasternal long-axis and **B**) apical 4-chamber views show a small left atrium (LA).

dAo = descending aorta

References

1. Esser SM, Monroe MH, Littmann L. Straight back syndrome. Eur Heart J 2009;30(14):1752.

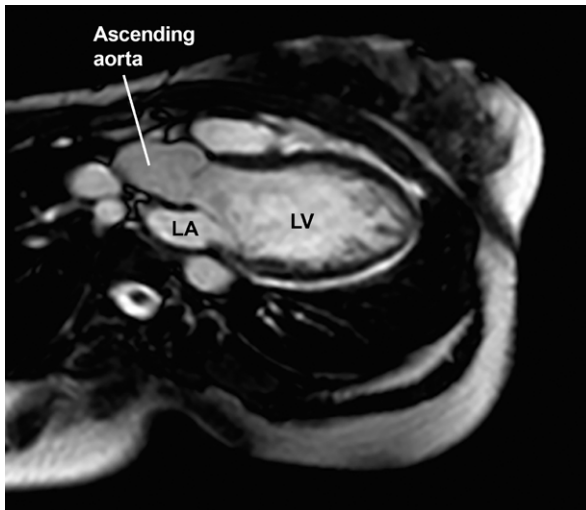


Fig. 2 Magnetic resonance image (left ventricular outflow tract view) shows a small left atrium (LA) with no evidence of compression by an external mass.

LV = left ventricle

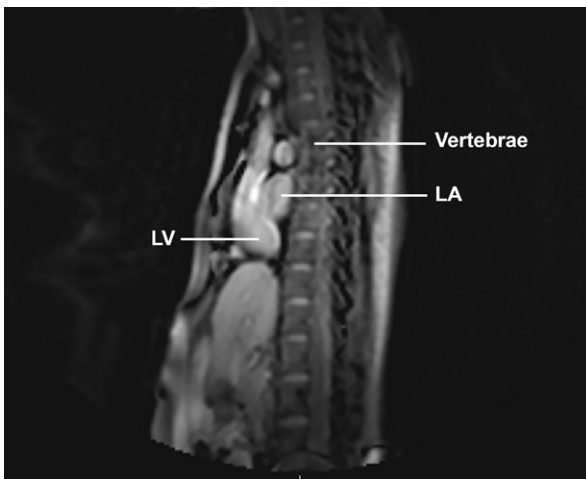


Fig. 3 Magnetic resonance image shows a straight spine with loss of thoracic kyphosis.

LA = left atrium; LV = left ventricle