

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

Abdelkader Almanfi, MD,
MRCP (UK)
Sandeep Y. Patel, MD
Jonas Garcia, MD
Benjamin Y.C. Cheong,
MD, FACC

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.

Section Editor:

Raymond F. Stainback, MD,
Department of Adult
Cardiology, Texas Heart
Institute, 6624 Fannin St.,
Suite 2480, Houston, TX
77030

From: Departments of
Cardiology (Drs. Almanfi
and Garcia) and Radiology
(Drs. Cheong and Patel),
Texas Heart Institute,
Houston, Texas 77030

Address for reprints:

Abdelkader Almanfi, MD,
MRCP (UK), Department
of Cardiology, Texas Heart
Institute, MC 1-133, 6720
Bertner Ave., Houston, TX
77030

E-mail: aalmanfi@
stlukeshealth.org

© 2016 by the Texas Heart®
Institute, Houston

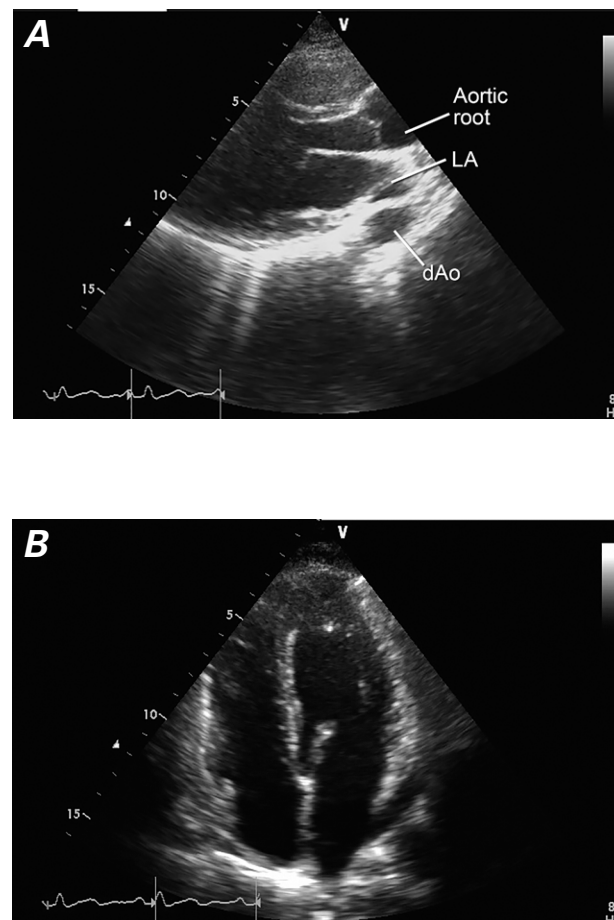


Fig. 1 Two-dimensional echocardiograms in **A)** parasternal long-axis and **B)** apical 4-chamber views show a small left atrium (LA).

dAo = descending aorta

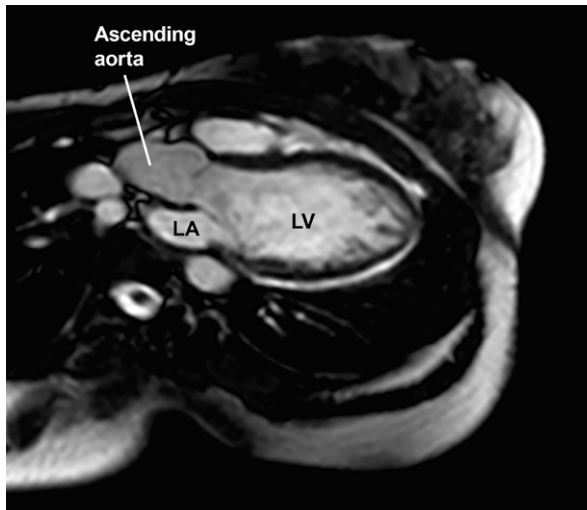


Fig. 2 Magnetic resonance image (left ventricular outflow tract view) shows a small left atrium (LA) with no evidence of compression by an external mass.

LV = left ventricle

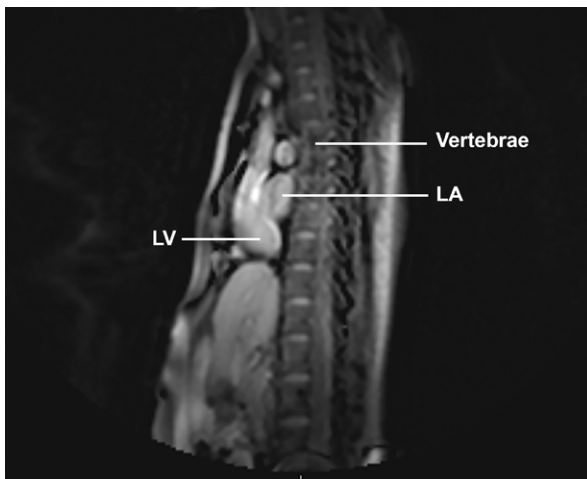


Fig. 3 Magnetic resonance image shows a straight spine with loss of thoracic kyphosis.

LA = left atrium; LV = left ventricle

References

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