Intra-aortic chord: A new entity?

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Disclosures: Authors have nothing to disclose with regard to commercial support.

Received for publication Sept 21, 2017; revisions received Jan 11, 2018; accepted for publication Feb 4, 2018; available ahead of print May 17, 2016.

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J Thorac Cardiovasc Surg 2018;156:355-6
0022-5223/$36.00
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https://doi.org/10.1016/j.jtcvs.2018.02.003

Video clip is available online.

A 65-year-old woman with hypertension was admitted to the hospital for acute and prolonged anterior chest pain. Clinical evaluation yielded normal results. Transthoracic echocardiography revealed the presence of an apparent

FIGURE 1. A, Multidetector computed tomographic angiography axial slice shows an intimal flap in the distal part of the ascending aorta. B and D, Axial slice (B) and sagittal multiplanar (D) views of the ascending aorta show an intraluminal chord crossing the aorta wall to wall B, C and D, Axial (C) and sagittal (B, D) multiplanar views of the ascending aorta show an intraluminal chord crossing the aorta wall to wall (arrow).
intimal flap, located at the distal part of the ascending aorta. Multidetector computed tomographic angiography (MDCTA) showed the presence of a linear, 1- to 2-mm thick flap crossing the aorta wall to wall (Figure 1).

Because the MDCTA images were not typical of acute aortic syndrome, the patient’s condition was medically managed. The diagnosis of acute aortic syndrome was definitively affirmed rejected with MDCTA performed at day 5; no aortic hematoma, aortic dissection, or penetrating ulcer was found. Multiplanar 3-dimensional reconstructions of the aorta clearly demonstrated that the apparent intimal flap was rather an atypical retractile chord crossing the lumen of the distal part of the ascending aorta, from one point to another (Figure 2), as also shown by virtual angioscopy (Video 1).

MDCTA is a key examination in the workup of patients with chest pain not related to coronary artery disease. Acute aortic syndrome is usually easily diagnosed. In the case described here, the apparent intimal flap seen on transthoracic echocardiography and initial MDCTA was rather intriguing. It was not associated with the presence of a false lumen, nor with an aortic wall thickening. Its location was restricted to the distal part of the ascending aorta, with no mobility (there was no fluttering of the flap within the aortic lumen), and the lesion was very focal. There were thus many arguments against aortic dissection.

To the best of our knowledge, the description of an intra-aortic chord has not been reported so far. This exceptional entity can be accurately assessed by MDCTA of the aorta as a thin linear and short cylindric plain tube, attached to 2 distinct points of the aortic wall and crossing the aortic lumen.

References