



## IMAGE IN CARDIOLOGY

# Suprasternal echocardiography and aortic dissection



## Ecocardiografia supraesternal e disseção aórtica

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A 48-year-old woman with no significant cardiovascular history presented to the hospital with a chief complaint of acute chest pain, without radiation, associated with an episode of blurred vision. The physical examination was remarkable for a systolic blood pressure differential in the upper limbs (left 129/43 mmHg, right 40/20 mmHg), absence of right radial and brachial pulses, and a holodias-tolic aortic murmur.

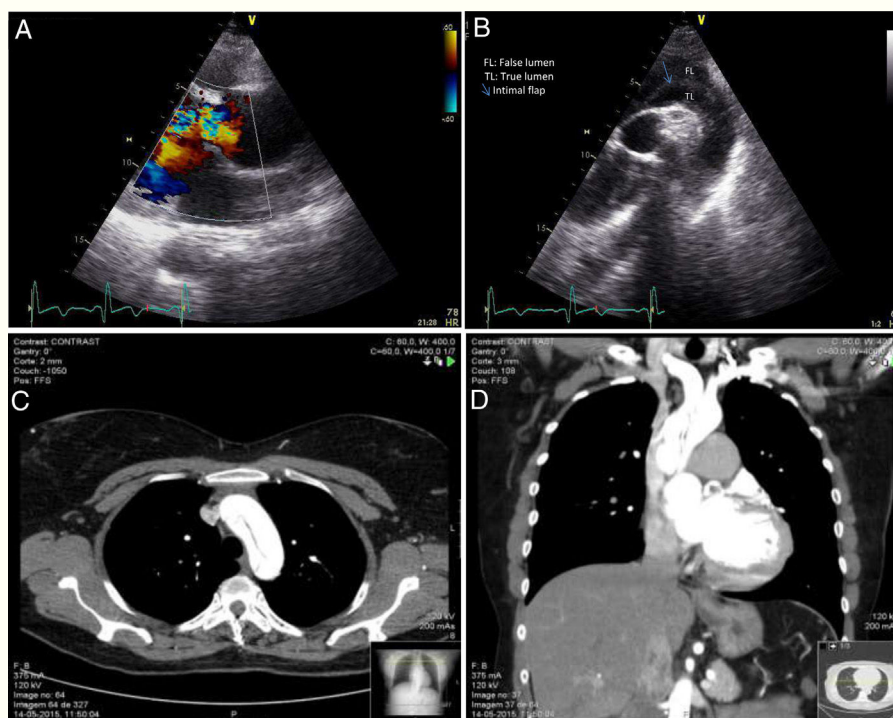
The electrocardiogram revealed left ventricular hypertrophy. Emergent transthoracic echocardiography in left parasternal view showed dilatation of the thoracic ascending aorta (43 mm) and a bicuspid aortic valve, with severe regurgitation due to prolapse of the cusps (Figure 1A). In the suprasternal window, at the level of the aortic arch, an

intimal flap with supra-avalvar origin and extension to the aortic arch, descending thoracic and abdominal aorta was clearly evident (Figure 1B, Videos 1 and 2). Biventricular systolic function was normal and there was no pericardial effusion. Subsequently, cardiac computed tomography confirmed the presence of a Stanford type A aortic dissection (Figure 1C and D). The patient was referred for emergent cardiac surgery. At three months of follow-up, she was asymptomatic, with no signs of target organ damage.

Aortic dissection is an uncommon but potentially fatal condition. The accessibility and diagnostic ability of bedside echocardiography enabled the rapid detection and prompt treatment of this condition, contributing to the good end result.

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**Figure 1** (A) Severe aortic regurgitation due to a prolapse of the cusps; (B) suprasternal view, at the level of the aortic arch, showing an intimal flap (blue arrow) with supralvalvar origin and extension to the aortic arch; (C and D) cardiac computed tomography confirming the presence of a Stanford type A aortic dissection. FL: false lumen; TL: true lumen.

## Ethical disclosures

**Protection of human and animal subjects.** The authors declare that no experiments were performed on humans or animals for this study.

**Confidentiality of data.** The authors declare that they have followed the protocols of their work center on the publication of patient data.

**Right to privacy and informed consent.** The authors declare that no patient data appear in this article.

## Conflicts of interest

The authors have no conflicts of interest to declare.

## Appendix A. Supplementary material

Supplementary material associated with this article can be found in the online version at <http://dx.doi.org/10.1016/j.repc.2016.07.010>.