

# Reversible tricuspid valve stenosis induced by ascending aorta aneurysm: an image focus

Odwracalna stenoza zastawki trójdzielnej spowodowana tętniakiem aorty wstępującej: badania obrazowe

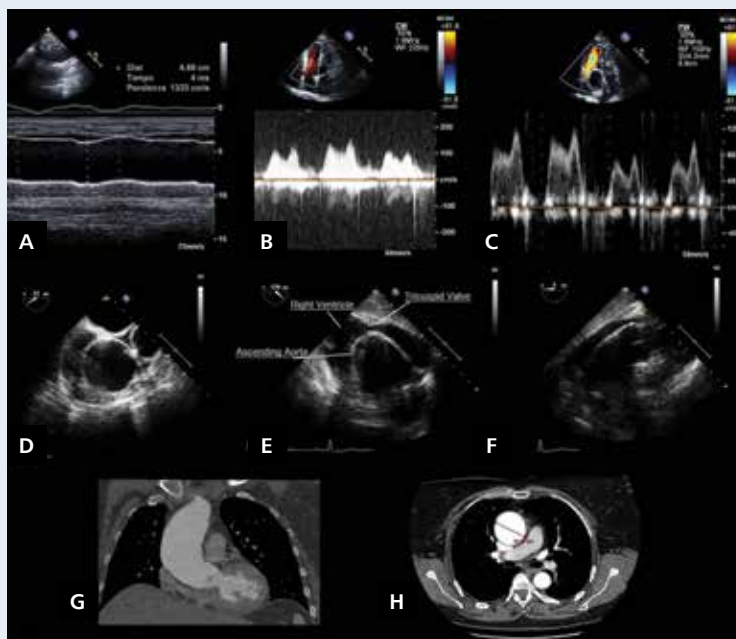
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A 42-year-old Caucasian woman was admitted to our Emergency Department complaining of headache and nausea. Her blood pressure was 240/130 mm Hg, and she was diagnosed as having a hypertensive crisis with suspected hypertensive encephalopathy. Her physical exam was unremarkable. To perform a comprehensive study of the patient, a standard transthoracic echocardiography was performed: it showed a left ventricle with a concentric remodelling and with a preserved systolic function (ejection fraction of about 60%). Moreover, a significant dilation of the ascending aorta was noted with a maximum diameter of 47 mm (Fig. 1A). The aortic valve was tricuspid with a central trivial regurgitation, the aortic root and the sino-tubular junction had normal diameters. In the apical four-chamber view, a dynamic tricuspid valve stenosis was observed (mean pressure gradient 4 mm Hg) (Fig. 1B) with a significant acceleration of the flow and a respiratory variation of the transtricuspidal inflow at the pulsed-wave Doppler greater than 30% (Fig. 1C). In order to better study the compression of the right chambers and the relationship between the dilated ascending aorta and the nearest cardiac structure, a transoesophageal echocardiography was performed. This showed a scoliotic and aneurysmatic ascending aorta with a diameter max of 50 mm (Fig. 1D) causing an external compression to the tricuspid valve (Fig. 1E, F). An angio-computed tomography of the chest confirmed the findings of the echocardiography (Fig. 1G, H). Unexpectedly, the patient had no signs of venous stasis and had no symptoms. Her antihypertensive medical therapy was optimised and, after surgical evaluation, she was enrolled on a six-month follow-up.



**Figure 1.** **A.** Transthoracic echocardiography, parasternal long axis view, M-mode on the ascending aorta; **B.** Continuous-wave Doppler of the tricuspid valve showing a reversible stenosis; **C.** Doppler-wave of the tricuspid valve showing a variation > 30%; **D.** Transoesophageal echocardiography, mid-oesophageal view, upper position, view of the great vessels, showing a dilated ascending aorta; **E, F.** Transgastric view, showing the dilated aorta compressing the tricuspid valve; **G.** Computed tomography, longitudinal view; **H.** Computed tomography, axial view

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**Conflict of interest:** none declared