A 53-year-old man was admitted with progressive exercise intolerance and presyncope. He had no history of congenital heart disease, but had reported these symptoms since childhood. Cardiovascular examination revealed completely normal findings and 12-lead electrocardiography showed sinus rhythm at 70 beats/minute. Two-dimensional echocardiography showed a defined membrane in the left atrium, dividing it into two chambers (Fig. 1), without transmembrane pressure gradient. The right ventricle had normal dimensions and there were no signs of pulmonary hypertension.

The membrane was examined more closely using TEE, which revealed three defects that allowed left atrial filling, demonstrated by colour Doppler (Fig. 2). With three-dimensional TEE we defined the exact membrane morphology; it was multifenestrated, crossing only half of the left atrial cavity (Fig. 3). Both of these noninvasive modalities provided a comprehensive anatomical and haemodynamic evaluation of the anomaly; the final diagnosis was nonstenotic cor triatriatum. The patient was scheduled for regular cardiology follow-up.

Cor triatriatum is a rare congenital condition (0.1% of all cardiac congenital malformations), in which the left atrium is divided into two chambers by a fibrous or fibromuscular septum. The posterosuperior chamber receives the pulmonary veins and the antero-inferior chamber has the left atrial appendage and the mitral valve. The diagnosis is often made early in childhood, mimicking mitral stenosis. Rarely, this disorder is discovered in adulthood, and depends on the number and size of fenestrations in the

**Abbreviations:** TEE, Transoesophageal echocardiography.

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Cor triatriatum: Transoesophageal three-dimensional reconstruction shows exact membrane morphology

Figure 1. Transthoracic echocardiogram shows the membrane dividing the left atrium into two chambers.

Figure 2. Transesophageal echocardiogram shows the three defects.

Echocardiography is the modality used most often to diagnose cor triatriatum; three-dimensional echocardiography can be used for identification and characterization, offering more information (e.g., spatial orientation) than two-dimensional echocardiography, and allowing the number of fenestrations and the membrane size to be viewed, as demonstrated in this case. Routine use of echocardiography has led to an increase in the frequency of diagnosis of cor triatriatum, and there are some published cases of incidental findings of the condition in adults. These patients rarely require surgical correction, but the exact diagnosis is important because the malformation may be easily correctable; surgical correction offers good early- and long-term results.

Conflicts of interest

None.