Sludge in a giant left atrium

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DESCRIPTION

A man aged 78 years who had been diagnosed with end-stage hypertrophic cardiomyopathy presented with dyspnoea. He was admitted to our hospital with a diagnosis of acutely exacerbated chronic heart failure. The patient had previously undergone bioprosthetic mitral valve replacement for non-rheumatic mitral regurgitation and pacemaker implantation for atrial fibrillation, with a slow ventricular response. He had received anticoagulation therapy (warfarin). Chest radiography revealed cardiomegaly with a markedly enlarged left atrial appendage (figure 1A). CT revealed massive left atrial enlargement (maximum diameter, 20.6 cm) and right-sided pleural effusion (figure 1B). A transthoracic echocardiogram showed a severely enlarged left atrium and mild degree of transvalvular regurgitation. The bioprosthetic mitral valve stenosis was insignificant; the mean pressure gradient of the mitral valve was 3.4 mm Hg on echocardiography, and the mean pressure difference between the pulmonary capillary wedge pressure and left ventricular pressure was 3.7 mm Hg on cardiac catheterisation. Although a relevant structural abnormality of the mitral valve prosthesis was not observed on transoesophageal echocardiography, a severely enlarged left atrium containing significant thrombus-free sludge could be seen (figure 2 and video 1). Sludge is a dynamic, gelatinous, precipitous echodensity without a discrete mass and is considered a more advanced stage along the spectrum of thrombus formation compared with spontaneous echo contrast.^{1 2} Comparable mortality and thromboembolic risk

Figure 2 Enlarged left atrium with thrombus-free sludge on TEE. TEE, transoesophageal echocardiogram; LA, left atrium; RA, right atrium.

Video 1 Enlarged left atrium with thrombus-free sludge on TEE. TEE, transoesophageal echocardiogram.

Figure 1 (A) Cardiomegaly with enlarged left atrial appendage (arrows). (B) Left atrial enlargement and right-sided pleural effusion on CT scan. LA, left atrium.

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have been reported in patients with atrial fibrillation with sludge and those with thrombi.³ Strict anticoagulation therapy should be administered to patients with sludge. The patient quickly recovered from a decompensated state and did not develop thrombotic complications.

Learning points

- ▶ Sludge is a more advanced stage along the spectrum of thrombus formation compared with spontaneous echo contrast.
- ▶ Strict anticoagulation therapy should be administered to patients with sludge.

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