Giant left atrial thrombus in moderate mitral stenosis

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Nearly every fifth mitral stenosis presents thrombi in the left atrium and therefore has remarkable therapeutic consequences. Most thrombi are located in the left atrial appendage, but atrial appendage thrombus can also extend to the left atrial cavity as in the presented case. This case shows the advantage of a combined diagnostic by MRI and transoesophageal echocardiography for a fast and sufficient detection as well as topologic classification of left atrial thrombi.

KEYWORDS
Echocardiography; MRI; Thrombus

A 85-year-old woman with chronic atrial fibrillation and moderate mitral valve stenosis (mitral valve area 1.2 cm²) was admitted because of rapidly progressive dyspnoea. Owing to repeated severe gastric bleeding, no anticoagulation was performed at that time. The chest roentgenogram demonstrated bilateral pleural effusion. Transthoracic echocardiography confirmed mitral stenosis and revealed an expanded and homogenous mass in the left atrium with an extent of 4 × 5 cm (Figure 1A). Additional MRI (1.5 T) showed this mass filling the lateral and superior wall of the left atrium (Figure 1B), but without signs of perfusion (Supplementary data, Movie 1). Transoesophageal echocardiography confirmed regional extent including the atrial appendage (Figure 1C) and detected mobile parts with abundant smoke in the left atrium (Supplementary data, Movie 2). In conclusion, the left atrial mass could be identified as a giant thrombus. The patient recovered under diuretics and after puncture of the pleural effusions. Fortunately, she demonstrated no thrombo-embolic events so far; however, risk of stroke is clearly increased.

Mitral stenosis is associated in up to 17% with atrial thrombus. Additional atrial fibrillation doubles the risk of left atrial thrombus. Most thrombi are located in the left atrial appendage, but in 2% of all mitral stenoses the auricular thrombus extends to the left atrial cavity. A pronounced thrombotic filling of the left appendage and atrium like in the presented case is rare.

Supplementary data
Supplementary data are available at European Journal of Echocardiography online.

References
Figure 1 (A) Echocardiographic four-chamber view presenting a large mass hugging the left atrial wall (white arrow). Note that the thrombus appears to be physically separated from the region of the left appendage (grey arrow). (B) Cardiac MRI in short axis view and early arterial phase of the contrast agent demonstrating a large mass inside the left atrium (white arrows). (C) Transoesophageal echocardiography of the left atrium at 114 degrees with a large wall adherent mass (white arrows) and abundant smoke (grey arrow) in the left atrium. Abbreviations: LV, left ventricle; RV, right ventricle; MV, mitral valve; RA, right atrium; LA, left atrium; AV, aortic valve; LAA, left atrial appendage.