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Spontaneous mitral annular rupture

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Introduction

Left ventricular false aneurysm is a rare complication that mostly occurs after mitral valve replacement[1] or myocardial infarction[2] as a results of the rupture of the myocardium. However, it is contained by the overlying adherent pericardium or scar tissue.[3] Owing to the high risk of rupture, urgent surgery is indicated. In contrast, in true aneurysm the myocardium is thinned and out-pouching but with some degree of intact myocardial wall integrity.[3]

Case description

A 79-year-old female patient with known mitral valve regurgitation presented with increasing exertional dyspnoea. Echocardiography, including contrast-enhanced transoesophageal echocardiography, showed a restricted posterior mitral leaflet with concordant severe mitral regurgitation and a perfused cavity left lateral of the left atrium, perfused from the left ventricle through the posterolateral mitral annulus (Figure *1*A and Supplementary material online, *Videos S1* and *S2*) without signs of an atrioventricular septal defect. For further evaluation, we performed a contrast-enhanced ECG-gated cardiac computed tomography (Figure *1*B) confirming a large perfused aneurysm with connection to the left ventricle via a small defect of the mitral annulus. The patient's medical history revealed an isolated tuberculosis of the colon 12 months ago, with subsequent surgical resection of the stenotic segment followed by a guideline-recommended tuberculostatic drug therapy for 6 months. There was no history of endocarditis, myocarditis, myocardial infarction, or cardiac or thoracic operation. A computed tomography of the chest performed during initial diagnostic evaluation of tuberculosis revealed a small pericardial effusion with inflammatory thickening of the pericardium. However, no extracardiac cavity could be depicted at that time. During the current presentation, antigen-specific T cell activity showed no signs of tuberculosis activity. The patient underwent cardiac surgery (Figure *1*C), where the mitral valve was reconstructed, the cavity resected, and the perforation covered with a pericardial

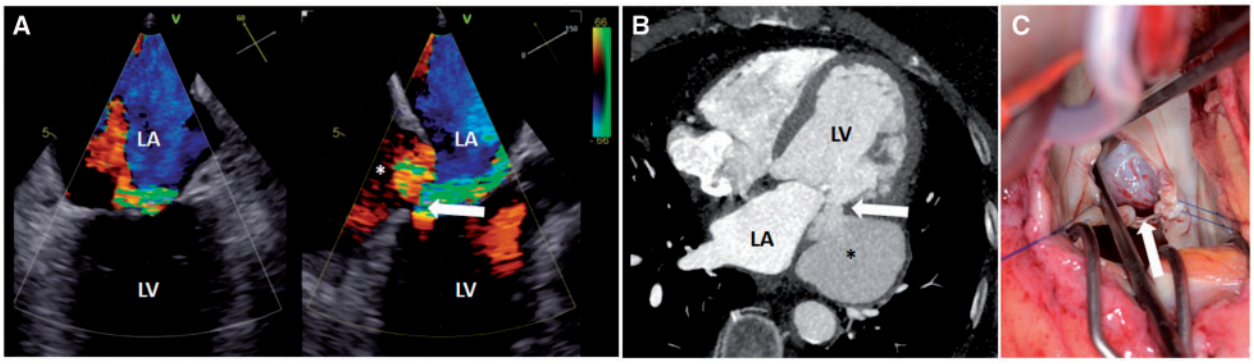

Figure 1 (*A*) Biplane transoesophageal echocardiography of the mitral valve. (*B*): ECG-gated cardiac computed tomography. (*C*) Intraoperative picture of the rupture of the mitral annulus. *Perfused aneurysm and perforation of the mitral annulus. Arrow demonstrates the aneurysm orifice. LA, left atrium; LV, left ventricle.

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patch. Multiple blood cultures and all intraoperatively obtained smears remained sterile.

In conclusion, we interpret these findings as a rare case of contained spontaneous rupture of the mitral annulus based on inflammatory degenerated myocardium.

Supplementary material

Supplementary material is available at *European Heart Journal - Case Reports* online.

Consent: The author/s confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient in line with COPE guidance.

Conflict of interest: none declared.

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