Successful transmitral repair of an inferobasal postinfarct pseudoaneurysm

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Follow-up transthoracic echocardiogram after a late presented myocardial infarction detected an inferobasal pseudoaneurysm, also confirmed by magnetic resonance imaging (MRI) stress perfusion (A and B), without further inducible ischaemia. To avoid atrioventricular rupture, we approached this pseudoaneurysm through the mitral valve and sealed off with a bovine pericardial patch (C and D).

(A) A 57-year old man presented following 2 days of chest pain, with raised troponin and Q waves inferiorly, which suggested a late presentation for primary percutaneous coronary intervention. He underwent coronaryography showing an occluded circumflex system, otherwise minor coronary disease. No intervention was performed as there was no evidence to suggest benefit from reopening of the circumflex artery. A routine follow-up outpatient transthoracic echocardiogram after 2 months detected an inferobasal pseudoaneurysm and a mild-to-moderate mitral regurgitation, also confirmed by MRI. Short-axis MRI with late gadolinium enhancement demonstrates scar over the inferolateral wall and the pericardium. (B) Three-chamber T2-weighted fat suppressed black-blood MRI image. The arrow marks pseudoaneurysm on the coronal plane. (C) Arrow shows bovine pericardial patch repair of pseudoaneurysm through an artificial mitral cleft at a standard left atrial horizontal approach. This cleft was reconstructed and ring annuloplasty also performed to restore annular integrity and to reduce tension on pseudoaneurysm repair. (D) Three-chamber black-blood MRI image showing repair of the false aneurysm at 6-month postoperative follow-up. No significant mitral regurgitation could be demonstrated on this occasion.

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