A 59-year-old male experienced severe central chest pain for 1 hour with no associated breathlessness. His medical history included rheumatoid arthritis for which he took methotrexate. His 12 lead electrocardiogram confirmed sinus rhythm with a heart rate of 68 bpm, Q waves in the inferior leads and persisting ST segment elevation in leads V3–V6. Blood tests confirmed increased troponin and an echocardiogram confirmed severely impaired left ventricle function. Angiography noted an occluded right coronary artery with plaque in the left anterior descending artery but no targets for revascularization. As he had no further chest pain he was discharged home with a follow-up at 1 month to consider whether he was suitable for an implantable cardioverter defibrillator.

Cardiac magnetic resonance imaging (MRI) after 1 week confirmed a dilated left ventricle with an ejection fraction of 35%. There was a transmural myocardial infarction with a pseudoaneurysm of the basal inferior and inferolateral wall, contained by the pericardium (Figure 1a). Late gadolinium enhancement imaging demonstrated full thickness infarction in this region (Figure 1b) and infarction in the apex. This patient was treated medically.

A pseudoaneurysm is a contained rupture of a blood vessel or of the myocardial wall contained by pericardium, thrombus or adhesions. An aneurysm, in contrast, results from a weakness in the wall with an outer layer that contains all layers of the myocardium. Differentiating these is clinically relevant as pseudoaneurysms have a greater risk of rupture and historically have had surgical treatment. The incidence of left ventricular aneurysms in patients with Q wave myocardial infarction is thought to be 8–15%. The natural history of untreated ventricular pseudoaneurysm in asymptomatic patients is not clearly defined, and the evidence is largely based on retrospective single centre case series. The risk of rupture had been thought to be as high as...
although advances in imaging have increased the detection of ‘incidental’ pseudoaneurysms in asymptomatic patients, possibly diluting this rupture risk. In a series published in 1998, 10 patients with ventricular pseudoaneurysms who did not undergo surgery did not rupture over the 4-year follow-up. A recent publication described a good outcome in a similar patient not treated surgically. Treatment of blood pressure, optimizing heart failure medications and consideration of anticoagulation are undoubtedly important in these patients.

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References