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## **Aneurysm of the left ventricle: Truths and falsehoods**

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## **Aneurysm of the left ventricle: Truths and falsehoods**

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We report a case of the postmyocardial aneurysm of the left ventricle which occurred challenging in diagnosis until intraoperative assessment. A 59-year-old female patient was admitted to the intensive cardiac care unit due to sustained chest pain with electrocardiographic (ECG) suspicion of posterior myocardial infarction (MI), accompanied by sweat and malaise for 4 days prior to admission. Her medical history included hypertension, untreated hyperlipidemia, smoking, family history of MI, and history of mild gastritis. Due to sustained chest pain the patient was immediately admitted to the catheterization laboratory and underwent coronary angiography that revealed proximal occlusion of the circumflex artery (Cx) (**Figure 1A**). The patient underwent percutaneous coronary intervention (PCI) of the Cx with a drug-eluting stent with TIMI 3 flow (**Figure 1B**). Pericardial chest pain returned in the night following PCI, with no subsequent ECG changes. Echocardiography performed after PCI revealed moderate mitral regurgitation with regional abnormalities in contractility, akinesis of the posterior, lateral, and inferior wall with wall thickness of 11 mm, an ejection fraction of 35%, and pericardial effusion with a maximal diameter of 12 mm of fluid in front of the right

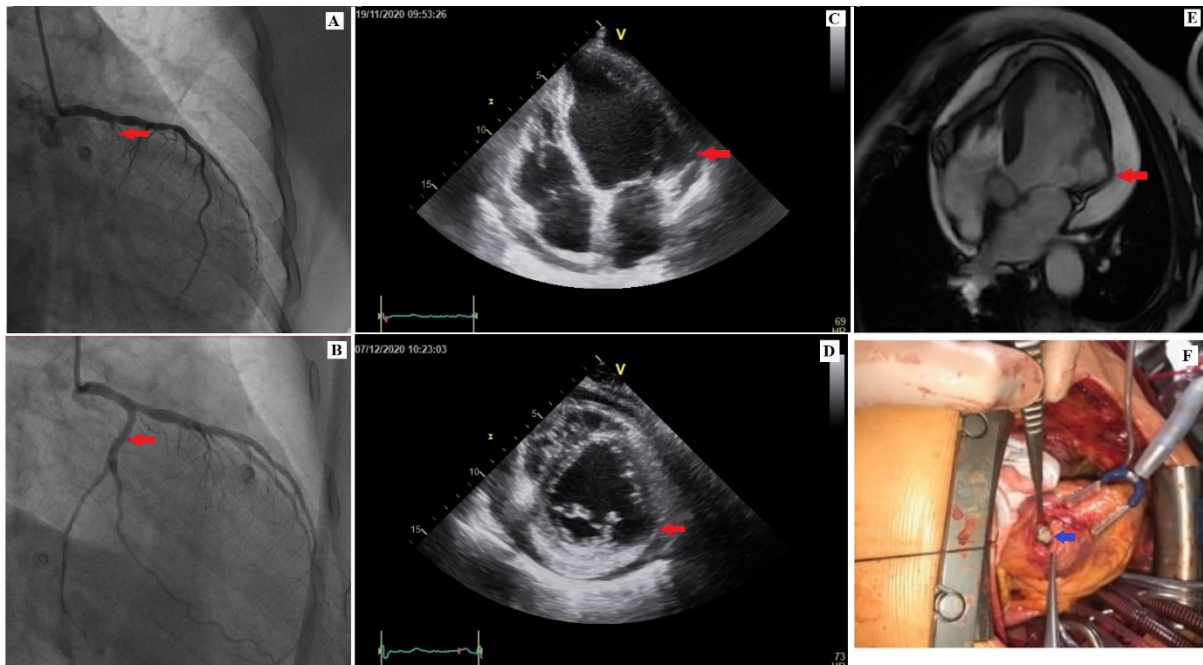
ventricle, without signs of tamponade. Pericardial effusion was treated with colchicine. Consecutive echocardiographic assessments revealed reduction of the pericardial effusion and left ventricle remodeling with formation of aneurysm in basal and medial segments of lateral wall with significant wall thinning to 3–4 mm. Severe functional mitral regurgitation was diagnosed (Figure 1C, 1D). Follow-up echocardiographic study after one month revealed an increase in pericardial effusion, and the patient complained of recurrent chest pain. The patient was re-admitted, and Dressler syndrome was diagnosed and treated with ibuprofen. Consecutive echo studies revealed decreased systolic function of the anterior wall, with a previously diagnosed aneurysm of the posterolateral wall. The patient underwent control coronary angiography, which revealed a good effect of PCI, without significant obstruction in the other coronary arteries. A magnetic resonance imaging (MRI) study was performed to confirm the diagnosis of Dressler syndrome and true aneurysm of the basal inferior and inferolateral segments with a thin (3 mm) wall (Figure 1E). Due to deterioration of left ventricular function with an aneurysm, the patient was referred to a cardiac surgeon, who suspected a false aneurysm. The patient was subsequently transported to the cardiac surgery unit. During aneurysmectomy, the suspicion of a false aneurysm was confirmed (Figure 1F). The patient was discharged a few days later in good condition, and was sent for cardiac rehabilitation.

There are few documented cases of true and false aneurysms in the same patient [1–3]. Despite the research proving promising specificity and accuracy of MRI, the diagnosis of false aneurysms still remains challenging [4, 5]. Taking into consideration a higher risk of cardiac tamponade, shock, and death among patients with a false versus true aneurysm, accurate diagnosis of these conditions is clinically important. Therefore a deterioration of left ventricular function, especially after MI, with a long delay from symptom onset to treatment, should be carefully evaluated.

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**Figure 1.** **A.** Coronary angiography — the arrow points at the proximal occlusion of the circumflex artery; **B.** Coronary angiography — the arrow points at the circumflex artery after percutaneous coronary intervention with stent implantation; **C.** Echocardiography — apical four-chamber view; **D.** Echocardiography — short axis view; **E.** Magnetic resonance imaging — the arrows in these panels point at the aneurysm of the lateral wall; **F.** Intraoperative picture — the blue arrow points at the visible discontinuity of the myocardium