

## CLINICAL IMAGE

# Left ventricular aneurysm: a rare complication of an acute myocardial infarction in the modern era

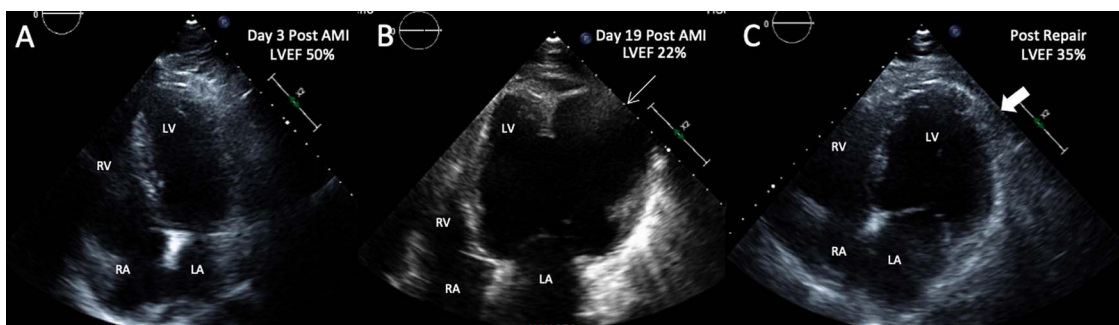
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A 56-year-old female with a history of well-controlled hypertension and gastroesophageal reflux disease presented with an inferolateral ST segment elevation myocardial infarction >48 h after the onset of chest pain. She underwent a coronary angiogram, which demonstrated complete occlusion of the left circumflex coronary artery, which was treated with a drug-eluting stent. A transthoracic echocardiogram (TTE) performed on Day 3 post acute myocardial infarction (AMI), revealed a dilated left ventricle (LV) with near normal systolic function (Fig. 1A). The patient was subsequently discharged home on appropriate medical therapy. She represented 2 weeks later

with symptoms of decompensated congestive cardiac failure. A repeat TTE revealed significant impairment of LV function and a prominent LV aneurysm in the lateral wall with the aneurysmal neck measuring 57 mm (Fig. 1B). Reconstructed CT images demonstrated a large aneurysm in the posterolateral wall of the LV (Fig. 2). The mouth of the aneurysm measured 64 mm × 49 mm. She subsequently had a LV aneurysmectomy and repair with a bovine pericardial patch. A follow-up TTE revealed a significantly smaller residual apicolateral wall aneurysm, with residual moderate impairment of LV function (Fig. 1C).



**Figure 1:** Serial transthoracic echocardiogram images in apical 4 chamber views showing day 3 post AMI (A), day 19 post AMI (B) and post aneurysmectomy (C), large left apicolateral ventricular aneurysm (arrow); repaired aneurysm with pericardial patch (bold arrow).

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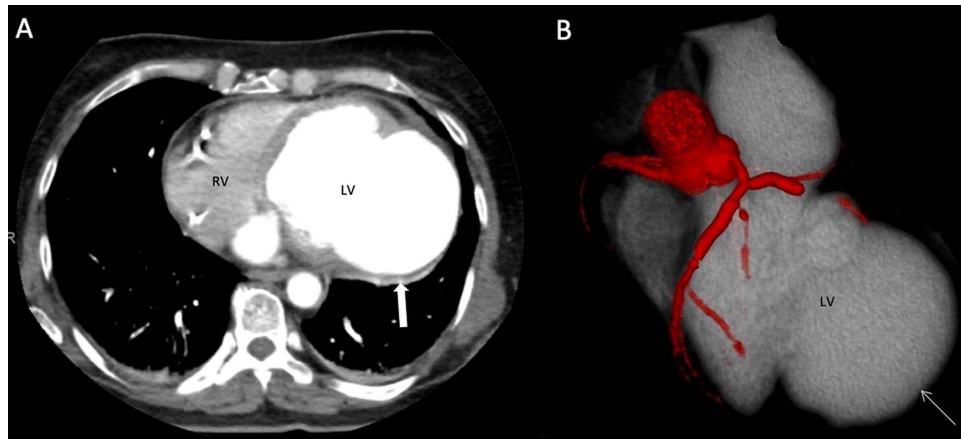


Figure 2: Axial CT (A) showing large aneurysm and rim of hematoma (bold-arrow), CT reconstruction images (B) showing size of aneurysm (arrow).

LV aneurysms post MI, are a well-recognised, yet rare complication in the current era of percutaneous coronary intervention [1]. Large LV aneurysms as a result of transmural ischemia as described in this case, are very rarely seen. LV aneurysmectomy is a surgical technique that carries good overall prognosis and can restore LV systolic function in some cases [2]. This case highlights the value of echocardiography and multimodality imaging in characterising these complications of AMI [3].

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*Conflicts of interest statement:* None declared.

### ETHICS APPROVAL

This project meets all ethical guidelines and adheres to local legal requirements.

### CONSENT

Written consent for submission and publication of this case report including images and associated text has been obtained from the patient.

### GUARANTOR

The nominated Guarantor is Dr Shaun Khanna.

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