

A rare case of idiopathic giant left ventricular pseudoaneurysm

Left ventricular pseudoaneurysm is a rare but life-threatening disorder. In this a contained rupture of the left ventricular myocardium causes the formation of a pseudoaneurysm wherein the pericardium and fibrous tissue form its roof. In a systematic literature review, myocardial infarction (55%), surgery (33%), and trau-

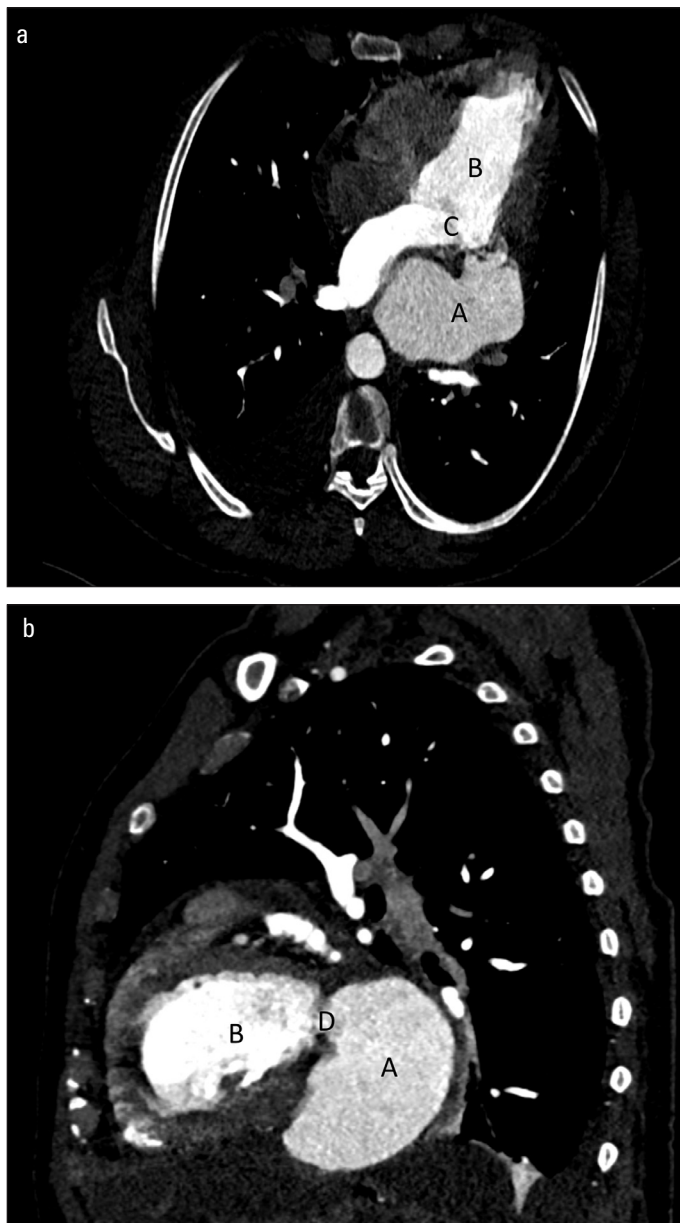


Figure 1. a, b. Panel A: Computed tomography image of the chest showing a pseudoaneurysm arising from the left ventricle and posterolateral and inferior to the mitral valve. Panel B: A narrow orifice (neck) relative to the diameter of the pseudoaneurysm (D). (a) Left ventricle pseudoaneurysm, (b) left ventricle, (c) mitral valve, and (d) connection between the pseudoaneurysm and left ventricle

ma (7%) were the top three associations (1). They are often located in the lateral or posterior walls and have a neck narrower than the true aneurysms, which have a wide neck and usually involve the antero-apical region (2).

Herein, we report the case of a 32-year-old male patient with giant submitral left ventricular pseudoaneurysm without an apparent cause. The patient presented to the outpatient department with dyspnea on exertion for the last 2 years, which had increased over the last 2 months. Results of clinical examination and 12-lead electrocardiography were normal. Two-dimensional (2D) transthoracic echocardiography revealed a mild left ventricular dysfunction and suspected outpouching and compression of the left ventricle located posteriorly to the left atrium and the mitral valve (Video 1). Mitral regurgitation or regional wall-motion abnormality was not observed.

Computed tomography (CT) aortography and contrast-enhanced CT of the chest were performed, which revealed a large (5.2 cm × 9.3 cm) pseudoaneurysm in the posterior mediastinum (Fig. 1a and Video 2). The globular-shaped pseudoaneurysm had a small connection with the posterolateral wall of the left ventricle adjacent to the mitral annulus (Fig. 1b). Coronary angiography revealed normal coronaries. A diagnosis of giant, idiopathic submitral left ventricular pseudoaneurysm was made, and surgical repair was performed due to the high risk of its rupture and death. The pseudoaneurysm wall was dissected, and a 2 cm × 1 cm rent in the left ventricular wall was closed with a polytetrafluoroethylene patch superimposed by the aneurysmal wall (Fig. 2). The patient had an uneventful recovery, and follow-up 2D echocardiography demonstrated normalization of left ventricular function.

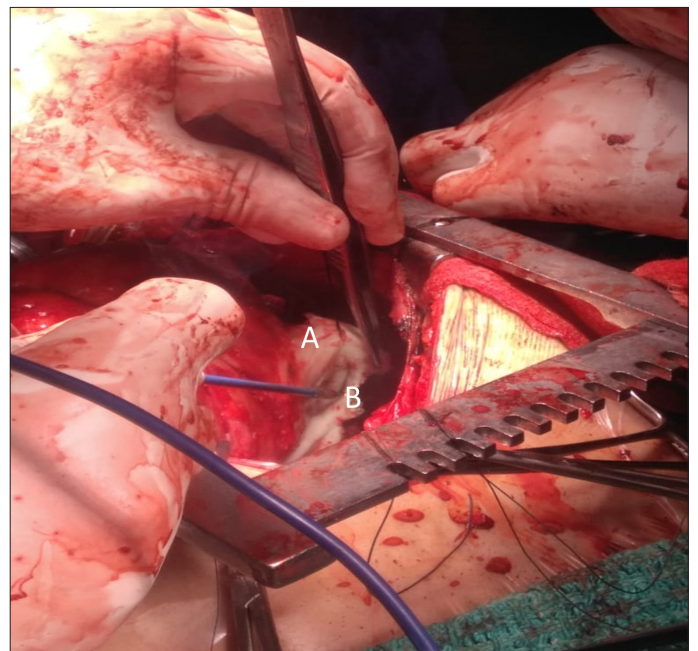


Figure 2. Intraoperative image of the pseudoaneurysm sac, as held by the forceps (a) and its connection with the left ventricle, as pointed by the cautery (b)

Submitral pseudoaneurysm is a rare entity and is usually associated with a history of infective endocarditis, myocardial infarction, valvular surgery, or trauma. In this case, the patient had no history of fever, trauma, or surgery. Coronary artery disease was ruled out based on the normal coronary angiogram findings and absence of regional wall-motion abnormalities on 2D echocardiography. Cardiac CT helped establish the diagnosis and thereby guided the management for this potentially lethal condition.

Informed consent: Written informed consent was obtained from the patient.

References

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Video 1. Transthoracic echocardiogram (parasternal long-axis view) showing a large outpouching from the left ventricle and posterior to the left atrium

Video 2. Sagittal section of the contrast-enhanced computed tomography image showing a large pseudoaneurysm in the posterior mediastinum with a small connection to the posterior wall of the left ventricle

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