

## True Aneurysm of the Left Ventricle: An Unusual Location

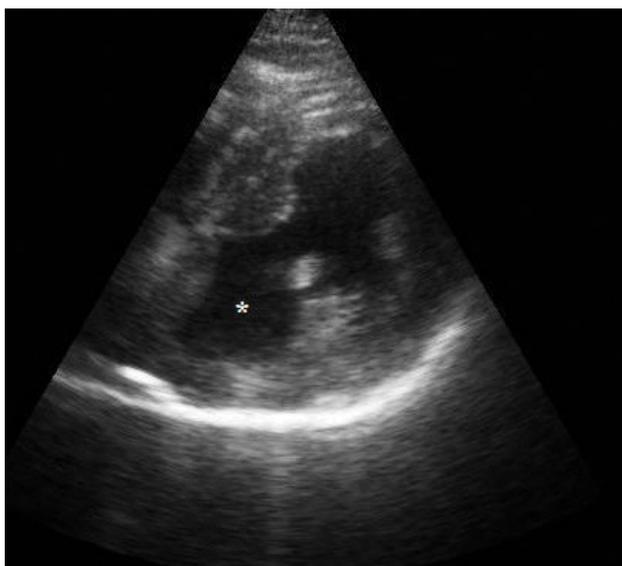
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Dear Editor,

Ventricular aneurysms mainly occur as a result of transmural myocardial infarction. In contrast to true aneurysms, which always contain myocardial elements in their walls, the walls of false aneurysms are composed of organized hematoma and pericardium. Therefore, false aneurysms are highly likely to rupture, and surgical treatment of these lesions is a priority. Hence, this type of aneurysm should be accurately diagnosed. Differentiation between these two pathologies remains difficult. Here we discuss an atypically located true aneurysm diagnosed by magnetic resonance imaging (MRI).

A 67-year-old male had unexplained sinus tachycardia. He was asymptomatic. He had no acute coronary event and chronic diseases other than diabetes mellitus. The consent of the patient was taken for all medical interventions and scientific studies. The electrocardiogram showed inverted T waves with abnormal Q waves in leads III and aVF; sinus tachycardia was detected. Transthoracic echocardiographic examinations showed the presence of an akinetic cavity connected to the inferior wall that communicated freely with the left ventricle—a preserved global left ventricular systolic function. In the parasternal short-axis view, the cavity had a narrow neck, but in the apical view, it had a broad neck (Figure 1). While the anteromedial wall of the pouch can be selected in the akinetic myocardium, it was not distinguished thrombus or myocardial tissue in the posterolateral wall. Therefore, cardiac MRI was performed to identify the thrombus or myocardial tissue (Figure 2). A true aneurysm (38×40 mm) was detected in MRI. The aneurysm started in the inferior atrioventricular junction of the left ventricle and connected to the left ventricle with a 30-mm mouth. While the thickness of the aneurysm wall was 7 mm in the anterior region, it was 4.6 mm in the posterior region, and there was no significant thrombus within it. Blood flowed from the aneurysm into the left ventricle during diastole and from the left ventricle into the aneurysm during systole.



**FIGURE 1.** Parasternal short-axis view shows a large echo-free space behind the inferior wall that communicates with the left ventricle through a narrow neck



**FIGURE 2.** MRI shows a large aneurysm containing some myocardial elements in its wall

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False aneurysms have been typically reported at the posterior-inferobasal region. True aneurysms are more frequently localized in the anterior or apical region; only about 3% of true aneurysms are located at the posterolateral or diaphragmatic surface (1). True aneurysms do not tend to rupture at the chronic stage. Hence, accurate diagnosis and differentiation of the two entities have important clinical implications. The distinction between a thin mural thrombus and the myocardium may be difficult using both transthoracic and transesophageal echocardiography (2). Cardiac MRI is the most sensitive and specific investigation method used to identify and assess these aneurysms preoperatively (2).

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