Left Ventricular Pseudoaneurysm in Cardiac Magnetic Resonance Imaging

A 58-year-old man hospitalized with posterolateral acute myocardial infarction was referred to the cardiac magnetic resonance (CMR) unit to determine the precise morphology of the left ventricle (LV) as well as its overall and regional function. The test was indicated because of an extremely poor ultrasound window that did not allow characterization by transthoracic echocardiography.

In the CMR study, cine gradient-echo T1 sequences were done along the cardiac axes. The 2-chamber view (Figure 1) findings were normal for structure and function, but the 4-chamber view and the basal short-axis view (oblique sagittal view of the heart) showed rupture of the myocardium in the basal segment of the LV lateral wall (Figures 2 and 3). This created a pseudoaneurysm (PS) with a 2.6-cm neck (N), opening to the pericardial cavity. No thrombi were observed and ventricular function was 46% by the Simpson method.

Cardiac magnetic resonance was highly accurate in depicting the anatomy and function of all the cardiac chambers and adjacent structures. The correct diagnosis was established in a non-invasive manner, justifying the rational use of currently available imaging methods in cardiology.

Complete absence of the muscle wall was confirmed by the surgeon. The patient was successfully operated on, and was discharged without complications eight weeks after the procedure.

Fernando Dicenta, Jorge Estornell, and José L. Diago
Resonancia Magnética Cardiaca, Eresa, Hospital General, Castellón, Spain.

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