

## Giant left ventricular aneurysm with intense spontaneous contrast but no thrombus

### *Aneurisma ventricular izquierdo gigante con intenso contraste espontáneo, sin trombo*

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**Palabras Clave:** Infarto de miocardio, Aneurisma cardíaco, Ecocardiografía, Contraste espontáneo

A 60-year-old woman, with no previous cardiac pathology and without known risk factors for ischemic heart disease, presented to the emergency room complaining of dyspnea and diaphoresis. She recalled an episode of constriction-like chest pain, non-radiating, with prolonged duration, 10 days before. Physical examination revealed a grade 2/6 systolic murmur heard over the mitral area, blood pressure was 100/60 mmHg, heart rate was 101 beats/minute, oxygen saturation of 95% on room air. The electrocardiogram showed sinus rhythm with q waves in D<sub>I</sub>, aVL, V<sub>2</sub>-V<sub>6</sub> leads, and ST segment elevation in D<sub>I</sub>, D<sub>II</sub>, aVL, V<sub>2</sub>-V<sub>6</sub> leads, suggesting distal occlusion of a long left anterior descending artery (**Figure 1**). Troponin I levels were increased, but creatin kinase MB was negative. Chest X-ray noted increased cardiothoracic ratio with left ventricle (LV)

dilatation; pulmonary edema signs were not present (**Figure 2A**). Transthoracic echocardiography showed a giant left ventricle apical aneurysm which occupied approximately 75% of the chamber volume, with dense spontaneous echo contrast in the left ventricle but without thrombi (**Figure 2B; supplemental material video 1 and video 2**). Left ventricular ejection fraction was estimated at 20%. Moderate mitral regurgitation was present, and a mild circumferential pericardial effusion was noted. The patient was treated conservatively. In the next days she developed cardiogenic shock and died after 4 days.

The pathogeny of left ventricular thrombus formation in myocardial infarction stands on the well-known Virchow's triad elements: blood stasis favored by regional wall akinesia/ dyskinesia or aneurysm, subendocardial ischemic and inflammatory injury, and a hypercoagulable state induced by changes in the balance of coagulation/fibrinolysis. The most important risk factors for the development of LV thrombus include: anterior myocardial infarction, large size of infarcted myocardium and LV aneurysm. The case reported is atypical because LV thrombus was expected to form in this patient with an apparently very high risk.

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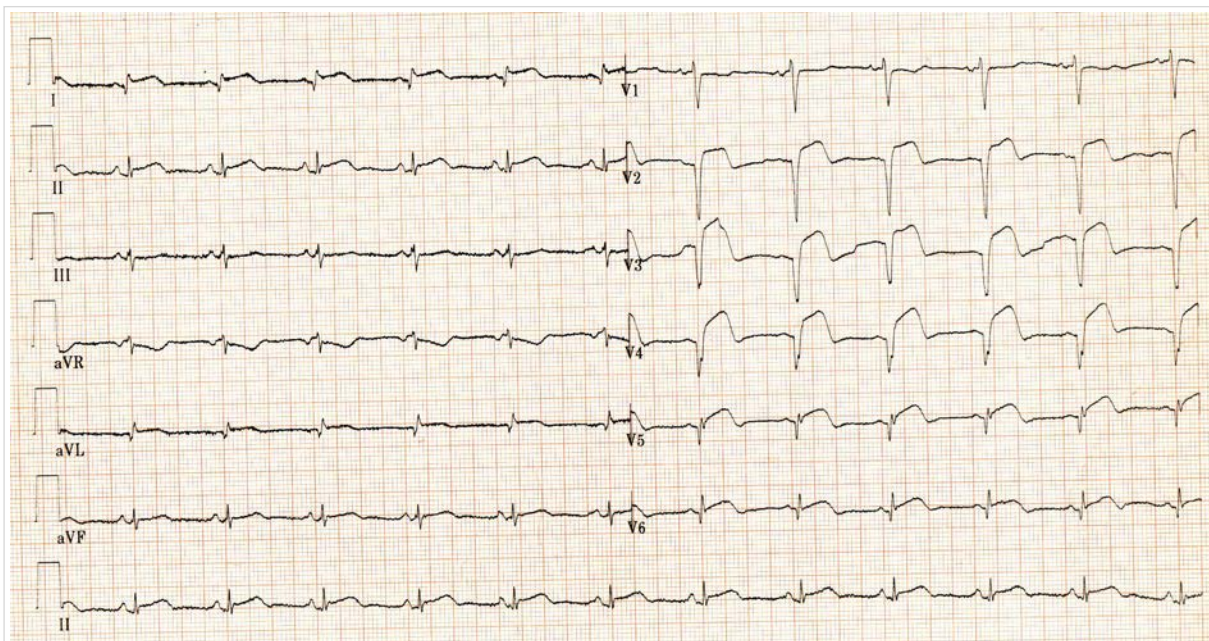


Figure 1

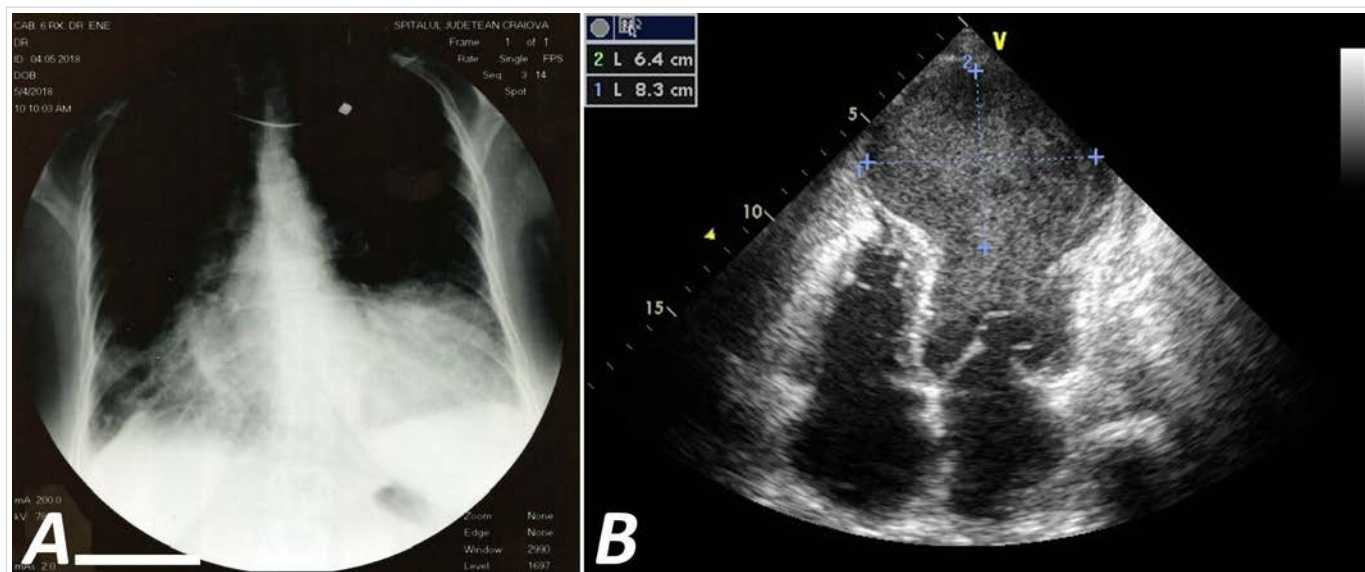


Figure 2