

Atypical form of acute myocardial infarction with tamponade

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Background: Nowadays it is well recognized that the absence of obstructive coronary artery disease in a patient presenting with symptoms suggestive of ischemia and ST-segment alterations does not preclude an atherothrombotic etiology. CMR is an essential method for the investigation of Myocardial infarction (MI) with non obstructive coronary artery disease (MINOCA).

Clinical Case: A 66 years-old female patient was referred after an episode of acute oppressive chest pain, nausea and hypersudorese, followed by syncope. She had a previous medical history of rheumatoid arthritis, under immunosuppression, occlusion of the cilioretinal artery, hypertension and dyslipidemia. On admission she was hypotensive (80/60mmHg). The ECG showed sinus rhythm and mild ST depression in V2-V3 leads, and the echocardiogram a small circumferential pericardial effusion (10mm) with signs of hemodynamic compromise. The blood tests documented a slight leukocytosis and an elevated troponin (hs-TnT 619ng/L).

Pericardiocentesis was performed with drainage of ~350mL of hematic effusion, with significant clinical improvement.

Coronary angiography revealed left anterior descendent artery with non-significant lesion in the middle segment (IFR = 0.94) and a dominant right coronary artery, with a <30% lesion in the middle segment.

Based on the coronary angiography results a CMR was performed revealing a focal area of transmural LGE, located at the basal segment of the posterior wall with an image suggestive of microvascular obstruction (MVO) (Fig.1). The diagnosis of myocardial infarction was established and the patient was medicated accordingly.

Discussion/Conclusion: According to ESC guidelines, it is recommended to proactively investigate the cause of MINOCA, with CMR being a method of choice. MVO usually appear in patients with acute MI following reperfusion therapy, and it is characterized by damage and dysfunction of the myocardial microvasculature with a no-reflow phenomenon within the infarct zone. In our case, the patient had several cardiovascular (CV) risk factors, including rheumatoid arthritis known to increase the risk of CV disease, with systemic inflammation playing a major role, through direct and indirect effects on the vessels. This patient had criteria of MI (symptoms, ECG changes and elevation of hs-TnT) complicated by hematic pericardial effusion possibly due to small free-wall rupture. In this case CMR was essential to establish the final diagnosis.

Abstract P100 Figure.

