





Case report: “If it looks like a duck and quacks like a duck, then it probably is a duck”, or is it?

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KEYWORDS: myocardial infarction; multimodality cardiac imaging.

CITATION: *Cardiol Croat.* 2025;20(5-6):138. | <https://doi.org/10.15836/ccar2025.138>

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Introduction: Differential diagnosis and diagnostic evaluation of patients presenting with chest pain, elevated troponin levels, and no culprit or any other lesion found using invasive coronary angiography (ICA) is sometimes challenging. It includes all causes of type II myocardial infarction (MI) (e.g. anemia, hypotension, tachy/bradyarrhythmia, coronary spasm, coronary microvascular disease)¹, myocardial injury (e.g. myocarditis, Takotsubo syndrome, cardiomyopathies)¹, and the possibility of unrecognized type I MI (e.g. unnoticed smaller branch occlusion, spontaneously recanalized coronary thrombus). Navigating this broad spectrum of diagnoses requires detailed clinical examination and history taking, blood tests, echocardiography, cardiac magnetic resonance imaging (CMRI), coronary computed tomography angiography (CCTA), intravascular imaging.

Case report: We present the case of 46-year-old male with the history of pericarditis, who was now hospitalized due to suspected inferior wall MI. Besides smoking cigarettes, he had no other known cardiovascular risk factors. Chest pain onset was 4 days prior to hospitalization accompanied by common cold symptoms. Upon admission patient had no chest pain, ECG showed Q waves in inferior leads without ST-segment elevation, minimal ST-segment depression in aVL, and laboratory results showed elevated levels of hsTnI (10545.8 ng/L), NTproBNP (611 pg/ml), LDL-cholesterol (5.07 mmol/L) and CRP (100.4 mg/L). ICA showed no stenosis of LMCA, LAD, Cx. There was a difficulty in locating the ostium of RCA using various techniques, so that raised suspicion of anomalous origin of RCA. Echocardiography revealed hypokinetic inferior left ventricular wall with preserved LVEF. Considering no culprit lesion found on ICA, elevated CRP levels and a common cold preceding the chest pain onset, the working diagnosis of myocarditis was made. Following initial work-up, patient underwent CCTA aiming to find true origin of RCA and its course, as well as CMRI. CCTA revealed typical RCA origin with visible conal branch and occlusion below that level. CMRI indicated ischemic fibrosis pattern of inferior left ventricular wall with no signs of myocarditis.

Conclusion: This case shows the importance of multimodality imaging in diagnostic evaluation of patients with disputable diagnosis to guide treatment and follow-up. It is important to emphasize that even if RCA ostium had been found on initial ICA, considering the subacute phase of MI and absence of chest pain, current guidelines recommend against PCI of IRA².

RECEIVED:
March 16, 2025

ACCEPTED:
April 2, 2025



LITERATURE

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