

Anterior wall myocardial infarction in a young man caused by spontaneous dissection and hematoma of coronary artery

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Abstract: A 55-year-old man without any cardiac history has been admitted to Ist Department of Cardiology due to anterior wall infarction. In echocardiography (ECG), local anterior wall dysfunction has been observed, with good left ventricle ejection fraction. In angiography performed immediately after transfer to hospital, long lesion in left anterior descending coronary artery has been visualized with high angiographic suspicion of dissection and intramural coronary hematoma. Intravascular ultrasound (IVUS) has been performed and further confirmed the diagnosis of hematoma – LAD was stented using three coronary stents. IVUS has confirmed good position of stents. Integriillin has been used. Periprocedural time was uncomplicated. ECG showed resolution of myocardial infarction pattern and evolution of infarction has been observed. The patient was discharged home in good clinical condition. Coronary dissection and coronary hematoma are the potential cause of infarction and IVUS, despite optical coherence tomography being reference nowadays, is still a very valuable tool in diagnosis and treatment guiding in such cases.

Keywords: IVUS, angiography, infarction

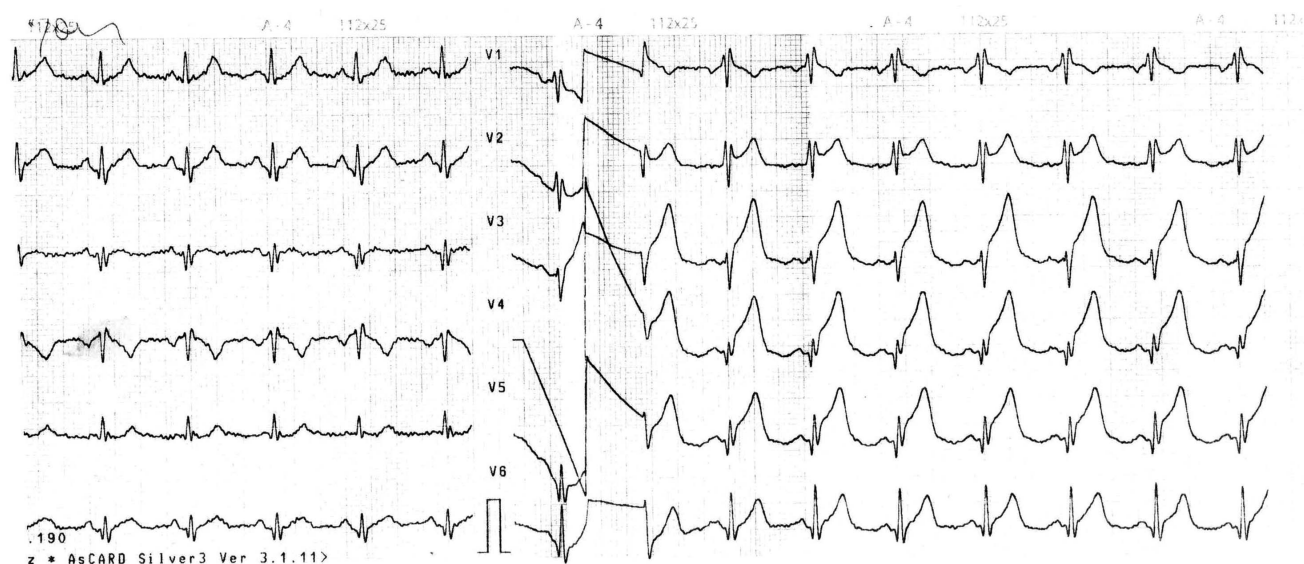


Fig. 1. First ECG transferred from ambulance to our hospital

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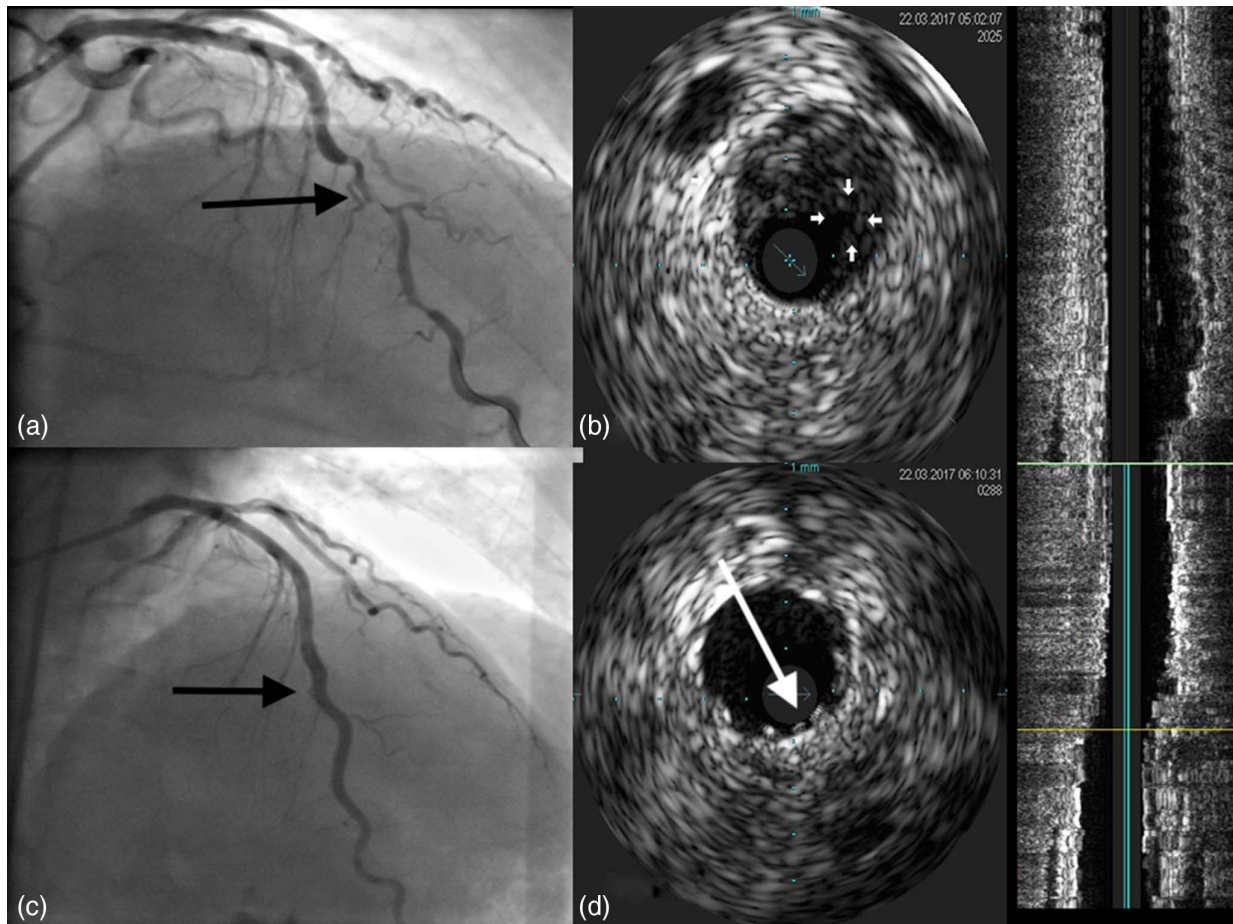


Fig. 2. Angiographic and ultrasonographic images of the artery

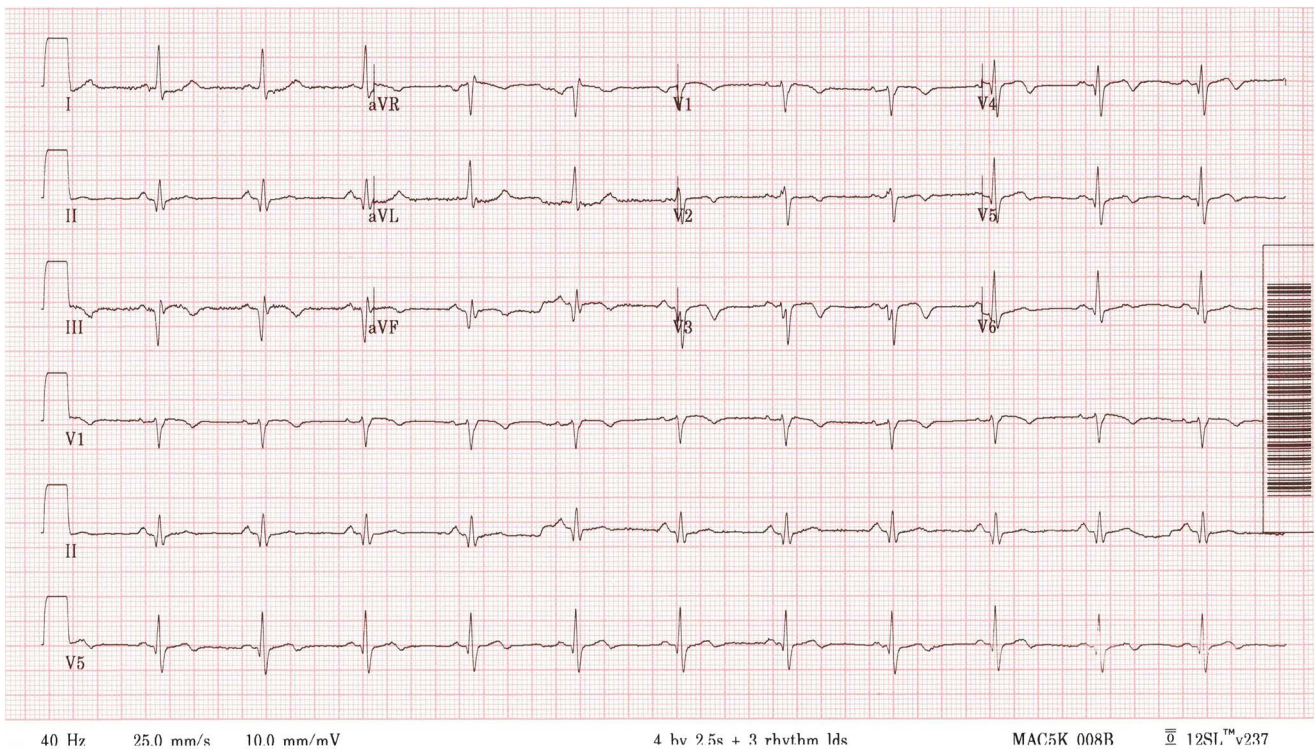


Fig. 3. Follow-up ECG of acute infarction

A 55-year-old man without any previous cardiac history has been admitted to the Department of Cardiology, Medical University of Silesia, Poland due to anterior wall myocardial infarction (MI) [Electrocardiography (ECG); *Fig. 1* showing typical features of anterior wall infarction] – 9 h after onset of chest pain. In echocardiography, local anterior wall dysfunction has been observed, with good left ventricle ejection fraction. In angiography that was performed immediately after transfer to the hospital, long lesion in left anterior descending (LAD) coronary artery has been visualized with high angiographic suspicion of dissection and intramural coronary hematoma (*Fig. 2a*, arrow). Right coronary artery and circumflex were free of narrowing lesions. Intravascular ultrasound (IVUS) has been performed and further confirmed the diagnosis of hematoma (*Fig. 2b*, arrows indicate dissection tear). LAD was stented using three coronary stents (*Fig. 2c*). IVUS has shown good position of stents (*Fig. 2d*, arrow indicates stent struts). Integrilin has been used. Periprocedural time was uncomplicated. ECG after the event showed resolution of MI pattern and evolution of infarction has been observed (*Fig. 3*). Patient was discharged home in good clinical condition.

According to literature, IVUS can identify plaque rupture [1]. IVUS is an important diagnostic tool in

establishing the correct diagnosis and provides a complete vessel wall assessment, which gives morphometric information on underlying hematoma [2]. To conclude, coronary dissection and coronary hematoma are the potential cause of anterior wall MI and IVUS, despite optical coherence tomography being referenced nowadays, it is still a very valuable tool in diagnosis and guiding treatment in such cases.

* * *

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