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**Clinical Image**

# Spontaneous coronary artery dissection presented as posterior ST-Elevation myocardial infarction

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A 48-year-old female, head nurse in a neighboring hospital, during her morning occupation at the hospital, felt an acute pain in the mid-chest, with radiation in her left shoulder. She was a non-smoker, with no cardiovascular history or predisposing factors for atherosclerotic disease, under treatment with thyroid hormone replacement due to hypothyroidism. Although a mild ST-segment depression was revealed at the 12-lead electrocardiogram left precordial leads, the appearance of an ST-segment elevation at the posterior leads V7, V8, and V9 was in favor of posterior – lateral ST-Elevation Myocardial Infarction (STEMI) [Figure 1].

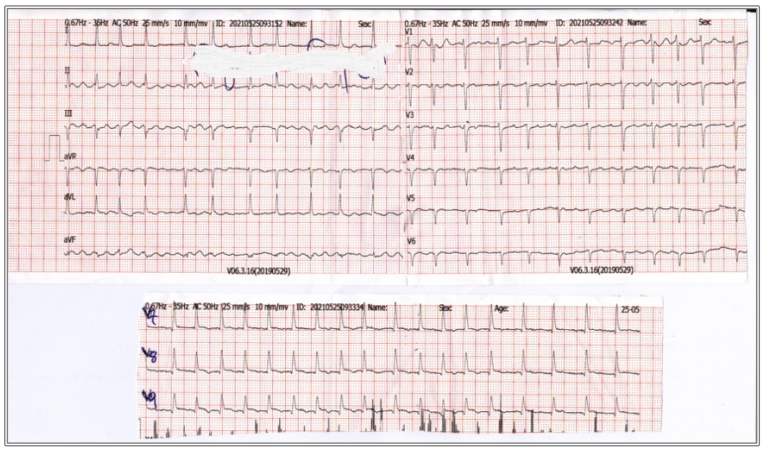

**Figure 1.** A 15-lead electrocardiogram was obtained on presentation to the Cardiology Department The electrocardiogram shows atrial fibrillation and ST-segment elevation in leads V7, V8, and V9.

During her transport to our hospital for emergency coronary angiography, the patient suffered from an episode of ventricular fibrillation, which was successfully defibrillated in the ambulance. Coronary angiography revealed an extended area of stenosis 40-50% right after the obtuse marginal branch of the left circumflex artery. Stenosis length was over 30 mm and did not restrict the blood flow. Moreover, this lesion remained unchanged after intracoronary nitrate administration. Thus, the diagnosis of Spontaneous Coronary Artery Dissection (SCAD), type 2a, was made since there was a recrudescence of a normal caliber distal vessel [1] [Figure 2].

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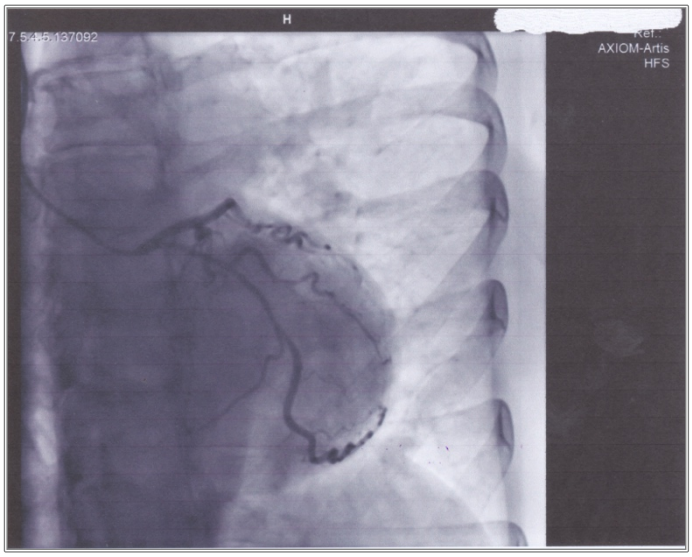


**Figure 2.** The angiographic image (LAO – CRA projection) revealed a long-segmented lesion (length of over 30mm), presented as an abrupt de-escalation in artery's caliber, along with the ostial, proximal & middle site of the LCx, including a part of the proximal site of OM2, continued by an OMb2 of a normal caliber, not responding in intracoronary bolus infusion of nitrates, while an atherosclerotic disease was not presented in the remainder of the coronary vasculature.

Apart from the female gender of the patient, additional angiographic findings, such as increased coronary tortuosity, especially in the distal segments of the vessels, the absence of co-existent atherosclerosis, as the unaffected coronaries were normal as well, advocated the diagnosis of SCAD. Due to the hemodynamic stability and the angiographically satisfying blood flow, it was decided conservative management with dual antiplatelet therapy [2]. Kinetics of cardiac biomarkers was observed, with peak values reaching Troponin-T high sensitive 1.27 ng/ml, creatine phosphokinase (CPK) 1195 IU/L, and creatine kinase-MB (CK-MB) 143 IU/L. The patient had been stable since then. After 3 months of follow-up, she remained asymptomatic.

### Conflict of interest

The authors declare that there is no conflict of interest.

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