

Giant left main coronary artery aneurysm revealed by a myocardial infarction

Olbrzymi tętniak lewej tętnicy wieńcowej rozpoznany w trakcie zawału serca

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A 73-year-old woman was admitted for acute chest pain lasting for 2 h. She had no cardiovascular risk factor except her age. Her previous medical history was unremarkable. On admission, her heart rate was 90 bpm and blood pressure was 120/70 mm Hg. An electrocardiogram revealed ST-segment elevation in anteroseptal leads. No acute heart failure was found on examination. Fibrinolysis was successfully performed with ST-segment regression. Transthoracic echocardiogram showed impaired left ventricular systolic function (ejection fraction: 40%). Coronary angiography revealed a large, partially thrombosed left main aneurysm; no other coronary significant stenosis was observed (Fig. 1). Hence, we concluded a diagnosis of embolic myocardial infarction originating from the left main aneurysm. Syphilis serology tests and immunological investigations were negative. A computed tomography scan was performed showing a 5×3 -cm partially thrombosed aneurysm of the left main coronary artery (LMCA) (Figs. 2, 3). Surgical exclusion of the aneurysm was indicated; however, it was rejected by the patient. Double anti-aggregation (aspirin + clopidogrel) associated with oral anticoagulation for six months were prescribed, followed by the association of aspirin and oral anticoagulation. At the time of writing, the patient is asymptomatic after an uneventful three-year follow-up. In 1761, Morgagni published the first pathologic description of aneurysmal coronary artery disease [Morgagni JB. De sedibus et causis morborum. Tom 1. Venetus: 1761: Epis 27, Art 28]. Coronary artery aneurysms are defined as dilated segments larger than 1.5 times the diameter of adjacent coronary arteries. The LMCA location is extremely rare. Common causes are atherosclerosis, autoimmune diseases (Kawasaki disease, systemic lupus erythematosus, Behçet's disease, Takayasu disease), dissection, and trauma. In our case, the most probable aetiology was atherosclerosis. The clinical presentations of coronary artery aneurysms are extremely variable. Our patient presented with acute myocardial infarction, probably due to distal embolisation originating from the left main aneurysm thrombus. Rupture is the other severe life threatening complication that may occur. Although invasive coronary angiography is still the gold standard for aneurysm assessment, computed tomography and magnetic resonance imaging can adequately evaluate these aneurysms. Echocardiography has also been shown to be useful, especially in children. The management of coronary aneurysm is controversial: both conservative and surgical treatments can be used. Medical treatment is based on antiplatelet agents alone or associated with anti-coagulants. Successful percutaneous obliteration of left main aneurysm using a covered stent was described, with good short-term outcome. Nonetheless, surgical revascularisation, either by aneurysm repair using a pericardial patch or by resection associated with coronary artery bypass, remains the recommended gold standard therapy.

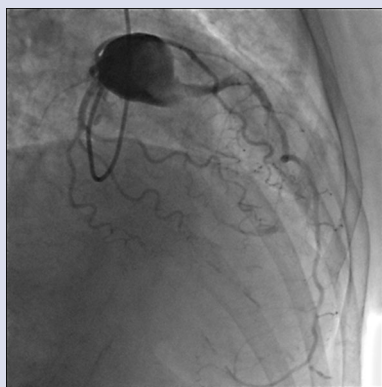


Figure 1. Coronary angiography: a giant left main coronary artery aneurysm with a suggestive image of left descending artery thrombus

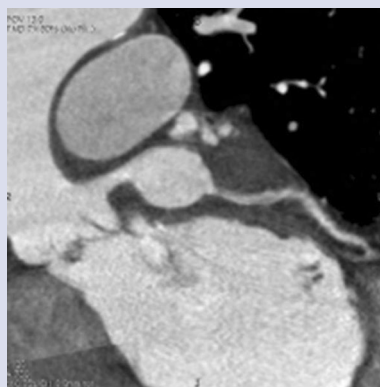


Figure 2. Computed tomography scan showing the left main coronary artery aneurysm (5×3 cm)



Figure 3. Three-dimensional reconstruction of the left main coronary artery aneurysm

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Conflict of interest: none declared

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