Coronary Artery Ectasia/Aneurysm by Computed Tomography

Ectasia/aneurisma coronario por tomografía computarizada

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These are images of a 48-year-old hypertensive man, who was admitted to hospital due to inferoposterior ST-segment elevation acute coronary syndrome (ACS). Rescue coronary angiography (CAG) (Figure 1) showed diffuse ectatic dilatation (14 mm in diameter) of the circumflex artery, consistent with thrombus (not suitable for angioplasty).

The patient was discharged with medical treatment and followed-up with computed tomography coronary angiography (CTCA) to rule out coronary fistula.

The CTCA (Figure 2) revealed diffuse aneurysmal dilatation of the circumflex artery, with 10 mm maximal luminal diameter (dashed line) and 22 mm vascular diameter (solid line), extensive mural thrombus along the entire artery (asterisk) and distal bed occlusion. There was no evidence of coronary fistula.

Coronary artery ectasia/aneurysm is a diffuse dilatation exceeding 1.5 times the diameter of the adjacent normal segments. (1) It must be differentiated from localized dilatations in areas adjacent to coronary artery stenosis and in Kawasaki disease. Its prevalence varies between 0.3-5.3%, and mainly affects middle-aged men without cardiovascular risk factors. (2, 3) Generally, it involves the right coronary artery. (4) Atherosclerosis is the underlying condition in 50-60% of cases, followed by vasculitis, and drugs (particularly cocaine), among others. Coronary artery ectasia/aneurysm is usually asymptomatic, but may present with unstable angina, ST-segment elevation ACS, ventricular arrhythmias or sudden death due to blood stasis, thrombosis, dissection and/or vasospasm. (5) It is usually diagnosed with CAG or -more recently- with CTCA. (6)

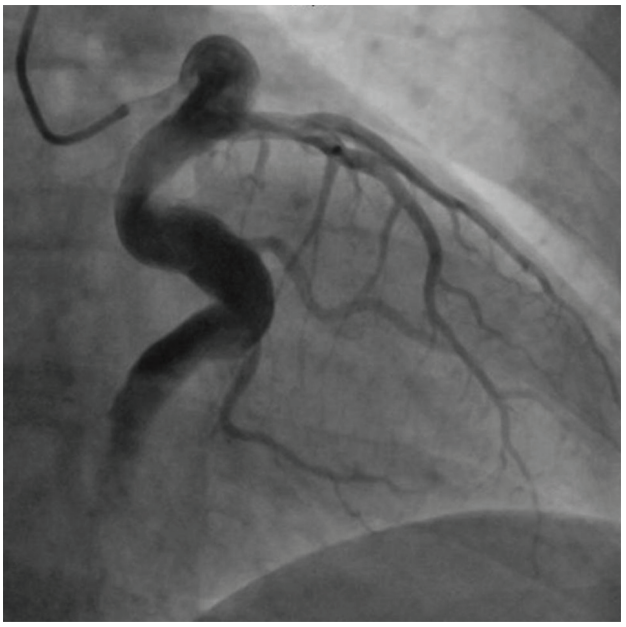


Fig. 1. Coronary angiography. Diffuse ectasia of the circumflex artery (14 mm in diameter) consistent with thrombus and total distal occlusion.

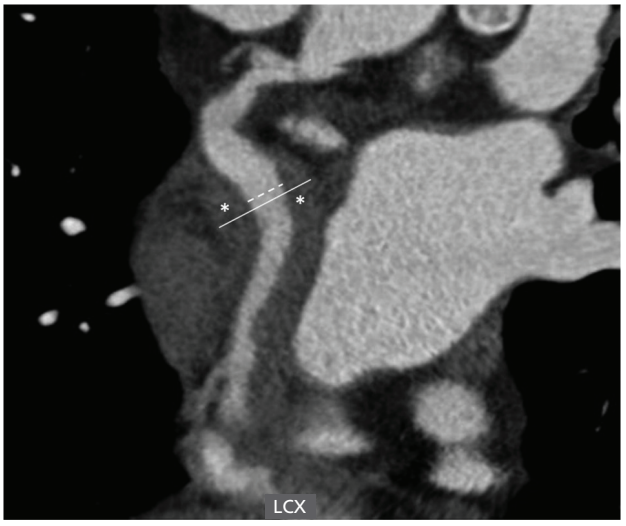


Fig. 2. Curved multiplanar reconstruction. Diffuse aneurysmal dilatation of the circumflex artery, with 10 mm maximal luminal diameter (dashed line) and 22 mm vascular diameter (solid line), with extensive mural thrombus along the entire artery (asterisk) and distal bed occlusion.

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