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Coronary artery aneurysms

IMAGES IN MEDICINE

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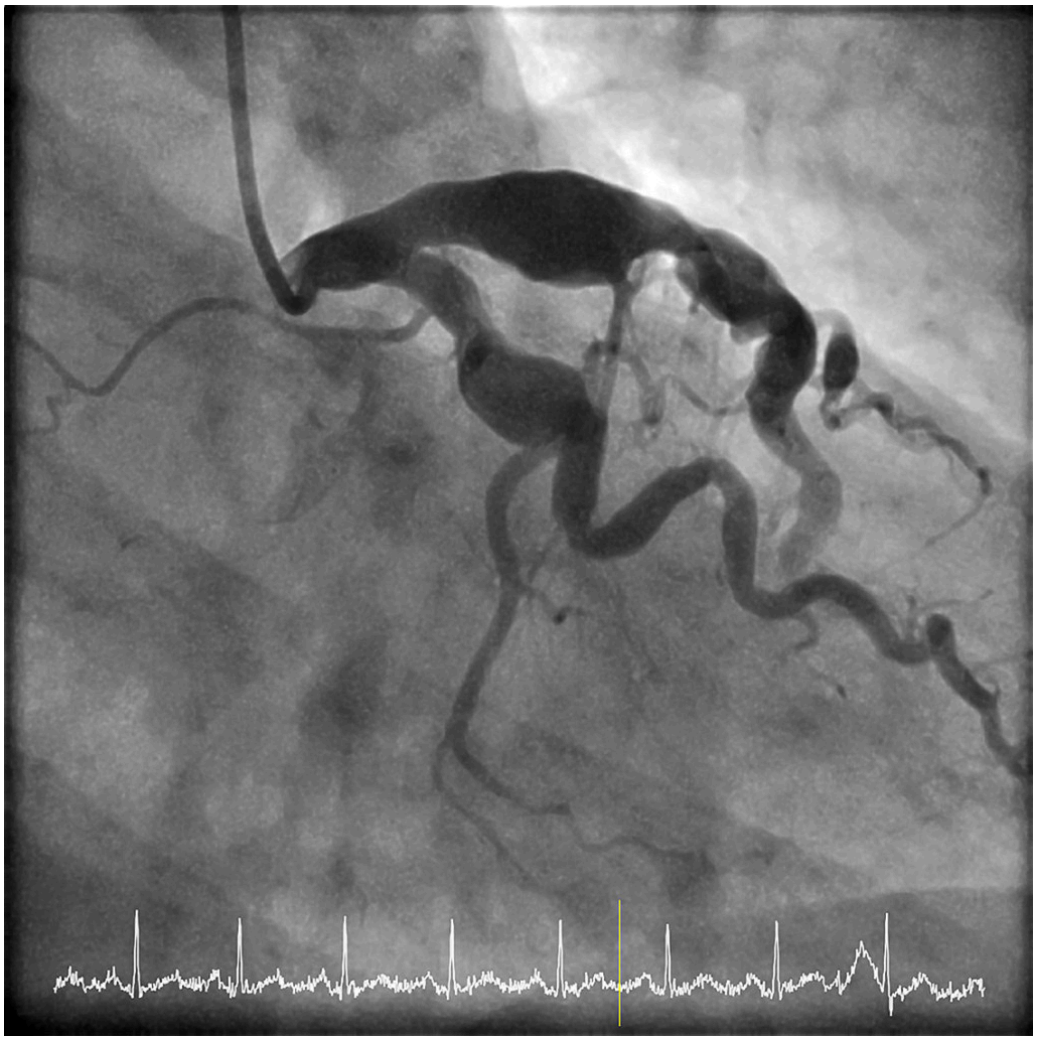

Coronary angiography reveals fusiform aneurysms in the left anterior descending artery, up to 13 mm in diameter. The patient also had acute occlusion of a similar aneurysm in the proximal right coronary artery (see video).

The patient is a man in his forties who was admitted with a non-ST-elevation myocardial infarction (NSTEMI), the course of which was complicated by acute coronary occlusion.

He had been diagnosed with his first NSTEMI a few years previously. At that time, coronary angiography revealed moderate ectasia, but no stenoses or occlusions. The patient was also found to have genotype-positive familial hypercholesterolaemia, and he had received dual antiplatelet therapy for one year, as well as intensive lipid-lowering treatment. Five years later, he underwent another coronary angiography for non-specific chest pain and was diagnosed with coronary aneurysms, the largest of which measured 10 mm.

Coronary angiography during the current admission revealed progression of the aneurysms. The next morning, the patient became acutely unwell with chest pain and hypotension, and ECG revealed ST elevation in the inferior wall. Repeated coronary angiography revealed an occluded right coronary artery. Thrombus aspiration and balloon dilation were performed, with blood flow being restored, but with signs of distal embolisation. Adjuvant antithrombotic therapy with the platelet aggregation inhibitor eptifibatide was administered for 24 hours.

The conclusion of the subsequent discussion at the heart-team meeting was for further medicinal treatment with warfarin and continuation of aspirin. Whole-body CT angiography revealed no aneurysms in any other vascular territories. As in previous admissions, no evidence was found of any underlying systemic inflammatory disease.

Coronary aneurysms leading to acute coronary complications in adults are rare and can have several causes. The aneurysms may arise secondary to coronary atherosclerosis, but infections, arteritis and connective tissue disease have also been described as potential causes (1). Kawasaki's disease is the autoimmune condition with the highest risk for development of coronary aneurysms and predominantly affects children under the age of five years (2). The incidence in Norway is unknown. Treatment with intravenous immunoglobulin and aspirin reduces the risk of developing coronary aneurysms in patients with Kawasaki's disease (2).

There are no randomised trials with respect to the treatment of coronary aneurysms, and the recommendations for antithrombotic treatment depend on the size of the aneurysms, among other factors. Warfarin plus aspirin is considered to be the first-line treatment for aneurysms larger than 10 mm in diameter (3). Treatment with coronary bypass surgery or stenting is challenging and rarely appropriate, but restoration of blood flow must be

endeavoured in cases of acute ischaemia using percutaneous revascularisation techniques, such as thrombus aspiration and balloon dilation, as was the case in this patient.

The patient has consented to the publication of the article.

The article has been peer-reviewed.

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