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Giant post-traumatic coronary aneurysm as an infrequent cause of inferior ST elevation myocardial infarction

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A 64-year-old woman with diabetes as the only known cardiovascular risk factor was admitted to the emergency department with ischaemic chest pain and inferior ST elevation on the electrocardiogram and complete atrioventricular block. Primary coronary angiography was immediately performed, 2.5 h after the beginning of the pain, showing a calcified round mass (Panel A) together with total occlusion of the proximal right coronary artery with contrast flow entering a giant calcified round anterior mass after a wire was introduced (Panel B). Left coronary artery was dominant and normal and the procedure was interrupted.

Urgent computed tomography (Panel C) revealed a giant round image (12 × 11 × 13 cm) with density suggesting thrombus inside, causing compression of right atrium and ventricle. Echocardiography did not reveal further information except from haemodynamic data supporting partial cardiac tamponade with no pericardial effusion. Emergent cardiac surgery was developed finding a giant aneurysm (Panel D) with thrombus inside connected with the right coronary. Empty aneurysm after resection was sent to pathological examination, which confirmed the existence of adventitial layer.

The woman had suffered a strong accidental thoracic traumatism 9 years before presumably causing deep vessel injury and a slowly growing aneurysm. The patient had been completely asymptomatic until 2 weeks before admission, when she was referring moderate exercise dyspnoea. Posterior occlusion of the right coronary artery caused the acute inferior myocardial infarction. The woman was discharged a week after the surgery with no overt complications.

Panel A. Urgent catheterization showed the calcified anterior round mass (arrows) and the transient pacemaker (PM) together with a total occlusion of the proximal right coronary artery (RCA) (Panel B) with contrast (cont) entering a giant calcified round anterior mass. w, wire.

Panel C. Urgent computed tomography revealing the giant aneurysm (An) with thrombus inside. RV, right ventricle; LV, left ventricle.

Panel D. Emergent surgery showing giant coronary aneurysm.

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