

# An unexpected cause of recurrent ST-elevation myocardial infarction with normal coronary angiography in a 48-year-old female

Nieoczekiwana przyczyna kilkakrotnego zawału serca z uniesieniem odcinka ST i prawidłowym obrazem tętnic wieńcowych w koronarografii u 48-letniej kobiety

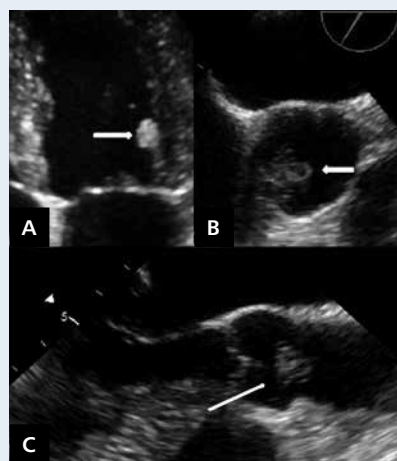
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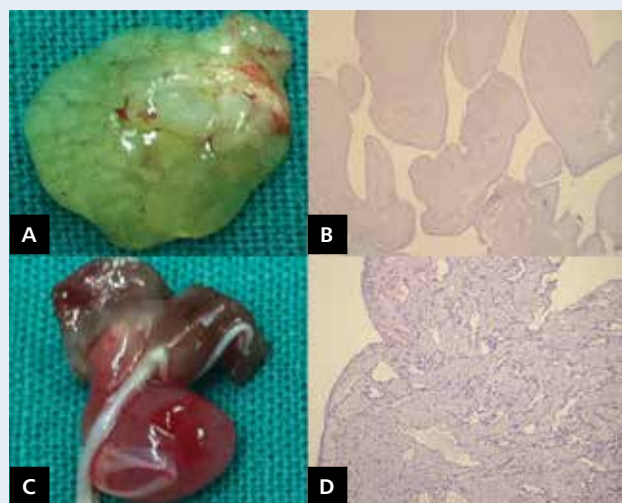
A 48-year-old female with arterial hypertension presented to a community hospital with an inferior ST-elevation myocardial infarction (STEMI). Coronary angiography showed patent epicardial coronary arteries with TIMI 3 flow and myocardial



**Figure 1.** A. Transthoracic four-chamber view demonstrating the left ventricular tumour (arrow); B, C. Transoesophageal views demonstrating the aortic valve tumour (arrow)

blush grade 3. The acute phase of STEMI was complicated by ventricular fibrillation that was treated promptly with electrical cardioversion. The ST-elevation and chest pain resolved spontaneously. A troponin rise of 20 times the upper reference limit was noted. Transthoracic echocardiography did not reveal any abnormalities. A tentative diagnosis of vasospastic angina was established at discharge. After 3 weeks the patient presented with a second inferior STEMI and normal coronary arteries on urgent angiography. Inferior wall akinesis was found on echocardiography at this time. Treatment directed at vasospastic angina was intensified and the patient was discharged home. After another 6 weeks the patient presented with a third inferior STEMI, which again resolved spontaneously. During monitoring in the local intensive care unit transient ST-elevation in the inferior leads was observed accompanied by chest pain. At that stage the patient was transferred to a tertiary cardiology centre. During careful diagnostic work-up at our centre a mass attached to the anterolateral papillary muscle of the left ventricle was visualised on transthoracic echocardiography (Fig. 1). Subsequent transoesophageal echocardiography surprisingly revealed the second, mobile mass (11 × 16 mm) attached to the aortic surface of the commissure between the right and non-coronary cusp of the aortic valve, located in the proximity of the right coronary artery ostium (Fig. 1). The patient was referred for urgent

cardiothoracic surgery during which both tumours were excised in a valve sparing surgery. Histopathological study found the left ventricular mass to correspond with capillary haemangioma, whereas the aortic valve mass proved to be papillary fibroelastoma (Fig. 2). This case report demonstrates that aortic valve papillary fibroelastoma may manifest as recurrent STEMI. In patients presenting with acute myocardial infarction and normal coronary arteries extra caution should be exercised to exclude non-atherosclerotic underlying causes.



**Figure 2.** Macroscopic (A) and microscopic (B) views of the tumour excised from the aortic valve showing avascular papillary tumour corresponding with papillary fibroelastoma; macroscopic (C) and microscopic (D) views of the tumour excised from the left ventricle corresponding with capillary haemangioma

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**Conflict of interest:** none declared