Emboloization of multiple papillary fibroelastoma of the aortic valve as cause of a ST-segment elevation myocardial infarction

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A 48-year-old man presented to a neighbouring cardiology unit with epigastric pain sensation. Acute myocardial infarction (AMI) was suggested by laboratory parameters for myocardial infarction and electrocardiogram showing ST-segment elevation in the inferior and lateral leads (Panel G). Emergency coronary angiogram revealed a subtotal occlusion of the posterolateral branch of the right coronary artery (Panel F). Serial angioplasties and intracoronary application of abciximab remained futile. Transoesophageal echocardiogram (TEE) revealed echodense structures on the valvar margins of the aortic valve with predominance on the aortic surface of the left coronary cusp measuring 7 × 8 mm (Panels A–D). The differential diagnosis considered was cardiac papillary fibroelastoma (CPF), infective vegetation and thrombus. Multiple blood cultures remained sterile. The patient was thereafter scheduled for a valve-sparing aortic valve surgery.

During surgery a 7 mm mass was found adherent to the free edge of the left coronary cusp of the aortic valve. Smaller masses were also visualized on both the right coronary and acoronary cusps (Panel E). The masses were thoroughly dissected. Histopathologic analysis confirmed the diagnosis of a CPF with multiple papillary fongs and a dense core of connective tissue attached to the endocardium by pedicles, which is pathognomonic (Panel H). The post-operative course of the patient was completely uneventful.

Embolizing fibroelastoma is a rare differential diagnosis of myocardial infarction, which should be considered because of the curable surgical possibility and different drug therapy. Echocardiography, specifically TEE is the method of choice for detection of this entity.

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