Papillary fibroelastoma of the mitral valve as an unusual cause of myocardial infarction in a 20-year-old patient

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The incidence of primary cardiac tumours is <0.1% and papillary fibroelastomas are relatively rare when compared with myxomas and lipomas. Papillary fibroelastoma is generally small and single, occurs most often on valvular surfaces, and may be mobile. Despite the embolic potential of primary cardiac tumours, they are extremely uncommon cause of ischaemic vascular accidents. Patients with smaller tumours, situated on the aortic valve and in the left atrium, with minimal symptomatology and no evidence of mitral regurgitation have a higher risk of embolism. Several causes of myocardial infarction in young patients, mostly non-atheromatous origin, have been described. These are congenital coronary artery anomalies, aneurysms, spontaneous dissection, myocardial bridging, septic coronary emboli or bacteraemia, and paradoxical embolization through a patent foramen ovale. Only a few cases of acute coronary syndrome caused by papillary fibroelastoma were reported.

A 20-year-old male patient with no cardiovascular risk factors, with a history of recurrent pre-syncope was admitted to the hospital with ST-segment elevation myocardial infarction. An amputation of the left descending coronary artery was revealed and a thrombus-like mass was removed. A following transthoracic echocardiogram showed abnormal contraction of the apex and interventricular septum and a round, hypoechoic, well-demarcated, homogenous, non-mobile tumour of 5 mm in diameter attached to the atrial side of mitral annulus, with no influence on valvular function. Transoesophageal echocardiography revealed no other masses in the heart chambers or great arteries and no patent foramen ovale. Only a few cases of acute coronary syndrome caused by papillary fibroelastoma were reported.

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We believe that in young patient with acute coronary syndrome echocardiography should be performed prior to initiating reperfusion therapy.