Dissection or embolism

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Abstract

Cardiac myxomas have a wide range of clinical presentations. The patient in this case presented with chest and back pain gradually radiating to her legs. ECG demonstrated an acute myocardial infarct. In cases of apparent aortic dissection, other diagnoses such as myxoma embolisation should be considered.

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Case report

A 57 year old woman presented to the emergency department with chest and bilateral leg pain. She had experienced sudden onset severe chest pain radiating to her back, while walking. The pain worsened over several minutes and gradually radiated to her legs. Past medical history was unremarkable. Examination revealed a regular heart rate of 106 beats/min, blood pressure 140/80 mm Hg in both arms, no carotid bruits, jugular venous pressure 4 cm above the sternal angle and a gallop rhythm with systolic and early diastolic murmurs heard best at the apex. Femoral pulses were absent. Abdominal examination was normal. ECG showed an acute anterior myocardial infarct. A chest radiograph showed mild pulmonary oedema. Labetalol and glyceryl trinitrate infusions were started before transfer to intensive care. A technically difficult transthoracic echocardiogram showed no evidence of aortic dissection. Contrast enhanced computed tomography showed a saddle embolus at the aortic bifurcation and a mass in the left atrium (fig 1). The patient underwent aortic embolectomy and leg fasciotomies. At surgery, the embolus was found to be of pale glutinous material rather than a thrombus. During operation transoesophageal echo confirmed the presence of a left atrial myxoma and a hypokinetic segment in the left ventricle. Under cardiopulmonary bypass the myxoma and atrial septum were resected and replaced

with a graft. Histological examination confirmed a villous type myxoma. She recovered well and was discharged walking with the aid of a frame without any cardiac symptoms.

Discussion

Myxomas are benign tumours of the heart with a surgical incidence of about 0.5/million population/year. They usually present during the fourth to sixth decades and are more commonly seen in women. About 75% arise in the left atrium, 20% in the right atrium and the remainder originate from ventricular endocardium.¹ Most are single pedunculated tumours although multiple and villous forms have been described. They may vary in size from millimetres to several centimetres in diameter. Myxomas are notorious for their wide spectrum of clinical presentation. The commonest clinical presentations are as heart failure secondary to the obstruction to blood flow, embolic phenomena, constitutional symptoms and syncope.² Systemic emboli most commonly affect cerebral or retinal vessels but embolisation to limb, visceral and coronary arteries have been described. Myxomas presenting as saddle emboli of the iliac bifurcation have been described,³ although not in association with an acute myocardial infarct. The definitive diagnosis is best made with two dimensional transthoracic or transoesophageal echocardiography, contrast enhanced computed tomography or magnetic resonance imaging. Echocardiography has the advantages of giving clear images of all four cardiac chambers and anatomical or morphological details of the tumour. Transoesophageal echocardiography may detect lesions as small as a couple of millimetres in diameter. Treatment entails early surgery to remove the tumour. Prompt intervention reduces the risk of further embolisation or sudden death. The surgery involves cardiopulmonary bypass, resection of the tumour base and closure of the defect with sutures or a graft. Although recurrence of myxomas has been described,⁴ surgery is usually curative.⁵

This patient presented with chest and back pain radiating to her legs. The combination of this history, the clinical signs and ECG changes led us initially to suspect dissection of the thoracic aorta. Transthoracic echocardiogram was non-diagnostic. Computed tomography showed the saddle embolus and a filling defect in the left atrium. Transoesophageal echocardiogram confirmed the diagnosis. In retrospect, the characteristics of pain progression and the presence of an anterior myocardial infarct should have called our working diagnosis into question. Acute inferior myocardial infarcts associated with aortic dissection have

Figure 1 Dynamic computed tomography of the chest showing filling defect in the left atrium.

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been recorded. However, a dissection involving both the left anterior descending artery and aortic valve is almost always immediately fatal. In our patient myxoma embolisation to her coronary artery may have occurred or the infarct may have arisen as a complication of the saddle embolus.

In conclusion, this case illustrates the importance of careful clinical examination and early use of appropriate investigations including imaging techniques. A diagnosis of myxoma should be considered in all cases of embolisation, particularly if more than one site may be involved. While aortic dissection can present with an inferior infarct, the presence of an anterior infarct should alert the clinician to an alternative diagnosis. Transoesophageal

echocardiography in experienced hands is the investigation of choice in cases of suspected aortic dissection or intracardiac masses. Contrast enhanced computed tomography may be more appropriate as a first line investigation in cases requiring definition of concomitant extra thoracic lesions.

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