Case report

Left atrial myxoma crossing the mitral valve

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Abstract

In this article, we report a 79-year-old man with a large mobile and pediculated mass in left atrium crossing the mitral valve in diastol and enter the left ventricle. Transthorasic two-dimensional echocardiography showed the big neoplastic mass attached to interatrial septum (IAS) and measured 7x4.5 cm. The patient presented signs and symptoms of Transient Ischemic Attack (TIA) with aphasia, dysphagy suddenly developed 24 hours earlier to admission. Brain axial CT scan showed a hypodense area in the left parietal lobe and a hypodense trigonal shaped area in the left temporal lobe. The surgical approach used for resection of this tumour was an isolated left atriotomy that provided excellent exposure and safe excision.

Key words: left atrial, mass, myxoma.

Introduction

A 79-year-old man accompanied with his son was admitted to the emergency ward of the hospital with 24 hours history of aphasia, dysphonia, vertigo and right side paralysis. He presented signs and symptoms of TIA prior to admission. He was cachectic (weight = 51 kg, height = 173 cm) and tumour plop was audible during middiastole. He was in fear condition. His vital signs were: respiratory rate = 18/min, heart rate = 100 b.p.m, blood pressure = 150/100 mmHg, temperature = 37.3°C. He had had a history of chest discomfort approximately two years before and his daily medications were nitrate (Nitrocountin) 6.4 mg TID, aspirin 100 mg daily and dimethicon after each meal. The prescribed medications were not followed properly by the patient, said his son. Electrocardiography showed sinus rhythm, normal axis and normal rate without any ST-T changes. Emergency Transthorasic two dimensional echocardiography showed a large, mobile and pediculated mass in the left atrium crossing the mitral valve in diastole phase and entering the left ventricle. The mass was attached to IAS and its size was measured to be 7x4.5 cm (Figure 1). The aortic valve was thickened and mildly calcified with trace insufficiency, the tricuspid valve was mild regurgitated and left ventricle ejection fraction was about 60%. The brain axial CT scan without contrast demonstrated senile cerebral atrophy and a hypodense area in the left parietal lobe involving both white and grey matters, indicating infarction (Figure 2). The brain CT scan with contrast revealed a trigonal hypodense area in the left temporal lobe, particularly

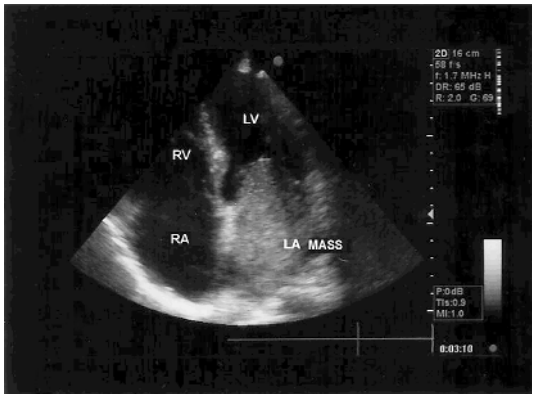

Figure 1. Echocardiography before removal of myxoma

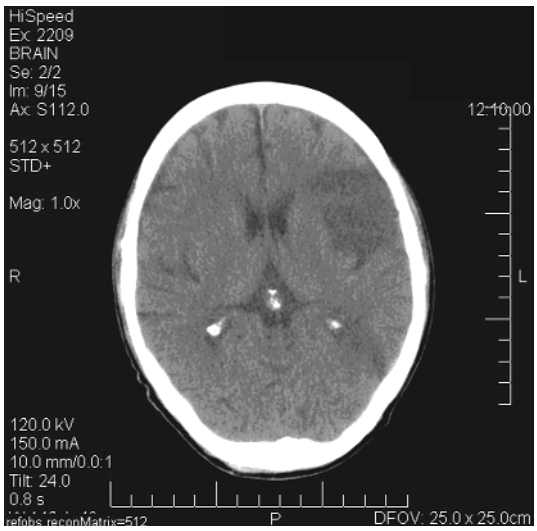

Figure 2. CT-scanning of the patient showing hypodensity in parietal lob

around the Cilvian sulcus, which was indicative of an infarction. Emergency coronary angiography and left heart catheterization by Seldinger's method via the right femoral artery were performed without any complication and the following data was obtained: LAD artery had a few plaques but no significant lesion, the Ramus had 70% stenosis at proximal portion with acceptable runoff and left circumflex artery had a narrowing in its origin but no significant lesion. The patient laboratory tests have been presented in Table I.

Clinical history

Myxomas are the commonest primary cardiac tumours; they represent nearly half the benign heart tumours with an estimated incidence of 0.5 per million populations per year [1]. In approximately 75-80% it is located in the left atrium, in 10-20% in the right atrium, and in 5-10% in both atria and either ventricle [2]. Maxima are a neoplasm of endocrinal origin, usually arising from the intertribal septum at the border of the fosse ovals in the left atrium [3]. Although symptoms of congestive heart failure such as syncope and dyspnoea on exertion are most common in patients with cardiac maxima, some manifestation with emboli events to the cerebral arteries, which lead to infarction, intracranial haemorrhage and aneurismal formation [4]. Myxomas may also present with peripheral or pulmonary emboli, or any of non cardiac signs and symptoms including fever weight loss, cachexia, malasia, arthralgia, rash, clubbing, Raynaud's phenomena, hypergammaglobulinemia and anaemia [5]. Systemic embolization is a common complication of left atrial myxoma [6].

Table I. Laboratory findings

Test	Results	Units	Reference
Hematocrite	42.0	%	39-52
Hemoglobin level	12.6	g/dl	14-18
WBC[1] count	6600	In mm^3	4000-10 000
Platelet count	182 000	In mm^3	140-440
Prothrombin time	11	second	11-13
Thromboplastin time	25	second	24-37
Blood sugar	204	mg/dl	Acceptable ≤200
Blood urea nitrogen	21	mg/dl	7-21
creatinine	1.3	mg/dl	0.6-1.3
Calcium (Ca)	8.0	mg/dl	8.6-10.3
Sodium	142	m.Eq/l	135-145
Potassium (Kalium)	3.9	m.Eq/l	3.8-5.6

[1]*white blood cell*

Material and methods

After diagnosis of left atrial myxoma, a prompt surgical restriction was indicated because of the risk of the sudden death for embolization and inflow and outflow occlusion. Restriction of tumour was done two hours after the admission. After prep and drape under general anaesthesia, median sternotomy was performed and the chest was opened. The pericardium was incised and traction sutures applied. After full heparinization, purse sutures were applied and the aorta, superior and inferior Vena cava was cannulated and total cardiopulmonary bypass established. Next to the ascending aorta was cross-clamped and arrest obtained with injection of cold blood cardioplegic solution into the aortic root. The left atrium was incised and a large gelatinous and fragile mass was immediately apparent, occupying the left atrial cavity with the pedicle adherent near the orifice of mitral valve. The mass then carefully evacuated, taking care not to leave any remnant and completely resecting the attachment to the endocardium. The cavity was then irrigated and the left atrium incision closed with continuous 3-0 prolene suture. After deairing the heart chambers and rewarming the patient and release of the aortic cross clamp and spontaneous return of normal sinus rhythm, the patient was weaned easily from cardiopulmonary bypass without any need for inotropic support. After placing chest drains and pacing wire, complete homeostasis was performed and the sternum was closed in layers as routine.

Results and discussion

The patient was transferred to the ICU with stable vital signs. After two days the patient was transferred to cardiac surgery ward and after a week of cardiac care, was discharged in a good medical condition. Now he is stable and his appetite got better. Post operation echocardiography after 4 days showed increasing ejection fraction. Due to the non-specific presentation of cardiac myxomas, a high index of suspicion is warranted. An emboli stroke in a person without evidence of cerebrovascular disease, particularly in the presence of sinus rhythm, should raise the possibility of intracranial myxoma, as well as infective endocarditis and prolapse of the mitral valve. Surgical removal of the cardiac myxoma should be performed as soon as possible because of the potential emboli complications [7].

Conclusions

Emergency surgical removal of Myxomas can improve the patient's condition and prevent signs and symptoms of embolization.

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