An Interesting Case of Left Atrial Myxoma

M H Tay, K W Lau, Z P Ding, C N Lee

ABSTRACT

Myxoma is the most common type of primary tumours of the heart in adults. Majority of these myxomas are found in the left atrium, followed by the right atrium and ventricles. We describe herein a patient who had a left atrial myxoma with interesting investigational results.

Keywords: atrial myxoma, coronary arteriography

Singapore Med J 2002 Vol 43(7):367-368

INTRODUCTION

Cardiac myxoma is the most common type of primary tumours of the heart in adults[1]. Approximately 75% of these tumours originate in the left atrium, and 15% to 20% in the right atrium[2]; only <10% are located in the ventricles[2,3]. Most patients with this condition present clinically with one or more of the triad of cardioembolism, intracardiac obstruction, or nonspecific constitutional manifestations[4]. Occasionally, there are no symptoms, particularly with small myxomas[3]. Herein, we describe a patient who had a left atrial myxoma with interesting investigational results.

CASE REPORT

A 68-year-old female patient presented with two weeks of nonproductive cough. A chest radiograph showed an outpouching along the left border of the left cardiac silhouette (Fig. 1). A computed tomography (CT) scan of the thorax showed the presence of a left atrial mass and a possible pericardial cyst (Fig. 2). The former lesion was confirmed on transthoracic echocardiography and then transesophageal echocardiography which demonstrated a well-defined mobile nonhomogenous mass (dimensions, 1.3 x 1.2 cm) with a broad base of 0.5 cm attached to the posterior wall of the left atrium (Fig. 3). Cardiac catheterisation, performed prior to cardiac surgery, excluded any underlying occult coronary artery obstructive disease, but demonstrated neovascularisation of the mass from the sinoatrial nodal branch of the right coronary artery (Fig. 4). At surgery, the tumour (measured 1.1 x 1.0 x 0.7 cm) was excised from the left atrium but the pericardial cyst was not apparent (Fig. 5). We postulated that the pericardial

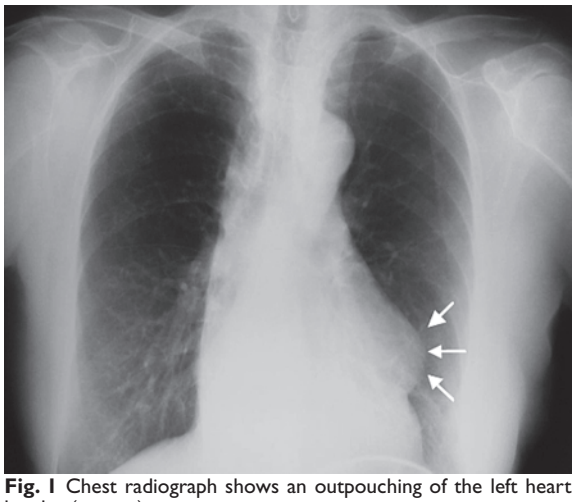

Fig. 1 Chest radiograph shows an outpouching of the left heart border (arrows).

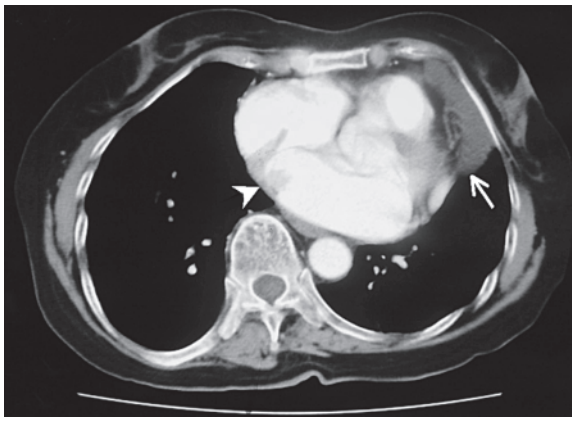

Fig. 2 CT scan of the thorax shows a left atrial mass (arrowhead) and a probable pericardial cyst (arrow).

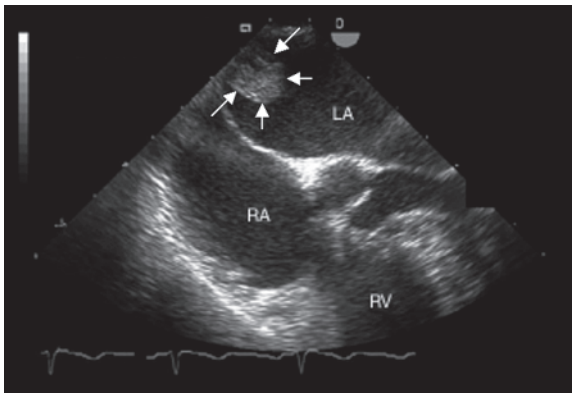

Fig. 3 Transesophageal echocardiogram shows a left atrial mass (arrows). LA denotes left atrium, RA right atrium, and RV right ventricle.

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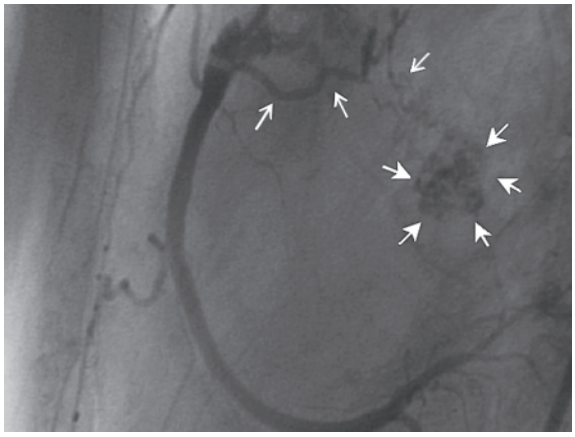

Fig. 4 Coronary angiogram shows neovascularisation of the myxoma (large arrows) and its arterial blood supply (small arrows).

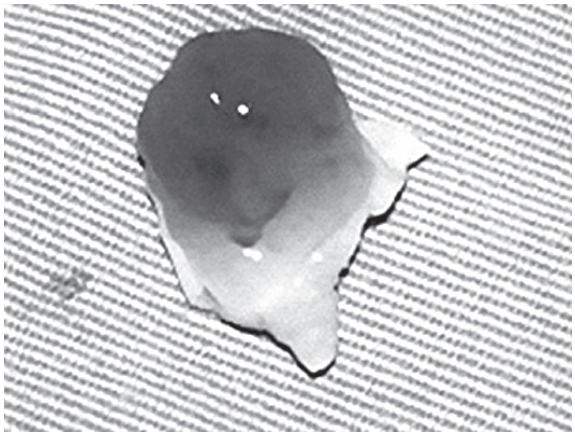

Fig. 5 Gross appearance of the myxoma which was removed during surgery.

cyst might have spontaneously ruptured before surgery. The operation was uneventful and the patient was well after surgery. Pathologic examination of the lesion confirmed a benign myxoma.

DISCUSSION

A left atrial myxoma was first described in 1845[5]. Prior to 1951, the diagnosis of intracardiac tumours was made only at postmortem examination; in that year the diagnosis of a left atrial tumour was confirmed by angiocardiography[6]. Chest radiograph may reveal left atrial enlargement and signs of pulmonary hypertension and congestion. Transthoracic two-dimensional echocardiography and if necessary the transesophageal approach can be used to determine the location, size, shape, point of attachment, and motion characteristics of a myxoma. The latter investigation is particularly helpful for precise delineation of tumour size, number and attachments. Supplementary noninvasive diagnostic imaging methods include computed tomography and magnetic resonance imaging. Coronary angiography is useful in the diagnosis and evaluation of atrial myxomas by demonstrating the vascular supply to the tumour. Filling defects[7] and total occlusions of coronary arteries[8], as well as aneurysmal dilatations and narrowings of distal coronary branches[9] due to tumour emboli, can also be disclosed by coronary arteriography. However, the indication for selective coronary arteriography in patients with atrial myxoma remains the detection of coronary artery disease, especially for patients above 40 years of age, enabling coronary artery bypass surgery to be performed if needed.

Our patient's left atrial myxoma attached to the posterior wall of the left atrium. Although most myxomas arise from the interatrial septum, they can also originate, in descending order of frequency, from the posterior atrial wall, the anterior atrial wall, and the atrial appendage[2,10]. The tumour neovascularity arising from the sinoatrial nodal branch of the right coronary artery was very clearly visualised by selective coronary arteriography. Tumour neovascularisation from branches of the right coronary and left circumflex artery had been observed in patients with myxomas[11,12]. Fueredi GA, et al reported tumour neovascularisation in five (55%) of the nine patients with atrial myxomas[12]. Another study by Van Cleemput J and colleagues found that seven (41%) of the 17 patients with left atrial myxoma had angiographically visible tumour vascularity emerging from the atrial branches of the right coronary artery in four patients and circumflex coronary artery in three[12].

Tumour resection usually provides a good long-term result. Recurrences of atrial myxomas are rare and usually occur within a 48-month period[13].

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