A Heavy Heart; A Massive Right Atrial Myxoma Causing Fatigue and Shortness of Breath

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Abstract
Cardiac myxomas are rare. The clinical diagnosis of an atrial myxoma may occur in an asymptomatic patient but may also present with cardiac failure due to intracardiac obstruction. The delay in diagnosis from presentation is approximately ten to forty eight years. We present the case of a 53 year old woman who attended our Emergency Department with dyspnoea, fatigue and left sided chest pain. Investigations revealed a massive right atrial myxoma. The tumour was resected successfully. Emergency Physicians should be aware of the subtle ways in which an atrial myxoma can present because of the potential for fatal outcomes.

Introduction
Cardiac myxomas are histologically benign lesions, of endothelial origin, occurring more commonly in women. They have a tendency to embolise and cause intracardiac obstruction. They can grow rapidly resulting in advanced symptoms at time of presentation and should be regarded as potentially fatal tumours of the heart.

Case Report
A 53 year old female presented to the Emergency Department with increasing shortness of breath for one week associated with left sided chest tightness for one day. She had complained of fatigue for months. There was a forty year pack history of smoking and a history of hypertension and rheumatoid arthritis. Physical examination was unremarkable. Her blood pressure was 166/57 mmHg. Her temperature was normal. Her respiratory rate was 18 breaths per min and her heart rate was 80/min and regular. Her Oxygen saturation was 97%, room air. A full blood count, urea, electrolytes and cardiac enzymes were normal. Her D-Dimer count, urea, electrolytes and cardiac enzymes were normal. An arterial blood gas revealed a pO2 of 11.8 kPa and a normal lactate. A diagnosis of a pulmonary embolus was considered. There was evidence of a pulmonary embolus throughout the tricuspid valve into the right ventricle.

Figure 1: Computerised Tomography Pulmonary Angiogram showing a bulky right atrial lesion suspicious for an atrial myxoma

Figure 2: Cardiac Magnetic Resonance Imaging showing a 6.2 cm x 4.5 cm mass prolapsing through the tricuspid valve into the right ventricle.

An M-mode echocardiograph showed good left ventricle function with an ejection fraction of 55%. There was mild tricuspid regurgitation. Coronary angiography was performed which showed normal coronary arteries. An elective thoracotomy was performed with resection of the tumour. The post operative period was uneventful. Pathological analysis revealed an approximately 8 cm x 7 cm x 1.5 cm gelatinous mass with a polypoid mucinous appearance. Histologically this tumour was composed of small polygonal and spindle cells in a loose myxoid stroma. The appearances were consistent with the radiological suspicion of an atrial myxoma.

Discusion
Cardiac tumours are rare and consequently delayed diagnosis is common. Incidence of primary tumours of the heart is estimated to be less than 1% of patients, and is 5 times more common in right atrial myxomas. Dyspnoea is the most common symptom. Other laboratory findings of significance include anaemia, leukocytosis, an elevated ESR and gamma globulin. Early diagnosis and treatment is important for prevention of possible tricuspid valve obstruction, pulmonary embolus, maintaining systolic function and restoring biventricular diastolic function. Important issues intra-operatively include the prevention of tumour embolisation and on bipoqueon with a wide margin of normal tissue, and inspection of all four chambers to avoid missing tumour emboli or a multi-entric lesion.

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References