

## Atrial myxoma presenting with aphasia alone: a case report

### 個案報告：只呈現失語症的心房黏液瘤

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Atrial myxomas are the most common primary heart tumours. Symptoms are produced by mechanical interference with cardiac function or embolization. Neurological symptoms may occur approximately in one third of the patients. We report a patient who was admitted to the emergency department with only a complaint of complete aphasia and without other neurological signs and symptoms. Transthoracic echocardiography demonstrated a large mobile mass sized 4 x 4.5 cm prolapsing into the left ventricle through the mitral valve from the left atrium, suggesting the diagnosis of atrial myxoma. After surgery, aphasia resolved completely. Our objective is to inform clinicians that aphasia alone can be a symptom of atrial myxoma. (*Hong Kong j.emerg.med.* 2009;16:168-171)

心房黏液瘤為最常見的原發性心臟腫瘤。因妨礙心臟的機械性功能或栓塞而產生症狀。神經症狀可出現於大概三分之一的病人。我們報告一名被送進急症室的病人，只有完全失語的一個申訴，而沒有其他的神經徵狀。經胸腔超聲波心動描記法顯示一個 4 x 4.5 厘米移動的大團塊由左心房經二尖瓣脫垂入左心室內，暗示診斷為心房黏液瘤。失語症於手術後完全消退。我們的目的在告知臨床醫生，單一的失語症也可以是心房黏液瘤的症狀。

**Keywords:** Aphasia, heart atria, heart neoplasms, myxoma

**關鍵詞：**失語症、心房、心臟腫瘤、黏液瘤

## Introduction

Primary cardiac tumours are rare;<sup>1</sup> 70-80% of them are benign, and the majority of them are myxomas.<sup>2</sup> Most myxomas occur in the left atrium (83-88%).<sup>3-5</sup> Myxomas are particularly frequent from the third to the sixth decades of life and show a 2:1 female

predominance.<sup>6,7</sup> Myxomas are generally sporadic and originate from multipotential mesenchymal cells of the endocardium.<sup>8</sup> Patients with left atrial myxoma usually present with signs of cardiac failure due to obstructed ventricular filling causing dyspnoea, pulmonary oedema, and right heart failure. In some cases, it leads to syncope, sudden death, or signs of systemic embolism.<sup>9</sup> Neurologic symptoms have been reported in 26-45% of patients, with embolic cerebral infarct being the most frequent.<sup>6,10,11</sup> The embolization of tumour particles or thrombotic material covered with tumour cells occurs in 30-45% of myxoma patients. In at least half of the cases, cerebral arteries are affected, leading to embolic ischaemic stroke.<sup>6</sup> We report the case of a female patient who presented only with aphasia, as a result of cerebral embolism originating from a left atrial myxoma with multiple cerebral lacunar infarcts shown on the magnetic resonance imaging (MRI).

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## Case

A 52-year-old woman was admitted to our emergency department with complete aphasia in May 2007. Her aphasia started abruptly one day before attending the emergency department. Her past medical history was unremarkable. On physical examination, she showed only motor aphasia without other neurological signs and symptoms such as focal lateralization, facial paresis, seizure or amaurosis. The cerebellar tests were normal. The blood pressure was 110/80 mmHg and the pulse rate was regular at 112 bpm. On cardiac examination, loud S1 and 2/4 diastolic murmur were present at the apex. There was no fever, dizziness, syncope, chest pain, dyspnoea or congestive heart failure. Electrocardiography demonstrated sinus tachycardia. No left atrial enlargement, rhythm disorder, conduction disturbance or repolarisation disorder was seen in the electrocardiogram. The chest radiograph was normal. Laboratory findings were as follows: leukocytosis (white blood cell count 19,000/mm<sup>3</sup>), anaemia (haemoglobin 11 g/dL, haematocrit 33%). All other laboratory results were normal. The urgent brain computerized tomography was normal. MRI scan was done in the emergency department and revealed

multiple subcortical lacunar infarcts in T1 and T2 weighted images (Figure 1). Subsequent transthoracic echocardiography demonstrated a large mobile mass sized 4 x 4.5 cm in the left atrium prolapsing into the left ventricle through the mitral valve, suggesting the diagnosis of atrial myxoma (Figure 2). Other findings on the echocardiogram were moderate mitral valve insufficiency, mild tricuspid valve insufficiency and pulmonary hypertension (40 mmHg). A neurologist examined the patient and commented that the motor aphasia was caused by the left atrial myxoma. The patient was then transferred to the cardiovascular surgery unit for removal of the left atrial mass. The mass was completely removed surgically. The histological examination confirmed the diagnosis of myxoma. After surgery, the aphasia resolved completely in 24 hours and the patient was discharged from hospital without any symptom. One month after the initial presentation, the neurologic examination remained normal.

## Discussion

Left atrial myxomas frequently cause cerebral embolic

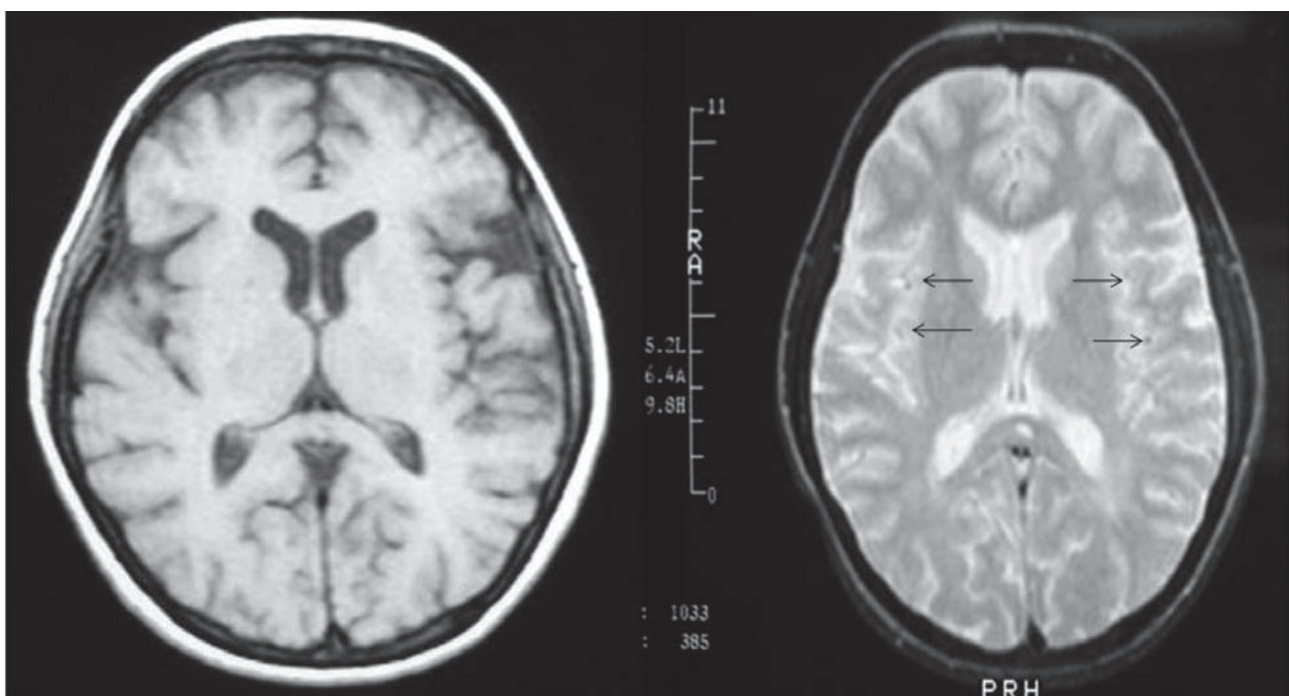
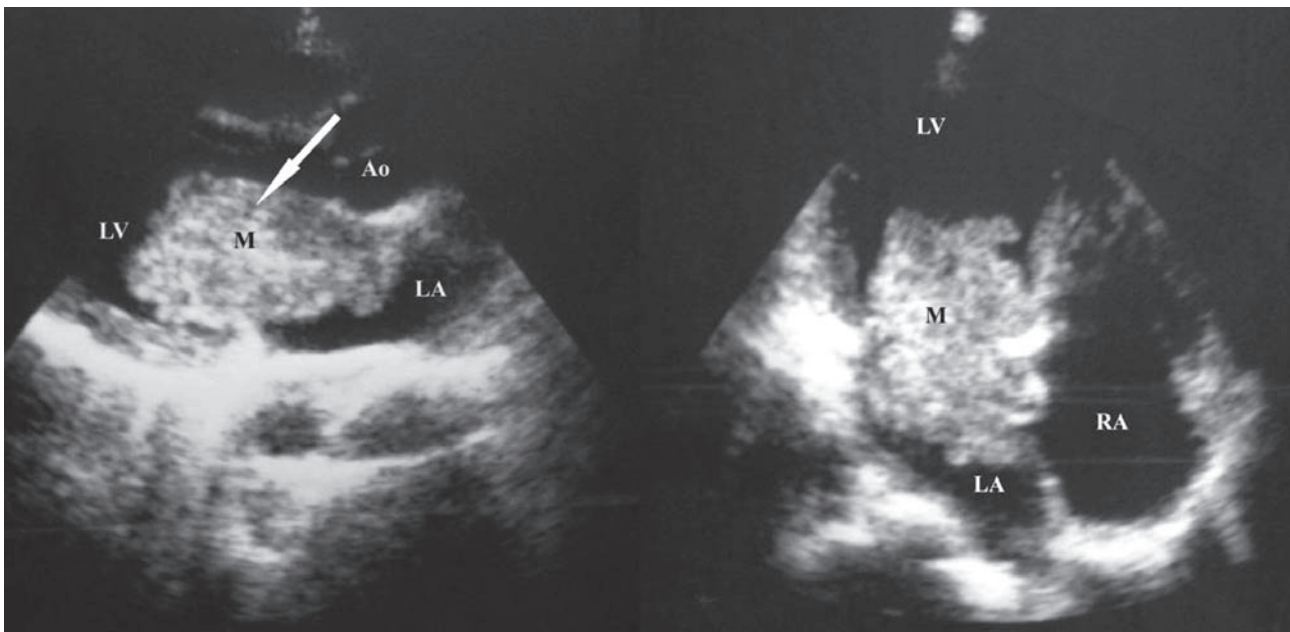


Figure 1. Cerebral MRI showing multiple subcortical lacunar infarcts (arrows).



**Figure 2.** (Left panel) Parasternal long axis view demonstrating myxoma prolapsing into the left ventricle through the mitral valve. (Right panel) Apical four view showing the myxoma. (Ao: aorta; LA: left atrium; LV: left ventricle; M: myxoma; RA: right atrium)

phenomenon leading to a great variety of symptoms and signs. However to the best of our knowledge, aphasia alone without other neurological manifestations has not been reported before in the medical literature.

Cardiac myxomas represent 50% of all cardiac tumours and express themselves with different clinical symptoms, which are classically grouped as cardiac, general and embolic (neurologic or peripheral).<sup>4</sup> Left atrial myxoma may or may not produce characteristic findings such as tumour plop, pansystolic murmur, or mid-diastolic murmur on auscultation. Symptoms range from nonspecific and constitutional to sudden cardiac death.<sup>12,13</sup> Left atrial myxomas become symptomatic when they obstruct the mitral valve, embolize peripherally, or cause systemic effects.<sup>6</sup> A high index of suspicion aids in diagnosis: symptoms of left and right sided heart failure, dizziness, syncope, symptoms related to embolization and constitutional symptoms that include fever, weight loss, and arthralgias.<sup>12</sup> Any arterial bed may be affected by embolization, such as upper and lower extremities, aortic saddle, coronary arteries, kidneys, liver, spleen, eye, skin, and more, leading to a great variety of

symptoms and signs. Different studies demonstrated neurological manifestations in 8-26% of patients.<sup>6,13,14</sup> Cerebral infarction, transient ischaemic attack, amaurosis, and less frequently, medullary infarction may be the clinical presentation. Visual field loss, facial paresis, extremity paresis, epilepsy, aphasia, and dysarthria may occur. However, aphasia without other clinical manifestations has not been reported in the literature previously.

Two-dimensional echocardiography is the diagnostic procedure of choice. Cerebral imaging often demonstrates multiple infarcts suggestive of an embolic cause, but in some cases it may show only small subcortical ischaemic lesions mimicking lacunar disease.<sup>15</sup> In our case, multiple subcortical lacunar infarcts were observed in the MRI.

## Conclusion

Aphasia alone is generally a symptom of neurological illness such as transient ischaemic attack or cerebrovascular infarction; but one must be alert that it may also be a symptom of atrial myxoma.

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