

Central nervous embolism as an usual presentation of left atrial myxoma

Sir,

Cardiogenic embolism accounts for about 15% of all ischemic brain infarcts, and most often it is related to atrial fibrillation, valvular heart disease, or cardiomyopathy. In patients with acute ischemic stroke and concomitant atrial arrhythmias, the arrhythmia is often incriminated as the sole cause of these embolic episodes. However, these arrhythmias may be associated with structural heart diseases, which may not be evident on initial clinical evaluation. We report the case of a patient with massive cerebrovascular embolism who had atrial flutter at presentation, and detected to have a large left atrial (LA) myxoma on echocardiography later.

A 68-year-old male, chronic smoker was found in altered sensorium at home 12-hours before admission. There was no history of fever, headache, vomiting or seizures. He was not a diagnosed case of diabetes mellitus, hypertension, coronary artery disease or rheumatic heart disease. On examination, he was stuporous. The pulse was 180 /min and regular, and the blood pressure was 130/90 mm of Hg. Cardiovascular examination was unremarkable. Cranial nerves were normal. Deep reflexes were brisk in all 4 limbs with extensor plantars bilaterally. No papilledema was seen.

Electrocardiogram revealed atrial flutter at a rate of around 360/min with 2:1 atrioventricular conduction. Cardioversion with 50 J restored normal sinus rhythm. Cranial computerised tomographic scan showed hypodensities of bilateral occipital lobes and cerebellum suggestive of infarcts. Magnetic resonance imaging revealed multiple infarcts with haemorrhagic transformation in bilateral occipital and parietal lobes, left temporal lobe and bilateral cerebellar hemispheres. The ventricular system was normal and there was no midline shift. Echocardiography revealed a large (80 x 48 mm) homogeneous tumor attached to the interatrial septum, which was prolapsing into left ventricle during diastole. Mild mitral regurgitation was noted. The diastolic gradient across the mitral valve was insignificant. A diagnosis of LA myxoma with atrial flutter and multiple brain emboli was made. There was progressive deterioration of neurological status to unresponsive coma and the patient died on the third day of presentation. A request for autopsy was deferred.

Several unique clinical features prompted us to report this case. First, association of atrial arrhythmias are uncommon in atrial myxomas; with atrial flutter hitherto unreported, to our knowledge.¹ Second, the commonest presenting feature of LA myxomas are mitral obstructive symptoms which were absent in our case, despite the large size of the tumor. Neither did he have any constitutional symptoms. Third, more often than not, patients with LA myxomas are seen with small and single territory infarcts. However, our patient presented with shower of

emboli in anterior as well as posterior vascular territories of brain.

Morphologically, two distinct types of LA myxomas have been described; round type characterized by round shape with nonmobile surface and polypoid type, characterized by irregular shape with mobile surface.² Studies suggest a higher incidence of embolic episodes in patients with friable polypoid type of tumor.^{2,3} Our case was an exception to this trend resulting in multiple emboli despite belonging to the round type. In general, the tumours of round type are also less likely to prolapse into LV, unlike this patient.²

Open-heart surgery immediately after cerebral embolism is considered contraindicated due to the problems of haemorrhagic infarction or brain oedema. On the other hand, relapses of embolism may deteriorate the condition leading to a fatal end, extirpation of the myxoma soon after the cerebral infarction is advisable at least in selected patients. Progressive increase in multiple small white matter infarcts is reported to occur until the surgical resection of myxomas.⁴ The decision regarding the timing of surgery in these cases should be individualized, as of now, as no definite guidelines are available.

In this patient, the embolic episode was attributed initially to the atrial arrhythmia and the diagnosis of LA myxoma was made later on echocardiography. So even in patients of acute stroke with established arrhythmias, it is important to perform transthoracic echocardiography to exclude structural heart disease. Though LA myxoma is a rare cause of cerebral embolism, detection of this tumor is relatively easy and surgical resection of myxoma is usually a permanent measure to prevent subsequent stroke.

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