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Case Report

Left atrial myxoma causing posterior cerebral artery infarct-a case report

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ABSTRACT

A 34-year-old female patient presented with a history of sudden loss of vision in right eye. On neurological examination, she was having visual agnosia in right eye. MRI was performed which revealed left posterior cerebral artery infarct. Trans thoracic echocardiography was performed. This showed a large left atrial myxoma. Patient underwent resection and had an uneventful postoperative course. This case report showed the importance of cardiac source of emboli in patients presenting as acute stroke. Performing echocardiography and diagnosing and treating cardiac source of emboli could prevent further complications.

Keywords: Echocardiography, Left atrial myxoma, Magnetic resonance imaging, Posterior cerebral artery infarct

INTRODUCTION

Cardiac tumors are rare, and are usually benign. Myxomas are benign primary cardiac tumors. Myxomas are recognized source of emboli, and can lead to stroke and systemic embolisation.[1] It is potentially treatable, therefore early detection can prevent complication.

CASE REPORT

A 34-year-old female patient presented with a history of sudden loss of vision in right eye. She was not having any significant medical history, she was nonsmoker, non-diabetic, and non-hypertensive.

Neurological examination was normal except for visual agnosia in right eye.

MRI brain was done and it revealed left posterior cerebral artery infarct. Trans thoracic echocardiography was done and it revealed large LA myxoma. Patient underwent early resection

Investigations

On presentation, her routine blood investigations were normal

Figure 1: MRI brain showing area of restricted diffusion in medial- parasagittal aspect of left occipital lobe, representing acute infarct.

Figure 2 (a): Transthoracic echocardiography showing myxoma attached to fossaovalis region of interatrial septum, freely mobile from LA to LV throughout cardiac cycle.

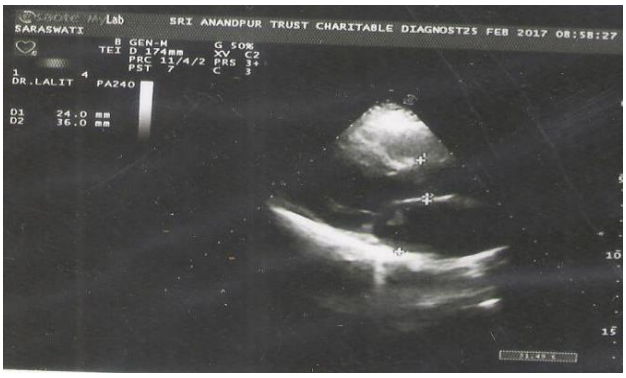

Figure 2 (b): Transthoracic echocardiography showing myxoma attached to fossaovalis region of interatrial septum, freely mobile from LA to LV throughout cardiac cycle.

Treatment

Patient underwent emergency excision of the myxoma. Post-operative course was uneventful.

DISCUSSION

Primary cardiac tumors are rare, and are found in less than 0.2% of patients at postmortem. The majority of primary cardiac tumors are benign, of which approximately 50% are myxomas. They are more common in women and occur most frequently between the third and sixth decade of life.[1] Most common site of cardiac myxoma is the left atrium.[2.]

Left atrial myxomas often present with one or more effects of a triad of obstructive, embolic and constitutional manifestations, although some are asymptomatic.[3] They may be small or large and either immobile and no prolapsing or mobile and prolapsing through the mitral valve. Large myxomas may cause obstruction of the atrioventricular valves and lead to dyspnea (secondary to impaired ventricular filling), presyncopal or syncopal episodes and sudden death.[4-5]

Cardiac manifestation is the most frequent mode of presentation, followed by embolic manifestation. Embolic events occur in 30-40% of patients. In majority of cases the cerebral arteries are affected leading to ischemic stroke.[5-8] Stroke, associated with myxomas is usually caused by embolisation of tumor or thrombus and classically involves several vascular territories. However, aneurysm formation and intacerebral or subarachnoid hemorrhage have been reported.[9,10] Non-specific symptoms such as weight loss and fever are common. In minority of cases (2-10%) patient may be asymptomatic and the myxoma may be discovered as an incidental finding.[11]

In present case patient initially presented with sudden loss of vision in right eye. MRI was performed, which revealed large area of restricted diffusion in the medial-parasagittal aspect of the left occipital lobe, representing acute infarct. Echocardiography was done and was suggestive of large LA myxoma. Patient underwent myxoma excision.

European stroke organisation recommends echocardiography when cardiac source of embolism is suspected in their 2008 guidelines for Management of Ischemic Stroke.[12] Two-dimensional echocardiography is an excellent initial diagnostic technique to detect a cardiac mass. It is noninvasive and is widely available. It has sensitivity and specificity of 90% and 95% respectively. In comparison to trans thoracic echocardiography, transesophageal echocardiography provides superior image resolution and better visualization of anatomic details of the tumor, its location, attachments, and relation to other anatomical structures. Doppler echocardiography can show the hemodynamic consequences of atrial myxoma.[13-15] Cardiac MRI may provide additional information as compared to echocardiography. It can distinguish between tumor and non-tumor masses with sensitivity and specificity of 94% and 91% respectively, and between benign and malignant masses with sensitivity and specificity of 89% and 100% respectively.[16-18]

The possibility of recurrence after surgical resection mandates regular follow up with echocardiography. The risk of recurrence ranges between 1% and 3% for sporadic cases and 12% and 22% for familial and complex myxomas respectively.[19]

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