Atrial myxoma as a cause of ischemic stroke: A rare case report

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ABSTRACT

Most strokes in young adults are ischemic and atrial myxomas are a rare cause of stroke, accounting for lesser than 1% of all ischemic strokes. Left Atrial (LA) myxoma can present with wide variety of symptoms including stroke. It should be considered as differential diagnosis of stroke in young. We present a female aged 43 years who presented with loss of consciousness. She had right hemiplegia and after workup for stroke in young, left atrial myxoma was detected.

INTRODUCTION

Stroke is generally considered to be a disease of middle-aged and older adults however it can occur in young adults as well. Data collected in Europe and the United States have demonstrated an annual incidence of 4 to 28 stroke events per 100,000 people younger than 45 years. Most strokes in young adults are ischemic. Atrial myxoma’s are a rare cause of stroke, accounting for fewer than 1% of all ischemic strokes. Detection of this tumor is relatively easy, and surgical removal of the myxoma is usually a permanent measure to prevent subsequent strokes.

The most common primary cardiac neoplasm is myxoma and accounts for approximately one-half of all primary cardiac tumors. Approximately 75% of these tumors arise from the left atrium and 18% from the right atrium. The few remaining tumors originate from atypical sites such as left or right ventricle and valves.

This study presents the case of a 43 year-old woman with an atrial myxoma who had stroke. The etiology of stroke in young adults is considered in the context of this patient’s differential. The embolic manifestation may be the first presentation in many cases and if not treated it may cause recurrent ischemic events.

CASE REPORT

A 43 year old woman with no co-morbid illness was admitted with history of loss of consciousness preceded by vomiting and giddiness. There was no history of headache, fever, seizures, or trauma to head. No history of similar complaints in the past. On examination patient was stuporous, responding to painful stimuli and paucity of movements on right side noted. Right plantar reflex was extensor. Rest nervous system and other systemic examination were unremarkable.

Her blood picture and biochemical parameters reports were normal. ECG showed non specific ST-T changes. MRI showed a large acute non-hemorrhagic infarct in the left fronto-temporo-parietal lobes and ganglio-capsular region in the left middle cerebral artery territory causing mass effect on left lateral ventricle. No midline shift is seen (figure 1).

Fig.1. Large acute non-hemorrhagic infarct in the left fronto-temporo-parietal lobes and ganglio-capsular region

Chest X ray suggest left atrial enlargement. In view of ECG and chest x ray findings, echocardiogram was done which showed enlarged left atrium with an echogenic mass (51mmx27 mm) attached to interatrial septum above mitral valve reducing its area to 1.40sq cms (figure 2, 3). Possibility of left atrial myxoma was considered. Patient was referred to cardiothoracic surgery for treatment.

Fig.2 & 3. Enlarged left atrium with an echogenic mass attached to interatrial septum above mitral valve. Size of the mass was 51mmx27 mm reducing the mitral valve area to 1.40sq cms
DISCUSSION

The commonest primary benign cardiac tumor is myxoma with the incidence of 0.5 per million population. Myxomas account for 0.3% of all cardiac surgeries performed. Although most cases occur sporadically, affecting the age group of 30-60 years, female predominance, 7-10% shows familial pattern, with an autosomal dominant transmission. The classic triad includes embolism, intracardiac obstruction and constitutional symptoms (Goodwin’s triad).

Ten percent of cardiogenic embolization occurs because of mitral valve prolapse, paradoxical emboli, endocarditis, and cardiac myxoma. Neurologic complications resulting from cardiac myxomas are seen in 20-35% of patients. Stroke is the initial presentation in 50% of patients with myxomas, and in 75% of patients it is seen with left atrial myxoma.

Calcifications on the chest radiography are more diagnostic of RA myxoma than in LA myxoma. CT & MRI can help identify the extent of the tumor and its relationships to surrounding cardiac and thoracic structures. Transesophageal echocardiography (TEE) is 100% sensitive for diagnosis of myxoma. It yields morphologic detail in the evaluation of cardiac tumors, including points of tumor attachment and degree of mobility. Intraoperative TEE monitoring can aid in recognizing and avoiding tumor embolization. We used TEE in our patient for preoperative confirmation of diagnosis and postoperative assessment of adequacy of tumor resection. Surgical removal of tumor carries less operative mortality rate but recurrence may occur at the site of surgical resection. Similar case from India is reported earlier which was successfully operated under general anesthesia and cardiopulmonary bypass (CPB).

CONCLUSION

In cases of acute ischemic stroke in young adult, atrial myxoma should be included in the differential diagnosis. Detection of the tumor by echocardiography, followed by surgical excision, significantly reduces the risk of subsequent ischemic strokes.

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