

Cerebrovascular Accident Complicating Left Atrial Myxoma

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Abstract

Cardiac myxoma is the most frequent subset of benign primary cardiac tumors that can lead to numerous complications as described in literature. Cardiac tumors can present with cardiac and embolic manifestations and should be considered in the differential diagnosis of patients presenting with such symptoms. We report a clinical case of a 65-year-old female who came to the emergency department in a clinical presentation cerebrovascular accident (CVA) secondary to tumor embolization from a large left atrial myxoma.

Keywords: Left Atrial Myxoma; Acute Stroke; Cardiac Tumors

Introduction

Cardiac myxoma (CM) is the most common primary tumor of the heart, considered a benign, slowly proliferating neoplasm of connective tissue [1,2]. Atrial myxomas occur in nearly 14 - 20% of the population and are associated with a higher risk of embolization, intra cardiac obstructions, conduction disturbances and lethal valve obstructions [3].

Dominant symptoms of left atrial myxoma are usually related to cardiac failure, or systemic embolism [4]. Atrial myxomas are a thought to be a rare aetiology of stroke, with a reported incidence of < 1% of all ischemic strokes. Myxoma are usually treated surgically, with a complete resection and septum reparation using pericardial material [5].

We present a rare case of a 65-year-old female who was diagnosed as having a cerebrovascular accident (CVA) caused by tumor embolization from a large left atrial myxoma.

Case Report

A 65 year old female patient, hypertensive, menopausal, admitted to the emergency department with slurred speech and blurry vision.

Past medical history was not significant for any surgery or family history of hypercoagulable state, coronary artery disease, or cardiac tumors.

The clinical examination revealed a blood pressure of 100/60 mmHg, heart rate of 65 beats/min respiratory rate of 19/min, and oxygen saturation of 99% on room air.

Cardiac examination was notable for a soft grade 2/6 diastolic murmur at the left sternal border.

Neurological examination decreased visual acuity with hemi-neglect and dysarthria. Besides, right upper/lower extremity strength scale was 4/5 with appropriate tone in the 4 limbs.

Results of initial diagnostic testing, including serum electrolyte levels, coagulation studies, complete blood count, and chest radiograph, were within normal limits. An electrocardiogram showed normal sinus rhythm, and a CT scan of the brain, showed an acute infarct in the left sylvian territory.

A transthoracic echocardiogram was done under the impression of possible mitral stenosis, which found no evidence of valvular heart disease or left atrium thrombus, but revealed a large tumor occupying the left atrium, very mobile, measuring 33/46 mm.

The patient was referred to surgery. Starting by a median sternotomy then a left atriotomy, which had revealed a massive myxomatous mass with a cauliflower appearance outside the cavity. This mass was multilobed, very friable and pedicle. It was appended to the interatrial septum with small base of implantation of 0.5 cm diameter. It was resected in totality (Figure 1). The immediate uneventful postoperative course was marked by the revelation of a mild mitral regurgitation by the Cardiac ultrasound control.



Figure 1: The myxoma after surgical resection.

Discussion

Myxomas, the most common type of benign primary cardiac tumor. They occurs in all age groups but is particularly frequent in women and during the third through sixth decades (mean: 53 years). 10% of cases are transmitted in an autosomal dominant fashion while 90% arise sporadically [6].

Histopathological exam of myxoma show features of soft, gelatinous, or myxoid regions with some cystic areas showing hemorrhage, while other parts are resistant with a profuse mature collagen. 10% of myxomas has ossification and calcification [7]. While most myxomas are founded in the left atrium from the interatrial septum near the fossa ovalis [8].

They can mimic every cardiac disease especially mitral stenosis, infective endocarditis and other vascular disease. Manifestations incorporate cardiac failure caused by obstructed filling leading to dyspnea, pulmonary edema, and signs of right heart failure. It may generate systemic embolism, syncope or even sudden death. 0.5% of ischemic strokes are caused my atrial myxomas [5].

Atrial myxomas can embolize to almost any organs. Cerebral embolism most commonly results in a transient ischemic attack or an ischemic stroke, but intracranial hemorrhage may occur as well [2,5].

Echocardiography is used in detecting myxomas; tumor size, shape. Attachment can also be evaluated, which serve in surgical planification for excision [9].

Transesophageal echocardiography (TTE) is the preferred initial imaging modality compared to transthoracic echocardiogram for evaluating the left atrial myxoma. TEE is 100% sensitive diagnosing cardiac tumors [10].

Cardiac CT and MRI offer noninvasive imaging options may The Evaluation of the characteristics of tumor may be offered by noninvasive imaging options such as Cardiac CT and MRI [11].

Surgery resection is the first-line treatment for cardiac tumors especially myxomas; the only indication of medical therapy is the management of concomitant CHF and/or arrhythmias [12,13].

The overall risk of sporadic tumors is only 1% to 3% unlike recurrence which is approximately 12% for familial tumors. Incomplete resection, intraoperative displacement of tumor material, embolization, transformation from a benign to a malignant lesion and multifocal genesis have been proposed as possible explanations for recurrence of atrial myxoma [14].

The average recurrence can appear about 30 months after removing the first myxoma. For some authors, a follow-up includes routine semi-annual echocardiography to detected recurrent tumors [15].

Conclusion

Even if cardiac myxoma can cause stroke, we can be considered in the differential diagnosis. 2D echocardiography and if necessary transesophageal echocardiography provides substantial advantages in detecting intra-cardiac tumors. Definitive treatment is surgical resection allows a reduction the risk of subsequent ischemic strokes with rare recurrence and low mortality.

Consent

Informed consent was obtained from the patient to reproduce his case in this report.

Disclaimer

The abstract has not been presented or published in any journal or conference.

Conflict of Interest

None to declare.

Funding Disclosure

None to declare.

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