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Case Report

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A Rare Presentation of Atrial Myxoma Leading to Stroke in a Young Female

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ABSTRACT

Myxoma is a common primary tumour of the heart. The most common site is the left atrium. As per previous reports, cardioembolic stroke accounts for around one-fifth of all acute ischemic strokes. Out of which cardiac myxoma is estimated to account for only 0.5% of the cases, which is very rare. Female patients, especially in the 5th decade, are shown to have a greater predisposition. cardiovascular stroke is life-threatening, requiring urgent recanalization and resection of the tumour.

Cardiac myxomas present with variable symptoms like breathing difficulty, chest pain, chest tightness, palpitations, fatigue, etc. CNS Emboli with stroke is one of the rarest presentations, making it a diagnostic challenge.

Here we present a case report of a 48-year-old female patient presenting with right-sided tingling, numbness, and syncope, diagnosed with atrial myxoma.

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Case Report

A 48-year-old housewife fell out of bed while she was trying to turn off the Mosquito Plug, and she lost consciousness. After regaining consciousness, she experienced severe pain in her right hand that radiated to her neck, along with giddiness and mild drowsiness. She also noticed discoloration in her right index finger.

The patient initially came for a consultation as an outpatient, from where she was referred to the emergency department with the above complaints and symptoms, such as pain in the right shoulder radiating to the back and the nape of the neck, along with one episode of unconsciousness. She is a known case of hypertension, hypothyroidism, and migraine, and is on regular medication for these conditions.

General physical and clinical examination showed a pulse rate of 109 beats per minute, blood pressure of 160/100 mmHg. There was no pallor, icterus, edema, clubbing, or lymphadenopathy. A detailed examination revealed swelling and bluish discoloration of the right index finger (Figure 1).

Figure 1: Bluish Discoloration of Right Index Fingure

During the extraction of detailed history patient revealed about similar episode of pain and numbness in Rt hand with giddiness, which occurred a few days back, for which she consulted locally and received some pain killer and anti-inflammatory with other symptomatic treatment, and she improved symptomatically. At the time of admission Neurologist's opinion was taken and after neurological examination MRI Brain with Cervical spine (without contrast) was ordered and conducted, which was suggestive of gyriform areas of restricted diffusion in the Rt frontal lobe post postcentral Gyrus of the right parietal lobe, and right occipital lobe, s/o Acute embolic infarcts. MRI cervical spine showed Spondylitic disc degenerative changes in the cervical spine (Figure 2).

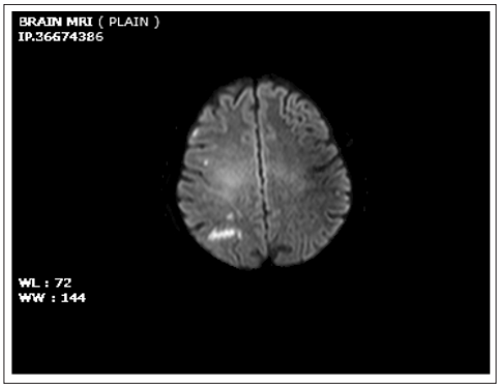

Figure 2: MRI Brain (Plain) Suggestive of Gyriform Areas of Restricted Diffusion in the Right Frontal Lobe Post Central Gyrus of the Right Parietal Lobe and Right Occipital Lobe, s/o Acute Embolic Infarcts

Given the patient's young age, other possible diagnoses were considered, and the spectrum of suspicion was elaborated. Cardiac consultation was taken, and a vasculitis panel was sent. The cardiologist advised an arterial peripheral Doppler study of the upper limb, bilateral carotid Doppler, 24-hour Holter examination, and transthoracic 2D echocardiography.

Arterial peripheral Doppler of the upper limb was normal, and carotid Doppler showed bilateral normal carotid and vertebral arteries. 2D echocardiography showed a large echogenic mobile mass (4.6x1.9 cm), which was suggestive of myxoma in the left atrium, seen attached to the interatrial septum with a small pedicle. It has multiple flagellar, highly mobile masses attached to its surface. Normal cardiac chamber dimensions. Left ventricle ejection fraction—60%. No pericardial pathology (Figure 3).

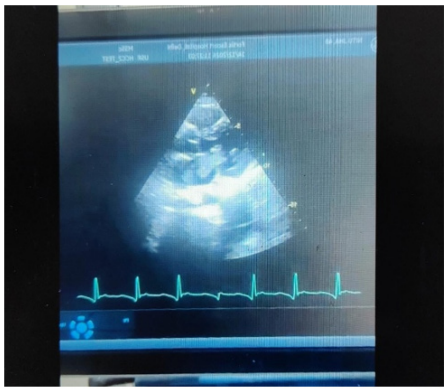

Figure 3: 2D Echocardiography Showing Large Echogenic Mobile Mass (4.6x1.9 cm) In Left Atrium Seen Attached to the Inter Atrial Septum with a Small Pedicle

A cardiothoracic and vascular surgeon was consulted, and an opinion was obtained, who further advised a computer tomography coronary angiogram; hence, the same was conducted, which showed a hypodense non-enhancing lesion measuring 37x23 mm seen in the left atrium (Figure 4).

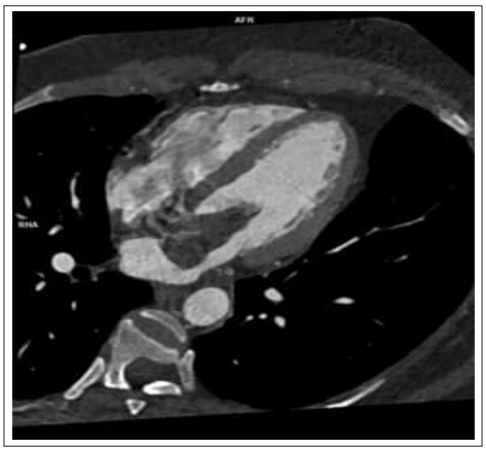

Figure 4: Computer Tomography Coronary Angiogram Showing Hypodense Non-Enhancing Lesion Measuring 37x23mm in Left Atrium

After reviewing the angiogram and echocardiography, the surgical team had advised surgical removal of the left atrial mass after clearance from the cardiac anesthetic team. A pre-anesthetic evaluation of the patient was done, and the patient was found fit for surgery. The patient and attendants were explained regarding the surgical procedure, their outcome, and the risks involved.

The patient underwent trans septal left atrial myxoma excision with autologous pericardial closure of the IAS crested through midline sternotomy. A large 4x3x5 cm elliptically shaped soft friable tissue with a smooth surface was found attached to the inner atrial septum through a broad base (Figure 5). The patient was shifted out of OT on ventilator support and extubated on the first postoperative day.

Figure 5: Post Operative Specimen, A Large 4x3x5 cm Elliptical Shaped Soft Friable Tissue with Smooth Surface

The specimen was sent for culture and histopathology, which confirmed the diagnosis of myxoma (Figure 6). The vasculitis panel sent for evaluation of an autoimmune disorder came back negative. Patient's symptoms relieved. The repeat 2D echocardiogram was suggestive of a normal study (Figure 7). Discoloration of the right index finger became normal (Figure 8).

The patient was discharged in stable condition with the advice to follow up in the OPD [1-6].

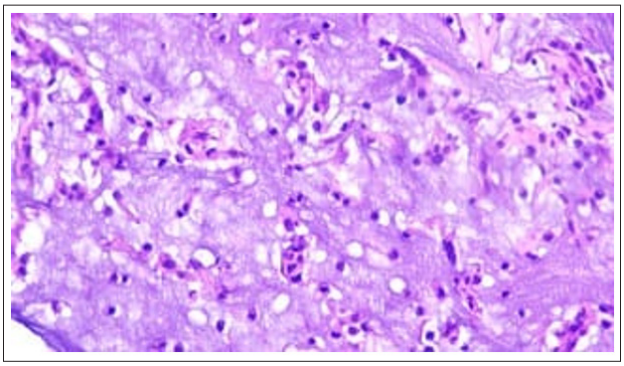

Figure 6: Histopathology Suggestive of Myxoma

Figure 7: Post Operative Normal Echocardiography

Figure 8: Showing Improvement in Bluish Discoloration of Index Finger of Right Hand

Discussion

The unusual occurrence of atrial myxomas along with its variable presentation results in the delay of its diagnosis, treatment outcomes leading to poor prognosis [7]. The presenting complaint for atrial myxoma usually comprises one of the following: syncopal episodes cerebral strokes, shortness of breath along with wheezing, and myocardial infarction [8-15]. The precise set of symptoms that might be observed depends upon the size, location, and anatomy of that particular atrial myxoma.

Tareen et al., reported that a 50-year-old woman's cardiac myxomas caused episodes of dyspnea and syncope before progressing to repeated episodes of transient ischemic attack and stroke [16]. This was curative, and a histological study of the excised tumor verified the presence of atrial myxoma.

Khan et al., studied a young female patient who complained of fever, right-sided weakness, and a reduced degree of awareness and was diagnosed with left atrial myxoma [17]. Stroke in a young patient is an uncommon disorder that may go unnoticed in the absence of a history of heart difficulties, and identification may be protracted until there is functional impairment.

There are no exact findings associated with atrial myxoma except for a "tumor plop" which resembles that of an opening snap in mitral stenosis. In this case, the patient had completely normal cardiac auscultation findings, as occurred in 36% of atrial myxoma patients as per studies. Nearly all patients of atrial myxoma present with essential symptoms, but episodes of syncope with transient ischemic attack/stroke are a relatively rare finding [18]. This stroke manifestation is caused by the embolic showers originating from the atrial myxoma. These emboli most typically affect the cerebral arteries, resulting in neurological manifestations as seen in our patient. However, only 0.5% of all strokes are caused by emboli from atrial myxomas [19-21].

The syncopal episodes of the patient can be explained by mechanical obstruction of the tumour at the level of the mitral valve [22]. This impairs the normal circulation of the blood, depriving the brain of its blood supply, which manifests as an episode of unconsciousness.

Initially, optimal conservative treatment can be used to prevent the complications of atrial myxoma, such as cardiac arrhythmias [23]. Nevertheless, surgical resection remains the only definitive treatment for atrial myxoma [23, 24]. Hence, the treatment plan for this patient was complete removal of the tumour. Post successful surgery led to the resolution of the presenting complaint of the pain in the right hand associated with discolouration of the right index finger. There was no further episode of unconsciousness and no recurrence of neurological symptoms during follow-up.

Conclusion

The diagnosis of atrial myxoma can be ambiguous, especially when the symptoms imply a systemic disease and are unusual. The relevance of these symptoms became clear in the instance reported here when the patient presented acutely with an unusual presentation, which was ultimately identified as a cerebrovascular embolic shower. The appearance of an embolic shower in a young girl raised concern, prompting us to do more comprehensive studies into the likelihood of a proximal source of embolization, which led to the validation of the causative atrial myxoma.

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