



VISION LOSS: AN ATYPICAL PRESENTATION OF ATRIAL MYXOMA

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ABSTRACT

We are reporting a unique case of Anterior ischemic optic neuropathy (AION) where ophthalmic complaints were the first and only complaints of the patient with atrial myxoma. A young female of 24 years presented to us with sudden unilateral painless loss of vision in her left eye for one day, also associated with intermittent pain in the pulp of the fingers. On complete eye evaluation she was diagnosed as left eye AION with a component of posterior ischemic optic neuropathy (PION). On further investigation Atrial myxoma was found to be the reason for the ischemia. Though atrial myxoma has varied presentation, visual loss as the presenting symptom is very rare. She was treated for the primary cause, with no significant improvement in the vision. Emboli due to atrial myxoma leads to lacunar infarcts in brain and AION or PION leading to sudden painless loss of vision. Early diagnosis and adequate management can prevent further serious complications and involvement of other eye.

KEY WORDS: Atrial myxoma, sudden painless loss of vision, emboli, PION/AION.

INTRODUCTION

Ischemic optic neuropathy presents with painless unilateral visual loss developing over hours to days. Though there is no histopathological evidence of vasculopathy, data suggests involvement of paraoptic branches of short posterior ciliary arteries. Systemic conditions like hypotension, anemia, sleep apneic syndrome etc have been associated with optic disc ischemia, where the blood supply of the optic disc is compromised. Rare conditions that are encountered are the cardiac conditions as in this case atrial myxoma. Myxoma are the most common type of primary heart tumours derived from multipotent mesenchymal cells.^[1] Myxoma are more common in women. About 10% are passed down through families (inherited), these are called familial tumours. Vision loss as a presenting symptom in a case atrial myxoma is very remote, most probably due to involvement of retinal arteries and in this case posterior ciliary arteries.

CASE REPORT

A 24 year old Indian female, an engineering student presented with a 1 day history of sudden painless loss of vision in left eye (LE) associated with intermittent pain in the pulp of fingers. Patient gives history of an episode of fainting attack about a year back when she was investigated and no cause was found. No history of dyspnoea, platypnea, dizziness, palpitations or chest pain.

On ophthalmic examination, her best corrected visual acuity (BCVA) was 0 log Mar for distance, N6 for near in the Right eye (RE) and HM CF (hand movement close to face) in LE. Anterior segment examination including slit lamp bio microscopy showed LE relative afferent pupillary defect (RAPD) grade 2. Fundus examination with indirect ophthalmoscope in the RE revealed clear media with normal disc (Figure 1a) and in the LE showed clear media with blurring of the disc margins, peripapillary edema, retinal folds radiating from disc and dull foveal reflex (Figure1b). The patient was advised an Magnetic resonance imaging (MRI) brain to rule out any space occupying lesions, vascular or inflammatory conditions.

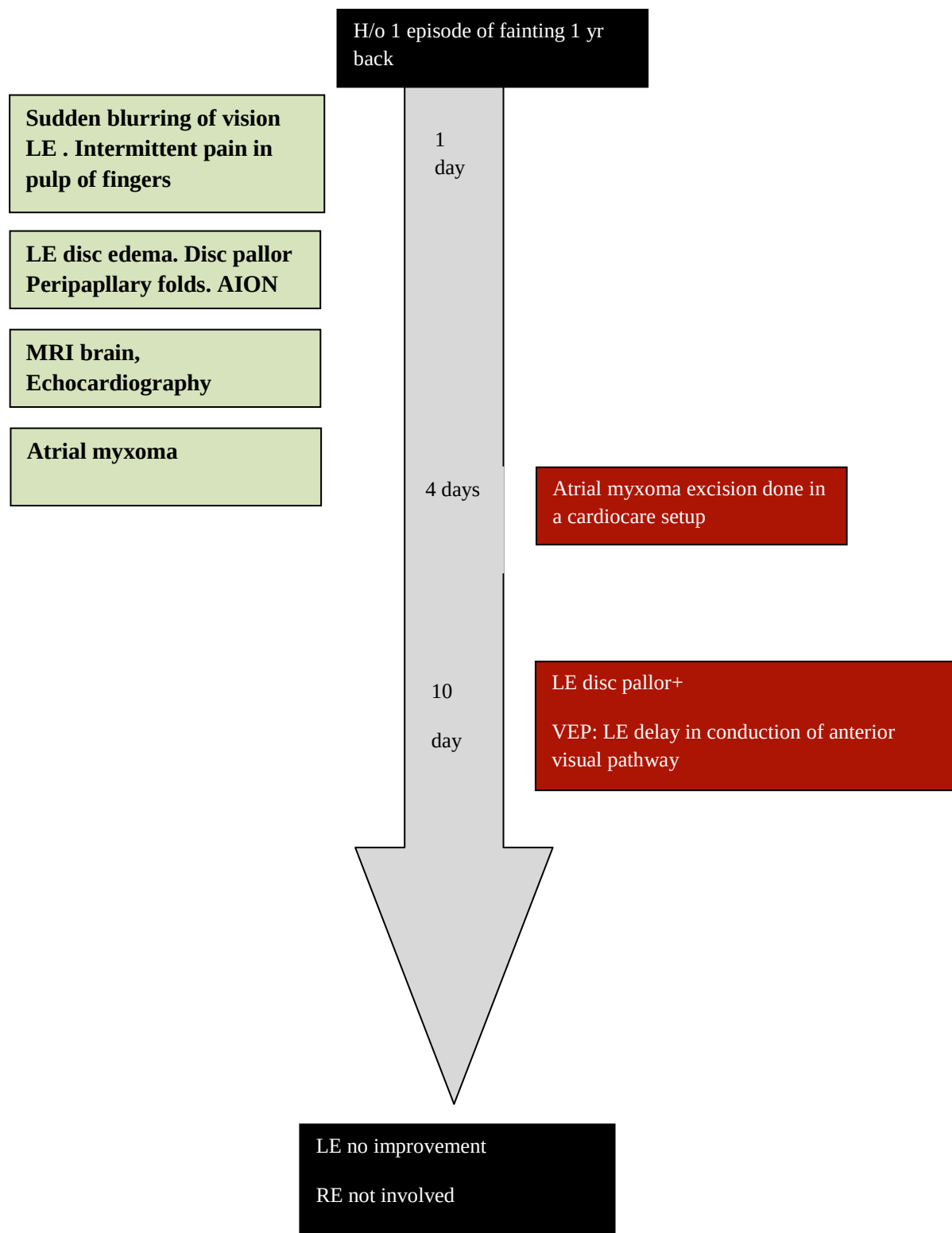
MRI brain revealed multiple acute lacunar infarcts of embolic etiology and old lacunar infarcts with perifocal gliosis (Figure 2a,2b). The embolic nature of lacunar infarcts led to advise an echocardiography of the patient.

Echocardiography showed mild dilatation of left atrium, mass attached to interatrial septum measuring 3 x 4.5cm left atrial Myxoma, with good bi ventricular function (Figure 3).

Visually evoked potential (VEP) standard externus for age match was done after the patient underwent surgery for atrial myxoma that is after 10 days of initial complaints to check on the prognosis, RE showed Latency of P-100 wave slightly prolonged, suggestive of mild delay in conduction of anterior visual pathway and

LE showed Loss of normal wave pattern, Latency of P-100 wave very much prolonged suggestive of delay in

conduction of anterior visual pathway (Figure 4).



DISCUSSION

Ischemic optic neuropathy is usually seen in patients above 55 yrs of age, but non arteritic anterior ischemic optic neuropathy (NA-AION) is reported in younger age

group too.^[2] Many etiological factors have been reported for the development of non arteritic ischemic optic neuropathy, like, Diabetes Mellitus, abnormal optic disc morphology, procoagulant risk factors, Rheumatoid

arthritis, Herpes Zoster, Anemia, Sickle cell trait, Syphilis, Behcet's, Antiphospholipid antibody syndrome, Polyarteritis nodosa, gastrointestinal ulcers, severe high blood pressure, systemic low blood pressure, arteriosclerosis, internal carotid artery disease, vasculitis, collagen vascular disease, migraine, vasospastic diseases, sleep apnea, massive recurrent haemorrhages, type A personality and cardiovascular diseases.^[3] Though the pathology still remains unclear, data suggests that involvement of paraoptic branches of the short posterior ciliary arteries plays a major role.

Most commonly encountered ischemic optic neuropathy is NA-AION. Pathogenesis similar to stroke which is a thromboembolic disorder has also been proposed to be one of the cause of NAAION. There are few rare cases reported on ischemic optic neuropathy secondary to sildenafil^[4] usage, Activated protein C resistance^[5], post spinal surgeries^[6]. There have been no case reports on Atrial myxoma leading to AION yet.

Atrial myxoma commonly presents as dyspnoea, platypnea, dizziness, fainting, palpitations, chest pain and in some cases even death. General symptoms seen in

50% patients due to overproduction of Interleukin-6 are cough, cachexia, fever, malaise, joint pains, Raynaud's phenomenon, clubbing, presystolic heart murmur. Symptoms related to embolization include: pulmonary embolization from left or right sided tumours, infarction or hemorrhage of viscera, embolization to central nervous system may result in transient ischemic attack, or seizure, involvement of retinal arteries may result in vision loss. There is usually high levels of erythrocyte sedimentation rate (ESR) and C- reactive protein.

There has been a case report where atrial myxoma in a 31 year old male has presented with dizziness, nausea, gait disturbance and blurring of vision in left eye. Retinal aneurysms and telangiectasias were seen in this patient due to involvement of retinal arteries. But there were associated symptoms along with blurring of vision.

The above discussed patient didn't have any typical symptoms of atrial myxoma described in the literature. The emboli invading the short ciliary arteries and most probably the digital arteries causing intermittent pain suggests symptoms due to involvement of small calibre blood vessels.

Fundus pictures of both eyes



Figure 1a -RE

Figure 1b-LE

MRI Brain shows multiple lacunar infarcts

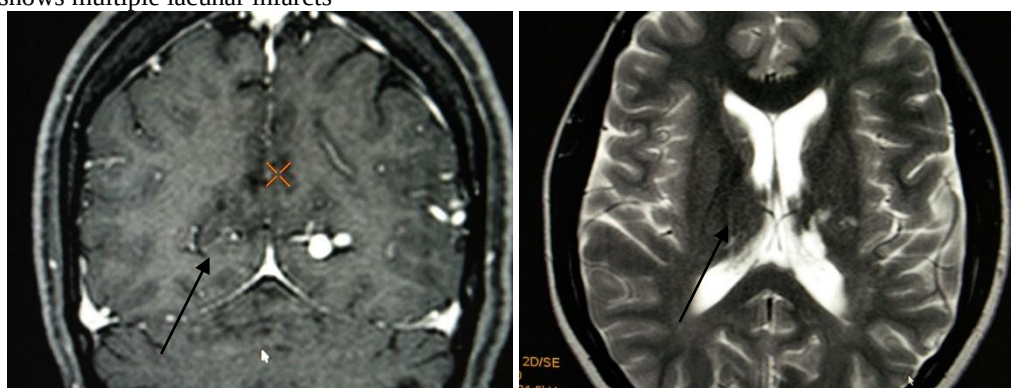


Figure 2a

Figure 2b

Echocardiography shows dense mass with irregular margins attached to interatrial septa with wide base freely moving and plopping into mitral valve.

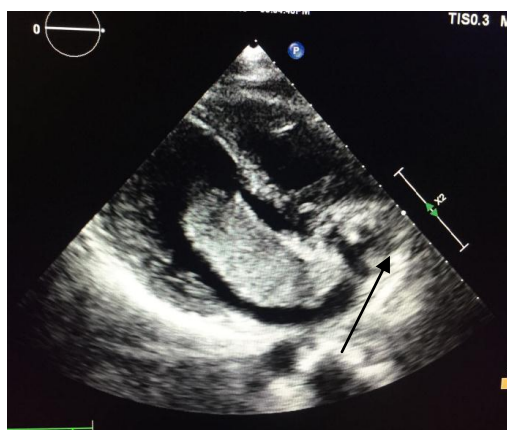


Figure 3

VEP showed delayed conduction in both the eyes, though in right eye it was mild

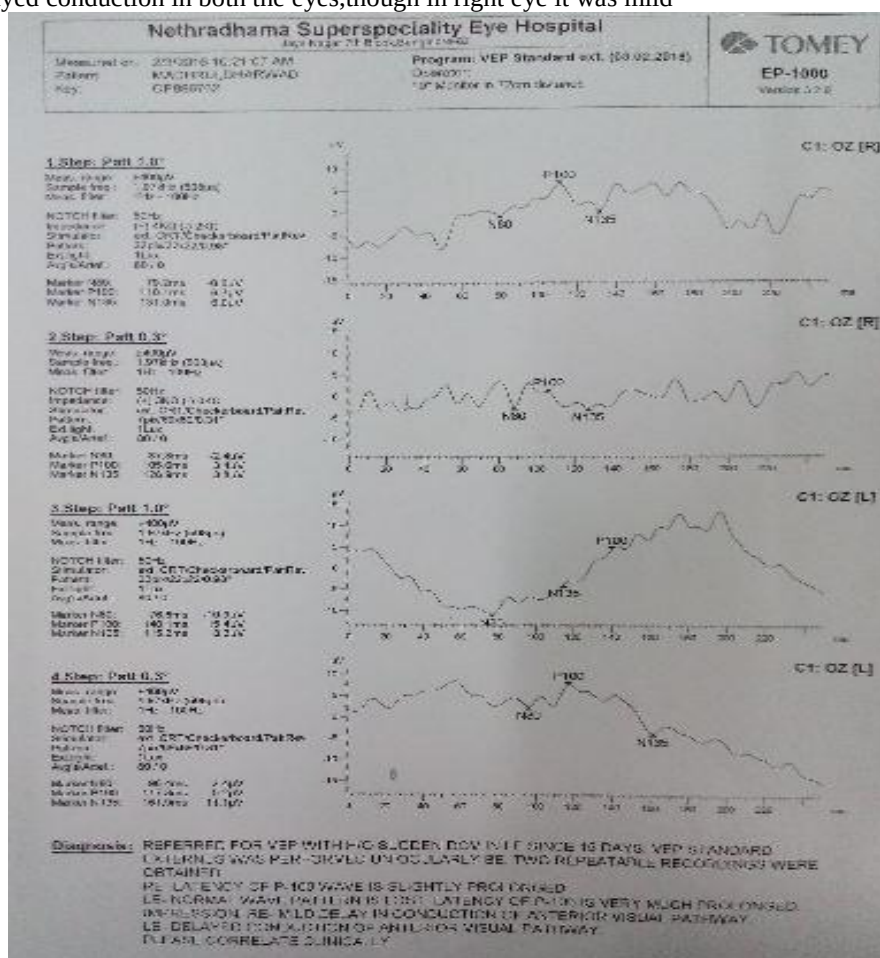


Figure 4

CONCLUSION

The above case report shows that atrial myxoma can present symptoms of embolic events first, instead of the typical presentation. Prompt diagnosis and treatment of underlying systemic causes in case of NAAION will help prevent the involvement of the other eye and salvage vision for the patient and prevent further complications that can be life threatening. Untreated NAAION remains stable, with no significant improvement or deterioration over time.

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