Oculomotor Nerve Schwannoma : A Rare Case Report - *Dr. Mandar Chaudhari , **Dr. Kedar Aathwale, ***Dr. Dilip Lakhkar, ****Dr. Mitesh Katariya

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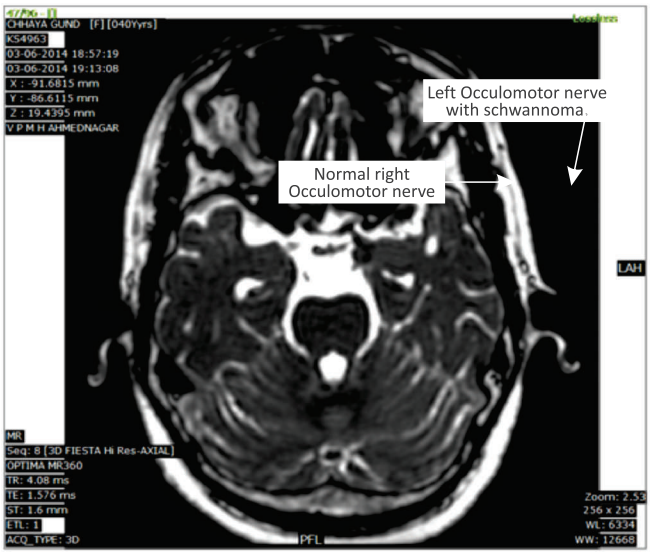
Abstract : The patient presented with transient diplopia and ptosis. There are 38 such cases reported in the literature. In most of these cases the lesion is located in cistern or cavernous sinus. The spatial relationship of the tumor, oculomotor nerve and surrounding arteries was clearly demonstrated by using three three-dimensional magnetic resonance imaging sequences.

Key Words : Occulomotor schwannoma, Diplopia, Neurofibromatosis

Introduction : Schwannomas are slowly growing peripheral nerve tumors that account for 6% to 8% of all intracranial tumors. They arise from the schwann cell layer of the vestibular branch of the eighth nerve or less commonly from the fifth nerve, the seventh nerve, and lower cranial nerves[1]. Oculomotor schwannomas without neurofibromatosis is very rare[2]. 38 cases of oculomotor nerve schwannomas have been described in the literature. In most of the cases the lesion is located in cistern or cavernous sinus.

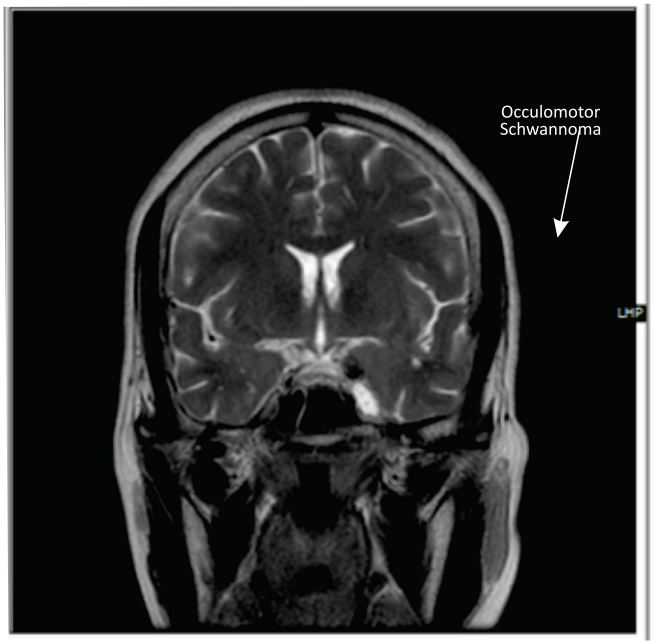
Case Report :A 40-years female came to ophthalmology department with history of diplopia and blurred vision. The physical examination revealed relative afferent pupillary defect and decreased visual acuity of the left. Ultrasound study was ordered which came negative and did not show any abnormality. Later MRI Brain was ordered. Magnetic resonance images showed a 9x8 mm well-defined solid lesion in the superior part of left cavernous sinus. It was seen to arise from the Occulomotor nerve and lied just posterior to the terminal cavernous part of the internal carotid artery.The lesion appeared hypointense on T1W and T2W images. It showed moderate post-contrast enhancement.There was no evidence of neurofibromatosis, such as characteristic skin lesions or familial history. No other cranial nerve tumors or meningiomas were appreciated on the MRI study.

Fig.-1. 3D FIESTA MRI image



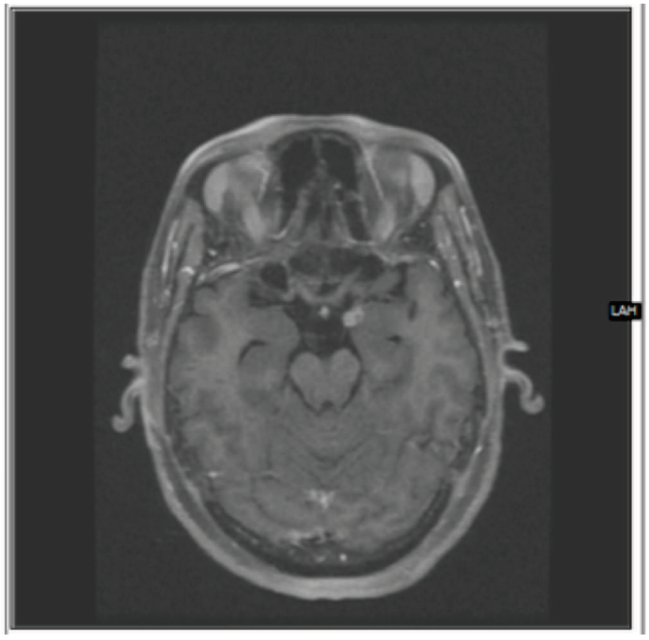
3D FIESTA sequence showing a well-defined lesion in the superior part of left cavernous sinus arising from left Occulomotor nerve {Arrow on left}. Normal nerve is seen on right {Arrow on right}.

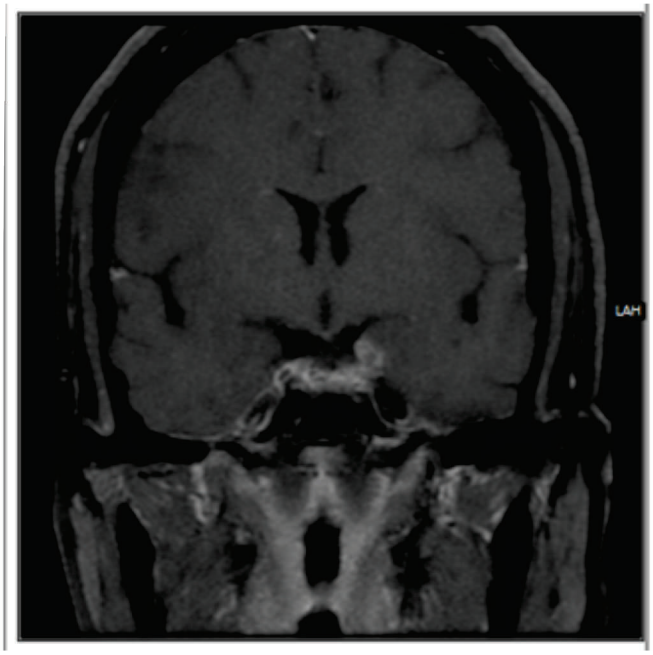
Fig.-2. Coronal T2 weighted MRI image



Coronal T2 weighted MRI image showing hypointense lesion in posterior to terminal part of cavernous ICA {Arrow}.

Fig.-3. Axial and coronal T1 weighted contrast images





Axial and coronal T1 weighted contrast images showing homogenous enhancement of the lesion {Arrow}.

Discussion :

Schwannomas are slowly growing peripheral nerve tumors. They account for 6% to 8% of all intracranial tumors. They arise from the schwann cell layer of the nerve. Most common location is vestibular branch of the eighth nerve. Less commonly from the fifth nerve, the seventh nerve, and lower cranial nerves. Oculomotor schwannoma without neurofibromatosis is very rare. Thirty-eight cases of solitary oculomotor schwannoma have been reported in the literature. These include 15 male and 23 female patients, whose age ranged from 8 to 74 years. These age and sex distributions were similar to vestibular schwannoma. It is noteworthy that preoperative oculomotor dysfunction was manifested in 29 cases out of 38. The tumor was located in the orbit in four cases (solitary orbital type), in the subarachnoid space in 17 cases (cisternal type), in the cavernous sinus in 12 cases (cavernous type), extending from the cavernous sinus to the cistern in five cases (cisternocavernous type).[3-12] To make a diagnosis on two clues help. These are symptom of an oculomotor paresis and the second is tumor location along the course of the oculomotor nerve. Removal of the tumor is the Surgery is the option of treatment. Prognosis is good and recurrence is rare.

Conclusion : Symptoms of the patient with origin of lesion from occulomotor nerve and its characteristic findings on MRI study suggested the diagnosis of Occulomotor Schwannoma. The patient refused to get operated.

Acknowledgment : Authors acknowledge the great help received from the scholars whose articles cited and included in references of this manuscript. The authors are also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed. Authors are grateful to editorial board members and team of reviewers who have helped to bring quality to this manuscript.

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