An isolated oculomotor nerve schwannoma presenting with oculomotor palsy: a case report

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Introduction: schwannomas account for 8% of primary intracranial tumors. Most schwannomas arise from sensory nerves, the superior division of the vestibular nerve being the most common site. Schwannoma of the oculomotor nerve is very rare in non-neurofibromatosis patients. Approximately 45 cases of oculomotor nerve schwannomas have been described in the literature. The most common presentation is oculomotor nerve palsy of variable degrees. It appeared that lesion size did not correlate with the degree of motor nerve deficit. Schwannomas are most common in the 20- to 50-year-old age group, but may occur at any age. No frequency variation according to sex has been identified. We report a case of oculomotor nerve schwannoma within the cavernous sinus.

Case report: a 61-year-old Caucasian woman presented with a 1-month history of right supraorbital headache, associated with blurred vision in right eye and right-side ptosis. On physical examination she had visual acuity of 7/10 in each eye, right-sided ptosis, the right pupil was irregularly shaped, nonreactive and mydriatic and the examination of the extraocular muscles revealed right oculomotor nerve palsy. Examination of her left eye was normal. Systemic evaluation was done to rule out neurofibromatosis and hematological tests were within normal limits. The brain MRI revealed an ovoid small mass (5x3 mm) hyperintense in T2- weighted images in the right cavernus sinus. An injection of contrast media honogeneously enhanced the mass. On the MR angiogram the lesion was avascular. Although she did not undergo biopsy for histologic confirmation, the neuroimaging was consistent with neuroma. The patient was treated with intravenous steroids followed by a tapering course of oral prednisone, with no improvement. After neurosurgical consultation, it was decided to perform a brain MRI after 2 months to assess lesion's evolution. The MRI and the clinical conditions were unchanged. After an adequate counseling, it was decided with the patient an imaging follow-up to evaluate if the tumour increases in size over time before considering a surgical approach of the lesion.

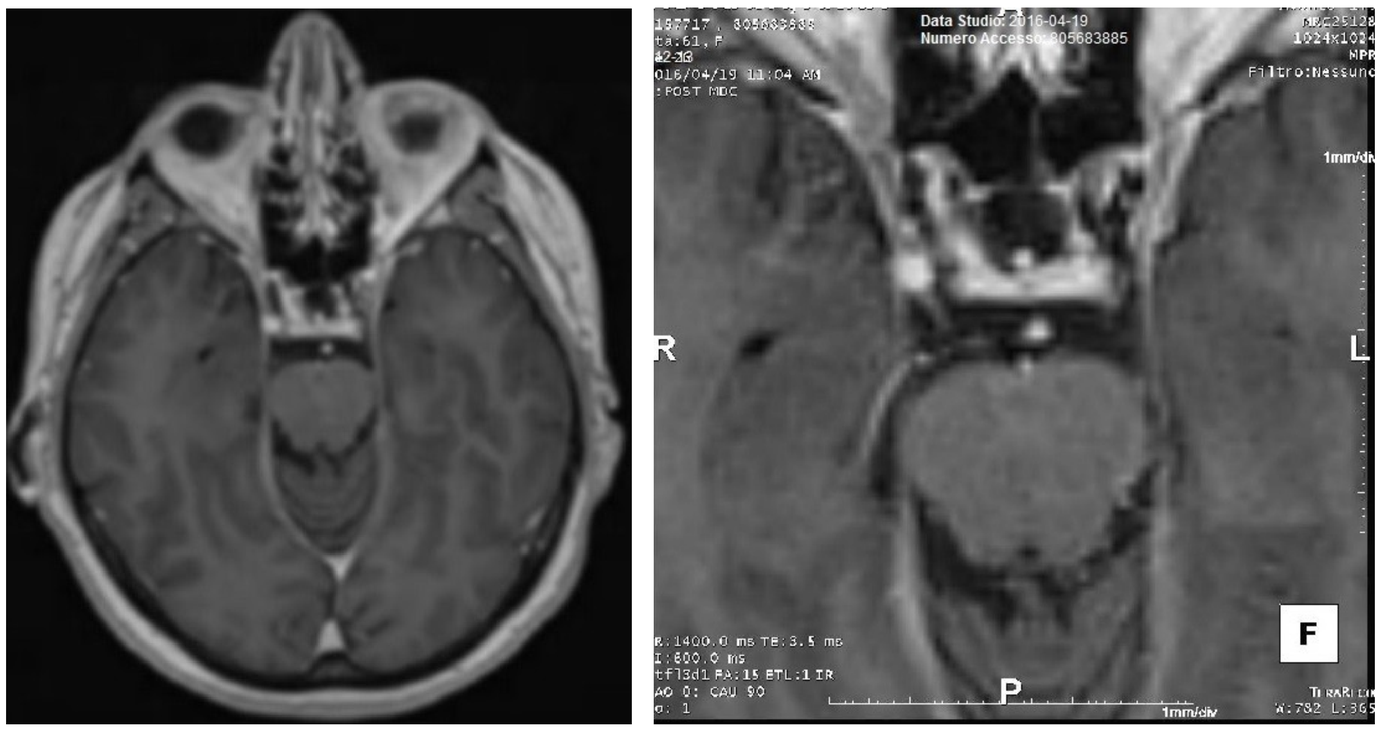

Figure 1. Gadolinium-enhanced T1-weighted axial MRI showing an ovoid small lesion of the right third cranial nerve in the cavernous sinus.

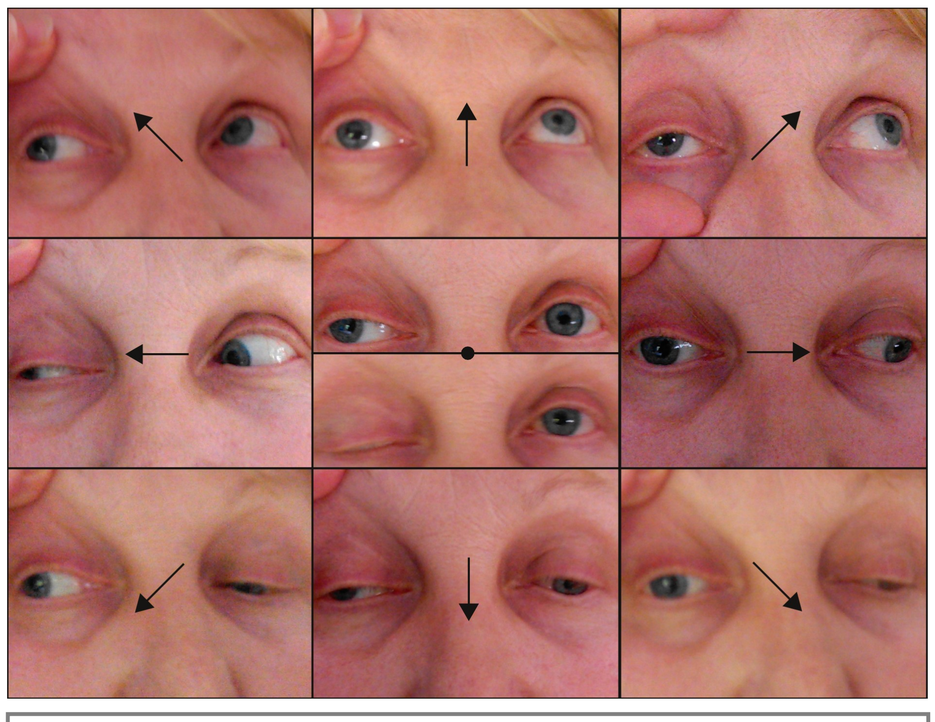

Figure 2. Photograph demonstrating mydriasis, ptosis and gaze limitation due to right oculomotor nerve palsy.

Discussion: schwannoma of the oculomotor nerve is very rare in non-neurofibromatosis patients. These tumours can be small and easily missed. Suspicion for neuroma should be considered in case of acquired, isolated, apparently idiopathic third nerve palsy. Because of the close proximity of the cranial nerve schwannomas to critical structures, preoperative MRI localization with accurate evaluation of the extent and growth pattern of the lesion is crucial for operative planning. Treatment of oculomotor nerve schwannomas depends on the clinical presentation, the size of the tumour and relation of nerve fascicles to the tumour.

References:
1. Lingawi SS. Oculomotor nerve schwannoma: MRI appearance. Clin Imaging 2000;24:86-8.
2. Norman AA, Farris BK, Siatkowski RM.J AAPOS. Neuroma as a cause of oculomotor palsy in infancy and early childhood. 2001;5:9-12.
3. Tanriover N, Kemerdere R, Kafadar AM, et al. Oculomotor nerve schwannoma located in the oculomotor cistern. Surg Neurol 2007;67:83-8.

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