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Sixth nerve palsy, abducens palsy

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The Case: A 45-year-old female patient comes to the out-of-hours service of the Health center with a 3-day history of binocular horizontal diplopia and holocraneal migraine. The patient has no history of trauma. The patient presents double vision producing a side-by-side image with both eyes open. in the physical exploration, diplopia to levo, supra and infraversion of his gaze is apparent. The rest of the neurological exploration was normal.

Method: She was immediately referred to an ophthalmologist for examination. Ocular fundus examination and campimetry results were normal. There is a limitation of the abduction of the left eye. The patient is referred to Neurology; a cranial TAC is performed and results show no intracranial injuries. Upon analysis, all parameters are normal. The diagnostic orientation was idiopathic sixth nerve palsy.

Results: The sixth cranial nerve innervates extraocular muscle (ipsilateral lateral rectus) that action is abduction of the eye. The most common symptom of the sixth nerve palsy is diplopia (Fig 1 and 2). There is usually less double vision on near fixation than on distant fixation. It can be caused by diabetes, hypertension, atheroesclerosis, trauma and idiopathic.

Conclusions: All the patients with abducens nerve palsy need an ophtalmologic examination: visual acuity, binocular function and stereopsis, motility evaluations and evaluation of ocular structures. in cases of sixth nerve palsy due to raised intracranial pressure, patients may experience headache. There is an article of the Department of Ophtalmology (Mayo Clinic, Rochester, Minnesota, USA) about the associations of sixth nerve palsy. They identified 137 new cases of sixth nerve palsy. Causes and associations were: undetermined (26%), hypertension alone (19%), coexistent hypertension and diabetes (12%), cerebrovascular accident (4%), post-neurosurgery (3%), aneurysm (2%) and other (8%). Treatment depends on etiology: systemic conditions are treated primarily. Most patients with a microvascular abducens nerve palsy are simply observed and usually recover within 3-6 months. There can be used oclusion to improve diplopia, torticollis and headache. Surgical intervation is only reserved for patients that had no improved in 3-6 months of conservative management. Botulinum toxin can be considered too.