



ORIGINAL RESEARCH PAPER

Ophthalmology

PARAPHARYNGEAL MASS MASQUERADING AS ABDUCENS PALSY : A CASE REPORT.

KEY WORDS: diplopia , mri brain ,parapharyngeal mass ,isolated cranial nerve palsy

Dr.Deepthi.R*	3 rd Year Junior Resident,MS Ophthalmology.*Corresponding Author
Dr.Kalaivani.K	Professor And Head of The Department of Ophthalmology , Vinayaka Mission's Medical College
Dr.Saranya.B	Assistant Professor, Department of Ophthalmology, Vinayaka Mission's Medical College

ABSTRACT

We report a case of a 27 year old male who came with complaints of sudden onset binocular, horizontal diplopia for 5 days worsening on left gaze .He also had history of dysphagia since 5 days.He was diagnosed as TB cervical lymphadenitis and was on ATT past 5 months. He was known case of type1 diabetes mellitus since 9 years,on treatment. **OCULAR EXAMINATION** :left sided face turn , anterior segment and fundus examination were normal in Right eye. Left eye showed 15 degree esotropia,normal anterior segment with abduction restriction(-4),normal fundus examination. Visual acuity was 6/6 in both eyes. Colour vision and Corneal sensation normal in both eye. Other cranial nerves examination were normal. **INVESTIGATION** : MRI neck and brain showed large diffuse suprahyoid neck mass involving oropharynx and nasopharynx with intracranial extension in prepontine cistern and cavernous sinus. Diagnosed as left lateral rectus palsy due to parapharyngeal mass and referred to oncologist which was later confirmed as nasopharyngeal carcinoma.**CONCLUSION** : This case emphasize importance of neurological evaluation with imaging in an isolated cranial nerve palsy.

INTRODUCTION :

Sixth nerve palsy is the most common ocular motor nerve palsy. Most common causes are viral illness in children and microvascular diseases in older adults, with good rate of recovery in these cases. It is comparatively uncommon in young adults and causes can be idiopathic, vasculopathic, tumors and multiple sclerosis. CNS space occupying lesions are the most common etiology, followed by multiple sclerosis, in young adults.

CASE REPORT :

A 27 year old male presents to department of ophthalmology VMMC ,Karaikal,Puducherry with complaints of sudden onset diplopia for 5 days with horizontal separation images which worsening on left gaze and diplopia disappeared with closure of either of the eye. It was associated with headache and neckpain . He also had history of dysphagia since 5 days.No history of trauma .He was diagnosed as TB cervical lymphadenitis and was on Antitubercular treatment (ATT) past 5 months. He was known case of type1 diabetes mellitus since 9 years, on treatment.

Ocular examination : Visual acuity was 6/6 in both eyes. Left sided face turn. Anterior segment and fundus examination and extraocular movements were normal in Right eye. Left eye showed 15 degree esotropia , normal anterior segment, extraocular movements showed abduction restriction(-4), normal fundus examination . Colour vision, intraocular pressure was normal and Corneal sensation was intact in both eye. Other cranial nerves examination were normal.

INVESTIGATION :

MRI neck and brain showed large diffuse suprahyoid neck mass involving oropharynx and nasopharynx with intracranial extension in prepontine cistern and cavernous sinus. Diagnosed as left lateral rectus palsy due to parapharyngeal mass and referred to oncologist.

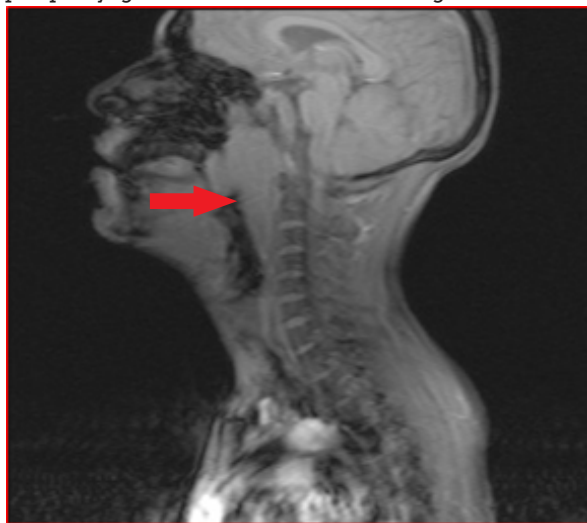


Figure 2 : showing parapharyngeal mass extending to prepontine cistern and cavernous sinus.

Source: original

DISCUSSION :

The **abducens nerve** is the sixth cranial nerve which innervates the later rectus muscle and responsible for outward gaze.The sixth cranial nerve is the most commonly affected of the ocular motor nerves because of its long intracranial course after emerging at the pontomedullary sulcus and then into the orbits, where it innervates the lateral rectus muscle. The points of fixation along its course, its tortuosity, and its attachment to the skull base all contribute to its vulnerability to compression.

Sixth nerve palsies are attributed to the following causes: 8%–30% idiopathic, 10%–30% miscellaneous, 3%–30% trauma, 0%–6% aneurysm, and 0%–36% ischemic.



Figure 1: Left eye abduction restriction. showing lateral rectus palsy.

Sources: original

It is comparatively uncommon in young adults and causes can be idiopathic, vasculopathic, tumors and multiple sclerosis.

Our case report shows a young adult male patient with diplopia and dysphagia ,who was a known case of Type 1 diabetes mellitus on insulin and known case of TB lymphadenitis on ATT. There was a necessity of rapid diagnosis and early intervention since he was young adult and immunocompromised.

The MRI brain and neck showed diffuse large supra hyoid neck mass in parapharyngeal ,carotid and right masticator spaces along with complete choanal obliteration.

Intracranial extension of the above mentioned mass in the pre-pontine cistern with possible extension into cavernous sinus . also showed altered signal intensity with mild irregularities of clivus Brain parenchyma showed no significant abnormalities.MR venography showed no abnormalities .

The **parapharyngeal space(PPS)** (or lateral **pharyngeal** or **pharyngomaxillary space**) is a deep compartment of head and neck. It is an inverted cone-shaped potential **space** that extends from the hyoid bone to the base of the skull.

PPS masses are rare, accounting for approximately 0.5% of head and neck tumors .The differential diagnosis for these masses is broad and includes salivary gland tumors, vascular masses, and neurogenic tumors .Benign tumors predominate at rates of about 87% whereas malignant tumors only account for 13% of PPS masses overall.

By the clinical and radiological evaluation our case was diagnosed as left lateral rectus palsy due to parapharyngeal mass and referred to oncologist which was later confirmed as nasopharyngeal carcinoma.

CONCLUSION :

This case shows that Sixth nerve palsy may not always be due to a benign process that allows complete recovery just by observation. Hence, the clinician must consider the potential of a serious conditions when evaluating sixth nerve palsy. Early diagnosis is often critical in some conditions that present with sixth nerve palsy.

This case also emphasizes the importance of neuroimaging in young adults with sixth nerve palsy.

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