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A RARE CASE REPORT OF FACIAL NERVE PALSY IN RAISED INTRACRANIAL HYPERTENSION SECONDARY TO INTRACRANIAL MENINGIOMA

Dr. N. Viswa Teja MD Post Graduate

Dr. A. Gayathri MD Post Graduate

Dr. Visalakshi MD Assistant Professor

ABSTRACT

Facial nerve palsy is rarely encountered in raised intracranial hypertension secondary to intracranial space-occupying lesions such as Meningioma. The sixth cranial nerve is most commonly affected in raised intracranial hypertension 8. Here we report a case of a 30-year-old female presented with headache, projectile vomiting, blurred vision and deviation of the mouth towards the right side to our emergency department. MRI Brain showing an extra axial mass most like meningioma noted at right posterior temporal convexity. The patient improved symptomatically after the resection of an intracranial mass lesion.

INTRODUCTION:

Intracranial hypertension is commonly encountered with intracranial space-occupying lesions. Raised intracranial pressure associated with single or multiple cranial nerves (CN) palsies. The most common CN palsy is that of CN VI[5], documented in 12% of adults and 9-48% of children . CN III, IV, VII, IX and XII palsies are less commonly encountered.

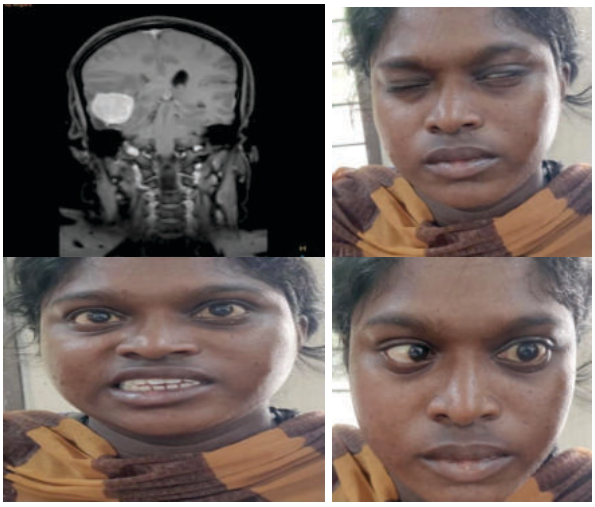
In light of this, we present one of rare cases of meningioma of dural origin presenting with CN VII, VI palsy.

Case Presentation:

A 30-year-old female patient with a body mass index of 33, presented to our emergency department with a severe headache for 3 days. Her headache [6] started 1 year ago, on and off, aggravated for 3 days, which is squeezing in nature, initially started on the right side and radiating to the back of the head and neck later generalized, associated with projectile vomiting, blurring of vision and diplopia on lateral gaze [4]. She had difficulty closing her left eye, was unable to chew food on the left side of the cheek, and had a deviation of the angle of her mouth towards the right side. She had no history of numbness or tingling, feeling of weakness, or tinnitus [1]. She had no history of fever, trauma and didn't not use oral contraceptive pills.

On initial evaluation, she was afebrile and hemodynamically stable. On neurological examination, she is conscious, coherent and oriented to time, place and person. Her higher mental functions were normal. There were no signs of meningeal irritation.CN testing revealed: Visual acuity counting fingers absent, perception of light present,3 mm pupils that were equal in size and sluggishly reactive to light and intact accommodation. She was unable to abduct her left eye [7] and the rest of the extraocular movements were normal. However, there was facial asymmetry evident in her left facial droop,difficulty in closing her left eye and limited ability to raise her left eyebrow [3]. The facial sensation was equal on both sides, masticatory muscle power was normal and a midline tongue of good power. She was able to swallow and shrug her shoulders. Her hearing was normal. Fundus examination revealed bilateral grade IV-V papilledema, cotton wool spots and flame-shaped haemorrhages in peripapillary area of both eyes. The rest of her neurological examination including motor functions, sensation, reflexes, coordination and gait analysis were within normal limits.

She underwent computed tomography (CT) scan of the brain showed evidence of a hypodense lesion seen in the right temporoparietal region suggestive of vasogenic oedema. Magnetic resonance imaging (MRI) brain revealed an extra axial mass lesion measuring 3.6×4.0×3.8 cm noted at the right posterior temporal convexity abutting the right tentorium most likely meningioma with a midline shift of 7.0 mm to the left side(fig 1). Lumbar puncture was not done in view of the risk of tonsillar herniation. She was initially treated with intravenous Mannitol 20 % 100 ml TID and 10 mg metoclopramide to alleviate her vomiting and headache. After 5 days of medical management, she was referred to the neurosurgery department for resection of the tumour. After surgery she symptomatically improved, her vision got better, her diplopia reduced and facial drooping decreased.



DISCUSSION:

It is a well-established fact that due to the long course of the sixth cranial nerve it is particularly susceptible to raised intracranial pressure. From the origin in the pons fibres of the seventh nerve, wrap [2] around the nucleus of the sixth nerve known as facial colliculus or internal genu. Any damage at the sixth nerve nucleus could involve the lower motor fibres of the seventh

nerve at the level of facial colliculus. The intracranial portion of the motor fibres of the seventh cranial nerve runs a reasonably short course before they enter the petrous temporal bone of the skull while localized there it is relatively protected from the effect of pressure in the vault. Perhaps the pressure effects secondary to meningioma are felt mostly in the area of the facial colliculus rather than the fallopian canal[4].

Here the patient is having both sixth and seventh cranial nerve palsy on the left side secondary to compression caused by the meningioma on the right temporal convexity having midline shift [10]. So with this presentation we can localize around the facial colliculus. Facial nerve perse on the left along its course there is no pathology, but the meningioma on the right temporal convexity exerting its indirect effects on

the opposite side signifying the false localizing sign.

CONCLUSION:

ICSOL should be strongly suspected in obese young women presenting with headache and transient visual complaints. Some cranial nerve abnormalities can occasionally be present in patients with ICSOL. The diagnosis of ICSOL remains one of exclusion and imaging studies should always be performed to rule out these structural abnormalities.

Lower motor neuron facial nerve palsy [3] can be a rare false localising sign for raised intracranial pressure. One should perform imaging modalities like CT or MRI BRAIN to rule out intracranial space-occupying lesions for prompt diagnosis and timely treatment to prevent complications of raised intracranial pressure.

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