



A RARE CASE OF FACIAL NERVE PARALYSIS

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ABSTRACT Facial nerve tumors account for 5% of all cases of facial paralysis. Awareness regarding this entity is paramount for the early diagnosis and correct management which may differ from patient to patient. We report a case of 37 year old male presenting with discharge from right ear associated with reduced hearing, dribbling of saliva from right side of mouth, inability to close right eye completely. Diagnosis of facial nerve schwannoma was made by MRI contrast Brain, HRCT temporal bones and histopathology. The tumor present in the vertical segment of the facial nerve which is the rarest was removed by endoscopic assisted transmastoid approach. The preoperative diagnosis of a FNS is exceedingly difficult to establish owing to its rarity and nonspecific clinical and radiological presentations. A high index of clinical suspicion along with detailed neurootological and radiological studies are of paramount importance in establishing its preoperative diagnosis. Timely excision of the tumor is very important to avoid complications.

KEYWORDS : Facial Nerve, Facial Paralysis, Schwannoma,

INTRODUCTION

- Facial schwannomas or neuromas are benign tumors of nerve sheath origin. They often are confused with Vestibular Schwannomas on imaging.
- Awareness regarding this entity is paramount for the early diagnosis and correct management which may differ from patient to patient.
- Facial Nerve Schwannomas (FNSs) are rare lesions that can arise anywhere along the course of the facial nerve, from its origin in the cerebellopontine angle to its extracranial ramifications in the parotid space of the extracranial head and neck.
- Typical symptoms include the slow progression of facial nerve paresis or paralysis, as well as hearing loss, tinnitus, pain and vestibular symptoms. Furthermore, an ear canal mass may be present

Case Description

A 37 year old male presented to ENT department with history of discharge from the right ear associated with decreased hearing since 2months, dribbling of saliva from right side of mouth, inability to close right eye completely since 2 months.

On Examination Otolaryngology showed pinkish oval mass seen on the floor of right EAC



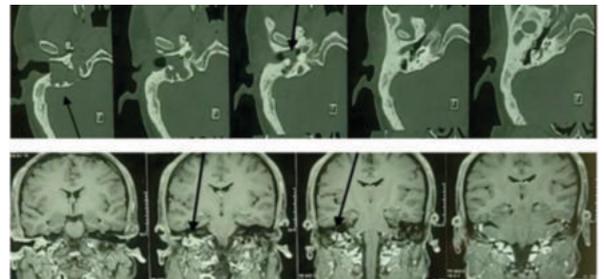
Investigations

- FACIAL NERVE EXAMINATION: House - Brackmann grade 5 palsy
- PURE TONE AUDIOMETRY AND IMPEDENCE:
Right Ear : 41.6 dB- moderate conductive hearing loss with B type of curve
Left Ear : 18. 3dB - normal hearing sensitivity with A type of curve
- HRCT TEMPORAL BONES: well-defined lobulated hypoenhancing homogeneous mass measuring 2.2cm x 2.1cm x

1.3cm. expanding the inferior half of the right stylomastoid facial canal

- Diagnostic modality of choice is MRI⁽¹⁾
MRI BRAIN WITH CONTRAST: lobulated heterogeneous lesion of 32 x 30 x 16mm in the region of

Rt middle ear extending inferiorly through styloid foramen into retroparotid region



CASE DISCUSSION

Neurofibromas and schwannomas are benign peripheral nerve sheath tumours that occur as isolated sporadic lesions⁽²⁾

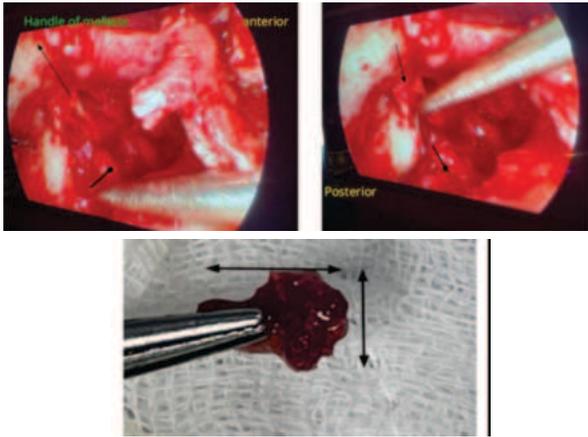
Peripheral nerve sheath tumors that arise from Schwann cells include schwannomas, neurofibromas, and malignant peripheral nerve sheath tumors. Both schwannomas and neurofibromas are benign lesions, with rare malignant transformation. Schwannoma is an ectodermal benign encapsulated tumor arising from Schwann cells. Schwannomas arise in a single fascicle or bundle inside the nerve sheath and grow out eccentrically, displacing the other nerves within the nerve sheath, with possible nodular growth³

These tumors also have the ability to invade and erode local bony structures. Neurofibromas, a similar tumor involving the nerve sheath, involve the extracellular connective tissue and endoneurium. Types of neurofibromas are localized, diffuse, and plexiform, with the localized being the most prevalent.

In ~5% of patients with Bell's palsy, facial nerve neuroma was found to be the cause

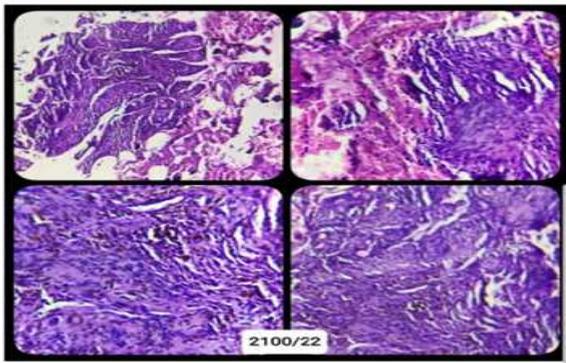
Surgical Management

Patient underwent Endoscopic assisted facial nerve decompression by transmastoid approach with facial nerve tumor excision



Histopathology Report

Microscopic appearance and impression: Microcytic/ Reticular variant of Schwannoma – Nerve sheath tumor of Facial nerve



CONCLUSION

- Facial nerve tumors are rare tumors of the temporal bone, which may involve any aspect of the facial nerve. However, facial nerve tumors predominantly present in the peri-geniculate area and the tympanic segment.
- Facial nerve tumors account for 5% of all cases of facial paralysis worldwide and, therefore must be considered in all cases of facial palsy.
- A high index of clinical suspicion along with detailed neurootological and radiological studies are of paramount importance in establishing its preoperative diagnosis.
- The selection of treatment is based on the intent to preserve facial nerve functions at the best possible level for the longest duration.

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