

Case report

**Infratemporal fossa neurofibroma presenting
as a parotid mass**

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Abstract

Majority of the tumour of parotid gland is benign in nature. Neurogenic origin of tumor is a rare entity. If it occurs, the tumour usually arises from the main trunk. A well encapsulated mass originated deep to the deep lobe of parotid may manifest itself like a typical pleomorphic adenoma. We reported a case of middle-aged man with infratemporal neurofibroma presenting with asymptomatic parotid mass.

Keywords: Parotid mass, asymptomatic, neurofibroma

Case Summary

A 35 year old Chinese gentleman presented with left parotid swelling for one year duration. The swelling was gradually increasing in size. It was painless. There was no other associated symptom. On examination, there was a swelling over the left parotid region with the size 3x3 cm, firm in consistency and non-tender (Figure 1).

The mass displaced the ear lobe anteriorly. Facial nerve function was intact. Fine needle aspiration cytology result showed scanty singly dispersed benign epithelial cells and no atypical cells were seen. Computed tomograph (CT) scan showed the bulk of lesion compressed and displaced the lateral pterygoid medially (Figure 2). Anteriorly it was bounded by left temporalis muscle and left coronoid process of mandible. Inferiorly the lesion was ill defined and showed probable infiltration into lateral pterygoid and temporalis muscle. Laterally the lesion cannot be separated from the anterior part of the superficial lobe of the left parotid. The CT scan was concluded as left infratemporal fossa soft tissue mass.

The left superficial parotidectomy was carried out. Intra-operatively, we found the mass was well encapsulated and firm in consistency. The size was 4 x 6 cm and it was oval in shape (Figure 3). It was located underneath the zygomatic and buccal branch of facial nerve. The mass was removed completely after it was separated from facial nerve. The remaining surrounding parotid gland appeared normal.

Histopathology examination (HPE) showed well circumscribed and encapsulated lesion consists of proliferating spindled to polygonal tumour cells with occasional occasional fibrillary background embedded within fibrohyalinized stroma. The tumour cells showed evidence of nuclear pleomorphism and occasional prominent nucleoli but no evidence of malignancy.

Immunohistochemistry stains showed positive of HMB45. HPE was concluded as benign peripheral nerve sheath tumour compatible with neurofibroma. Post operatively the patient had mild facial nerve palsy involved buccal branch which resolved completely after few sessions of physiotherapy.

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Figure 1: The left parotid mass displaced the ear lobe anteriorly



Figure 2: Oval shaped mass (arrow), well encapsulated located in the left infratemporal region.

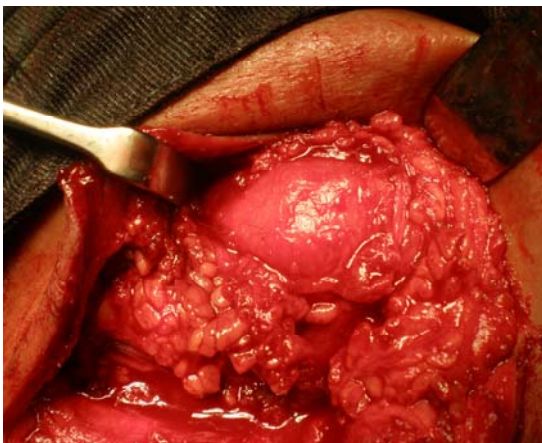


Figure 3: Well encapsulated mass situated deep to the normal parotid gland

Discussion

Tumor originating from nerve tissue is a rare occurrence in the parotid region. The two commoner histological types include schwannoma and neurofibroma¹. Both of these lesions do present with parotid mass because the origin of the lesion is from the extratemporal part of facial nerve which traverse in between the superficial and deep lobe of parotid. Asymptomatic parotid mass usually associated with benign lesion of the parotid tissue itself. The commonest diagnosis is pleomorphic adenoma. Neurogenic lesions thus rarely considered as a preoperative diagnosis². The role of fine needle aspiration cytology in salivary gland tumours is usually not conclusive. Parotid gland masses are not particularly conducive to diagnostic accuracy and precision by fine needle aspiration³.

Computed tomography scan is an adjunct investigative tool to aid the diagnosis in terms of extension and relation of the mass to adjacent structures. Parotid gland structure can be easily outlined owing to the presence of the capsule. Our case showed that the mass, although clinically manifest itself as parotid mass by classical displacement of the ear lobe, was found radiologically occupying infratemporal region. The mass seen on CT scan can be the medial extension from the deep lobe of parotid mass. This was consistent with the intraoperative findings that showed it was emerging underneath the branches of facial nerve.

Almost half of extratemporal facial nerve tumors involve the main trunk of the nerve⁴. In our case, the mass was located adjacent to two branches, zygomatic and buccal. Having said that, we were able to isolate the mass from the branches mainly because it was well encapsulated and embedded within the deep lobe substance separable from the nerve.

Temporary facial nerve paralysis is expected after a parotid surgery. Besides iatrogenic causes, several authors have reported the occurrence of facial paralysis even in cases when an intraparotid facial nerve tumor was simply biopsied or carefully resected with apparent preservation of the facial nerve⁴⁻⁵. Most probably it is due to

edema secondary to manipulation or excessive facial nerve stimulation for monitoring which is used intraoperatively. Temporary paralysis also can be due to compression from accumulated hematoma especially if hemostasis is not obtained before closing of wound.

References

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