Intraparotid schwannoma: A rare case report

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Abstract

Pleomorphic adenomas are the most common tumors which present as parotid masses. Schwannoma (peripheral nerve sheath tumor) is a rare entity in this region. Very few schwannomas originate from the facial nerve and in the majority of these cases the tumor involves its intratemporal part. The following case is reported because it presented as an asymptomatic parotid swelling with normal seventh nerve function, which masqueraded as pleomorphic adenoma clinically, radiologically and cytologically. However, it turned out to be peripheral nerve sheath tumor on histopathological examination.

Key words: Parotid mass, peripheral nerve sheath tumor, schwannoma

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Introduction

Benign schwannoma is a slow growing encapsulated tumor arising from the neuroectodermal sheath of Schwann. Approximately, 25–30% of all reported schwannomas occur in the head and neck and most of these in the eighth nerve.¹ Schwannoma of the facial nerve is a rare entity with very few cases reported in the literature. In our case the schwannoma involved the extratemporal part of the facial nerve that is still rarer.

Case report

A 7-year-old female was brought to ENT out-patient department with right-sided parotid swelling of 1-year duration. Initially, the swelling was small in size that gradually and painlessly increased up to its present size [Figure 1]. Patient had no other complaints. There was no significant family history.

On clinical examination, the swelling was 10 cm × 9 cm × 7 cm in size, firm in consistency, had bosselated appearance, was mobile horizontally and vertically and the skin over the swelling was mobile. A clinical diagnosis of parotid tumor was made. Cytology was advised, and it came out to be a benign parotid tumor. Since the mass was large in size and patient was a child, a computed tomography (CT) scan was advised. CT scan suggested a well-defined, lobulated, homogenous, mildly enhancing soft tissue lesion with loss of interface with the masseter muscle and multiple small lymph nodes [Figure 2]. Rest of the routine blood and radiological investigations were normal. A provisional diagnosis of pleomorphic adenoma was made, and superficial parotidectomy planned [Figure 3]. Peroperatively, the facial nerve trunk was found deeper and inferior due to pushing effect of the tumor. However, on further anterior dissection the tumor was found to originate from the buccal and zygomatic branches of the facial nerve. The mass was removed successfully with careful dissection. An adjacent lymph node was also removed for histopathological examination. The patient had postoperative (after 3 months of surgery) facial weakness of grade three (House Brackmann classification)² [Figure 4].

The gross appearance of the tumor was like a brain tissue [Figure 5] and histopathologically, it was confirmed to be an intraparotid schwannoma, showing Antoni type A and B cells [Figure 6]. The lymph node showed reactive changes.

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Discussion

Among 802 parotid tumors reported Eneroth and Hamberger[3] could demonstrate two cases with neurogenic origin and in a review of 700 parotidectomies Nussbaum et al.[4] found only one case of neurilemma of the facial nerve. The intraparotid facial nerve schwannomas are mostly (75%) asymptomatic.[5] The tumor grows eccentrically pushing the nerve fibers away.
as observed in the present case. The ability of the parotid to accommodate the expanding tumor results in facial nerve palsy in only 20–27% of cases.\(^6\) In some cases, radiology may provide preoperative information about facial nerve schwannoma but in many cases it mimics pleomorphic adenoma.\(^7\) The CT scan although not the preferred method of imaging shows a smooth and sharply defined mass in the parotid. Fine-needle aspiration cytology is also unreliable for diagnosing these lesions as in most cases results are inconclusive or suggest a pleomorphic adenoma.\(^8\) The diagnosis is, therefore, generally made peroperatively when the surgeon finds difficulty in identifying the facial nerve.

In our case, the size of the tumor was quite big and could have complicated into facial nerve palsy very soon. Moreover, the patient’s preference to get the tumor operated was the main indication for a surgical intervention.

**Conclusion**

Any parotid mass in children should be viewed with suspicion and adequately investigated before any intervention is planned. Intraparotid schwannoma should be suspected if the facial nerve cannot be found intraoperatively, if the tumor is intimately associated with the facial nerve and if the gross appearance of the tumor is like that of a brain tissue. In cases where schwannoma is suspected, biopsy is recommended while complete resection is postponed to obtain imaging studies to evaluate the extent of disease and to discuss possible outcomes with the patient.

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