

Case Report

Pediatric lingual Schwannoma: case report on an atypical localisation of a benign nerve sheath tumour

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ABSTRACT

Schwannomas of the tongue are rare tumours, and their occurrence in the paediatric population is exceptionally uncommon. We present the case of a 9-year-old boy with a nodular mass on the tongue, present for two years. Complete surgical excision was performed with preservation of both motor function and overall tongue mobility. Histopathological examination confirmed the diagnosis of Schwannoma. This case is reported to highlight the rarity of paediatric lingual Schwannomas and the favourable functional outcomes achievable with meticulous surgical management.

Keywords: Schwannoma, Head and neck neoplasms, Oropharyngeal neoplasms, Peripheral nerve neoplasms, Pediatric neoplasms

INTRODUCTION

Schwannomas are benign neoplasms arising from the neural sheath cells and are often referred to as neurilemmomas also. Approximately 25-48% of the Schwannomas are reported in the head and neck area out of which only 1% are reported in oral cavity.¹ Paediatric tongue Schwannomas are exceedingly rare and may be presented as a painless nodule on the tongue.²

Magnetic resonance imaging (MRI) is the imaging of choice as it gives more tissue contrast and precise localization of the tumour.³ Due to rarity and nonspecific presentation, histopathology confirmation and immunohistochemistry are used to confirm the diagnosis of Schwannomas. A complete excision to prevent recurrence will suffice the management.

Given the rarity of paediatric tongue Schwannomas, we are reporting a case to contribute to the data regarding diagnosing, managing and planning follow up in such cases.

CASE REPORT

A 9-year-old boy visited the out outpatient department with complaints of a painless swelling over the surface of tongue on left side since 2 years. There are no complaints of sensory or motor deficit, pain or discharge from the swelling. Size increased very slowly over past 2 years. No history of any comorbidities or congenital anomalies. Speech, mastication and swallowing were normal on evaluation. Examination revealed a single, firm, nodular swelling of size 1×1 cm over the dorsal of tongue on left side, 0.5 cm medial to left lateral border of tongue (Figure 1). No other lesions or lymph node enlargements were noted.

Patient was taken up for surgical excision of tongue mass under general anaesthesia. A 1×1 cm nodular lesion was excised in toto (Figure 2) and the wound was closed using absorbable sutures (Figure 3). Mass was found to be superficial to the musculature of tongue. Postoperative period was uneventful. Motor and sensory functions were preserved.



Figure 1: Single, firm, nodular swelling of size 1×1 cm over the dorsum of tongue on left side, 0.5 cm medial to left lateral border of tongue.



Figure 2: Excised nodular mass of size 1×1 cm.



Figure 3: Sutured wound after excision of mass.

Histopathological examination revealed a well-defined lesion deeper to the normal epithelium (Figure 4). The cellular lesion with nodular architecture showed clusters of cells exhibiting oval to spindle shaped nuclei (Figure 5). Areas with hypercellular and hypo cellular areas called Verocay bodies were also identified. Hence the diagnosis of Schwannoma was made.

Patient was seen 2 weeks after surgery and the wound was healed perfectly and is under follow up.

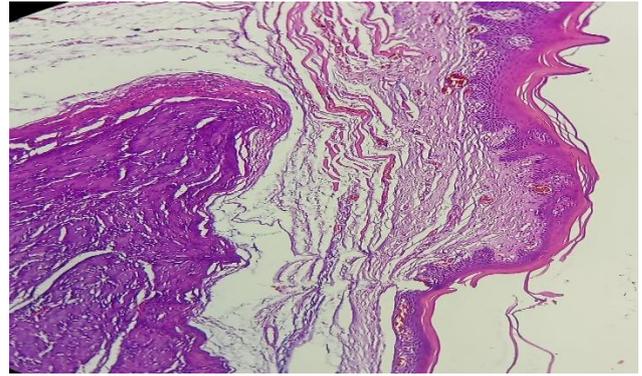


Figure 4: 10x view of H&E stained section studied shows a normal epithelial lining with lesion in deeper area.

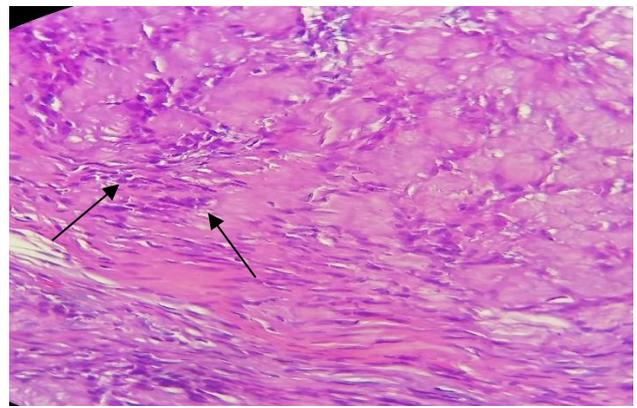


Figure 5: 40x view of H&E stained section showing a defined cellular lesion with nodular architecture with cells exhibiting oval to spindle shaped nuclei. Verocay bodies noted (black arrow).

DISCUSSION

Schwannomas (neurilemmomas) are slow growing, encapsulated, benign tumours arising from the Schwann cells of nervous system. Even though majority of the cases are reported in the head and neck region, intra-oral lesions are less common. In the oral cavity tongue is the most common site owing to the rich neural innervation from hypoglossal and lingual supply.¹ However, Schwannomas of tongue is exceedingly rare in children and may often be missed as a diagnosis resulting in protracted disease.²

Lingual Schwannomas usually present as painless nodules over tongue. Even though it has a neural origin, sensory or motor deficits are absent, attributed to the peripheral growth pattern and proper encapsulation of the tumour. Larger lesions impinging the local structures may sometimes cause pain or paresthesia. In children it may not be noticed in early stages and may result in functional disturbances to speech or swallowing.⁴ Other differential diagnoses for tongue masses in children include fibromas, lymphangiomas, hemangiomas, neurofibromas and minor salivary gland tumours.

Ultrasonogram, CT scan or MRI can be used for imaging the tumour. MRI is the gold standard imaging modality for pre-operative evaluation as it provides better tissue contrast and will provide precise information on size and depth of the tumour. Schwannomas appear as well circumscribed encapsulated lesions with heterogenous intensity and enhancement. This is suggestive of the both benign and neural origin of the lesion.⁵

The confirmation of diagnosis of schwannoma can be achieved only by a histopathological examination. Schwannomas typically show a biphasic pattern with hypercellular (Antoni A) and hypocellular (Antoni B) areas along with highly ordered arrangement of Schwann cell nuclei in rows separated by fibrillary processes called Verocay bodies which are pathognomic for Schwannomas. Immunohistochemistry extends further supports the diagnosis by showing diffuse positivity for S-100 protein suggestive of Schwann cell origin.⁶ These findings helps to differentiate schwannoma from other peripheral nerve sheath tumours like neurofibromas which are typically non encapsulated and shows variable S-100 staining.

A complete surgical excision is more than enough for the management of lingual Schwannomas. Removal of the tumour en bloc without sacrificing the nerve or origin can be achieved as the tumour is well encapsulated. Tumour can excised by varying approaches depending on the site and size. But a meticulous surgical technique should be ensured as to preserve the motor and sensory functions of the tongue and to prevent postoperative complications.⁷ We could achieve a complete excision transorally with excellent preservation of function.

Prognosis of paediatric tongue Schwannoma is excellent. Very large or long standing cases are rarely associated with incomplete removal resulting in recurrence, which is extremely rare in children.⁸ Initial follow up visits are ensured to make sure the restoration or preservation of functional outcomes like speech, mastication and taste.

CONCLUSION

Lingual Schwannoma is an exceptionally rare tumor in the pediatric population and can present as a slow-growing, asymptomatic tongue mass. Early recognition and complete surgical excision are key to diagnosis and definitive management, with histopathology confirming

the diagnosis. Awareness of this entity is important to include it in the differential diagnosis of tongue swellings in children, ensuring timely treatment and excellent prognosis.

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