

# CASE REPORT

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## LINGUAL SCHWANNOMA IN POSTERIOR 1/3 OF TONGUE - A RARE PRESENTATION

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**ABSTRACT:** Schwannomas arise from neural crest derived Schwann cells. They are rare neoplasms intra-orally and account to 1% of the tumors of head and neck region. Involvement of posterior one third of tongue is even rarer, in incidence.

**KEYWORDS:** Schwannoma, tongue, posterior one third regions.

**INTRODUCTION:** Schwannoma is a benign, slow growing encapsulated perineural tumor of neuro ectodermal derivation, originating from Schwann cells of the neural sheath of motor and sensitive peripheral nerves.<sup>1</sup> About 25 to 40% of these lesions occur in head and neck region, but intraoral development is uncommon.<sup>2</sup> In the oral cavity, the clinical presentation of schwannoma in decreasing order of frequency is tongue, palate, floor of mouth, buccal mucosa, lip and gingiva. Base of the tongue is commonly involved when compared to the tip region and the involvement of posterior one third is very uncommon for this neoplasm.<sup>3</sup>

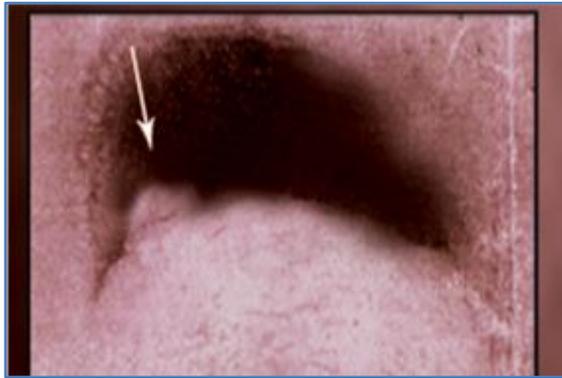
**CASE REPORT:** A 28 year old male presented with painless swelling on tongue, with difficulty in swallowing and speech, of one year duration. Examination of oral cavity revealed small whitish non-tender nodular lesion in posterior one third of tongue on the right side. Regional lymph nodes were not palpable.

**Gross:** A small nodular mass measuring 0.3x0.3 cms was received and was glistening on cut section. No cystic changes were noted. Histopathological processing and routine staining was performed with haematoxylin and eosin stain.

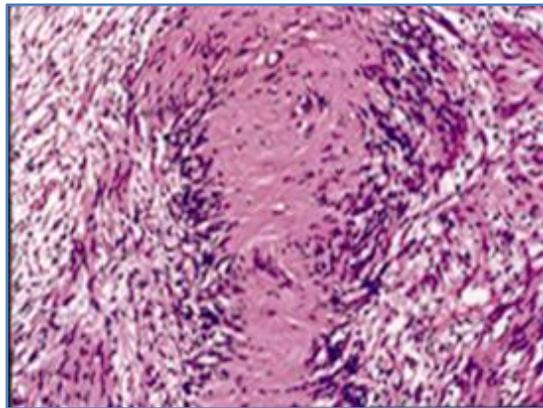
Microscopy showed well encapsulated tumor with overlying stratified squamous epithelium. It is comprised of predominantly Antoni- A areas alternating with few Antoni B areas. Antoni A areas comprised of hypercellularity with spindle shaped cells arranged compactly in interlacing bundles and fascicles. Verocay bodies are noted in the form of nucleus-free eosinophilic masses surrounded by spindle cell arranged in parallel rows forming typical palisading pattern. Adjacent Antoni B areas showed hypocellularity with edematous stroma enclosing widely spaced plump oval to spindle cells. No cytological atypia was observed. A diagnosis of schwannoma of posterior third of tongue was considered.

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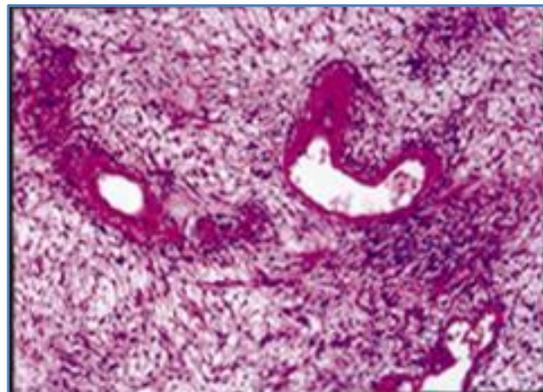
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**Fig. 1: Clinical photograph-nodular lesion in posterior lingual region**



**Fig. 2: Verocay body with palisaded rows on either sides (H&E stain, x 40)**



**Fig. 3: Hypocellular areas - loose stroma with spaced spindle cells (H & E stain, x40)**

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**DISCUSSION:** Schwannoma was first identified by Virchow in 1908 and later reported by Verocay in 1910. It is very uncommon neoplasm in the oral cavity compared to other parts of the body.<sup>2</sup>

Schwannomas are usually solitary, but when multiple they are associated with Von Recklinghausen's disease (combined with neurofibromas) or schwannomatosis. The differentiation between schwannoma and neurofibroma is of prime importance as the latter tend to occur frequently and has potential for malignant transformation in 8 to 10% of cases. Schwannoma has thick collagenous capsule, Antoni A, Antoni B areas and Verocay bodies, which lack in Neurofibroma, comparatively. Immunoreactivity for S-100 protein is observed with uniform reactivity in schwannoma, whereas only a portion of cells in neurofibroma.<sup>1, 4</sup>

Although schwannomas originate from the nerve tissue, a direct relation with a nerve can be demonstrated only in 50% of cases. They often arise from the VIII<sup>th</sup> cranial nerve.<sup>5</sup>

Other nerves commonly affected are the spinal roots, cervical sympathetic, vagus, peroneal and ulnar nerves. Etiology still remains unknown and the disease is generally asymptomatic. It begins as a capsulated nodule and grows slowly.<sup>2</sup> Tumours arising from the small nerves are freely mobile but mobility is restricted along the long axis in those arising from large nerves. Pain and neurological symptoms are uncommon unless the tumours are larger in size. Schwannomas may occasionally wax and wane in size due to fluctuation in the quantum of fluid, in areas showing cystic change.<sup>4</sup>

Schwannomas which originate from cranial nerves in decreasing order of frequency are VIII<sup>th</sup>, V<sup>th</sup>, VII<sup>th</sup>, IX<sup>th</sup>, X<sup>th</sup> followed by XI<sup>th</sup> cranial nerve. Involvement of III<sup>rd</sup>, IV<sup>th</sup>, VI<sup>th</sup> and XII<sup>th</sup> cranial nerve are extremely uncommon. They do not arise from optic and oculomotor nerves as these lack schwann cells.<sup>6</sup> Peripheral nerve sheath tumours arising from oral and maxillofacial region include schwannoma, neurofibroma, nerve sheath myxoma, peripheral encapsulated neurinoma, mucosal neuroma associated with multiple endocrine neoplasia (MEN III), traumatic neuroma and granular cell tumours.<sup>7</sup>

Identification of schwannomas with respect to their nerve of origin may be difficult.

In more than 50% of the intraoral lesions, it is not possible to differentiate between each other, the tumors arising from lingual, hypoglossal and glossopharyngeal nerves.<sup>2</sup>

Differential diagnosis of this neoplasm in posterior third of tongue, must include inflammatory lesions, dermoid cysts, lingual thyroid, benign tumors like granular cell tumors, salivary gland tumors, schwannomas, lipomas, leiomyomas, rhabdomyomas, lymphangiomas, hemangiomas, neurofibroma and malignancies such as squamous cell carcinoma and sarcomas.<sup>5</sup>

Complete surgical excision or enucleation with preservation of nerve function is the treatment of choice for this tumor, of rare presentation. Isolated schwannomas hardly ever become malignant and the prognosis is excellent.<sup>8</sup>

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