# Lingual Schwannoma

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**Citation**

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**Abstract**

Schwannomas originate from Schwann cells of the nerve sheath which cover myelinated nerve fibres. The incidence of head and neck schwannoma ranges from 25-40% of all cases. Intraoral schwannoma is uncommon (only 1% of all head and neck schwannomas). Tongue, palate, cheek mucosa, lip and gingiva are the most frequent locations in the oral cavity. Lingual schwannomas are usually benign, slow growing and solitary encapsulated tumors. The tumor tissue consists of so-called Antoni A and B type cells. Surgical excision or enucleation is the treatment of choice of this rare tumor.

## INTRODUCTION

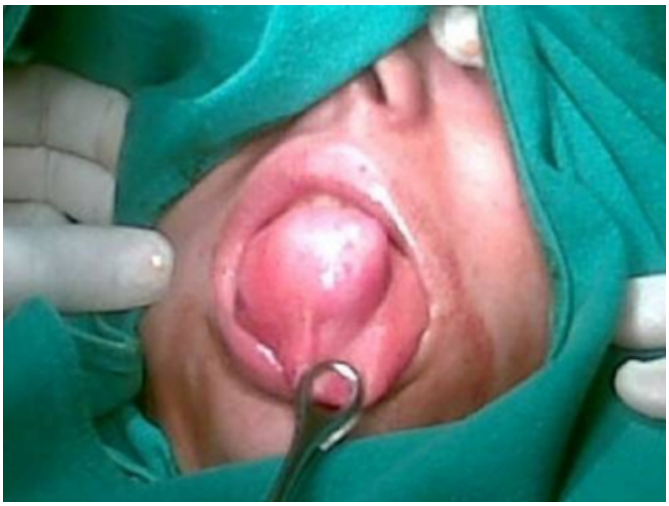
Nerve sheath tumors originating from the peripheral nerves are of two types: neurofibroma and schwannoma. Neurofibromas are benign neoplasms composed of neurites, Schwann's cells, and fibroblasts within a collagenous or myxoid matrix whereas schwannomas originate from Schwann cells of the nerve sheath which cover the myelinated nerve fibres. [1]

## CASE REPORT

A 16-year-old female presented with a slowly progressive painless swelling in the tongue since the last 4 years. The patient had difficulty in swallowing and speaking at the time of presentation. Examination of the oral cavity showed a swelling of 4x4 cm on the anterior aspect of the tongue more towards the right side. The swelling was non-tender, smooth and firm to elastic in consistency. No regional lymphadenitis was detected (FIG. 1).

**Figure 1**

Figure 1: swelling in the anterior part of the tongue.



Routine investigations revealed an hemoglobin of 11gm/dl, a total leukocyte count of 9340/cu.mm and a differential leukocyte count showing 60% neutrophils, 24% lymphocytes, 8% eosinophils, 2% basophils and 6% monocytes. Fine needle aspiration cytology of the mass was suggestive of schwannoma of the tongue.

Excision of the swelling was planned under general anesthesia. On incising the mucosa of the tongue, an encapsulated tumor was seen submucosally. Complete enucleation of the encapsulated mass with primary repair of the tongue was done. The patient had an uneventful postoperative recovery (FIG. 2 and 3).

**Figure 2**

Figure 2: Enucleation Of The Tongue Schwannoma

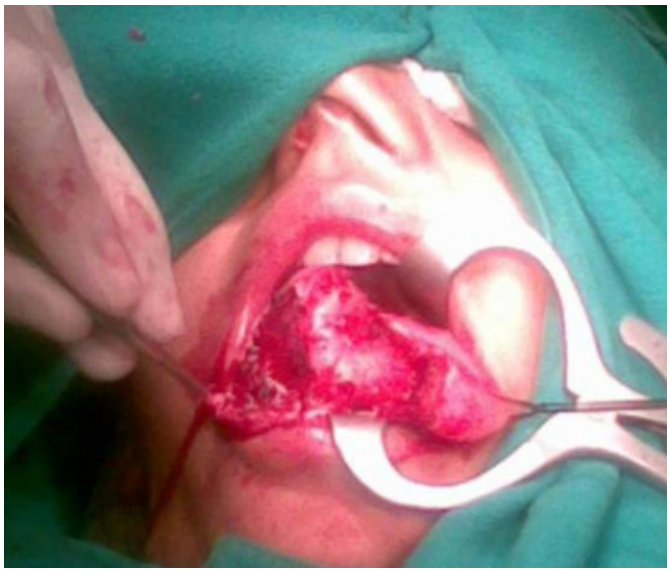


**Figure 3**

Figure 3: Encapsulated Tongue Schwannoma

Histopathology of the enucleated specimen was suggestive of schwannoma.

## DISCUSSION

Schwannoma was first reported by Virchow in 1908 and is found in all parts of the body. Neurilemmoma, neurolemoma, neurinoma, perineural fibroblastoma, peripheral glioma and peripheral nerve sheath tumor are the synonyms of this tumor. Most commonly, the tumor appears in the paravertebral region of the retroperitoneum, pelvis, mediastinum, extremities, nasal cavity, nasopharynx, orbit, parapharyngeal space, larynx and oral cavity. [2,3,4]

The incidence of head and neck schwannoma ranges from 25-40% of all cases. Intraoral schwannoma is uncommon (only 1% of all head and neck schwannomas). Tongue, palate, cheek mucosa, lip and gingiva are the most frequent locations in the oral cavity. The tip is the least affected part of the tongue. [5,6,7,8]

Lingual schwannomas are usually benign, slow growing and solitary encapsulated tumors. In more than 50% of intraoral lesions, it is not possible to differentiate between tumors of the lingual, hypoglossal and glossopharyngeal nerve as identification of the nerve is difficult. Direct relation with a nerve can be demonstrated in only approximately 10-50% of the cases. It may be found alone or in association with von Recklinghausen disease. The tumor develops in patients of all ages, without an obvious preference for either sex. [9,10]

Etiology of lingual schwannoma is still unknown and the disease is generally asymptomatic. The tumor usually presents as a slow growing painless nodule. Invasion of submucosal area leads to pain and discomfort. Dysphagia and dyspnoea are present depending upon the site of the tumor. The incidence of malignant transformation is 8-10%. [7,10,11,12,13]

MRI can show not only the tumor and its capsule, but also in certain cases the nerve from which it has developed. On imaging, schwannoma appears smooth and well-demarcated. This tumor is isointense to muscle on T1-weighted images and homogeneously hyperintense on T2-weighted images. [14]

Diagnosis is confirmed by histopathological studies. The tumor tissue consists of so-called Antoni A and B type cells. Type-A tissue shows densely packed, elongated spindle cells, in the form of parallelly formed thin reticulin fibres, fusiform shaped cells and curled nuclei while type-B tissue has a more myxoid consistency. Amongst the sheets, there are acellular eosinophilic bodies called Verocay bodies, formed by thin cytoplasmic fibres. In addition, hemorrhage from adjacent tissue, necrosis, hyalinization and cystic degeneration may also occur in the tumor tissue. [7,15,16]

Malignant lesions such as squamous cell carcinomas and sarcomas and benign lesions as granular cell tumors, salivary gland tumors, schwannomas of the oral cavity, leiomyomas, rhabdomyomas, lymphangiomas, hemangiomas, dermoid cysts, lipomas, inflammatory lesions and lingual thyroid are the differential diagnoses of this entity. [17]

Surgical excision or enucleation is the treatment of choice of

this rare tumor. Excision is usually easy to perform and the prognosis is excellent as malignant transformation is rare. [18]

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