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Case Report

Lingual Schwannoma: A Case Report

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Abstract

We describe an18-year old male patient with a 5 months previous history of swelling at the posterior mobile part of the tongue. The patient had difficulty in swallowing and speaking at the referral time. Examination of the oral cavity showed a swelling of 2x2 cm on the posterior part of the tongue, more towards the right side. Macroscopically, the entire lesion was removed with its capsule. Histopathological examination of the surgical specimen showed a schwannoma.

Keywords: Schwannoma; Tongue; Intraoral mass; Encapsulated

Introduction

Schwannomas originate from Schwann cells of the nerve sheath which covers the myelinated nerve fibres.[1-4] It was first identified by Virchow in 1908.[5] Approximately 25 to 40% of all schwannomas are seen in the head and neck region.[5-7] Intraoral schwannoma accounts for 1% of all head and neck region tumors[7-9] and are commonly seen at the base region of the tongue.[7,10,11] We report a patient with a schwannoma of the posterior part of the tongue (rare location), that was excised intraorally. Immunohistochemistry showed positive staining for S-100 protein, vimentin and glial fibrillary acid protein. Based on these findings, a histopathological diagnosis of benign schwannoma of the tongue was made. The patient was followed up for one year and there was no evidence of recurrence.

Case Report

An18-year old male patient is presented with a 5 months previous history of a small mass in the posterior mobile part of the tongue while the mass was small at the onset and grown later. The patient had difficulty in swallowing and speaking at the referral time. Examination of the oral cavity showed a swelling of 2x2 cm on the posterior part of the tongue, more towards the right side. The swelling was non-tender, smooth and firm to elastic in consistency at the time of admission (Figure 1).

No regional lymphadenitis was detected. The patient′s medical history was unremarkable. There was no need for radiological investigations, because the mass was easily visible and palpable on physical examination. The lesion was excised with a small border of clinically uninvolved surrounding tissue. Macroscopically, the entire lesion was removed with its capsule (Figure 2).

The postoperative course was uneventful. The mobility of the tongue was good. Histopathological examination of the surgical specimen showed a schwannoma (Figure 3 and 4).

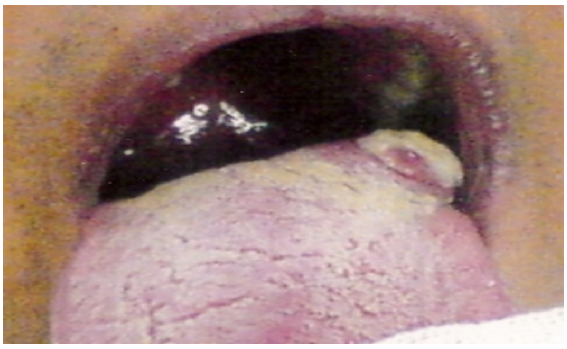

Fig. 1: Swelling in the posterior part of the tongue

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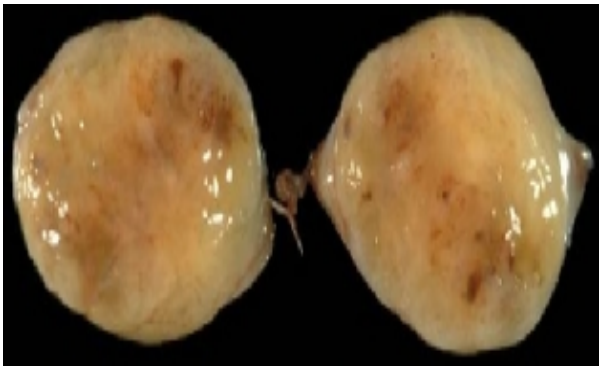

Fig. 2: The cut surface of a schwannoma with a "fish flesh" soft tan appearance.

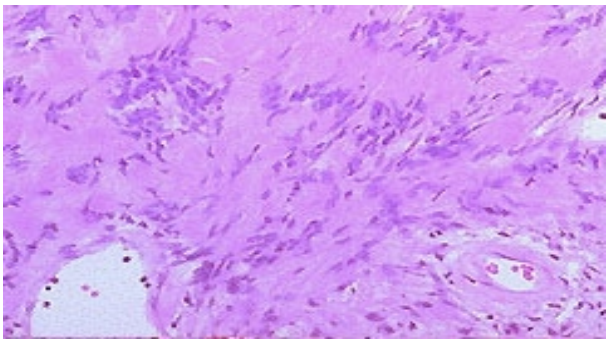

Fig. 3: The classic microscopic appearances of a schwannoma. The "Antoni A" pattern with palisading nuclei surrounding the pink areas (Verocay bodies).

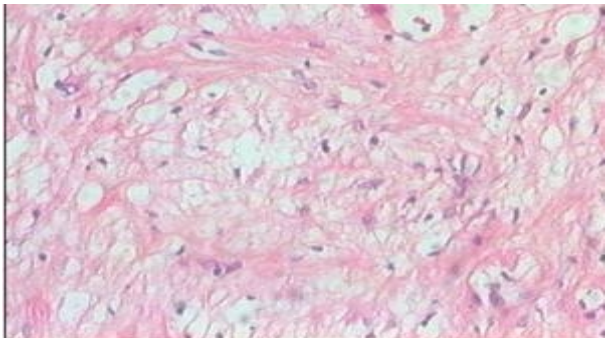

Fig. 4: The classic microscopic appearances of a schwannoma. The "Antoni B" pattern with a looser stroma, fewer cells, and myxoid change.

Immunohistochemistry showed positive staining for S-100 protein, vimentin and glial fibrillary acid protein. Based on these findings, a histopathological diagnosis of benign schwannoma of the tongue was made. The patient was followed up for one year and there was no evidence of recurrence.

Discussion

Schwannomas or neurilemmomas are benign, slow growing, usually solitary and encapsulated tumors, originating from Schwann cells of the nerve sheath.[1,2] After a thorough review of the literature, we found only 6 previously reported cases of tongue base schwannomas.[3,4] Approximately 25 to 40% of all schwannomas are seen in the head and neck region.[5,6] Intraoral schwannoma accounts for 1% of all the head and neck region tumors[7-9] and commonly seen at the base region of the tongue.[7,10,11] Identification of the originating nerve may be difficult. In more than 50% of the intraoral lesions, it is not possible to differentiate between tumors of the lingual, hypoglossal and glossopharyngeal nerves.[12] It can be seen alone, or is associated with Von Recklinghousen disease.[13] Etiology is still unknown and the disease is generally asymptomatic.[14] In general, it starts as a capsulated nodule and grows slowly. If it invades the submucosal areas, it will lead to pain and discomfort.[15,16] Malignant transformation is mentioned in 8-10% of the cases.[13] The tumor develops in patients of all ages, without an obvious preference for either sex.[7] The presenting feature of a tongue schwannnoma is usually a tumor mass. Other symptoms include dyspnea or dysphagia and depend on the location and size of the tumor.[10] Diagnosis is confirmed by histopathological studies. The tumor tissue consists of the so-called Antoni A and B type cells. Type-A tissue shows densely packed, elongated spindle cells, in the form of paralelly formed thin reticulin fibers, 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.[14,17,18] All histopathlogic changes have been confirmed by immunohistochemistry staining such as S-100 protein, vimentin and glial fibrillary acid protein.[19] Magnetic resonance imaging (MRI) is superior to other imaging modalities for the examination of the base of the tongue.[20] 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.[21] Surgical excision or enucleation with preserve nerve function is the treatment of choice for this rare tumor. Excision is usually easy to perform and the prognosis is excellent as malignant transformation is rare.[10,22]

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