



CASE REPORT

Schwannoma of the oral tongue

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Abstract

Schwannomas are benign tumors arising from Schwann cells that affect the peripheral or central nerves. We report the case of a patient presented with a swelling of the tongue. The diagnosis was performed through imaging exams, videolaryngoscopy and magnetic resonance imaging (MRI), and incisional biopsy. The patient underwent complete transoral resection of the lesion. Schwannomas are rarely found in the oral cavity, with 46 cases described in the tongue. They present in several ways, from painless nodules to bulky masses with compressive symptoms. Complete surgical excision is the treatment of choice. These tumors show rare recurrence if completely excised.

Keywords: schwann cells, peripheral nervous system neoplasms, head and neck neoplasms, tongue neoplasms.

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Introduction

Schwannomas comprise benign tumors arising from Schwann cells, and can affect the peripheral or central nerves¹. They present no genetic predisposition, and are usually solitary lesions, but can sometimes be multiple when associated with other diseases such as neurofibromatosis¹. The peak incidence of schwannomas is between the second and fifth decades of life, with no predilection for sex or race².

Schwannomas are rare in the oral cavity, corresponding to 1% of cases, and are found most commonly in the tongue^{1,3}.

We performed a literature review and report a clinical case of schwannoma of oral tongue.

Case report

A 32-year-old male presented with a complaint of a painless swelling in the tongue, with progressive growth and discomfort to swallow, for approximately two years. He had no other complaints or conditions, did not smoke, and consumed alcohol socially. Upon examination of the oral cavity, we found a well delimited, submucosal lesion of fibroelastic consistency occupying the left posterior third of the tongue, preserving the base of the tongue (Figure 1). Videolaryngoscopy and fibronasolaryngoscopy showed a submucosal globous swelling in the left posterior third of the tongue, tongue base without lesions, mobile vocal folds, and unobstructed pyriform sinuses. Magnetic resonance imaging (MRI) showed an expansive, oval lesion with

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Figure 1. Schwannoma of the posterior third of the tongue.

lobulated contours and defined limits in the posterior portion of the tongue, to the left of the midline, bulging the contours of the tongue superiorly. He presented hyperintense signal in T2- and STIR-images and hypointense signal in T1-images, with intense and heterogeneous enhancement using paramagnetic contrast, and hypocaptizing areas suggestive of necrosis. The lesion apparently involved the bellies of the transverse and superior longitudinal lingual muscles, measuring 2.3x2.1x3.0 cm. (Figure 2). Incisional biopsy was performed using the transoral approach. The anatomopathological examination and the immunohistochemical study confirmed the diagnosis of schwannoma. Positive results were obtained for the S-100, Ki-67, and CD34 proteins. The patient underwent transoral glossectomy with primary closure. He evolved well postoperatively, tolerating pasty and liquid oral diet 16 h after the operation. He was discharged from hospital 24 h after surgery. The anatomopathological examination confirmed the diagnosis of schwannoma - Antoni type A, with free resection margins.

Discussion

Originating in Schwann cells, which produce the myelin sheath, these tumors may arise in several regions (intra- and extra-cranial nerves, spinal nerves, sympathetic chain)^{1,2,4}. A systematic literature review was carried out in scientific databases using the MeSH terms "Schwannoma", "tongue". Lira et al.⁴, described 36 patients with this tumor located on the oral tongue in 2013. Other ten case reports have been published since then⁵.

Schwannomas are located in the head and neck region in 25-40% of cases^{1,4}, with the parapharyngeal region as the most common⁵. These neoplasms



Figure 2. Magnetic resonance imaging (MRI) showing a hyperintense lesion in the posterior third of the tongue.

seldom occur in the tongue (<1% of cases)³. Patient may present only a painless mass, or may complain of dysphagia, odynophagia and weight loss, depending on factors such as lesion size and location^{4,5}. Malignant tumors, hemangiomas, lymphangiomas, and salivary gland tumors are among the differential diagnoses⁵. There are reports of malignant transformation in approximately 15% of cases¹.

Concerning the image exams, MRI shows well-circumscribed, homogeneous masses that capture contrast. They are usually isointense at T1 in relation to the muscles and homogeneous and hyperintense at T2, as observed in this clinical case^{1,2,4}.

Histologically, two morphological patterns assist with the diagnosis of schwannoma⁵: Antoni type A - more cellular areas with Verocay bodies (the most common form, and present in this case report), and Antoni type B - more swollen areas with inflammation and hemorrhage³. The S-100 protein is the most sensitive marker to differentiate between these two patterns³.

Treatment consists of complete surgical resection, as performed in the case herein reported. Recurrence occurs only in cases of incomplete excision⁴. Several techniques have been proposed according to the characteristics of the tumor, such as its location and size; of the patient, such as their mouth opening^{2,5}; of the treatment center, such as the presence of robotic surgery with trained professionals⁴. In this case report, safe transoral resection was

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possible. Treatment should also consider the function of the tongue after complete resection, with analysis of treatment morbidity⁵.

In conclusion, schwannoma of the tongue is a rare benign lesion that usually presents only as a mass in the oral tongue region whose transoral resection can treat the problem in the vast majority of cases.

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