Case Report

Schwannoma at the Base of Tongue: A Case Report

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Abstract

Schwannomas (also known as Neurilemmomas) are benign nerve sheath tumor which can arise from any myelinated nerve. Base of tongue schwannomas are rare and manifest with vague symptoms resulting in delayed diagnosis and treatment. Histologic identification of Antoni A and B areas with strong and diffuse S-100 staining, confirm the pathological diagnosis of schwannoma.

INTRODUCTION

Schwannomas are benign slow growing solitary tumor, originating from Schwann cells. Head and Neck Schwannomas (HNS) represent approximately 25-45% of the total, but only 1% have an intraoral origin [1]. Intraoral schwannomas commonly occur in the tongue followed by the palate, floor of mouth, buccal mucosa and mandible [2]. Involved nerve is identified in only 50% of cases [3]. HNS most often arises from sensory nerves, but can occur in all cranial nerves except the olfactory and optic nerves.

CASE PRESENTATION

A 30-year-old woman without any relevant medical history, non-smoker, with no alcohol habits, presented with a history of oral discomfort, swelling at the base of tongue and dysphonia for 1 year. She did not complain of dysphagia, taste alteration or upper airway obstruction apart from snoring. Oral examination revealed a submucosal mass on the posterior surface of the tongue. Examination of the head and neck region was unremarkable. Flexible nasopharyngolaryngoscopy showed a solitary smooth mass on the posterior surface of the tongue. Examination of the head and neck region was unremarkable. Flexible nasopharyngolaryngoscopy showed a solitary smooth mass arising from the right base of the tongue, not involving glosso-epiglottic valleculae, determining a significant airway obstruction. Tongue motility was normal. Thyroid scan (Tc-99m pertechnetate) revealed normal appearance and position of the thyroid gland and no ectopic thyroid tissue was detected. A CT scan of the neck showed a moderately enhancing soft tissue lesion involving the right side of base of tongue, measuring 3.9*3.7*3.9 cm.

Operative technique

In order to avoid potentially lethal complications derived from lingual artery bleeding, and to obtain maximal working space a tracheotomy was performed before starting the tumor excision. Tumor exposure was obtained using a Denhart mouth gag with anterior retraction of the tongue. The most challenging problem we encounter during the surgical procedure was the achievement of an optimal tumor exposure especially during the resection of the posterior aspect of the tumor. However the anterior traction of the tongue using a towel clip resulted sufficient and permit us to have under direct vision the resection plane in all phases of the surgical procedure. A circular incision was made using a 15 cold blade and the encapsulated lesion was excised en-bloc using a monopolar electrocautery. Primary closure with 3-0 vycril suture was performed after obtaining an optimal bleeding control. A nasogastric feeding tube was inserted for postoperative nutrition.

There were no perioperative complications and tongue motility and speech ability were normal. On postoperative day 5, the nasogastric feeding tube was removed and the patient started semi-liquid diet without taste modification and dysphagia.

Figure 1 Transoral view showing tumor at the tongue base.
The patient was successfully decannulated and discharged on postoperative day 8.

**Histopathogy**

Macroscopically, the resected specimen consisted of a elastic, encapsulated, brown mass, measuring 4.5*4*3.2 cm.

Microscopically, the resected specimen was composed of spindle cells arranged in short bundles with nuclear palisades and Verocay bodies (Figure 3). ‘Antoni A’ and ‘Antoni B’ pattern areas with diffuse S-100 staining were present (Figure 4).

**DISCUSSION**

Tumor composed solely from Schwann cells is called Schwannomas. HNS represent approximately 25-45% of the total, however only 1% have an intraoral origin. Intraoral Schwannomas most commonly occur in the tongue followed by the palate, floor of mouth, buccal mucosa and mandible [2]. Originating nerve is identified in only 50% of cases [3]. Tumor most often arises from sensory nerves, but it can potentially involve all cranial nerves except the olfactory and optic nerves. HNS are intracranial in more than 90% of cases and most commonly originate from the superior division of the vestibulocochlear nerve [4]. Although potentially affecting all ages, HNS are diagnosed more frequently in the second decade with no sex predilection. Malignant change does almost never occur [5]. Patient may present with persistent throat discomfort, swelling of the base of the tongue, dysphagia, snoring, voice change and otalgia. The differential diagnosis of a lesion in the base of tongue is very extensive. Benign lesions include tumor of salivary gland, lymphangioma, hemangioma, epidermoid cyst, lipoma, leiomyoma, rhabdomyoma, inflammatory lesion and lingual thyroid. In our case, patient had undergone a thyroid scan and a head and neck CT scan which revealed thyroid gland in normal position with normal thyroid function tests. According to the intraoperative findings we can not reach definitive conclusions about the nerve from which schwannoma originated. Considering the localization, terminal motor or sensory branches of hypoglossal nerve as well lingual nerve could be suspected.

Histologically, schwannomas are defined by a mixture of two growth patterns, namely ‘Antoni A and B’ types. Antoni A is highly cellular and composed of elongated Schwann cells with disorganized palisading nuclei. Between these palisades pink areas named ‘Verocay bodies’ could be observed. The ‘Antoni B’ pattern, consisting of elongated Schwann cells in a less dense myxoid morphology, is more disorganized then ‘Antoni A’ pattern [6]. HNS treatment is surgical and complete excision results in no recurrence.

**REFERENCES**


