

## CASE REPORT

# Schwannoma of the Lower Lip Mucosa: An Unexpected Finding

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## ABSTRACT

Of all the neurogenic tumors, about half are seen in the head and neck region. Schwannomas are benign tumors of nerve sheath schwann cells and are quite uncommon in the oral cavity, rarely occurring in the lip area. A MEDLINE search in the English literature from 1969 to 2013 revealed only 20 documented cases of schwannomas of the lip.

Although rare, schwannoma should be considered in the differential diagnosis of any nodule or mass in the oral mucosa. In the current study, authors report a case of an intraoral schwannoma situated in the lower lip. The diagnosis was established based on clinical and histopathological aspects, which was treated by complete surgical excision.

**Keywords:** Neurilemmoma, Neurinoma, Schwannoma, Neoplasm, Lower lip.

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## INTRODUCTION

The schwannoma, also known as neurilemmoma or neurinomas, is a rare benign neural tumor, arising from the neural sheath schwann cells, first described by Verocay in 1908 and in 1935, the term 'neurilemmoma' was coined by Stout.<sup>1,2</sup>

Schwannomas are encapsulated nerve sheath neoplasms of the peripheral, cranial or autonomic nerves.<sup>3</sup> The etiology is unknown, but it is postulated that the lesion arises by proliferation of schwann cells at one point inside the perineurium.<sup>3,4</sup>

This neoplasm has predilection for the head and neck region where one-third of the cases are reported; however, intraoral lesions are rare.<sup>3-5</sup> When it is found in oral structures, the tongue is reported to be the favored site<sup>6</sup> and rare in lip.<sup>7</sup> It may present itself at any age, but

it is more frequent between the second and third decades of life. It is not certain if there is a predilection for women or it is equally distributed between sexes.<sup>3,8</sup>

Schwannoma, clinically is seen as a slow-growing, benign encapsulated nodular lesion, usually solitary. It is usually asymptomatic, although pain and paresthesia may occur. The lesion causes displacement and compression of the surrounding normal nerve tissue.<sup>9</sup>

A medline search in the English literature from 1969 to 2009 revealed only 17 documented cases of schwannomas of the lip. This article reports the case of schwannoma in the lower lip mucosa in a 35 years old female patient.

## CASE REPORT

A 35-year-old white female patient presented with the complaint of swelling in the lower lip since 10 years. The swelling was not associated with pain, discharge or paresthesia. The medical history was noncontributory. There was no extraoral facial swelling. On intraoral examination, a submucosal nodular lesion measuring approximately 2 × 1.5 cm was observed, located on the right side of the lower lip. Overlying mucosa was normal without erythematous or ulcerative changes (Fig. 1). The lesion was moderately firm and was not fixed to the surrounding tissues. There was no pain on palpation.

A provisional diagnosis of benign soft-tissue neoplasm was made. An excisional biopsy was done under local anesthesia, followed by histopathological examination.



**Fig. 1:** Intraoral picture showing swelling involving lower lip

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**Fig. 2:** Excised lesion

Macroscopically, the excised specimen appeared oval, whitish in color, firm in consistency and approximately 20 × 15 mm in size (Fig. 2). Microscopically, the characteristic histological features for schwannomas were seen. These included complete tumor encapsulation and composition consisting of alternating regions of hypocellularity, and hypocellularity known as Antoni A and Antoni B respectively. Numerous blood vessels were observed. Verocay bodies were also seen (Fig. 3).

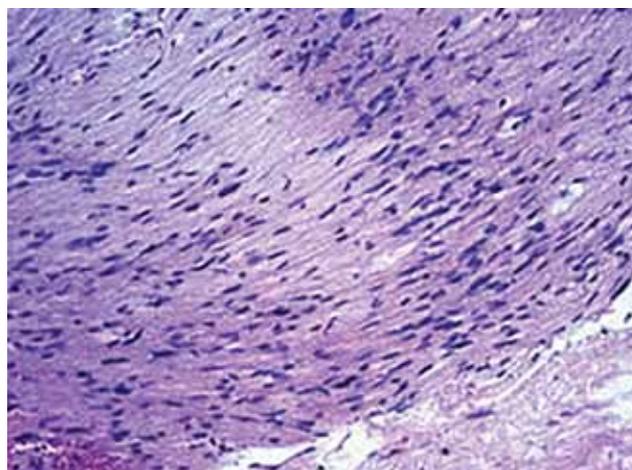
Based on the clinical behavior, histological, and immunohistochemical aspects, the final diagnosis of schwannoma was made. Postoperative healing was uneventful. The patient is under routine follow-up, with no signs of recurrence even after 3 years.

## DISCUSSION

Schwannomas in the head and neck regions constitute 25% of all extracranial schwannomas, but only 1% show intraoral origin.<sup>10,11</sup> The schwannoma is a rare benign neural tumor, arising from the neural sheath schwann cells of the peripheral, cranial or autonomic nerves.<sup>3</sup> It does not arise from cranial nerves I and II (optic and olfactory nerves), because they lack schwann cells.<sup>12</sup>

The peak incidence of schwannoma varies between the third and the sixth decade of life; however, it can arise at any age. Clinically, schwannomas are solitary, slow growing, smooth surfaced and usually asymptomatic.

The microscopic aspect is characteristic and easily distinguishable from other lesions. There are two types of tissue arrangement: Antoni A and Antoni B. Alternation between Antoni A and B regions is common. Antoni A type is composed of aligned fusiform cells, forming a typical palisade, between the fibrils. There are small eosinophilic masses called Verocay bodies. Antoni B type is composed of a smaller number of cells and the spindle cells are randomly arranged within a loose myxomatous stroma.<sup>13</sup> In this case, both tissues were predominantly revealed along with Verocay bodies.



**Fig. 3:** Histological picture of the lesion (H&E stain)

From the immunohistochemical viewpoint, all neural origin tumors show positivity for s100 protein, but immunohistochemical examination could assist in lesion differentiation. Chrysomali et al<sup>2</sup> observed an intense positive reaction to s100 in schwannoma and palisaded encapsulated neuroma. Intensive reaction to cd57 is observed in traumatic neuroma, while capsular epithelial membrane antigen (EMA), and cd34 stainings are observed in schwannoma.

Ultrasonography, CT and MRI may be helpful diagnostic and treatment tools, for the estimation of tumor margins, the lesion composition, and the determination of whether there is infiltration to surrounding structures or not.<sup>14</sup> The recurrences as well as the malignant transformation are rare events.

The treatment of choice is excision. The prognosis is very good since it does not usually recur. Fortunately, malignant transformation of neurilemmoma is exceedingly rare.

## CONCLUSION

From this case, an important conclusion can be drawn that the differential diagnosis of painless nodule in head and neck must include schwannomas. The final diagnosis should be done after histopathological exam and, in some cases, after immunohistochemical analysis. Prognosis is excellent as the tumor is benign, and recurrence is rare only after total removal of the lesion with preservation of nerve integrity through careful dissection.

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