

# Schwannoma of lower lip: an unusual case report and review of literature

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## Abstract

Schwannoma is a slow-growing benign tumor that is derived from the Schwann cells. It presents as a well-defined radiolucency in the soft tissues where it commonly occurs, and it is also found in the bones. Although schwannoma occurs as a single lesion, it presents as multiple lesion when associated with neurofibromatosis. The most preferred treatment is the conservative surgical removal. The rate of recurrence and malignant transformation are not seen very often. The histological patterns of the lesions reveal that they are well encapsulated and consist of spindle cells showing either an Antoni A (spindle cells arranged in palisaded whorls and waves) or Antoni B (spindle cells with more haphazard appearance). In this article, we review the literature on intraoral schwannoma and describe a case occurring on the lower lip of a 30-year-old male patient.

**KEY WORDS:** Lower lip, neurinoma, neurolemmoma, schwannoma, lemmoma

## Introduction

Schwannoma is a benign neural tumor, arising from the schwann cells of the peripheral, cranial, or autonomic nerves.<sup>[1,2]</sup> The etiology is unknown. It is alleged that the proliferation of schwann cells in the perineurium leads to schwannoma that causes displacement and compression of the adjacent nerve.<sup>[1,2]</sup> Schwannoma may arise at any age,<sup>[1,2,3]</sup> but the peak incidence is between the third and sixth decades. There is no gender predilection.<sup>[1,2]</sup> The tumor is usually asymptomatic,<sup>[2]</sup> but the displacement and compression of the surrounding normal nerve tissue occurs, resulting in pain and paresthesia.<sup>[1]</sup> Schwannoma is known to commonly occur in the soft tissues of the head and neck and on the flexor surfaces of the upper and lower extremities, but it is rarely seen intraorally (only 1% are intraoral in origin).<sup>[3,4,6]</sup>

## Case Report

A 30-year-old male patient reported to the Tatyah Sahib Kore Dental College, Newpargaon, Kolhapur, with a chief complaint of a swelling on the lower lip, which was present for 4–5 years. The case history revealed that the swelling had gradually increased in size, since its onset. Clinical examination revealed a 2- × 2-cm, dome-shaped, nontender, firm to soft mobile mass, with a smooth surface, on the right side of the lower lip, and not fixed to the surrounding tissues. There was no pain on touch. The medical history was nonsignificant. The provisional diagnosis was established as a benign soft tissue neoplasm or a minor salivary gland tumor. The margins were well demarcated [Figure 1]. There were no palpable neck nodes and no signs of neurological deficit. The clinical differential diagnosis for the lesion was benign fibroma, lipoma, neurofibroma, and mucocele. Conservative surgical removal is the preferred mode of treatment. Schwannoma shows no recurrence, if completely excised. The prognosis is good, and malignant transformation of benign schwannoma is found to be rare. The patient underwent a surgical excision of the lesion under local anesthesia under aseptic precautions. Curvilinear incision was given to expose the lesion; a blunt dissection was done to separate the lesion [Figure 1], followed by complete surgical excision; and finally, a primary closure was done [Figure 1].

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**Figure 1:** Schwannoma of lower lip—its surgical excision and closure.

Intraoperatively, the mass appeared well encapsulated, and the mass was found to be easily separable from the surrounding tissues [Figure 1]. The surgical specimen was an ovoid soft tissue mass with a thick capsule.

## Discussion

The schwannoma is also known as neurilemmoma, neurinoma, or perineural neuroblastoma. Neurilemmoma was first described by Verocay in 1910. He called it “Neurinoma” then. In 1935, the term “neurilemmoma” was coined by Stout.<sup>[6]</sup> Unlike neurofibromas, schwannomas rarely metastasize.<sup>[2,6]</sup> Schwannoma is commonly known to occur in the soft

tissues of the head and neck. Approximately, 25%–45% of all schwannomas occur in the head and neck, but only 1% are intraoral in origin.<sup>[1,3,4]</sup> When found intraorally, the tongue is reported to be the favored site, followed by the palate, floor of mouth, buccal mucosa, lips, and jaws.<sup>[1,5]</sup> Central and peripheral schwannoma are the two types that are prevalent in the bone or in the soft tissues, respectively.<sup>[1,2,6]</sup>

The treatment of choice is excision.<sup>[6]</sup> If the nerve of origin is visualized, an attempt should be made to separate carefully to preserve nerve function. In our case report, the connection with the nerve could not be seen. The prognosis is very good, because it does not usually recur, and malignant transformation of neurolemmoma is also rare.<sup>[1,2,6,9]</sup>

Microscopically, schwannoma is classically described as being composed of two types of tissues, Antoni type A and Antoni type B.<sup>[1,2,4,5,6]</sup> Antoni type A is made up of cells with elongated- or spindle-shaped nuclei, which are aligned to form a characteristic palisading pattern, while the intercellular fibers are arranged in a parallel fashion between rows of nuclei. These fibers in some planes will give the impression of occurring in whorls and swirls. Antoni type B tissues do not exhibit this characteristic palisading but rather a disorderly arrangement of cells and fibers.<sup>[1]</sup>

The schwannoma and neurofibroma differ histologically and histogenetically; the schwannoma is derived from the Schwann cells and the neurofibroma from the fibroblasts of the perineurium.<sup>[1,2]</sup> Neurofibroma is unencapsulated consisting of a mixture of Schwann cells, perineurial cells, and endoneurial fibroblasts.<sup>[1,2]</sup>

The presence of schwannoma at one site of the body calls for the careful search for nerve tumors in other parts of the body; however, in most cases, none may be found. The differentiation of schwannoma from neurofibroma is essential, because an apparently solitary neurofibroma may be a manifestation of neurofibromatosis.

## Conclusion

An important conclusion that has evolved from this case report is that the differential diagnosis of painless nodules at lower lip should also include schwannomas, which was diagnosed and managed efficiently at our institute.

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