Neurilemmoma of the tongue: A case report

Pallav Kumar Kinra, Jayakumar K, Manoj Joseph Michael

ABSTRACT

Introduction: Neurilemmomas, also referred to as schwannomas or neurinomas, are benign encapsulated nerve sheath tumors composed of Schwann cells. Neurilemmomas arise when proliferating schwann cells form a tumor mass of unknown etiology encompassing motor and sensory peripheral nerves. We report a rare case of neurilemmoma over the ventral surface of the tongue.

Case Report: A 15-year-old child came to our Department of oral and maxillofacial surgery, Govt. Dental College, Kozhikode complains of swelling over ventral surface of tongue since two years. The lesion was freely moveable and asymptomatic. Clinically, the lesion appeared to be a benign soft tissue neoplasm. Excisional biopsy of the lesion was done under local anesthesia and tissue was sent for histopathological examination. Diagnosis is made by histological examination of the lesion. The treatment is surgical excision of the lesion. They do not show recurrence after complete excision.

Conclusion: As neurilemmoma is a benign neoplasm, surgical excision is the treatment of choice. The prognosis of neurilemmoma is usually excellent after adequate excision. This case showed no recurrence after the treatment and malignant transformation of a previously benign neurilemmoma is exceedingly rare.

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CASE REPORT

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Introduction: Neurilemmomas, also referred to as schwannomas or neurinomas, are benign encapsulated nerve sheath tumors composed of Schwann cells. Neurilemmomas arise when proliferating schwann cells form a tumor mass of unknown etiology encompassing motor and sensory peripheral nerves. We report a rare case of neurilemmoma over the ventral surface of the tongue. **Case Report:** A 15-year-old child came to our Department of oral and maxillofacial surgery, Govt. Dental College, Kozhikode complains of swelling over ventral surface of tongue since two years. The lesion was freely moveable and asymptomatic. Clinically, the lesion appeared to be a benign soft tissue neoplasm. Excisional biopsy of the lesion was done under local anesthesia and tissue was sent for histopathological examination. Diagnosis is made by histological examination of the lesion. The treatment is surgical excision of the lesion. They do not show recurrence after complete excision. **Conclusion:** As neurilemmoma is a benign neoplasm, surgical excision is the treatment of choice. The prognosis of neurilemmoma is usually excellent after adequate excision. This

case showed no recurrence after the treatment and malignant transformation of a previously benign neurilemmoma is exceedingly rare.

Keywords: Neurilemmoma, Tongue, Oral cavity, Schwannoma

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INTRODUCTION

Neurilemmomas are benign neoplasms, which are commonly well encapsulated. It usually arises from spinal, cervical, sympathetic, vagus, peroneal or ulnar nerves. Extracranially, 25% of all schwannomas are located in head and neck, but only 1% show an intraoral origin [1]. Intraorally, it shows predilection for tongue followed by palate, buccal mucosa, lip and gingiva [2]. The tip of tongue is the least affected part. They remain asymptomatic unless they attain an appreciable size. Schwannomas may occur at any age but peak incidence is between third and sixth decades. There is no gender predilection. Only 50% of these tumors have direct relation with a nerve [3]. Schwannomas are usually solitary lesions but in unusual instances can occur as multiple, with von Recklinghausen's neurofibromatosis. They show no recurrence if completely excised and almost never undergo malignant transformation. We report a rare case of neurilemmoma on ventral surface of tongue [4].

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CASE REPORT

A 15-year-old child came to our Department of oral and maxillofacial surgery, Govt. Dental College, Kozhikode complains of swelling over ventral surface of tongue since two years (Figure 1). Patient had no history of any change in size the of lesion. Patient had no difficulty in chewing, swallowing and phonation and there was no sensory or taste abnormalities by the patient. Color of overlying mucosa was normal. Patient was only concerned about the swelling which was totally asymptomatic. The past medical history of the patient was unremarkable. On clinical examination a 1.5-cm diameter mass was present on ventral surface of tongue just beneath the mucosa. The lesion had rubbery consistency, was freely moveable, non tender and asymptomatic. Rest of the oral cavity was normal. Clinically, the lesion appeared to be a benign soft tissue neoplasm.

Surgical excision of the lesion was done under local anesthesia with adequate surgical margins (Figure 2) after giving bilateral nerve block. During excision lesion was well circumscribed and encapsulated with no infiltration in the surrounding tissues. After excision tissue was sent for histopathological examination. Grossly the mass was well encapsulated, measuring 1.5 cm in diameter and had firm gray white cut surface with small cystic areas. The patient has not shown any recurrence in follow-up period of two years.

DISCUSSION

Schwannomas are benign nerve sheath neoplasms composed of schwann cells. They were first described by Verocay in 1908. Embryologically, schwann cells arise during fourth week of development from a specialized population of ectomesenchymal cells of neural crest [2]. These cells form a thin barrier around each extracranial nerve fibres of motor and sensory nerves with myelin sheath to enhance nerve conductance. Schwannomas being rare in oral cavity, and is not often encountered in clinical practice. Diagnosis is confirmed by microscopic examination (Figure 3A). Two microscopic patterns of schwannomas are known to coexist: Antoni A and Antoni B. In Antoni A, elongated cells with cytoplasmic processes are arranged in fascicles in areas of moderate to high cellularity with little stromal matrix [5]. Spindle shaped nuclei are aligned in parallel rows forming a typical palisaded pattern. Between the rows of cells there are fine cytoplasmic fibrils with acellular, eosinophilic masses called Verocay bodies [3]. In Antoni B, the tumor is less densely cellular with a loose meshwork of cells along with microcysts and myxoid changes similar to neurofibroma [6]. In both patterns, the cytology of the individual cells is similar, with elongated cytoplasm and regular, oval nuclei. S-100 protein was strongly reactive in the spindle cells (Figure 3B). Degenerative changes in schwannomas can occur and include nuclear pleomorphism, xanthomatous

Figure 1: Preoperative view of tongue lesion.

Figure 2: Intraoperative view of the lesion being removed.

change and vascular hyalinization [6]. Robert et al. have documented a schwannoma in a 30-year-old woman arising in the tip of tongue [2].

Lopez and Ballestin in their study of nine intraoral schwannomas found three schwannomas in vestibule, two each in tongue and palate and one each in floor of mouth and lower lip [5]. The main differential diagnosis clinically are other benign lesions which may occur at this site. These include neurofibroma, traumatic neuroma,

Figure 3: (A) Antoni A pattern with verocay bodies (B): Tumor cells showing S-100 reactivity.

fibroma, lipoma, leiomyoma etc. Diagnosis of the lesion can only be confirmed by histopathological examination and immunohistochemistry. Malignant transformation of schwannoma is exceptionally a rare event. Treatment of the lesion is complete surgical excision.

CONCLUSION

As neurilemmoma is a benign neoplasm, surgical excision is the treatment of choice. The prognosis of neurilemmoma is usually excellent after

adequate excision. Diagnosis is only confirmed by histopathological examination. This case showed no recurrence after complete surgical excision and malignant transformation of a previously benign neurilemmoma is exceedingly rare.

Author Contributions

Pallav Kumar Kinra – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Jayakumar K – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Manoj Joseph Michael – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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