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Case Report / Приказ случаја

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Schwannoma of Upper Lip – Case Report and Literature Review

Шваном горње усне – Приказ болесника и преглед литературе

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SUMMARY

Introduction Schwannomas or neurilemmomas are well demarcated, benign neurogenic lesions arising by a fibroblastic proliferation of the nerve sheath cell (Schwann cell). They usually present as solitary encapsulated leisons with rare occurrence in the upper lip. These tumours based on their location could lead to facial weakness and paralysis, pressure in ears, tinnitus, hearing loss, balance loss and could lead to a life threatening situation.

Case outline This case is a rare presentation of schwannoma located in the upper lip of a 21 year old male patient of Indian origin. The patient complained of a swelling in the mouth with a difficulty in keeping the mouth closed. The swelling was surgically excised and the patient healed completely.

Conclusion This case of occurrence of tumor on upper lip indicates on the possibility of considering schwannoma as a possibility in the diagnosis of oral tumors in the future; as the location of tumor was rare and had a high chance of misdiagnosis.

Keywords: Schwannoma, neurinoma, neurilemmoma, oral lesions, head and neck tumors

Сажетак

Увод Шваноми или неурилемоми су јасно ограничени, бенигни тумори нервног порекла који настају фибробластном пролиферацијом омотача нерава (Шванових ћелија). Обично се манифестују као солитарне инкапсулиране лезије, а ретко се развијају у горњој усни. Ови тумори у зависности од локализације могу довести до слабости или парализе, осећаја притиска у уху, тинитуса, губитка слуха и равнотеже као и по живот опасних стања.

Приказ болесника Овај случај представља ретку манифестацију шванома у горњој усни 21 годину старог мушкарца Индијског порекла. Он се жалио на отицање у пределу усне и тешкоће да споји усне. Тумор је хируршки уклњен и рана је уредно зарасла.

Закључак Локализација шванома у горњој усни је изузетно ретка, али се мора разматрати у диференцијалној дијагнози тумора усне дупље јер лако може доћи до превида.

Кључне речи: Шваном, неурином, неурилемом, орални тумор, глава и врат

INTRODUCTION

Schwanoma was first described by Vercay in 1910, who called it Neurinoma [1]. But the term Neurilemmoma was first coined by Stout in 1935 [1]. Neurilemmoma produces distinct patterns referred to as Antoni A and Antoni B [2]. It has a predilection for head, neck and surface flexors of the upper and lower extremities [3] 25-45% of all schwannomas occur in the head and neck region with the tongue being the most common site [4]. Cranial nerves I and II are not sites for this tumour as they lack Schwann cells [5].1 % of schwanomas occur in the intra oral region [6, 7]. Among the intra oral lesions tongue is the most common site, with rare occurrence in the upper lip [7, 8].

CASE OUTLINE

A 21 year old apparently healthy male reported to the Department of Oral& Maxillofacial Surgery, Government Dental College, Kottayam, India with a two year old painless, slow growing swelling on the inner aspect of the upper lip (Figure 1). He had history of trauma to the region 7 years back, followed by Root Canal Treatment and full crown restoration on 21 and 22.

On examination it was an ovoid, firm, mobile mass approximately 3x2 cm exhibiting a smooth, non-ulcerated, non-erythematous surface. The swelling was in the midline and extended to the labial vestibule (Figure 2). With a provisional diagnosis of traumatic fibroma an excisional biopsy was performed under local anesthesia. The lesion was encapsulated and this facilitated the meticulous

dissection. The surgical bed was thoroughly cleaned, hemostasis achieved and wound closure was done (Figure 3).

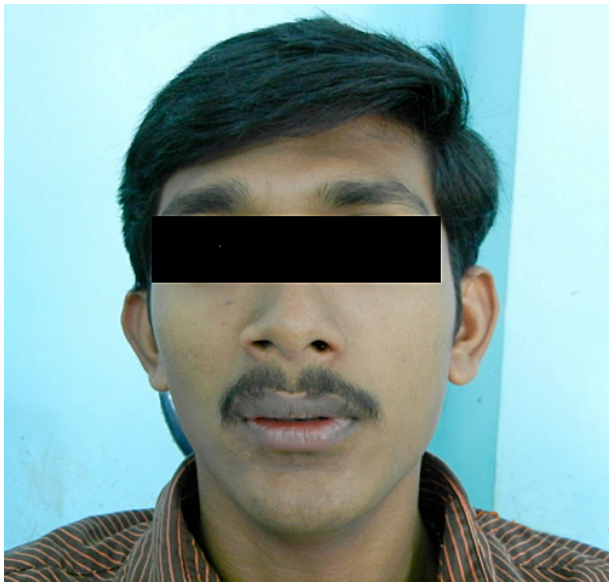


Figure 1. Preoperative view of the patient.

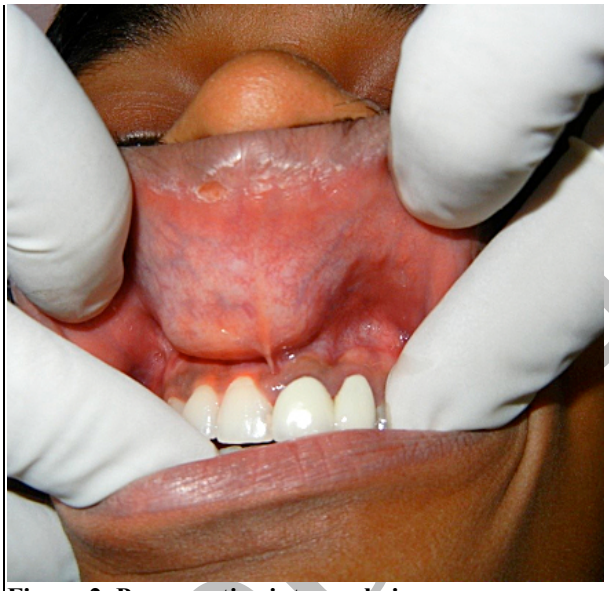
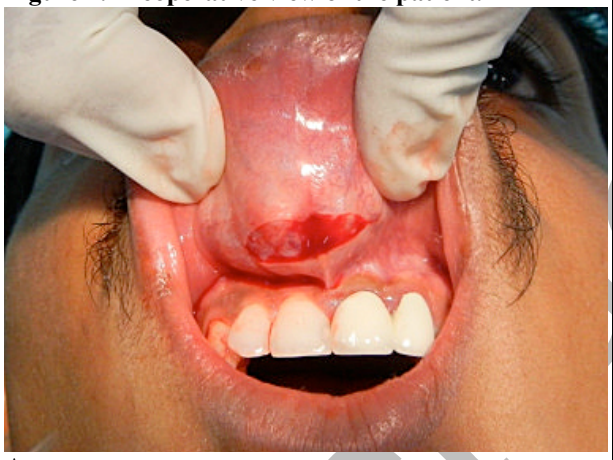
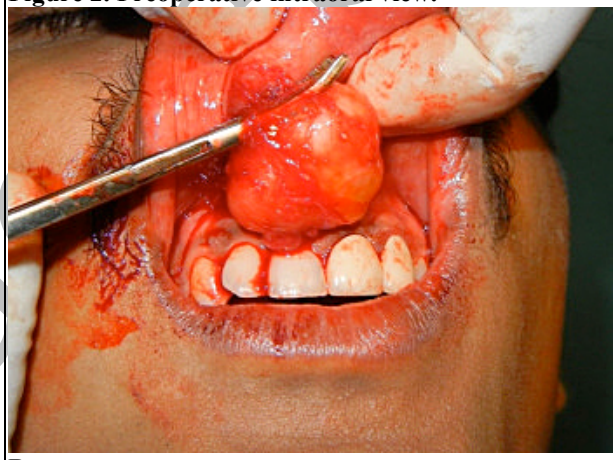


Figure 2. Preoperative intraoral view.



A



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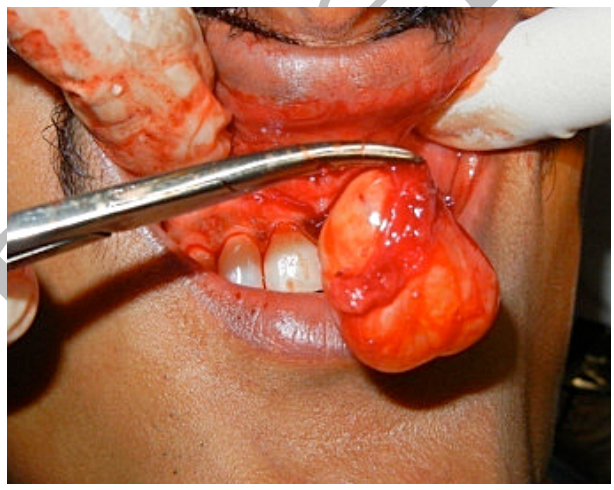

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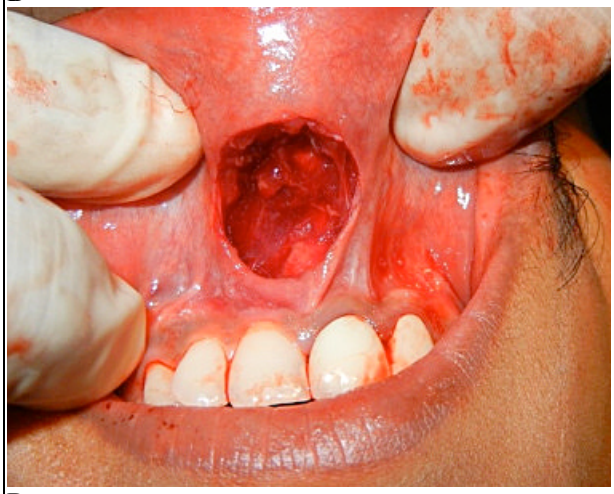


D

Figure 3. Intraoperative view: A) Incision, B)Meticulous dissection, C) Excision of the lesion in toto, D) Excised bed.

The gross specimen was yellowish with a smooth, shiny surface (Figure 4). Upon histopathologic examination Both Antoni Type A tissue made up of cells with spindle shaped nuclei arranged in a palisading pattern and Antoni Type B tissue showing disorderly arranged cells and fibers were seen (Figure 5). A diagnosis of schwannoma was made.

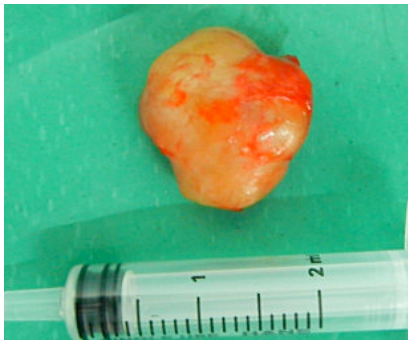
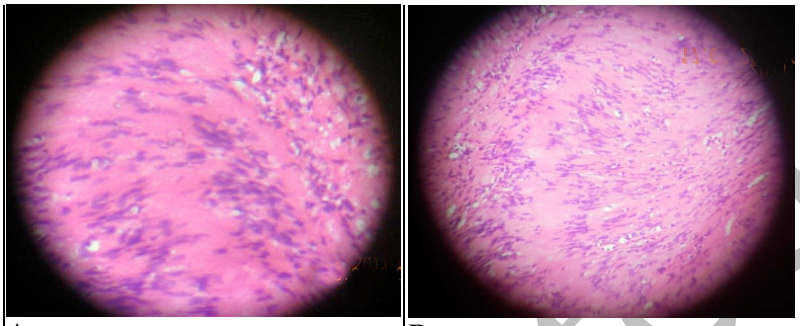


Figure 4. Photograph excised of gross specimen.



A **B**

Figure 5. A) Photomicrograph showing verocay body with palisaded arrangement of nuclei (H&E, x45); B) Photomicrograph showing Antoni type B tissue. (H&E, x10).

The postoperative period was uneventful and the patient is disease free after an year of follow-up.

DISCUSSION

Schwanoma also goes by the name of neurilemmoma, neurinoma, lemmoma and perineuralfibroblastoma [9]. It was first described by Vercay in 1910, who called it neurinoma [1], but the term Neurilemmoma was first coined by Stout in 1935 [1]. Tissue culture studies by Murray and Stout confirmed the Schwann cell origin when they cultivated the tumour in vitro. Neurilemmoma produces distinct patterns referred to as Antoni A and Antoni B [2]. It has a predilection for head, neck and surface flexors of the upper and lower extremities [3]. 25-45% of all schwannomas occur in the head and neck region with the tongue being the most common site [4]. Cranial nerves I and II are not sites for this tumour as they lack Schwann cells [5]. 1 % of schwannomas occur in the intra oral region [6, 7]. Among the intra oral lesions tongue being the most common site, with rare occurrence in the upper lip [7, 8]. They usually present as solitary encapsulated slow growing lesions unless associated with neurofibromatosis. Despite the nerve tissue origin they are painless. They cause pain only when they cause pain on adjacent nerves, rather than on the nerve of origin [9]. This case showed gradual increase in size and was otherwise asymptomatic. Frequency of lip lesions is comparatively less [8].Infraorbital nerve schwannomas can present as lip masses [10]. Rarely multinod0ular neurilemmomas are also seen [11]. Central lesions which cause bony destruction can present as unilocular or multinodularradiolucencies that are centered on the inferior alveolar nerve [2]. They may have a true capsule or a psuedocapsule made of fibrous connective tissue [4]. This lesion was encapsulated which aided in complete removal.

Ultrasound scan with fine needle aspiration biopsy can be diagnostic in 30% and MRI in 77% [12]. Ultrasound scans show homogenous and hypo-echogenic findings and post-acoustic enhancement. CT scans show definitely marginated mass with homogenous soft tissue density. MRI scans demonstrate a homogenous lesion with low intermediate signal intensity on T1- weighted and high signal intensity on T2 –weighted images [13]. This mass was not subject to any such investigation as we relied entirely on our clinical assessment.

Treatment of choice is surgical excision [14]. Recurrence is uncommon [4, 7, 14]. Malignant transformation of schwannomas is rare [7, 15]. Das Gupta and Brasfield reported 8% incidence of malignant schwannomas in the head and neck region [7, 16]. Ghosh et al reported 13.9% incidence [7, 17]. A provisional diagnosis of traumatic fibroma was made based on the prior history of trauma. Minor salivary gland neoplasms and mesenchymal tumors can also be considered as possibilities.
Histopathology shows two types of tissue; Antoni Type A and Antoni Type B. The cells in Antoni Type A have elongated or spindle shaped nuclei aligned to form a characteristic palisading pattern. Intercellular fibers are arranged parallel to the nuclei; giving the impression of organoid swirls [4].Verocay bodies are central, acellular, eosinophilic bodies with reduplicated basement membrane and cytoplasmic processes. Antoni Type B tissue shows oval nuclei and disordered cells and fibers with edema fluid and microcysts [9]. There is no myelin as no axis cylinders exist to induce myelin formation by the Schwann cells. Tumor cells also show diffuse positive immunohistochemical reaction for S-100 protein [9].This lesion exhibited all the classic histopathologic features. If the nerve of origin is visualized all attempts should be made to isolate it[18]. Here the nerve of origin could not be identified.

CONCLUSION

It is customary to submit all excised tissue for histopathologic analysis. This case report underscores the importance of the above tradition. Though lesions like the schwannoma are the exception rather than the norm, it is becoming of a prudent clinician to be on the lookout for such rare entities.

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