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SCHWANNOMA OF THE SUBLINGUAL REGION : A RARE CASE REPORT

Oral Pathology

Dr. Karuna Sree. P* Assistant Professor, Government Dental College and Hospital, Hyderabad. *Corresponding Author

Dr. Jyothirmayee. K Assistant Professor, Government Dental College And Hospital Hyderabad.

ABSTRACT

Schwannoma is a relatively uncommon, slow-growing benign, encapsulated perineural tumour of neuroectodermal origin that is derived from the Schwann cells of the neural sheath. They remain asymptomatic, unless they attain appreciable size. They do not recur, and malignant transformation is rare. It is usually found in the head and neck, and rarely in the intraoral location. Here, we report a case of schwannoma, that was located at an unusual location, i.e., sublingual region.

KEYWORDS

Benign neoplasm, floor of mouth, sublingual region, schwannoma, neurilemmoma.

INTRODUCTION

Schwannomas are slow growing, benign, neural tissue tumours also known as neurilemmomas or neurinomas. They are epineurium-encapsulated neoplasms arising from Schwann cells[1,2]. Neurilemmoma was first described by Verocay in 1910. He called it "Neurinoma." In 1935, the term "Neurilemmoma" was coined by Stout[3,4,5]. It may originate from any of central, peripheral or autonomic nerves that have Schwann cells[6]. Most commonly affected nerve is the VIII cranial nerve (acoustic neurinomas)[7]. About 25-45% of schwanommas arise in head and neck region with nearly 1% in the oral cavity, where it is most commonly found in tongue followed by palate, floor of mouth, gingiva, vestibule[8]. Schwannomas remain asymptomatic unless they attain appreciable size. Clinically these resemble salivary gland tumour, fibroma, lipoma, neurofibroma. we present a rare case of schwanomma on the floor of the mouth in a 48 years - old male patient which was diagnosed after excisional biopsy.

CASE REPORT

A 48 -year-old male patient, presented to the department of Oral and Maxillofacial Surgery, Government Dental College, Hyderabad for evaluation of a lesion on the floor of the mouth first noted 3 months earlier. History revealed that the swelling had gradually increased in size since its onset.The swelling was not associated with pain, discharge, or paresthesia. Tongue mobility was normal. Discomfort during speech and swallowing were reported. His personal, family and medical history was unremarkable. Clinical examination revealed a roughly cylindrical, sessile, well circumscribed swelling measuring 4.5 x 2 cm, nontender, soft and nonulcerated mass on the anterior floor of the mouth extending more towards the right side i.r,t 32 to 46 (Figure:1). The mass was slightly movable . The remainder of the oral examination was unremarkable and examination of the head and neck was otherwise normal. A clinical diagnosis of sublingual salivary gland tumor was made, considering lipoma, fibroma, mucocoel, Sialolithiasis, abscess, and neurogenic tumor as differential diagnoses. Fine needle aspiration cytology was done to rule out any cystic pathology. There was no aspirate on FNAC. An orthopantomograph was taken, which did not show any significant findings. An excisional biopsy was done under local anesthesia. Incision was given on the mucosa, along the long axis of the tumour. Surgical undermining was done on either side of the incision and the tumour was separated (Figure:2). Sututing was done after achieving haemostasis. The specimen was sent for histopathological examination.

The gross specimen was greyish white and encapsulated. Hematoxylin and eosin stained sections showed fibrocellular connective tissue stroma surrounded by fibrous capsule. Stroma showed cells arranged in different cellular patterns. At places there were acellular areas with amorphous eosinophilic masses that may represent verocay bodies surrounded by spindle shaped cells with typical palisading arrangement and rest of the section showed proliferating stromal cells, which are irregularly arranged spindle cells in a fibrillar edematous matrix. Few inflammatory cells and endothelial lined blood vessels are also evident. Immunohistochemistry showed reactivity to S-100 Protein and positivity for CD 56. From the histopathologic features, diagnosis of schwannoma was made. After 15 months of follow-up, no recurrence has been detected.

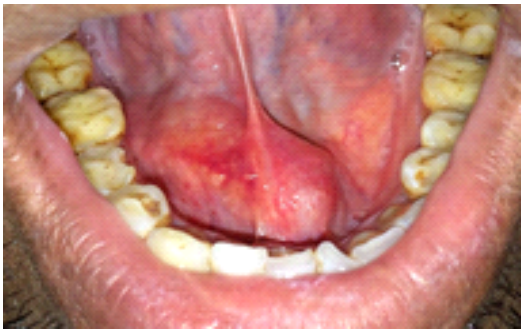

Figure 1: Clinical picture of patient showing intraoral swelling on the floor of the mouth

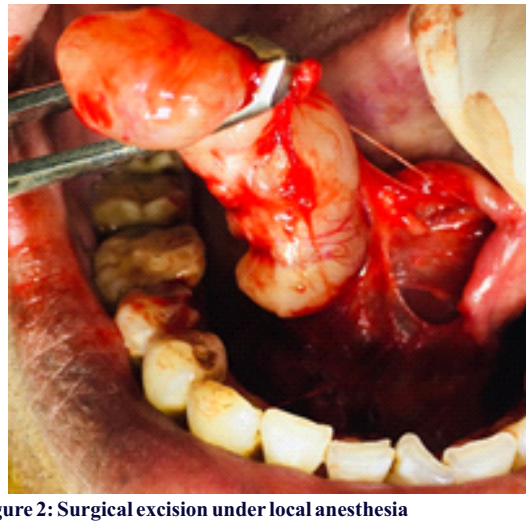

Figure 2: Surgical excision under local anesthesia

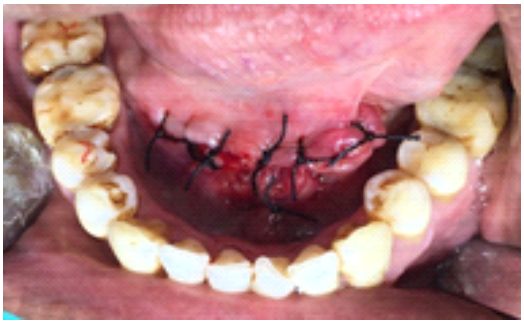

Figure 3: Postoperative picture

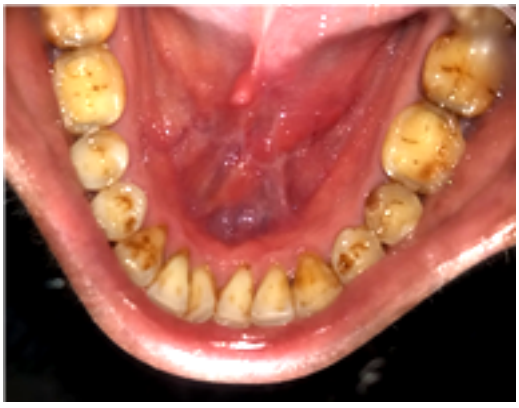

Figure 4: Clinical Picture of the floor of the mouth after 15 months of follow-up.

DISCUSSION:

Schwannomas are benign, slow growing, neural tissue tumour which are epineurium-encapsulated neoplasms arising from Schwann cells. They are also known as neurilemmomas or neurinomas[4,5]. They are tumours of neural crest origin which present as soft tissue or intrabony mass[9]. The most common intraoral sites are the tongue, followed by the palate, the floor of the mouth, the buccal mucosa, the gingiva, the lips, and the vestibular mucosa. It may arise at any age, the peak incidence is between third and sixth decades. There is no sex predilection[10]. Wright and Jackson, reported 146 cases of schwannoma of the oral cavity soft tissue. Of those, 52% occurred in the tongue, 19.86% in the buccal or vestibular mucosa, 8.9% in the soft palate, and the remainder 19,24% were in the gingivae and lip[11]. Lopez and Ballestin in their study of 9 intraoral schwannomas found 3 schwannomas in vestibule, 2 each in tongue and palate and 1 each in floor of mouth and lower lip[12].

Schwannomas are usually solitary lesions but in rare instance are multiple. Multiple lesions occur in multiple localized neurilemmomas, in association with neurofibroma in von Recklinghausen's disease and in schwannomatosis, a non-hereditary disease characterized by multiple subcutaneous and intradermal schwannomas along with variety of intracranial tumors[7]. The differentiation of schwannoma from neurofibroma is essential, because evidently, a “solitary” neurofibroma may be a manifestation of neurofibromatosis. Fifteen to sixteen percent neurofibromatosis patients, will present malignant transformation in one or more lesions, contrary to schwannoma[11].

Schwannomas remain asymptomatic unless they attain substantial size. Clinically, the tumor appears as a smooth-surfaced, soft-tissue swelling with intact overlying epithelium which is usually painless. It is a slow growing, encapsulated tumor that typically arises in association with a nerve trunk. As it grows it pushes the nerve aside. Although asymptomatic, tenderness or pain may occur in some instances. In the present case, the schwannoma presented as an asymptomatic, enlarging, well circumscribed mass in the anterior floor of the mouth in a 48 year-old male. Lipoma, fibroma, hemangioma, eosinophilic granuloma, epidermoid and dermoid cysts, salivary gland tumors, epithelial hyperplasia, granular cell tumor, leyomioma, lymphangioma, are some of the lesions included in the differential diagnosis of schwannoma[11]. When neurilemmomas occur in the anterior sublingual area, it is important to rule out sublingual gland tumors.

Radiological approaches, such as computed tomography (CT) and magnetic resonance imaging (MRI), should be used for the differential diagnosis of schwannoma, especially to evaluate different neoplastic processes involving the floor of the mouth. Panoramic X-ray is a complementary diagnostic measure for oral schwannoma; as such, this method was used in all the reviewed studies[10]. The typical features on MRI are: a well-circumscribed small nodule, homogeneously isointense to muscle on T1WI and homogeneously hyperintense on T2WI, showing homogeneous enhancement after contrast administration. when they present intraosseously radiographically, schwannomas present as unilocular radiolucencies with a thin sclerotic border,. They are also sometimes associated with external root resorptions and cortical expansions[13] .

Microscopic evaluation of neurilemmoma shows two main patterns. The Antoni A pattern consists of densely packed spindle cells. These cells are arranged in a typical, palisading figure surrounding acellular, eosinophilic areas known as Verocay bodies. The Antoni B pattern the loose hypocellular arrangement, lies beside the Antoni A pattern. Positive staining for the neural crest marker, S 100 protein, is an important characteristic for diagnosis[14]. combined immuno histochemical analysis for calretinin, CD56, and CD34 may be very useful for differentiating schwannomas from neurofibromas[15]. Calretinin, CD56 are sensitive for schwannomas and CD34 appears more sensitive for neurofibromas. The tumor in our patient showed the characteristics typical of neurilemmoma. Hence, the final diagnosis of schwannoma was made. The current treatment modality for neurilemmoma is complete surgical excision. The lesion normally will not recur. Malignant transformation is extremely rare[16]. Hence, complete surgical excision was done in our case. There was no recurrence during 15 months of follow up.

CONCLUSION

Schwannoma represent a pathology, which is often not taken into account during clinical practice. differential diagnosis must be made in relation to numerous epithelial and connective tissue benign and malignant tumours. The definitive diagnosis can only be made after correlating the clincal, histopathological and immunohistochemical findings. Immunohistochemical features can be useful in determing neural differentiation. Anti-S-100 protein is probably the single best antibody for this case. Treatment of the Schwannoma is complete surgical excision, as recurrences and malignant transformations of Schwannomas are exceedingly rare.

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