Scholars Journal of Dental Sciences (SJDS) **ISSN 2394-496X (Online)**
Sch. J. Dent. Sci., 2015; 2(6):363-366 **ISSN 2394-4951 (Print)**

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com DOI: 10.36347/sjds.2015.v02i06.004

Case Report

Tumor of nerve sheath origin: a case report

Dr Joyce Sequeira, Dr Vijoo Rajkumar
Dept of Oral and Maxillofacial surgery, Yenepoya dental college, Derlakatte, Mangalore, India

***Corresponding author**
Dr Vijoo Rajkumar
Email: vijoo.rajkumar@hotmail.com

Abstract: Schwannoma is the non aggressive well encapsulated benign tumor. It can be arises from any nerve which have Schwann cells. It is common in head and neck region. Most common site is the tongue and buccal mucosa. We are presenting a case report in a 55 year old female in which schwannoma was seen on hard palate with the history of slow growing and painless swelling on the hard palate. Schwannoma recurrence is very rare and surgical excision is the choice of treatment.
Keywords: schwannoma, hard palate, nerve sheath.

INTRODUCTION

Schwannoma is a benign, painless, well encapsulated, slow growing tumor of head and neck region which is originated and derived from Schwann cell of the nerve sheath [1, 3, 5]. It is also known as neurilemoma, neurinoma and Schwann cell tumour [2,4]. It can arise from any cranial nerves except CN1 and CN2, which doesn't have Schwann cells, Peripheral nerve, or autonomic nerve that contains Schwann cell [1, 3]. Approximately 25-45% of the lesions are seen in head and neck region in which 80% of the lesions arise from vestibulo cochlear nerve. Intraoral Schwannoma are rare and accounts less than 1% of head and neck region [1, 3, 4]. Most common site for intraoral Schwannoma is tongue followed by buccal mucosa, palate, gingiva and lips [1]. The exact aetiology is not known but cases due to traumatic cause have been reported [5]. The incidence is mainly in 3rd and 4th decade of life but it can occur in any age and both male and female are affected with slight predilection in female [4, 6]. Normally, Schwannoma are solitary lesion but it can be present in multiple if it is associated with neurofibromatosis and intra osseous lesions are very rare [2]. The article represents a case of intra osseous lesion of Schwannoma which is located in the posterior part of the hard palate.

CASE REPORT

A 55 years old female reported in our Dept of maxillofacial surgery, yenepoya dental college, Mangalore with the history of swelling over the right posterior part of the hard palate just medial to the upper right 1st and 2nd molar since for 2 Years. Swelling had increased in size gradually with no history of pain or pus discharge or paraesthesia. There was no relevant medical or personal history.

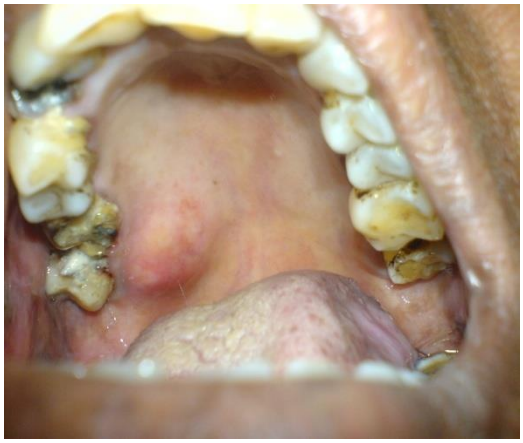

Fig-1: Clinical examination

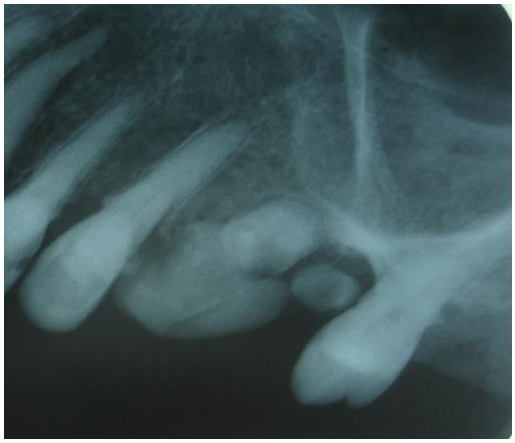

Fig-2: Radiological examination

Clinical examination shows rounded swelling measuring 2x2cm at the posterior part of the hard palate. There was no erythematous or ulceration over the lesion. The mucosa over the swelling appeared normal and smooth.(Fig.1) The swelling was non tender and firm in consistency. The intraoral peri apical radiograph of the region reveals radiolucency and well demarcated margin. (fig2) The clinical and radiographic findings give the provisional diagnosis of fibroma, minor salivary gland tumor or palatal cyst.

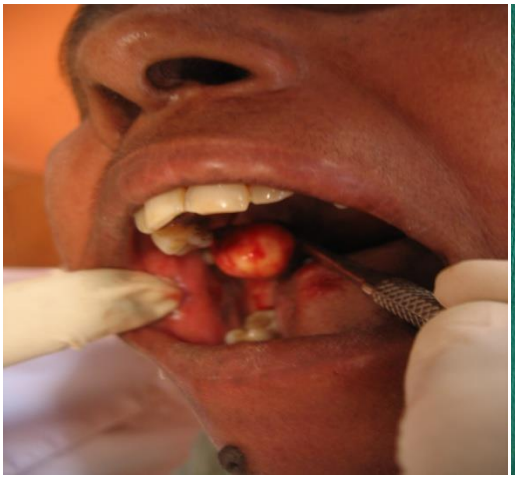

Fig 3: surgical procedure

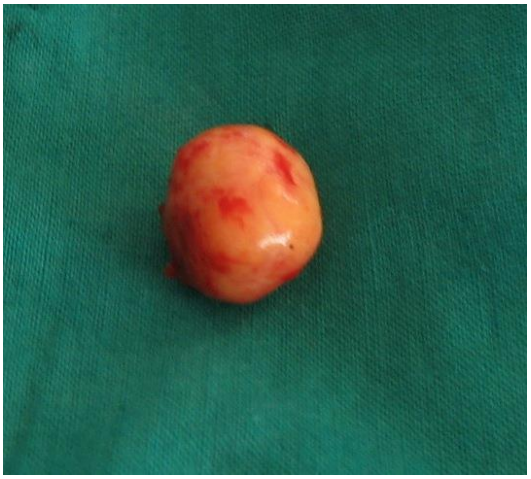

Fig 4: Round lesion measuring 2cm in diameter

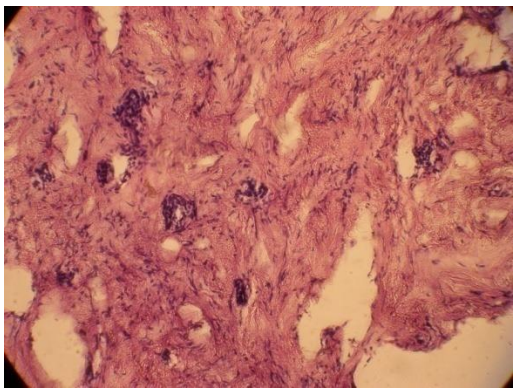

Fig 6: Hyper cellular Antoni A areas

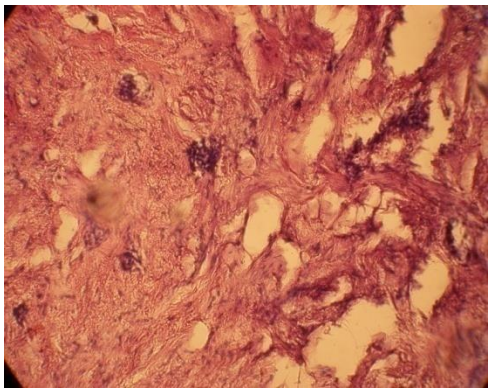

Fig 5: Hypocellular Antoni B areas

The lesion was removed under local anaesthesia. Enveloped flap was raised and the lesion was removed in toto, round, smooth and well demarcated mass measuring around 2cm in diameter. The bony resorption was appreciated at the site of the lesion. Lesion was not attached to underlying or overlying tissue. The procedure was uneventful post operatively. The specimen was sent for histological investigation. Histopathologically, the slides show well defined neural lesion surrounded by fibrous capsule. It consists of Antoni A and Antoni B type cells. Antoni A tissue shows densely packed, elongated spindle cells, with a regular arrangement forming a palisading pattern with delicate reticulin fibres and spindle-shaped nuclei. Cytoplasmic fibrils with acellular, eosinophilic masses called Verocay bodies are also present.Fig5 Antoni B tissue consists of spindle cells haphazardly distributed in a light fibrillar matrix.Fig6 They are less cellular and formed by irregularly arranged masses of elongated cells and fibres, with areas of cystic degeneration and oedema [5]

DISCUSSION

Schwannoma is the benign slow growing, painless, well encapsulated tumor originated from nerve sheath which contain Schwann cell. It can be present at any age but it is mainly seen in 3rd and 4th decade of life. The exact etiology of Schwannoma is not known. Schwannoma involved only the nerve sheath which is adjacent to the parental nerve but it can compress the nerve of origin. It can transform into malignancy but it is exceptionally rare [7]. The size of Schwannoma ranges from about 2-20cm in diameter with the smaller tumors appearing white, fusiform, round and firm [10].The larger tumors are usually irregular, lobulated and grey or yellowish white. It has been distinguished into two types- central and peripheral Schwannoma in which intra osseous lesion is central type and soft tissue lesion is peripheral type [9].

In 1910, Verocay reported the first case of Schwannoma [8]. Cranial nerve 8 (vestibulo cochlear) is the most commonly affected nerve in head and neck region. Intra orally, tongue is the most affect followed

by palate, buccal mucosa [3]. In our case, the lesion was present in right side of the hard palate just medial to 1st and 2nd molar.

Gallo *et al.;* [12] reported on 157 cases where 45.2% of the cases involved in the tongue and 13.3% involved the cheek. Wright and Jackson [13] reported 146 cases of Schwannoma of the oral cavity soft tissue of those, 52% involved the tongue, 19.86% the buccal or vestibular mucosa, 8.9% soft palate, and the remainder 19.24% were in gingiva and lip. Das Gupta *et al.;* [14] reported on 136 cases of Schwannoma in the head and neck that consisted of 60 cases in the neck, 10 cases in the parotid gland, 9 cases in the cheek, 8 cases in the tongue, and 8 cases in the pharynx. Kun *et al.;* [18] reported in their study 49 cases, 18 cases in the neck, 11 cases were in the tongue. Wakoh M *et al.;* [19] reported 22 cases of schwannomas among these, tumours located in palate 7 cases, tongue 4 cases, submandibular region or oral floor 3, buccal mucosa 2, mental skin 2, lip 2, gingiva 1, temporal region 1.Chi *et al.;* [17] has reported that Schwannoma of the jaw occurred in the age range of 8-72 years, with the average age of 64 years, and there is a definite female predilection.

In this case, the lesion was slow growing, non symptomatic, well circumscribed swelling. After clinical and radiographic finding, the swelling mimicked diagnosis of palatal cyst, fibroma or minor salivary gland tumor. Schwannoma at the palatal region is relatively rare comparing to other site of the oral cavity. As in this case, the lesion was located medial to the 1st and 2nd molar of the upper right jaw. Radio graphically, the tumor appears unilocular, well circumscribed and slight sclerotic margin was seen. (fig2) Bony and root resorption, cortical thinning, and peripheral scalloping can be evident [17, 18]. In our case, the lesion was removed and delivered as a whole mass, round, smooth and well demarcated measuring around 2cm in diameter. Fig(4). The bony resorption was appreciated at the site of the lesion. There was no any underlying attached tissue to the lesion.

Histologically, tumor is composed of a mixture of two cellular patterns Antoni A and Antoni B. Antoni A areas are composed of compact spindle cells with twisted nuclei arranged in bundles or fascicles. Antoni B variant is less cellular and less organized, representing degenerated Antoni A areas composed of haphazardly arranged spindle or oval cells within myxoid, loosely textured, hypocellular matrix punctuated by micro cyst, inflammatory cells and delicate collagen fibers [1-18]. Fig-5, 6. Surgical excision is the treatment of choice since the lesion is benign and well encapsulated. The treatment outcome is excellent and the recurrence is extremely rare [1, 3, 4]

CONCLUSION

Schwannoma is a solitary benign tumor of nerve sheath origin. Schwannoma in Head and neck region is quite rare. Clinical diagnosis is difficult to differentiate from other soft tissue or hard tissue lesion. It should be rule out only with histological examination. Since it is a benign lesion, recurrence is very rare and prognosis is good.

REFERENCES

1. Karataş M, Sarıkaya Y, Doğan S, Erdoğdu HI, Bulut HT; A Slow Growing Mass of Hard Palate: Schwannoma-Case Report. J Clin Med Case Reports, 2015; 2(1):4.
2. Parikh NR, Desai N; Intraoral schwannoma (neurilemmoma): An unusual anterior palatal swelling–A Case report. J. Int Oral Health, 2010;2(4):87-91.
3. Kumar PD, Meghashri K; Schwannoma of the hard palate: A case report and review of literature. Journal of Advanced Oral Research, 2012; 3(1).
4. Khiavi MM, Zenouz AT, Mesgarzadeh AH, Sabetmehr O, Mahmoudi SM, Kouhsoltani M; Schwannoma in the midline of hard palate: a case report and review of literature. Journal of dental research, dental clinics, dental prospects,2014; 8(2):114.
5. Ranjan A, Kumar P; Schwannoma Of The Hard Palate: A Rare Extracranial Site. Int j basic and applied medical science, 2013; 3(3): 110-113.
6. Bisi MA, Selaimen CM, Chaves KD, Bisi MC, Grossi ML; Vestibular schwannoma (acoustic neuroma) mimicking temporomandibular disorders: a case report. Journal of Applied Oral Science, 2006; 14(6):476-481.
7. Kurtkaya-Yapicier O, Scheithauer BW, Woodruff JM; The pathobiologic spectrum of Schwannomas.2003.
8. Verocay J; Zur Kenntnis der “nerofibrome. Beitr Pathlo Anat Pathlo, 1910;48:1-69
9. Artizi Z, Taicher S, Nass D; Neurilemmoma of the mental nerve. J Oral Maxillofac Surg, 1991;49:196-200
10. Garg v, Agarwal A. Schwannoma; a case report. Global J Rearch Analysis, 2014; :12:2277-8160
11. Shah AA, Latoo S, Ahmad I, Malik AH, Singh AP, Hassan S; Schwannoma causing resorption of zygomatic arch. Journal of oral and maxillofacial pathology: JOMFP, 2011; 15(1):80.
12. Gallo WJ, Moss M, Shapiro DN, Gaul JV; Neurilemoma: review of literature and report of five cases. J Oral Surg 1977; 35(3):235-6.
13. Wright BA, Jackson D; Neural tumors of the oral cavity .Oral Surg Oral Med Oral Pathol, 1980; 49(6):509-22.
14. DasGupta TK, Brasfield RD, Strong EW, Hadju IS; Benign Solitary Schwannomas (neurilemmomas). Cancer 1969; 24:355-66
15. Kun Z, Qi DY, Zhang KH; A comparision between the clinical behavior of the neurilemomas in the

head and neck and oral and maxillofacial region. J Oral Maxillofac Surg, 1993; 51:769-71

16. Wakoh M, Yonezu H, Otonari T, Sano T, Matsuzaka K, Inoue T; Two cases of schwannoma with marked cystic changes. Dento maxillofac Radiol, 2005; 34:44-50.
17. Chi AC, Carey J, Muller S; Intraosseous schwannoma of the mandible: a case report and review of the literature. Oral Surg Oral Med Oral Pathol Oral Radiol Endod, 2003; 96: 54-65.
18. Shah AA, Latoo S, Ahmad I, Malik AH, Singh AP, Hassan S; Schwannoma causing resorption of the zygomatic arch. J oral maxillofac pathol, 2011; 15:80-87.