IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 10, Issue 4 Ser. I (Jul. – Aug. 2021), PP 56-60
www.iosrjournals.org

Schwannoma of the Floor of the Mouth

Abstract
Schwannoma is a benign neoplasm comprising solely of Schwann cells. Etiology of schwannoma is unknown. It mostly presents as an asymptomatic solitary mass,with surface being smooth and consistency being firm and having a slow growth rate. Age of presentation usually ranges from 30 to 50 years. Though it is uncommon ,about 25% present in the head and neck region with schwannoma in the floor of the mouth being quite rare. Here is a case of Schwannoma of the floor of the mouth in a 13-year-old female.

Keywords: *Schwannoma ,solitary swelling, floor of the mouth, Benign neoplasm, neural lesions, intraoral mass*

Date of Submission: 28-06-2021 Date of acceptance: 12-07-2021

I. Introduction

Schwannoma is a benign type of tumour having an origin from epineurial Schwann cells. Schwannomas are commonly seen between 30 and 50 years[1] with 25% to 48% being in the head and neck area.[2] Intraorally speaking, the most common site is the tongue.[3] Here,is a case of schwannoma arising from the floor of the mouth in a 13-year-old female.

II. Case Report

A 13-year-old female patient presented to our ENT OPD with a complaint of a swelling of 2 months duration in the right anterior part of the floor of the mouth; which was asymptomatic. [Figure 1]. On intra-oral examination, a 4 × 2 cm swelling in the right anterior part of the floor of the mouth was noted. It had a smooth surface, well-defined border, covered with normal appearing oral mucosa. On palpation, it was firm in consistency and non tender to touch. Computed tomography (CT) scans (axial view) showed a well-defined heterodense mass measuring 4 × 2 × 1 cm, with tiny calcifications in the right sublingual region. Small lymphnodes of size 6 mm were also seen at submental and submandibular levels on either side. [Figure 2].

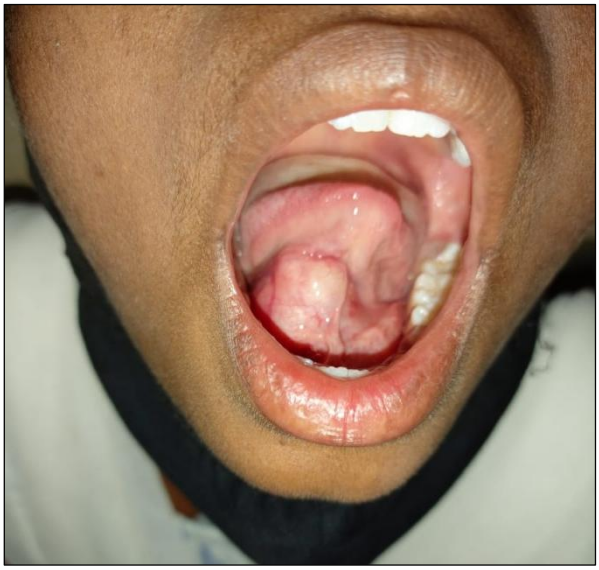

Figure 1
13-year-old female presented with a solitary swelling in the right side of the floor of the mouth.

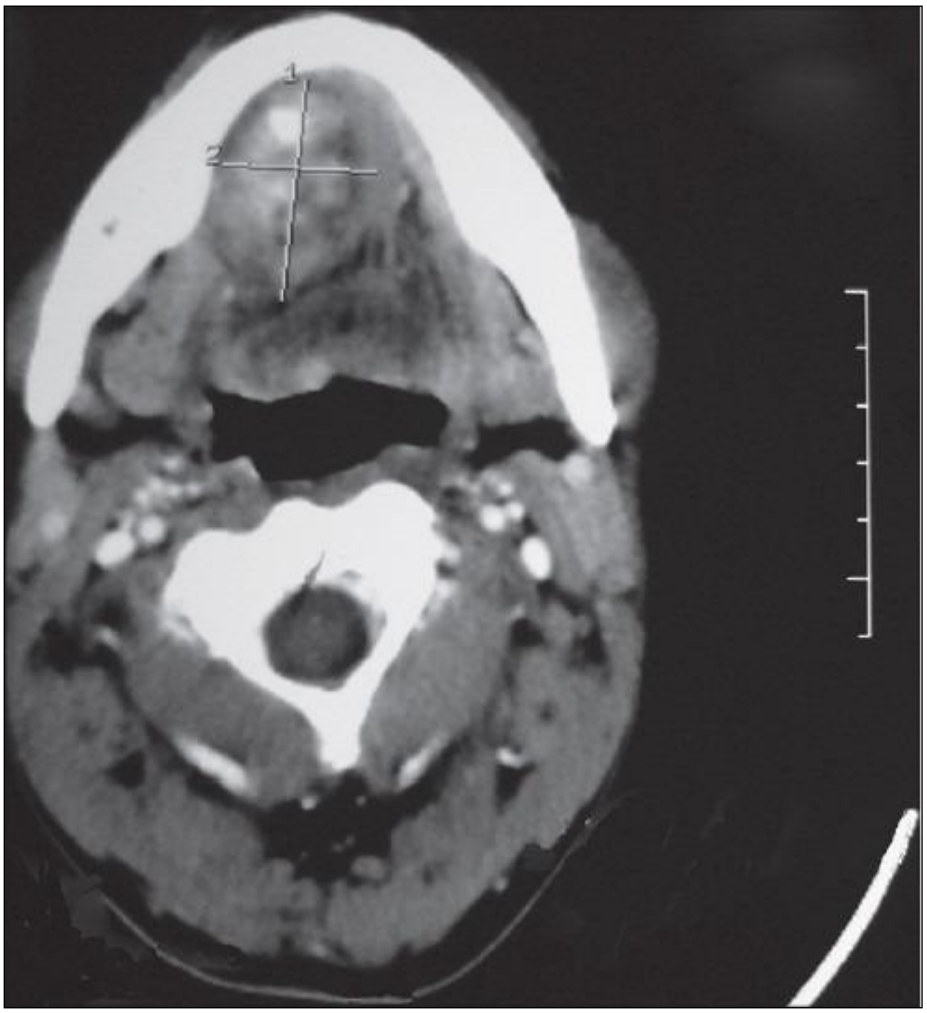

Figure 2

Computed tomography scan in axial view showed a well-defined heterodense mass with specks of calcification in the right sublingual region

Based on the clinical examination findings, the CT scan and anatomical location of the mass a provisional diagnosis of sublingual salivary gland tumour was made. The patient then was posted for surgical excision of the mass under general anaesthesia and the post-surgical period was uneventful. [Figure 3].

Macroscopically, the excised mass was greyish – white ,encapsulated, 4 × 2 × 1 cm in size. It was oval in shape, smooth and its consistency was firm [Figure 4]. Histopathological examination revealed a well encapsulated tumour with areas of organized spindle-shaped cells in palisading arrangement around eosinophilic and acellular areas forming Verocay bodies which is a typical appearance of Antoni type 'A' pattern. Other areas with Antoni type 'B' pattern, that is, less cellularity, less organization of spindle-shaped cells were seen. [Figure 5]. Immunohistochemical investigation of the tumour cells showed positive diffused staining for S-100 protein [Figure 6]. These findings were highly consistent with the diagnosis of Schwannoma.

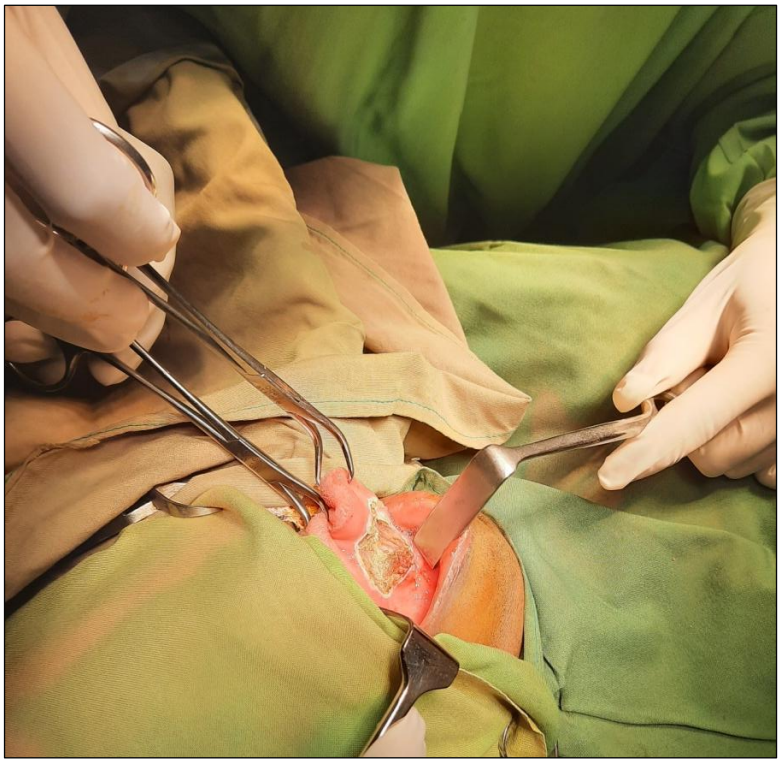

Figure 3.
Intra-operative photo of the surgical excision of the mass

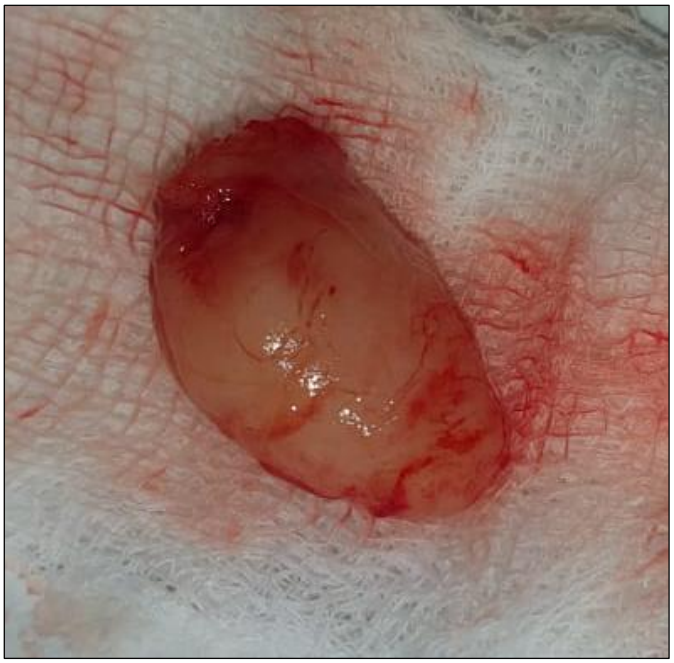

Figure 4
Gross appearance of the excised mass

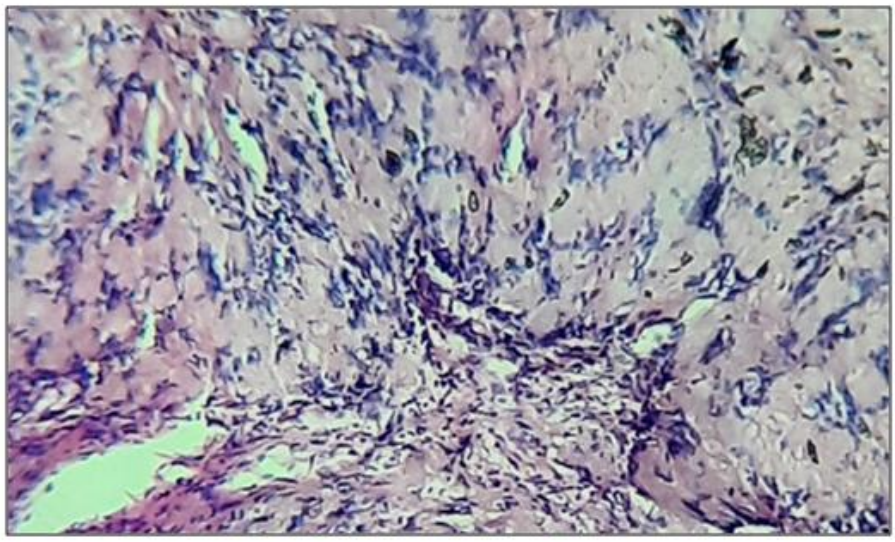

Figure 5
Depicts Antoni type 'A' tissue with spindle-shaped cells, palisading nuclei and Verocay bodies, (H and E, ×10)

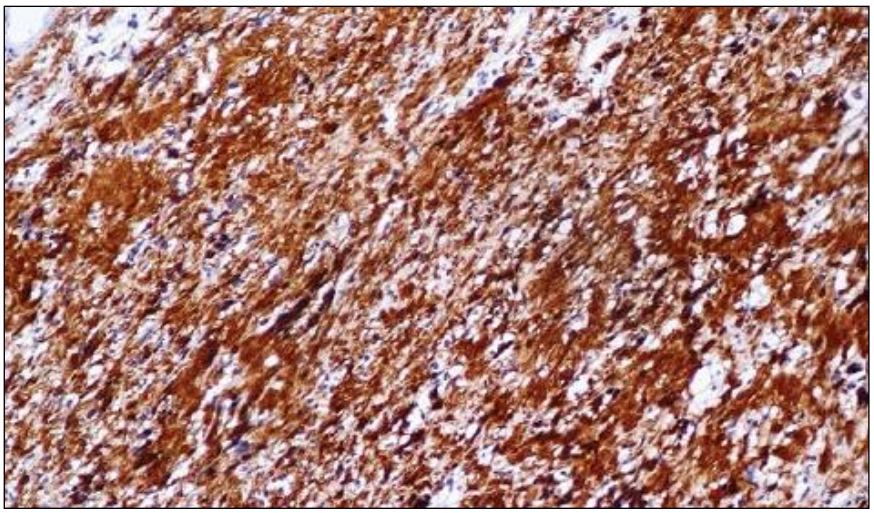

Figure 6
Immunohistochemical staining of the tumour cells showing diffusely stained for S-100 protein, (×10)

III. Discussion

Neurilemmoma/Schwannoma, is a benign tumour arising from Schwann cells.[1,4] Its size can be from a few millimeters to several centimeters.[2] Both genders are affected in almost equal numbers.[5] Extracranially, head and neck area show about 25% of all schwannomas and among those only 1% have an intraoral origin.[4,6,7] Intraorally, the tongue is the most common site of presentation.[3]

Schwannomas are mostly solitary type of lesions; however, multiple lesions are seen as a part of Neurofibromatosis type I disorder.[1] The solitary neurilemmoma is slow growing in nature, encapsulated ;which arises in close proximity with a nerve trunk, pushing the nerve aside as it grows. Usually the mass is asymptomatic, however tenderness or discomort such as pain have been reported in some cases.[2] Our case was of a 13-year-old female who was asymptomatic except for an enlarging mass , well circumscribed borders and site of presentation as right anterior part of the floor of the mouth.

Schwannoma seen in the floor of the mouth or tongue has an intact epithelium covering it and in this way resembles any other benign lesion presenting the area.[1] The histological examination of our case has a well-defined fibrous capsule showing two types of patterns.

Antoni 'A' areas are composed of organized spindle-shaped cells with twisted nuclei, indistinct cytoplasmic borders and clear intranuclear vacuoles arranged in bundles.[5] In Antoni 'A' areas nuclear palisading, whirling of cells and Verocay bodies formed by two compact rows of aligned nuclei separated by fibrillar cell processes are seen. Antoni 'B' areas are less orderly and cellular. The spindle or oval cells are arranged haphazardly in the matrix, which are punctuated by microcystic change, inflammatory cells and thin

collagen fibres. These tumours might undergo degenerative changes such as cyst formation, hyalinization, calcification, hemorrhage, and nuclear atypism, but nonetheless remain benign.[1]

The fact that the tumour acquired such a large size within a span of 2 months is conflicting with usually observed slow growing nature of Schwannoma. However, its hidden location in the floor of the mouth and it being asymptomatic combined with the encapsulated nature and some degenerative areas with changes such as thinned out blood vessels and hemorrhage indicate that the mass was of long standing nature.

S-100 is strongly expressed in Schwannoma when compared to neurofibromas, where it is variably expressed. Although the expression of S-100 is less in Antoni B areas, immunostaining for this protein is an important diagnostic tool.[5] In our patient, almost all tumour cells stained strongly for the S-100 protein. S-100 staining and the characteristic hematoxylin and eosin staining pattern confirmed the diagnosis of Schwannoma.

Recurrence is significantly nil of a surgically resected solitary Schwannoma. Malignant transformation is very rare.[2] The extensive size of this lesion, occurrence in an uncommon location and in a short period of time, swayed the clinical diagnosis towards a malignant lesion. However, a typical histological picture of Schwannoma of both 'A' and 'B' type made us to include this large-sized tumour under the benign category.

IV. Conclusion

With head and neck region accounting for 25% of all Schwannomas and among this 1% being intraoral and having tongue as the most common location for this benign neoplasm, Schwannoma presenting in the floor of the mouth is very rare but nonetheless a possibility which cannot be overlooked in differential diagnosis of solitary swelling in the floor of the mouth.

Footnotes
Source of Support: Nil
Conflict of Interest: None declared.

References

[1]. Marx RE, Stern D. Benign soft tissue tumours of mesenchymal origin. In: Bywaters LC, editor. *Oral and Maxillofacial Pathology: A Rationale for Diagnosis and Treatment.* Carol Stream: Quintessence Publishing Co, Inc; 2003. pp. 395–461.
[2]. Neville BW, Damm DD, Allen CM, Bouquot JE. *Oral and Maxillofacial Pathology*. 3rd ed. St. Louis: Elsevier; 2009. Soft tissue tumours; pp. 507–70.
[3]. Gallesio C, Berrone S. Schwannoma located in the tongue. A clinical case report. *Minerva Stomatol.* 1992;41:583–90.
[4]. Shu-Hui Li, Long-Chang Chang, Herng-Sheng Lee, Kuo-Chou Chou, Huan-Ching Su, Yi-Shing Shieh. Schwannoma of the Alveolar Mucosa. *J Med Sci.* 2006;26:149–52.
[5]. Weiss SW, Goldblum JR. Benign tumours of peripheral nerves. In: Strauss M, editor. *Enzinger and Weiss's soft tissue tumours*. 4th ed. St. Louis: Mosby; 2001. pp. 1111–207.
[6]. Pfeifle R, Baur DA, Paulino A, Helman J. Schwannoma of the tongue: Report of 2 cases. *J Oral Maxillofac Surg.* 2001;59:802–4.
[7]. Arda HN, Akdogan O, Arda N, Sarikaya Y. An unusual site for an intraoral schwannoma: A case report. *Am J Otolaryngol.* 2003;24:348–50.

XXXXX. "Schwannoma of the Floor of the Mouth." *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, 10(4), 2021, pp. 56-60.