Case Report

Rare case of schwannoma in anterior palate

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ABSTRACT

Schwannoma is benign tumors of ectodermal origin derived from Schwann cells of the nerve sheath. They are usually asymptomatic and preoperative diagnosis is difficult without histopathological study. We report a rare case of schwannoma of the anterior palate in a 16-year-old female patient.

Key words: Anterior palate, neurinoma, neurilemmoma, schwannoma

INTRODUCTION

Schwannoma is usually solitary, slow growing benign neoplasm derived from the neural crest cells. It is also called as neurilemmoma, neurinoma, and Schwann cell tumor. Verocay, in 1910, first described schwannoma and called it as "Neurinoma." Stout in 1935 coined the term neurilemmoma.[1,2]

Schwannoma can develop at any age and more commonly in the third and fourth decade with no sexual predilection. 25-45% of schwannomas occur in the head and neck region of which only 1% of them is found in the oral cavity. In the oral cavity, it is more common in tongue, the floor of the mouth, palate, gingiva, vestibule, lips, salivary glands, and mental nerve region.[3]

We report a rare case of schwannoma occurring in the anterior palate of a young female.

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CASE REPORT

A 16-year-old female patient reported with a swelling over her inner aspect of upper jaw for the past 1-year. History revealed that it was slow growing and pain free. There was no history of increase in size during eating and the presence of discharge from it.

On examination, a 2 × 3 cm swelling noted on the right side of anterior palate extending 1 cm from the palatal aspect of 11 to mesial aspect of 15 posteriorly. Laterally swelling extended to the mid palate. Mucosa over the swelling appears normal and without any surface changes [Figure 1].

During palpation, swelling was soft, nontender, and nonfluctuant.

Aspiration of the swelling yielded 0.5 ml of blood tinged fluid.

Radiographically, maxillary anterior occlusal view showed a well-defined radiolucency of 1 × 1 cm over the right side of the hard palate. There was no evidence of a radiological

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relation between the radiolucent lesion and the roots of upper anterior teeth [Figure 2].

Computer tomography (CT) showed a radiolucent lesion over right anterior maxilla region. There was no breach of the nasal floor [Figure 3].

Hence, the patient was planned for excisional biopsy after undergoing the routine hematological investigation. The patient underwent an excisional biopsy under local anesthesia and specimen sent for histopathological analysis [Figures 4 and 5].

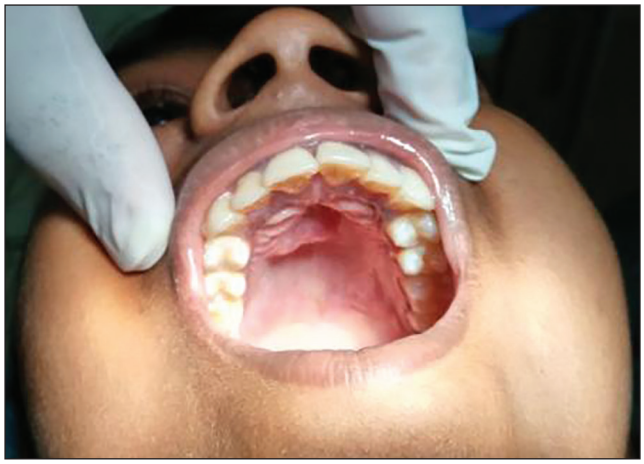

Figure 1: Preoperative photo of the swelling in palate

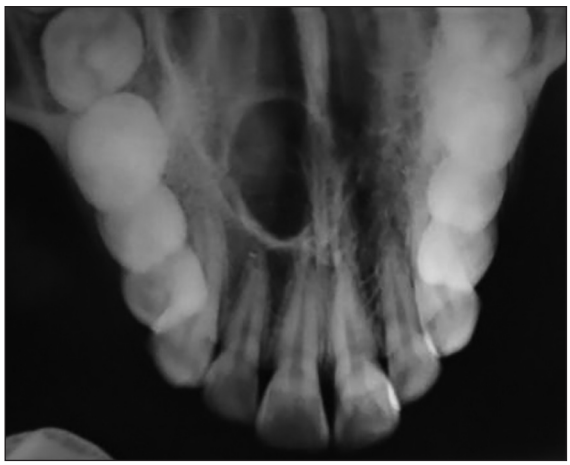

Figure 2: Anterior maxillary occlusal view showing the radiolucent lesion

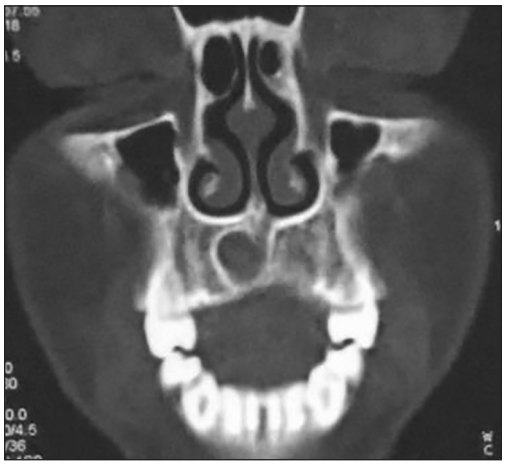

Figure 3: Computed tomography showing the relation of lesion to surrounding structures

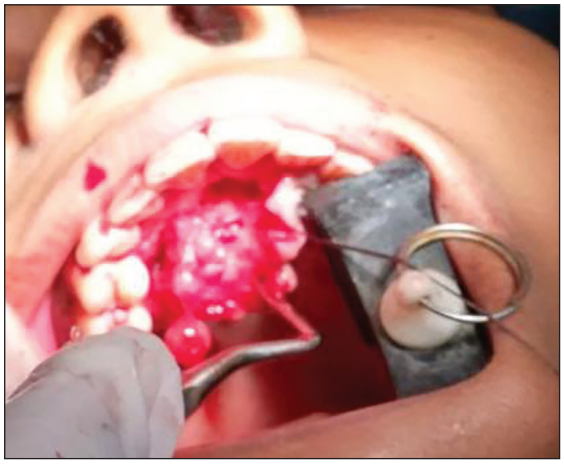

Figure 4: Intraoperative photograph

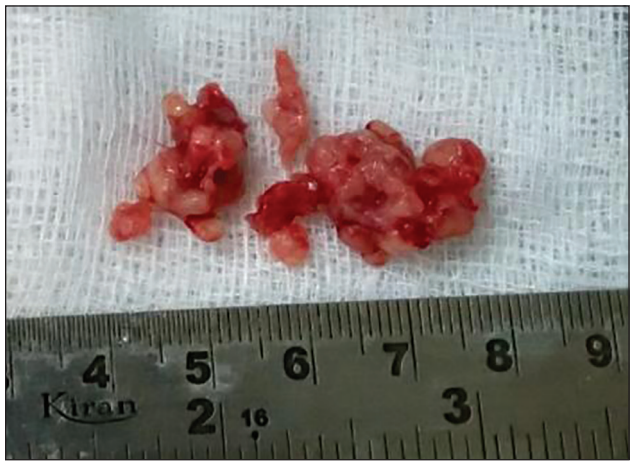

Figure 5: Excised lesion

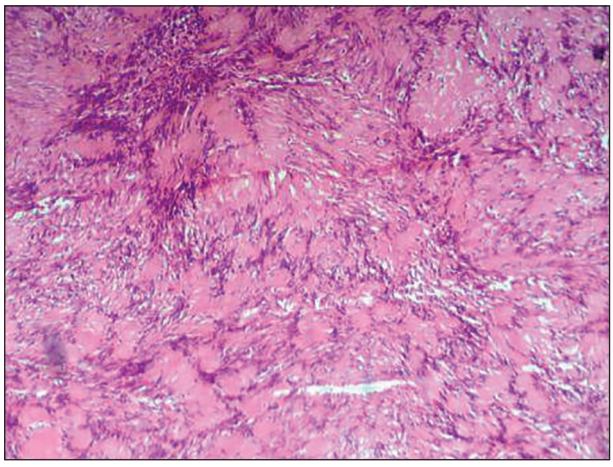

Figure 6: Microscopic view

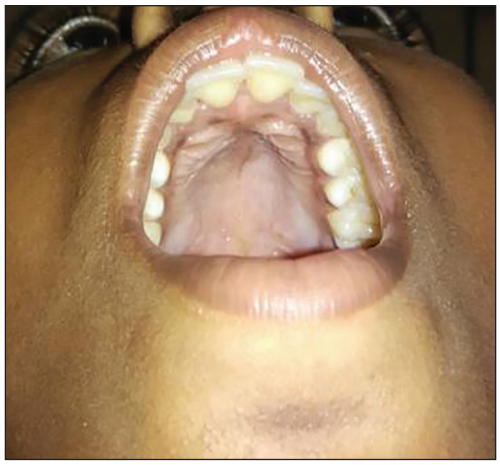

Figure 7: Postoperative photograph showing healed area of lesion

Histopathological analysis revealed the fibrovascular connective tissue exhibiting streaming vesicles of spindle shaped cells arranged in a palisading manner. Antoni A and Antoni B-type cell pattern were seen. The connective tissue also exhibited the spindle cells randomly arranged in the myxomatous stroma. All these features suggested of schwannoma [Figure 6].

DISCUSSION

Schwannoma has a predilection for head and neck region and surface flexors of the upper and lower extremities. The oral cavity has less incidence of schwannoma and tongue is the most commonly involved structure in the oral cavity. In our case, schwannoma occurred on the anterior aspect of the palate which is rare.[1,3] Moreover, our patient was in her second decade of life whereas schwannoma has reported increased incidence only in the third and fourth decade of life.

The etiology of schwannoma is unknown. It is believed to originate from a proliferation of Schwann cells in the perineurium causing displacement and compression of the adjacent nerve. Schwannoma is classified into two types namely, central schwannoma located in bone and peripheral schwannoma located in soft tissues.[1]

Clinically schwannoma can occur either as encapsulated form where in the tumor is surrounded by dense fibrous connective tissue and in pedunculated form, wherein it resembles a fibroma. Encapsulated form is more common than pedunculated form.[3] In our case, it was not encapsulated, and it appeared as a bunch of grapes.

As a diagnostic tool, routine radiograph, computed tomography are used to identify the tumor margins as schwannoma appear as well demarcated unilocular radiolucencies. Magnetic resonance imaging is useful to identify the extent of peripheral schwannoma.[4] In our case, both the anterior maxillary occlusal view and CT images showed the tumor margins clearly. They were useful to check the possible involvement of adjacent teeth and nasal floor.

Histologically schwannoma shows two patterns of tissue arrangement namely, Antoni A and Antoni B. Antoni A type is composed of alignment of fusiform cells, forming a typical palisade pattern. Between the fibrils, there are small eosinophilic masses called Verocay bodies. Antoni B type is composed of a smaller number of cells and the spindle cells are randomly arranged within a loose myxomatous stroma. Immunohistochemical examination shows the schwannoma cells to be positive for S100 protein. Traumatic neuroma shows an intense reaction to CD57. Schwannoma shows staining for capsular epithelial membrane antigen and CD34. Tumor cells with Antoni A show greater intensity scores compared to Antoni B tumor pattern.[2,3,5,6]

The differential diagnosis will be traumatic neuroma, solitary neurofibroma, granular cell tumor, neurofibromatosis, malignant schwannoma, nerve sheath myxoma, adenoma, and ganglioneurofibroma.[3]

The treatment of choice for schwannoma is local excision. Encapsulated forms can be easily enucleated, whereas the nonencapsulated form warrants normal tissue margins to avoid the recurrence. While the surgical excision if the nerve of origin is visualized attempt should be made to preserve it to avoid a postsurgical neurological deficit. Prognosis for schwannoma is good as it does not usually recur and malignant transformation is very rare.[3,5,6]

In this case, we did a thorough excision, and we could not identify the exact origin of the tumor in the nerve. Hemostasis was achieved and primary closure of the wound was performed. The postoperative patient was followed-up and the wound healed uneventfully and there was no sign of recurrence of the tumor [Figure 7].

CONCLUSION

Schwannoma should be considered in the differential diagnosis of slow growing painless solitary swelling in the oral cavity, and the diagnosis can only be made histologically. The treatment of choice is the surgical excision and has a good prognosis.

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Conflicts of interest
There are no conflicts of interest.

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