Intraosseous schwanomma: A rare case report

ABSTRACT

Intraosseous schwanommas are benign tumors that arise from Schwann cells. They are common in soft tissues of the head and neck region. However, intraosseous schwanommas are rare accounting for less than 1% of all bone tumors. They commonly manifest as a swelling that is usually asymptomatic. They can be treated with simple enucleation and curettage with a low rate of recurrence and malignant transformation. Histopathology alone is insufficient for arriving at a definitive diagnosis. Immunohistochemistry plays an important role in such cases for correctly establishing and confirming the diagnosis. Here, we present a rare case of intraosseous schwanomma (neurilemmoma) of the mandible.

Keywords: Immunohistochemistry, intraosseous schwanomma, neurilemmoma

INTRODUCTION

Schwanommas also called neurilemmomas arise from the sheath cells covering myelinated nerve cells.[1] They are common in soft tissues of the head and neck region.[2] However, intraoral lesions are rare.[1] Intraosseous variant arising from the inferior alveolar nerve in its long course in the mandible forms the rarest of rare case.[2,3] In this article, we report a case of intraosseous schwannoma (neurilemmoma) of the mandible in a 19-year-old male patient.

CASE REPORT

An otherwise healthy, 19-year-old male patient reported to our department with a chief complaint of swelling in the lower left back tooth region for 7 months. Initially, the swelling was small of a peanut size, which gradually increased in size to reach the present state. There was no history of any pain, paresthesia, fever, or pus discharge.

On gross facial examination, a diffuse swelling was noted on the left lower third of the face measuring approximately 2 × 3 cm in size extending superoinferiorly from the line joining corner of the mouth to the lower border of the mandible and anteroposteriorly around 4 cm from the corner of the mouth to 3 cm in front of the angle of the mandible. The overlying skin appeared normal in color and texture. On palpation, inspectory findings were confirmed. It was nontender and bony hard in consistency [Figure 1].

On intraoral examination, vestibular obliteration was noted with respect to the mandibular left second premolar, first molar, and second molar. On palpation, it was hard in consistency and nontender. Buccolingual expansion was also noted.

Orthopantomogram revealed a well-defined unilocular radiolucency with non-scalloped, corticated border seen in the left mandibular body measuring about 4.5 × 2.5 cm with intralesional density ranging from 89 to 92 by densitometric analysis, using KODAK 8000 Digital OPG machine. The lesion extended from the apex of 35, 36 across the mesial aspect of 38

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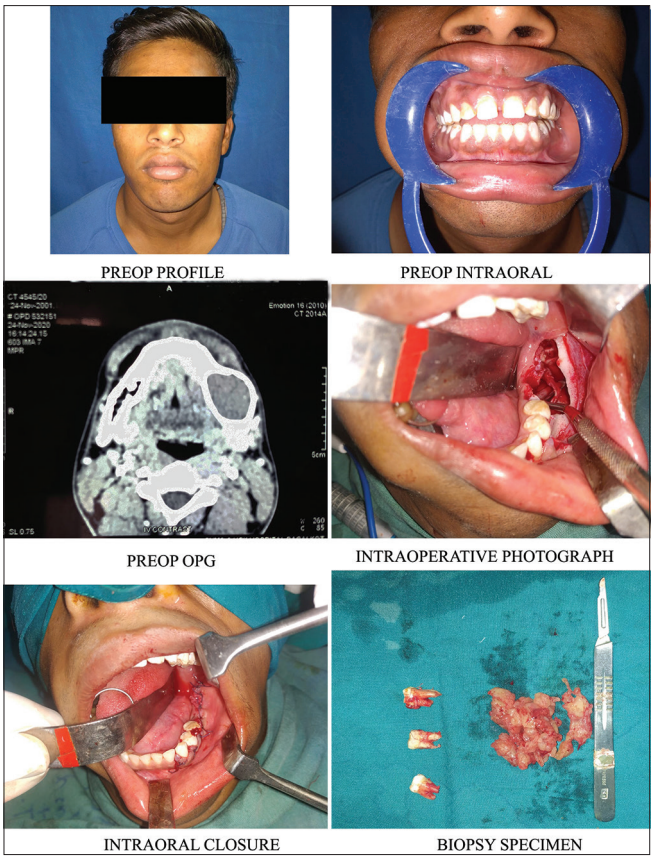

Figure 1: Clinical and Intraoperative photographs

with a breach in the bony crypt at gonion point till angle region. External root resorption was noted with respect to 36, 37.

Computed tomography (CT) with contrast revealed a well-defined expansile cystic unilocular oval-shaped lesion with soft tissue within (HU 50–70) measuring 2.6 × 3.8 × 3.8 cm epicentered in the left mandibular body with thinned out inner and outer cortices. Root resorption of 36, 37 was noted. The 38 was abutting the lesion postero-superiorly. The course of the ipsilateral mandibular canal seemed to be embedded in the lesion.

The lesion was provisionally diagnosed as odontogenic keratocyst and was treated by surgical enucleation under general anesthesia. Wards incision placed followed by a crevicular incision that was extended till the distal aspect of the mandibular left canine teeth (33). A bony window was created, and the tumor was exposed. Following which the tumor was curetted and removed after carefully identifying and separating the nerve from the tumor [Figure 1].

The hematoxylin and eosin (H and E) stained sections showed circumscribed richly cellular tissue with little or scant collagen fibers admixed with pale staining foam cells. Lesional cells arranged in short and long intersecting fascicles and storiform

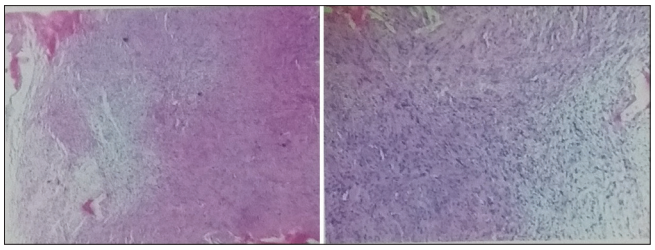

Figure 2: Histopathology photograph

arrangements with cells exhibiting round, spindle, and oval cells with scant cytoplasm. Also, the occasional presence of giant cells and florid cells was noted [Figure 2].

Immunohistochemistry showed that tumor spindle cells had a strong, diffuse expression for S-100/Sox-10 with no evidence of malignancy confirming the diagnosis of intraosseous schwannoma.

DISCUSSION

Schwanommas are slow-growing, benign tumors derived from the peripheral nerve sheath.[1,2] The mandible is more commonly involved than the maxilla, particularly the posterior border.[3] Usually, schwanommas are asymptomatic; the presenting complaint may be a swelling.[2] Pain and paresthesia are reported in about 50% of cases.[2,4] There is a slight female prediction[5] with the most common occurrence in the 2nd and 3rd decade of life.[5]

Radiographically, it presents as well-demarcated unilocular or multilocular radiolucency with a thin, sclerotic border.[2,6,7] External root resorption, cortical erosion/expansion, focal radiopacity, and peripheral scalloping are some of the other features.[5,8]

Intraoperatively, the direct association of the tumor with the neurovascular bundle is another diagnostic feature.[2] A similar finding was noted in our case.

Usually, the treatment of choice is enucleation as the tumor is well encapsulated.[7,9,10] Recurrence following enucleation is not common, however, possible if inadequately excised.[1]

In our case, histopathological examination arrived at an indefinite diagnosis which required immunohistochemistry for confirmation. The same scenario was described by Buric *et al.*[4]

CONCLUSION

Schwannomas are rare tumors which mimic other odontogenic cysts and tumors in clinical and radiographic presentation.

Immunohistochemistry along with histopathology plays an important role in establishing a definitive diagnosis.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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