CASE REPORT

INTRACRANIAL SCHWANNOMA OF MANDIBLE

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ABSTRACT

Schwannoma are benign neoplasm originating from the neural sheath and occurring most often in the soft tissues of the head and neck. This paper reports a case of intra mandibular schwannoma in a 24 year old male patient.

Key Words: Schwannoma; Mandible; Jaw; Intraosseous Schwannoma

Introduction

Schwannoma is also known as neurilemmoma, peripheral fibroblastoma, neurinoma and lemmoma. It is a rare neural tumor that arises by proliferation of Schwann cells.1-4 It may arise at any age and has no sex predilection.5-7 Clinical evidences suggest that it is a slowing growing lesion and is usually of long duration at the time of presentation by the patient. It has a predilection for head and neck region where one third of the cases are reported.4 Intraoral lesions are rare and they generally occur on the soft tissues.

In the oral cavity tongue is the most common site followed by palate, floor of the mouth, buccal mucosa, gingiva, lip and vestibule.4 Soft tissue lesion generally appears as a nodule of varying size that is generally asymptomatic. It may resemble any benign oral soft tissue lesion. The intracranial lesion is reported chiefly in mandible and it may produce destruction of bone with expansion of cortical plates. Clinically it may be accompanied by pain and paraesthesia.2 The treatment is surgical excision with minimum danger of recurrence and it rarely undergoes malignant transformation. This paper reports a case of intra mandibular schwannoma in a 24 year old male patient.

Case Report

A 24 year old male patient reported to the department of Oral Medicine and Radiology with the chief complaint of asymtomatic slowing growing swelling on the left side of the face present since one year. Patient gave history of being operated in the same region with extraction of multiple teeth six years back for a similar swelling (Figure 1). The patient’s medical and family history was non-contributory.

Extra oral examination revealed a 62x50 mm firm swelling on the left middle and lower third of the face causing asymmetry of the face. On intraoral examination 35, 36, 37 was missing and there was expansion of both buccal and lingual plates. The overlying mucosa was intact. In the maxillary arch there was obliteration of buccal vestibule and the palatal aspect of 25, 26 and 27(Figure 2). On palpation paraesthesia was elicited in the left lower lip and adjoining part of the chin. Aspiration was attempted but the lesion was found to be solid. IOPA, maxillary and mandibular occlusal and panoramic radiographs were taken. OPG revealed a large multilocular lesion involving the entire left side of the body and ramus with involvement of left condyle and coronoid process (Figure 3). Mandibular occlusal radiograph showed diffuse multilocular lesion involving

Figure 1. Intraoral view showing obliteration of the buccal vestibule and the palatal aspect of 24 25 26, Figure 2. Intraoral view showing missing 35 36 37 which were extracted during previous surgery, Figure 3. Panoramic radiograph showing multilocular radiolucency extending from 34 region to entire ramus of the mandible, Figure 4. Occlusal radiograph reveals multilocular radiolucency extending from 34 region to the anterior border of the ramus, Figure 5. Photomicrograph of the lesion showing elongated spindle shaped nuclei arranged in palisading pattern suggestive of Antoni Type A cells & few cells arranged in disorderly pattern suggestive of Antoni B cells, Figure 6. Photomicrograph of the lesion showing Antoni Type A and Antoni B cells.
the left side of the mandible from 34 regions to the posterior most extent of the radiograph (Figure 4).

Considering the clinical picture, history of recurrence and the radiographic findings a differential diagnosis of ameloblastoma and odontogenic keratocyst was considered. To confirm the diagnosis an incisional biopsy was done from posterior part of the mandible. Histopathology showed the features of a typical schwannoma with both Antoni type A and Antoni type B cell. (Figure 5) The inconsistent radiographic and histopathological appearance of this tumor led us to search for initial surgery and histopathological report which was also done in our hospital six years back. The initial surgical report was also consistent with the reports of schwannoma as the initial diagnosis (Figure 6).

Discussion

J. Verocay gave the first microscopic description of schwannoma in 1908. He coined the term neurinoma.6 Later the term schwannoma became popular because it was thought to originate from the Schwann cells of nerve sheath. In 1935 the term neurilemmoma was coined by A P Stout.7 It is generally a slow growing tumor with no gender predilection.5,7 Eversole in his series of 17 neurilemmoma noted a male: female ratio of 1:2.10 It can occur in any age group1,7 but it is more frequently seen in second and third decades.4,10-12 The most common complaint of the patient is swelling followed by paraesthesia.7 Intraoral schwannoma are not very common and further intraosseous variety is very rare. Intraosseous schwannoma can occur in both maxilla and mandible although mandible appears to be more common according to the reported cases.1,7 Mandibular schwannoma are mostly localized to the posterior body and the ascending ramus but can also involve the symphysis region. The radiographic appearance of intraosseous schwannoma is non-specific.11,12 But generally it is seen as a unilocular radiolucency with a thin sclerotic border.13,14,16 It can also produce external root resorption, cortical plate expansion and calcification. The central lesion of the bone can sometimes produce considerable destruction of bone with expansion of the cortical plates. But they can also mimic any odontogenic or non-odontogenic lesion of the jaw. Jarkko et al in his report of two cases has described a honeycomb pattern in one of the patient.12 Another multilocular appearance in schwannoma has been described by Sugimura et al.17 Review of literature done by Angela et al has revealed only four cases of schwannoma with multilocular appearance and three cases with cortical expansion out of 43 acceptable cases.1 The histopathological picture of schwannoma is characteristic and can seldom be confused with any other lesion. It is an encapsulated tumor composed of two types of tissues Antoni type A and B. Type A is made up of cells with elongated or spindled shaped nuclei aligned in characteristic palisading pattern and type B cells have a disorderly arrangement of cells with micro cysts. Verocay bodies are also characteristic of this tumor. Recurrence has been reported in cases with incomplete removal of the lesion. Malignant transformation is very rare but it has been documented.18

In our case the age and clinical presentation of the patient was similar to the previous cases reported in the literature. The patient was 24 years of age which was consistent with the common age of second and third decade. The patient presented with a slow growing swelling which elicited paraesthesia on examination. This is also consistent with the clinical presentation of intraosseous schwannoma. However the radiographic appearance of multilocular radiolucency with complete involvement of left side of mandible was rare. There was expansion of both the buccal and lingual cortical plates in mandible with respect to 35, 36, 37 region. No hairline fracture was evident in spite of massive destruction. Microscopically the appearance of the tumor during the first presentation in 2004 and six years later in September 2010 was typical and characteristic of schwannoma. Recurrence of this tumor is rare but in our case the tumor had recurred after almost 6 years aggressively involving entire half of the mandible. The treatment of intraosseous schwannoma is surgical excision with resection of the involved nerve to prevent recurrence. In the present case hemi mandiblectomy along with resection of the nerve has to be done and the patient has been scheduled for the same. A frequent follow up is very important to check for further recurrence.

Conclusion

The clinical and radiographic feature of schwannoma is not very characteristic and it can be similar to commonly found benign odontogenic tumor and cyst. Sometimes the radiographic presentation can be very deceptive as in our case. This case has a very unusual radiographic appearance which requires documentation to add to the limited knowledge of rare cases like intraosseous schwannoma.

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References


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