



A CASE REPORT OF OSSIFYING FIBROMA ASSOCIATED WITH AN ANEURYSMAL BONE CYST LIKE CHANGES

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ABSTRACT

Ossifying fibroma is a benign tumour of connective tissue origin and is a slow growing central lesion. In the head and neck region mandible and maxilla are the most commonly involved sites. We hereby discuss a case of ossifying fibroma of right side posterior mandible which showed aneurysmal bone cyst like changes in the histopathology.

INTRODUCTION

Ossifying fibroma is a benign connective tissue neoplasm with characteristic histopathological feature, composed of highly cellular connective tissue stroma and ossified areas in the form of bone trabeculae showing peripheral osteoblastic rimming [1]. Based on its histopathological feature it has been classified under fibro-osseous lesion category along with fibrous dysplasia and cemento osseous dysplasia [1]. This case report discuss a case of ossifying fibroma involving posterior mandible in a 41 year female which showed abundant hemorrhagic areas mimicking aneurysmal bone cyst in the histopathology.

Case Description

A 41 year female patient aged 10 years reported with the chief complaint of swelling in the right side lower jaw for the past 8 months. Swelling was smaller initially and gradually progressed to the present size. No pain,

numbness or paraesthesia was reported by the patient. Past dental history revealed an extraction of single decayed teeth in the right side posterior mandible region eight months before from a private dental practitioner.

Extraoral examination revealed facial asymmetry with diffuse swelling in the right lower jaw approximately 2 × 2 cm, extended anteriorly 3 cm from left corner of mouth, posteriorly 3 cm from angle of the mandible, superiorly 1 cm from ala-tragus line, inferiorly extended 1 cm beyond the inferior border of the mandible.

Surface of the swelling was normal with no sinus opening or no pus discharge. On palpation, inspeutory findings were confirmed. Swelling was hard in consistency and tender on palpation with no local rise in temperature. Skin over the swelling appeared normal and was pinchable. Intra orally mild obliteration of the right buccal vestibule due to a swelling in relation to 46, 47 & 48



region. Surface of the swelling appeared smooth and was normal in colour. Borders were well defined and swelling was mildly tender on palpation and hard in consistency. There was significant buccal cortical expansion without any obvious lingual cortical expansion. (Figure 1 A&B).

Mandibular occlusal radiograph revealed radiolucent lesion extending from 46 to 48 region with marked expansion and thinning of buccal cortex with no evidence of lingual cortical expansion. (Figure-2).

Panoramic radiograph revealed a well defined radiolucent lesion interspersed with patchy opaque areas extending from 46 region to distal aspect of 48 with any evidence of sclerotic rim and root resorption. (Figure -3). Thermal vitality test revealed an immediate response in relation to 44, 47 &48. Aspiration with 21 gauge needle revealed a wet aspirate (scanty material mixed with blood) and was negative for cystic fluid.

The histopathology of the incisional biopsy specimen showed mixture of mature lamellar bone and trabeculae of woven bone with predominant osteoblastic rimming in a stroma. The stroma is characterized by the varied presence of less cellular loosely arranged myxoid areas to densely cellular areas which is composed of plump spindle cells. No evidence of pleomorphism and abnormal mitotic figures were seen. The stromal component also shows large blood filled spaces without any specific endothelial lining and extensive extravasated RBCs. (Figure 4 A&B).

Based on the above features, diagnosis of “ossifying fibroma associated with aneurysmal cyst like changes” was made and the same was confirmed with the final excised specimen.

Fig 1. Mild facial asymmetry on the right side (A) and Mild obliteration of buccal vestibule in relation to 46, 47 &48 region.



Fig 2. Mandibular occlusal view showing expansion of buccal cortex in relation 47 and 48.

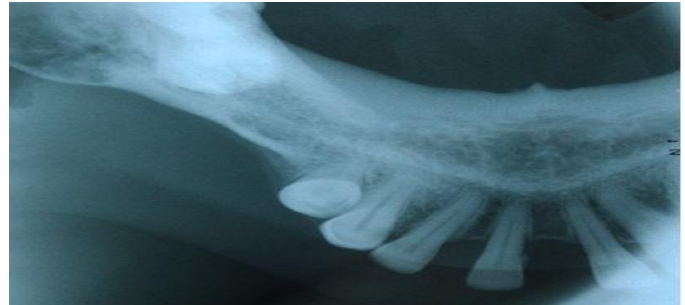
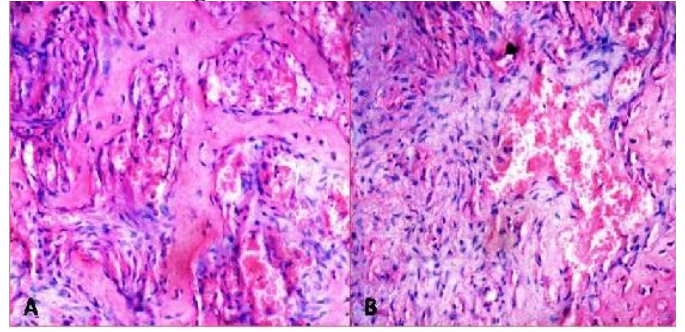


Fig 3. OPG showing ill defined radiolucent lesion interspersed with patchy opaque areas extending from 46 region to distal aspect of 48.



Fig 4. Osseous trabeculae with prominent peripheral osteoblastic rimming (A) and Blood filled spaces without endothelial lining (B)



DISCUSSION AND CONCLUSION

Ossifying fibroma is a benign neoplasm with a significant growth potential. It has been suggested that cells of the periodontal ligament can be source for this tumour. Current literature evidence shows that mutation of HRPT2 gene plays a role in the pathogenesis of this tumour but the exact mechanism leading to formation of the tumour is not known [2].

Generally this tumour occurs over a wide range with increased incidence in the 3rd and 4th decades of life. It has female gender predilection and mandible is the most common site compared to maxilla. Generally lesion at

initial stage does not cause any symptoms, as they grow cause the painless cortical expansion of the jaw bone [3].

Radiographically, at initial stage the tumour present as well defined unilocular radiolucent lesion. As the lesion progress the ossification of the bone trabeculae leads to radio opaque areas proportional to the calcified area resulting in mixed radiographic appearance. Other radiographic findings include root divergence and resorption. Bowing of the inferior border of the mandible may also seen in large lesion [4].

Histologically, ossifying fibroma basically consists of cellular fibrous stroma and mineralized

materials. Mixture of woven and lamellar bone with prominent osteoblastic rimming and basophilic, poorly cellular spherules resembling cementum forms the mineralized portion [3]. Since the lesion generally is well

demarcated from the surrounding bone, which permits easy surgical enucleation. The tumour has very good prognosis and recurrence after removal of the tumour is rare [5].

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