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CASE REPORT

CENTRAL OSSIFYING FIBROMA OF MAXILLA – A RARE CASE REPORT

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ABSTRACT:
The term Ossifying Fibroma came into existence in WHO classification of odontogenic tumors in 1995. It is a rare benign fibro-osseous neoplasm of the jaw wherein normal bone is replaced by fibrous tissues and calcified products suchas bone, cementum or both. These are slow growing, painless lesions seen in women between the third and fourth decades of life predominantly involving the mandible. This case report describes a rare variety of Central Ossifying Fibroma arising in the maxilla of a 19-year-old female treated with surgical enucleation.

Key Words: Ossifying fibroma, Odontogenic tumor, Fibro-osseous lesions.

INTRODUCTION

Central ossifying fibroma is an uncommon benign fibro-osseous neoplasm which consists offibrous tissue with varying amount of calcified tissue resembling bone, cementum or both.[1] This feature along with its confinement to tooth bearing region supports a periodontal ligament origin.[2]Commonly seen in third and fourth decade of life.[3] More frequently seen in females than in males in the ratio of 2:1. The most common location is mandibular premolar and molar region.It is usually asymptomatic and slow growing. Displacement of teeth may be an early clinical feature.[4]

CASE REPORT

A 19 year old female patient reported to the Department of Oral medicine and Radiology of Hitkarini Dental College and Hospital. Patient complained of swelling in upper front teeth of the jaw since 3 months. Patient noticed swelling 3 months ago which was of peanut size. The swelling slowly and gradually increased to its present size. Swelling was not associated with any pain or other symptoms. Her past medical and family histories were non-contributory. On extra-oral examination, swelling was evident on the right side of face leading to slight facial asymmetry [Fig. 1]. Patient presented with adequate mouth opening. Intra oral examination revealed swelling with approximate size of 1x1.5 cm in region of premolars and molars [Fig. 2].Buccal expansion was noticed. Associated teeth showed grade I mobility along with rotated second premolar. Overlying mucosa was intact normal in appearance. Swelling was non tender and bony hard in consistency with well-defined margins. Cervical lymphadenopathy was absent.Based on history and clinical features a working diagnosis of cemento-ossifying fibroma was made. A list of

differential diagnosis was prepared including fibrous dysplasia and central giant cell granuloma.

Intra oral periapical radiograph revealed well defined radiolucency interspersed with areas of radio-opacity involving maxillary right premolar and first molar causing flaring of roots of second premolar and first molar and pushing the maxillary sinus lining upward [Fig. 3]. Occlusal radiography reveals bucco-palatal cortical expansion in the region of premolar and molar teeth approximately 1-1.5cm away from teeth [Fig. 4].

Panaromic radiography reveals mixed radioluceny and radio-opacity between second premolar and first molar with radio-opaque margins. Floor of maxillary sinus rose superiorly with flared second premolar and molar teeth [Fig. 5].

Incisional biopsy was performed under local anaesthesia and was sent for histopathological examination which revealed dense bundles of collagen fibres, areas of ossification and bone trabeculae. Numerous plump of spindle shaped fibroblast were presented suggestive of cellular stroma. Irregular areas of ossification, woven bone and bony trabeculae of varying length and degree of mineralization were seen. Based on histopathological features, correlating it with clinical and radiographic findings a final diagnosis of Central Ossifying Fibroma was made [Fig. 6].

Surgical excision of lesion was done along with the involved teeth and sutures were placed. Radiograph of excised specimen revealed areas of radiolucency interspersed with areas of radio-opacity [Fig. 7-8]. 3 months follow-up of patient revealed uneventful healing [Fig. 9].

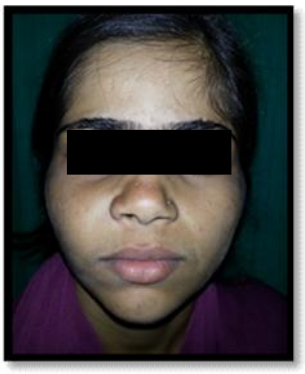

Fig. 1 Extra oral swelling visible on right side of face.

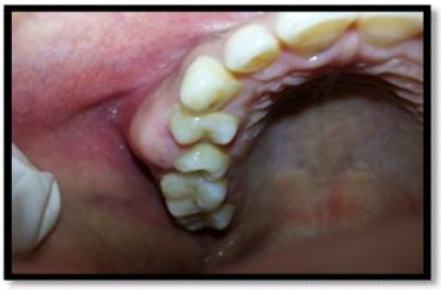

Fig. 2 Intra oral appearance of lesion.

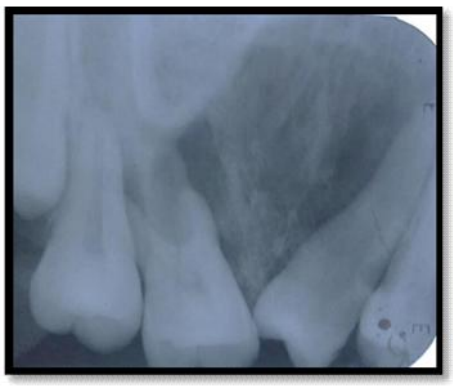

Fig. 3 Intraoral periapical radiograph of the lesion.

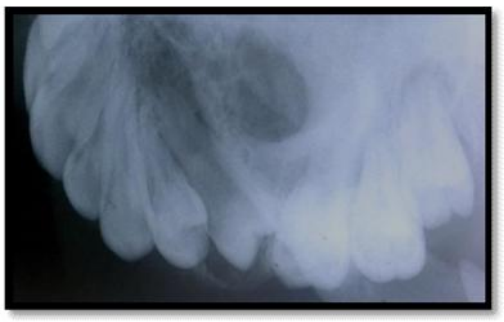

Fig.4 Maxillary Occlusal radiograph of the lesion.

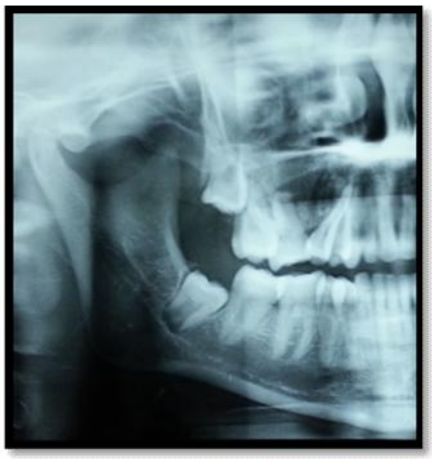

Fig 5 Panoramic radiograph of the lesion.

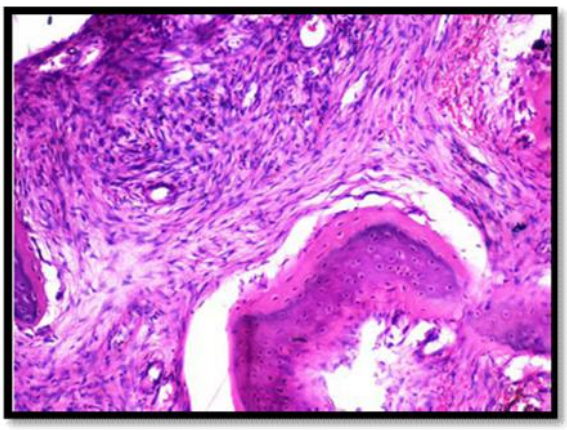

Fig. 6 Photomicrography of the excised specimen.

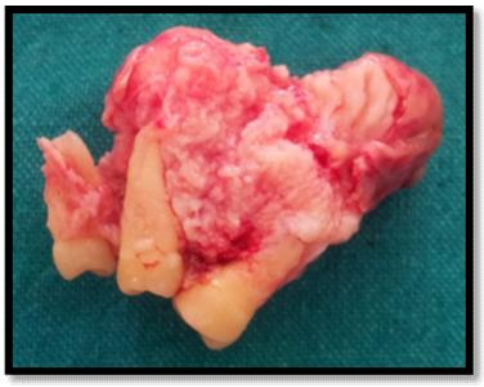

Fig. 7 Excised Specimen.

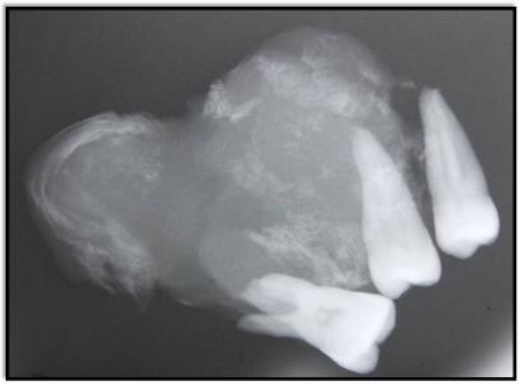

Fig. 8 Radiograph of excised specimen showing mixed radiolucency.

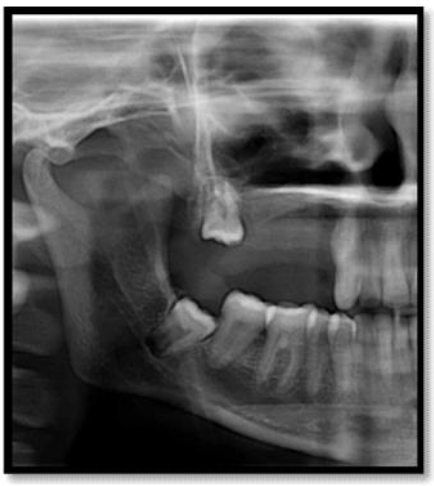

Fig. 9 Panoramic radiograph after 3 months followup revealing uneventful healing.

DISCUSSION

Fibroosseous lesions are characterized by replacement of normal bone by fibrous tissue along with mineralized products. They include fibrous dysplasia, cemento-ossifying fibroma and central ossifying fibroma.[5]The term "Ossifying Fibroma" was first used by Branon and Fowler in place of Central Ossifying Fibroma.[6]Central Ossifying Fibroma was replaced with Ossifying Fibroma in the classification of odontogenic neoplasm by WHO in 1995.[7]A more aggressive form reported in younger individual has been designated as Juvenile Central Ossifying Fibroma.[8]

According to literature Central Ossifying Fibroma are usually seen in third to fourth of life.[3] However in our case patient was 19 years of age. Most studies show female predilection which was same in our case.[4]The most common location is mandible whereas in our case maxilla was involved. Central Ossifying Fibroma presents as an asymptomatic lesion until noticeable swelling and mild deformity develops along with cortical bone expansion and displacement of teeth[4] which was consistent with our case findings.

MacDonald-Jankowski described 3 stages of Central Ossifying Fibroma based on radiographic features; an initial radiolucent stage, then mixed stage and eventually a sclerotic stage.The radiolucent appearance in 53%, a sclerotic radio density in 7% and mixed or mottled appearance in 40% of the cases.[5]Our case presented herehas a mixed stage with radiolucency interspersed with areas of radio-opacity.

Histologically, Central Ossifying Fibroma shows well vascularized fibrocellular connective tissue with immature bone trabecullae.[9]Our case showed similar findings.

Surgical enucleation with long term follow-up is the treatment of choice. However resection is indicated in large lesions. Eversole et al reported 28% of recurrence rate. Hence a long term follow-up of patient is recommended.[10]

CONCLUSION

We reported a rare case of Central Ossifying Fibroma in 19 year old female patient who reported with a bony hard swelling. Proper correlation of clinical, radiological and histopathological features is necessary for establishing a definitive diagnosis.

REFERENCES:

1. C C Chang, et al. Central Ossifying Fibroma: A Clinicopathologic Study of 28 Cases. *J Formos Med Assoc* 2008; 107(4):288–294.
2. B S Sreenivasan, Joseph Edward, S Sunil. Central Ossifying Fibroma of Mandible - A Case Report. *J Oral & Maxillofacial Pathology* 2010; 1(1).
3. More C, Thakkar K, Asrani M. Cemento-ossifying fibroma. *Indian Journal of Dental Research* 2011; 22(2):352-355.
4. Sarwar H G, Jindal M K, Ahmad S S. Cemento-ossifying fibroma—a rare case. *J Indian SocPedod Prevent Dent* Sept 2008:128-131.
5. Kamadjaja.Cemento-ossifying fibroma. *Dent. J. (Maj. Ked. Gigi)* Oct.–Dec 2009; 42(4): 164-171.
6. Rajpal K, Agrawal R, Chhabra R, Bhattacharya M. Updated Classification Schemes for Fibro-Osseous Lesions of the Oral & Maxillofacial Region: A Review. *Journal of Dental and Medical Sciences* Feb. 2014; 13(2):99-103.
7. Bal Reddy P, Sridhar Reddy B, Prasad N, Kiran G, Patlolla K. Central Ossifying Fibroma of the Mandible: An Unusual Case Report. *Journal of Clinical and Diagnostic Research* 2012; 6(3):539-541.
8. Keles et al. Juvenile Ossifying Fibroma of the Mandible: a Case Report. *J Oral Maxillofac Res* 2010; 1(2):1-7.
9. Ah Hup M Ong, Chong HuatSiar. Cemento-ossifying fibroma with mandibular fracture-Case report in a young patient. *Australian Dental Journal* 1998; 43(4):229-33.
10. Ram R, Singhal A, Singhal P. Cemento-ossifying fibroma. *Contemporary Clinical Dentistry 2012*; 3(1):83-85.

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Biography

Dr.Shobhit Kochar has obtained his early education from Jabalpur (Madhya Pradesh). Did his Bachelor's degree from Hitkarini Dental College and Hospital Jabalpur, affiliated to Rani Durgavati University Jabalpur. Currently pursuing master's degree in Oral Medicine and Radiology from Hitkarini Dental College and Hospital, Jabalpur. Participated in various dental health screening and treatment camps.

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