IJIRR

International Journal of Information Research and Review
Vol. 03, Issue, 02, pp.1911-1914, February, 2016

Case Report

OSSIFYING FIBROMA

[1]Dr Apoorva Gupta, [2,*]Dr Chandan Kumar, [3]Dr Arun Bhati and [4]Dr Vishal

[1,2,3]Post Graduate, Dept of Oral Medicine and Radiology, Teerthanker Mahaveer Dental College, Moradabad
[4]Senior Lecturer, Dept of Oral and Maxillofacial Surgery, Hitech Dental College, Bhuwaneshwar

ARTICLE INFO

Article History:

Received 27th November, 2015
Received in revised form
19th December, 2015
Accepted 24th January, 2016
Published online 28th February 2016

Keywords:

Fibro-Osseous,
Jaw Tumor,
Ossifying Fibroma.

ABSTRACT

The ossifying fibroma (OF) is a benign neoplasm that affects the jaws. It is classified as fibro-osseous lesions of the jaws. We are reporting an unusual case report of a central ossifying fibroma of the left mandible in a 28 years old female patient who presented with a painless swelling on the lower front side of the face.

INTRODUCTION

Fibro-osseous lesions is a term used for a group of diseases of the jaws in which the normal bone tissue is replaced by fibroblasts and fibrous tissue, with formation of variable amounts of mineralized material. This term does not represent a specific diagnosis (Marcia de Andrade, 2013). The concept of "fibro-osseous lesions" of bone has evolved over the last several decades and now includes two major entities: fibrous dysplasia and ossifying fibroma, as well as the other less common lesions such as florid osseous dysplasia, periapical dysplasia and focal sclerosing osteomyelitis (Rangila Ram *et al*., 2012).

The ossifying fibroma (OF) is a benign neoplasm that affects the jaws. This lesion occurs more often in females in the third and fourth decades of life. Usually, OF appears as a single, painless and slow-growing lesion, mostly found in the posterior region of the mandible, specifically in the premolars and molars area (Marcia de Andrade, 2013). Radiographically, OF presents as a well-defined, unilocular lesion which contains varying amounts of radiopaque material (Bal Reddy, 2012). Here we report an unusual case of ossifying fibroma occurring in a female patient aged 28 years affecting mandibular canine region.

Corresponding author: Dr Chandan Kumar
Post Graduate, Dept of Oral Medicine and Radiology, Teerthanker Mahaveer Dental College, Moradabad

Case Report

A 28 years old female reported to the department with a chief complaint of swelling in her lower front tooth region since 1 month.

The patient revealed that she noticed the swelling in lower front tooth region 1 year back which gradually increased in size to attain the present size. The swelling started on the lingual aspect in the same region since 1 month. There is no history of pain or trauma in the region. There is no significant medical and family history. On examination, intraorallly a diffuse swelling is present irt 32 to 34 region involving both buccal and lingual cortical plate measuring approximately 2x2 cm, which is bony hard in consistency and non tender. (Fig no 1, 2).

The intraoral periapical radiograph of the region 33,32,31,41 reveals a diffuse area of mixed radiolucency and radiopacity on the apical portion of 33,32,31,41 region. The radiolucency was surrounded by a radiopaque border. Slight displacement of 32 and 33 is evitable. (fig no 3). The mandibular occlusal cross sectional radiograph reveals the expansion of buccal and lingual cortical plate irt 31 to 34 region with mixed radiopacity and radiolucency.(Fig no 4). The orthopantomograph reveals diffuse radiopacity with areas of radiolucency in the region of teeth 33,32,31,41 region. Mandibular left canine and lateral incisor are displaced. (fig no 5). 3-D computed tomography scan showed expansion of the buccal and lingual cortical plates

of the mandible. Axial and coronal section shows an ill defined, expansile lytic lesion in mid part of mandible causing bony erosion of buccal and lingual cortical plates, surrounding the fat strands. The lesion seems to be involving the lateral incisor to premolar on the left side of mandible. The lesion also shows multiple dense calcifications at its central part with lingual expansion in 3-D coronal reconstruction view (Fig no 5). All the routine hematological investigationswere in normal limits.

Alkaline phosphatase levels were abnormally increased to126 u/l suggestive of bony defect. Incisional biopsy of the lesion was performed and hard tissue was sent for histopathological examination. The given tissue sections show lesional connective tissue which is highly cellular with abundant plump, few spindle and stellate shaped fibroblasts and fibrocytes. Collagen is arranged in the form of fibers and bundles. Numerous irregular trabeculae of woven bone containing plump osteocytes within the lacunae , and plump osteoblastic rimming at few areas with few multinucleated osteoclasts are seen in the lesional area. Endothelial lined blood capillaries and extravasated RBC's are seen suggestive of

OSSIFYING FIBROMA (FIG 6)

The suggestive treatment for the lesion is its complete excision.

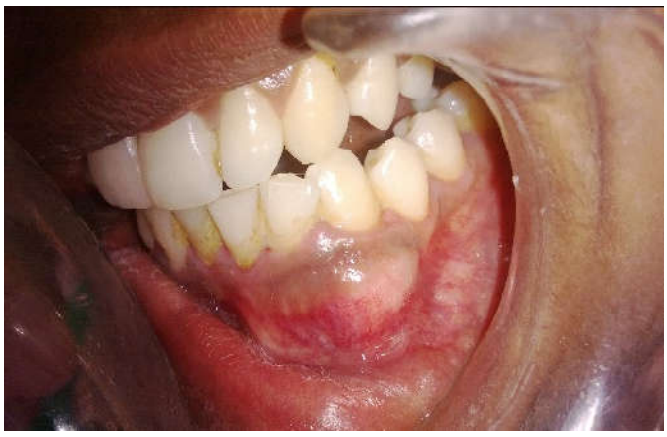


Fig. 1.

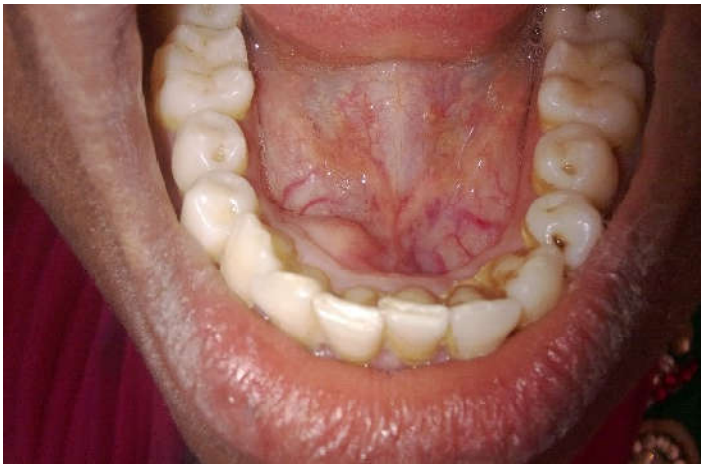


Fig. 2.

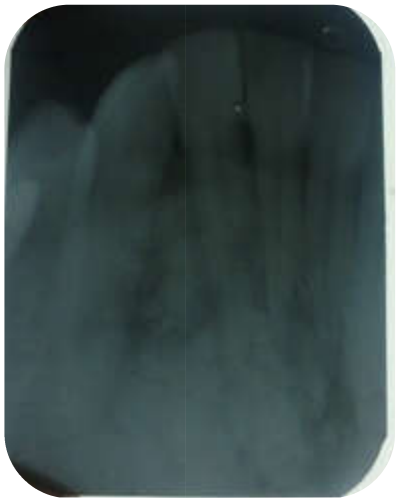


Fig. 3.

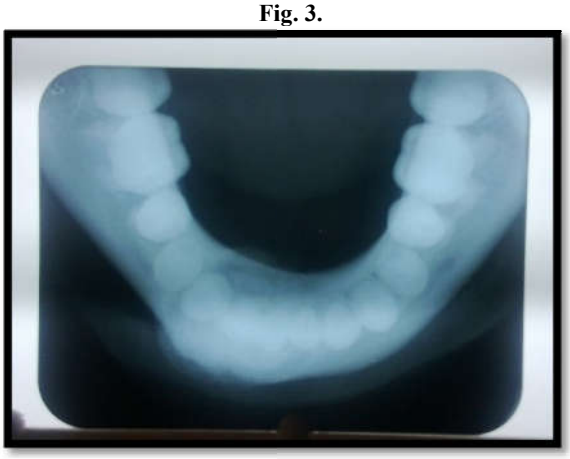
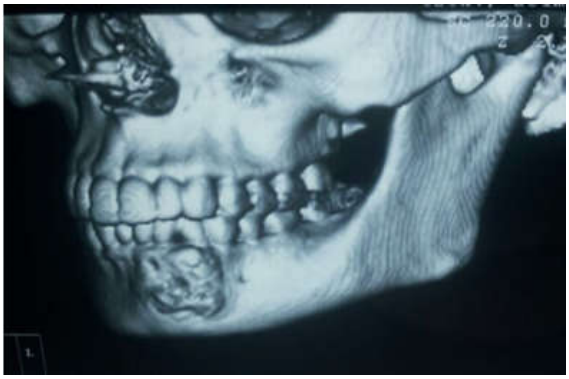


Fig. 4.



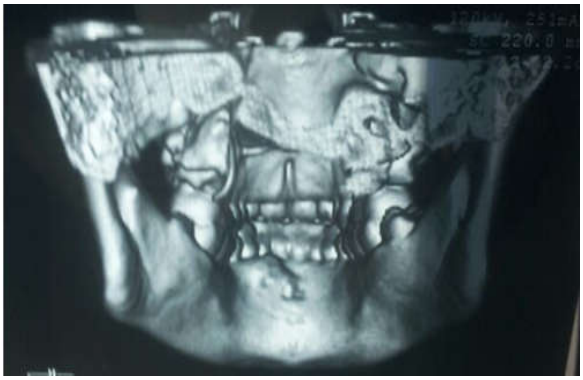


Fig. 5.

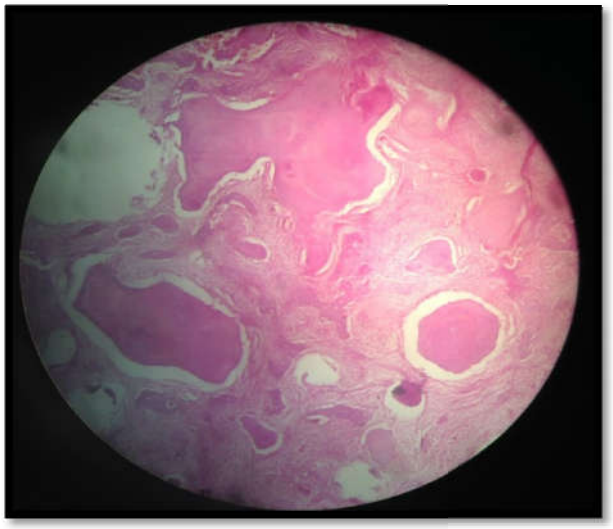


Fig. 6.

DISCUSSION

Intraoral ossifying fibromas have been described in the literature since the late 1940s. Many names have been given to similar lesions, such as epulis, peripheral fibroma with calcification, peripheral ossifying fibroma, calcifying fibroblastic granuloma, peripheral cementifying fibroma, peripheral fibroma with cementogenesis and peripheral cemento-ossifying fibroma (Farquhar, 2008). Menzel gave the first description of a varient of ossifying fibroma, which was a benign fibro-osseous neoplasm calling it as cemento-ossifying fibroma in the year 1872.[2] In 1971, WHO classified four types of cementum-containing lesions: fibrous dysplasia, ossifying fibroma, cementifying fibroma and cemento-ossifying fibroma. According to the second WHO classification, benign fibro-osseous lesions in the oral and maxillofacial regions were divided into two categories, osteogenic neoplasm and non-neoplastic bone lesions; cementifying ossifying fibroma belonged to the former category.

However, the term ‘‘cementifying ossifying fibroma’’ was reduced to Ossifying fibroma (OF) in the new WHO classification in 2005. The origin of ossifying fibroma is supposed to be from periodontal ligament. Age range of this tumor is from 20-40 years. In a study by Eversole females were five times more affected than males. In Summerlin and Tomich study females were affected twice than males. Usually condition is painless but if a nerve is involved there can be pain (Sreenivasan, 2010). It is a slow-growing lesion most often seen in women between the third and fourth decades of life. While one-half of all cases are asymptomatic, the growth of the tumor over time may lead to facial asymmetry, with the appearance of a mass causing discomfort or mandibular expansion, and the possible displacement of dental roots (Rangil, 2011). In our case, the tumor was since a long duration without causing any discomfort to the patient except for the esthetic concern. Growth of the tumor will be usually in a centrifugal manner (Sreenivasan, 2010). Clinically, the tumor tends to present as a slow-growing intrabony mass most often located in the region of the mandibular premolars and molars and in the ascending ramus[6] – in contrast to the anterior mandibular location of our case. MacDonald-Jankowski described three stages of OF, based on the radiographic features; an initial radiolucent stage, then a mixed stage and eventually, a sclerotic appearing stage.[3] OF usually presents as a mixed lesion with well defined borders. Radiographic appearance of lesion vary according to stage of development of tumor. In early stages it is radiolucent lesion with no evidence of internal radiopacities. As it matures, there is increasing calcification sothat radiolucency becomes flecked with opacities and ultimately appears as uniform radiopaque mass. Sometimes peripheral portion show sclerotic margin. Lesion is always well circumscribed and demarcated from the surrounding bone in contrast to fibrous dysplasia (Sreenivasan, 2010).

Our case presented as a diffuse radiopaque mass with radiolucency present in between. There may be a degree of root reabsorption or displacement of neighboring teeth (Rangil, 2011). Any root resorption is not seen in our case. Histopathologically, OF shows a well vascularized fibrocellular connective tissue with immature bony trabeculae and cementoid, but these findings are not specific to OF alone and they can also be seen in FD (Ogunsalu *et al*., 2001). Our case represented a well vascularized fibrocellular connective tissue with irregular trabeculae of woven bone containing plump osteocytes within the lacunae, and plump osteoblastic rimming at few areas with few multinucleated osteoclasts are seen in the lesional area.

The differential diagnosis of OF includes fibrous dysplasia (FD), a calcifying odontogenic cyst (COC), cementoblastoma, chondrosarcoma and osteosarcoma. FD has a characteristic ‘ground glass’ appearance. COC and cementoblastomas are associated with the roots of vital permanent teeth. OF is differentiated from sarcomas by presence of well defined margins (Rangil, 2011). Surgical curettage or enucleation with a long term follow-up is the initial treatment of choice for small COFs, whereas surgical resection is indicated for the large lesions (Koury *et al*., 1995). Eversole *et al* reported a recurrence rate of 28 % following curettage (MacDonald-Jankowski, 1998). Hence, a long term follow-up of the patients is recommended. In our case, we carried out surgical resection and reconstruction and the follow-up revealed normal healing.

REFERENCES

Bal Reddy, P. *et al*. 2012. Central Ossifying Fibroma of the Mandible. *JCDR*. May (Suppl-1); 6(3): 539-41

Farquhar, T. *et al*. 2008. Peripheral Ossifying fibroma: A case report. JADC. 74 (9)

Koury, M.E., Regezi, J.A., Perrott, D.H. and Kaban, L.B. 1995. Atypical fibro-osseous lesions: diagnostic challenges and treatment concepts. *Int J Oral Maxillofac Surg.,* 24:162-69.

MacDonald-Jankowski, D.S. 1998. Cemento-ossifying fibromas in the jaws of the Hong Kong Chinese. *Dentomaxillofac Radiol,* 27: 298–304.

Marcia de Andrade. 2013. Ossifying fibroma of the jaws: A clinicopathological case series study. *Brazilian dental journal*. 24(6): 662-6

Ogunsalu CO, Lewis A, Doonquah L. Benign fibro-osseous lesions of the jaw bones in Jamaica: analysis of 32 cases. *Oral Dis* 2001; 7: 155–62.

Rangil, J. S. *et al*. 2011. Cemento- Ossifying fibroma of the mandible: Presentation of a case and review of literature. *J Clin Exp Dent*.; 3(1):e66-9.

Rangila Ram, Anita Singhal, Parul Singhal. 2012. Cemento ossifying fibroma. *Contemporary clinical dentistry*. Jan-Mar; 3 (1).

Sreenivasan, B. S. *et al*. 2010. Central Ossifying fibroma of mandible: A case report. *OMPJ.* 1(1)

****