(e) ISSN Online: 2321-9599
(p) ISSN Print: 2348-6805

CASE REPORT

CENTRAL ODONTOGENIC FIBROMA: A CASEREPORT

Udit Prakash[1], Moin Ifftikar Shapoo[1], Ranjan Chauhan[2]

Post graduate Student[1], Assistant Professor[2], Department of Oral and Maxillofacial Surgery, Maharana Pratap College of Dentistry & Research Center, Gwalior (M.P)

ABSTRACT:
Central odontogenic fibroma is considered to be derived from mesenchymal tissues of dental origin, such as periodontal ligament, dental papilla or dental follicle. It usually resembles an endodontic lesion. This benign neoplasm is a rare tumor and it accounts for 0.1% of all odontogenic tumors. Central odontogenic tumor radiologically represents both unilocular and multilocular radiolucent lesion. The following case represents central odontogenic fibroma in a 45 year old female. The case was treated surgically and no post-operative complication was seen.
Key words: Benign lesions, Central odontogenic fibroma, Mandible, Surgical treatment.

Corresponding Author: Dr. Ranjan Chauhan, Assistant professor, Department of Oral and Maxillofacial Surgery, Maharana Pratap College of Dentistry & Research Center, Gwalior (M.P), Email: drranjanchauhan@gmail.com

This article may be cited as: Prakash U, Shapoo MI, Chauhan R. Central Odontogenic Fibroma: A Case report. J Adv Med Dent Scie Res 2016;4(2):60-62.

INTRODUCTION

The odontogenic fibroma (OF) is a rare benign neoplasm representing 1%-2.5% of oral biopsy specimens. It either occurs as a central (intraosseous) lesion (COF) or in a peripheral location (POF).[1]The ossifying fibroma appears in both the maxilla and the mandible (45%and 55%) respectively. It has been reported to occur in a wide age group with a strong female predilection.[2]

Radiologically, central odontogenic fibroma is usually radiolucent and sometimes can have a mixed radiolucent-radiopaque appearance. Most central odontogenic fibromas are well defined unilocular lesions, but they can be multilocular or have poorly defined borders in rare cases.[3]

Periosteal reaction occurs when cortical bone reacts to one of a range of possible stimulants. A codman triangle develops when a portion of the periosteum is litted off the cortexby a tumor, pus or hemorrhage ata leading edge.[2]

The aim of this report is to present a case of Central Odontogenic fibroma in the mandibular left premolar region in a 45 year old female patient.

CASE REPORT

A 45 year old female patient had been referred to us by a local dentist following the conventional orthopentomography that revealed a radiolucency associated with mandibular left 1st Premolar and canine (Figure 1).

Figure 1: Pre operative facial view

The patient presented with an extra oral painless swelling on the left side of the mandibular region since 2 months which had gradually increased in size. Intraoral examination revealed swelling extending from distal aspect of 2nd Premolar to distal aspect of Central Incisor. There was no evidence of parasthesia. On palpation, swelling was firm in consistency.

OPG revealed a large well defined unilocular radiolucent lesion surrounded by a sclerotic border on left side of the mandible extending anteriorly from the apical of the lateral incisor to apical of the 2nd premolar, measuring 2.5x1.5 cm (Figure 2) . The provisional radiographic diagnosis was ameloblastic fibroma, ameloblastoma, Central Odontogenic Fibroma.

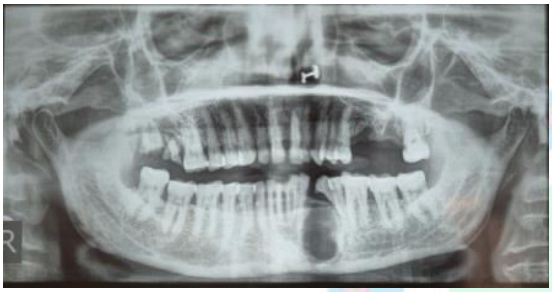

Figure 2: Preoperative orthmopantmogram

The lesion was resected under local anesthesia along with canine and premolar. The surgery was completed by curettage of the remaining bone bed (Figure 3). There has been no occurrence at 6 months of follow up.

Gross examination of the biopsy specimen showed several soft tissue bits measuring about 1x1 cm in size, whitish and firm in consistency.

Microscopic examination revealed tumor composed of odontogenic epithelial islands with mature and fibrous connective tissue. Some cementum like material is also variably present (Figure 4).

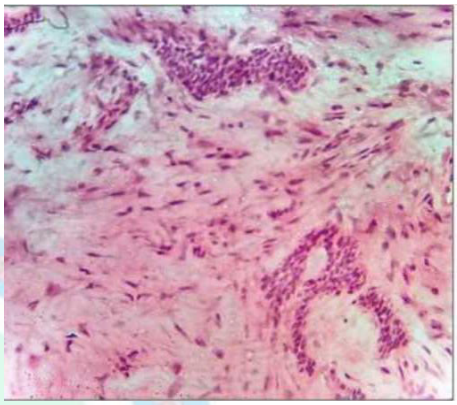

Figure 4: Showing microscopic report of the lesion

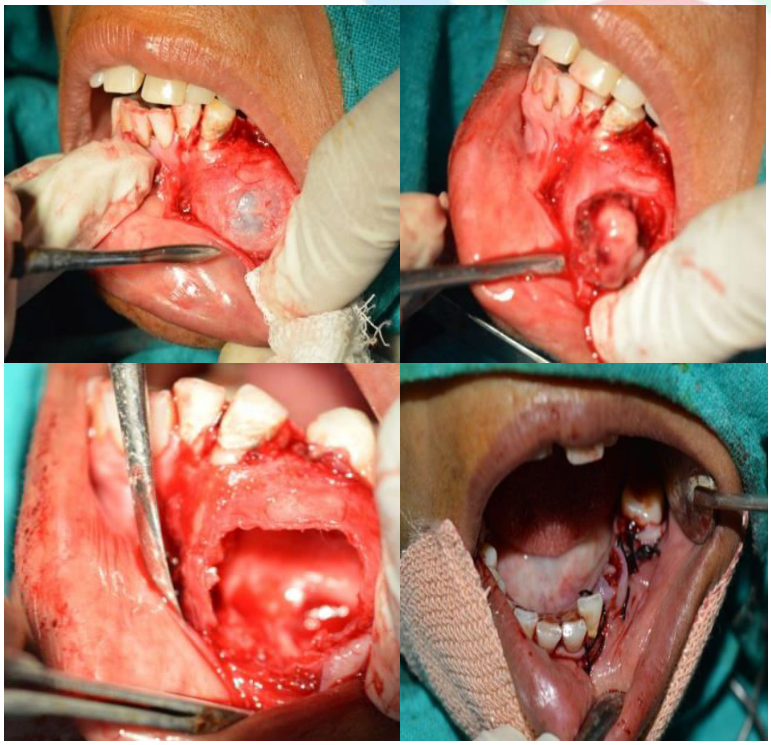

Figure 3: Showing Intraoperative pictures

Based on clinical, radiographic and histological findings a diagnosis of Central Odontogenic Fibroma of WHO type was established.

DISCUSSION

Clinical differential diagnosis includes cysts of the odontogenic origin, ameloblastoma, aclenomatoid odontogenic tumor and ameloblastic fibroma. The correct diagnosis is often arrived after histological examination of the lesion.[4]It accounts for 0.1% of all odontogenic tumors. Central odontogenic fibroma is an extremely rare benign neoplasm that is most often found in females and the incidence between the mandible and maxilla is 1:1.11. The most common site of presentation in maxilla is in anterior region (66%) and in mandible is in posterior region (71%). The highest frequency of occurrence is in the 5th decade of life.[5] Majority of Central Odontogenic Fibromas are clinically asymptomatic causing slow expansion of the cortical bones. Clinical signs often observed are prominence of vestibular cortical and lingual bone (75%), pain (50%) and rhisolysis (Interruption of spinal nerve roots by coagulation with radiofrequency waves. Our case occurred in 45 year old female patient in mandible anterior region and manifested a asymptomatic swelling.[6]

According to the latest classification of Odontogenic tumors reported by Gardner, the odontogenic fibroma is classified as a benign lesion derived from odontogenic ectomesenchyme with or without odontogenic epithelium. He also has referred the tumor made up of connective tissue and odontogenic islands resembling dental follicle as the simple type and to the tumor described by WHO as WHO-type Central Odontogenic Fibroma.[7] The current classification of central Odontogenic Fibrona by WHO (2005) is

(i)WHO variant ; (ii) Non-WHO variant.

The WHO variant is consideredas a mesenchymal odontogenic tumor and is compiled of 2 distinct cell types, a fibrous element, and an epithelium component that resembles dental lamina or its remnants. In contrast the Non-WHO variants lacks an epithelial component and is said tto be monomorphic fibroplastic tumor reported to be of Odontogenicmesenchymal origin and ostemibly derived from pulpal or follicular fibroblasts.[8]

Histologically the simple type is characterized by a tumor mass made up of mature collagen fibers interspread usually by many plum fibroblasts that are very uniform in their placement. Variable but minimal amount if inactive odontogenic epithelial island or nests are present. WHO type consists of relatively mature but quite cellular fibrous connective tissue with few to many islands of Odontogenic epithelium, osteoids, dysplastic dentin or cementum like material is also variably present.[6] Our case resembled the WHO type.

The treatment of Central Odontogenic Fibroma is conservative surgery by the Enucleation of lesion. Recurrence is not common. Causes of recurrence are not related to histological type but due to an incomplete surgical removal of lesion.[9]Post Operative follow up for 5Years is advisable. However Ramer et al reported a 12.8% (5 out of 39) cases rate of recurrence.[5]

CONCLUSION

The unusual presentation of these lesions demonstrates the importance of careful clinical, radiographical and histological examination of every lesion. In reaching the diagnosis and then affecting the overall treatment and prognosis.

REFERENCES

1. Armas M.J., Hunter D.K., Jenkins M.M.W. Odontogenic fibroma: An unusual presentation. JOMFP 2008; 12(2).
2. Anbiaee N., Ebrahimnejad H., Sanaei A. Central odontogenic fibroma (simple type) in a four-year-old boy: Atypical cone-beam computed tomographic appearance with periosteal reaction. ISD 2015;45: 109-15.
3. A.Mosqueda-Taylor, G.Mart´ınez-Mata, R. Carlos-Bregni et al., "Central odontogenic fibroma: new findings and report of a multicentric collaborative study," Oral Surg, Oral Med, Oral Pathol, Oral Radiol and Endodont 2011;112:349–58.
4. E. M. Sadeghi, S. R. Sewall, A. Dohse, and T. S. Novak, "Odontogenictumors that mimic a dentigerous cyst," Compendium of Continuing Education in Dentistry 1995;16:500–504.
5. Iordanidis S.,Poulopoulos A. ,Epivatianos A.,Zouloumis L:Central odontogenic fibroma: Report of case with immunohistochemicalstudy. IJDR, 24(6), 2013;753-755.
6. Thankappan P.,Chundru V.S.N., Amudala R.,Yanadi P., U.K.A.S. and Botu M.:CentralOdontogenic Fibroma of Simple Type.CRD 2014;642905, 1-3
7. GardnerD.G.. Central odontogenic fibroma current concepts. J Oral Pathol Med 1996; 25: 556-61
8. V. Veeravarmal, R. N.Madhavan, M. M. Nassar, and R. Amsaveni, "Central odontogenic fibroma of the maxilla," J Oral Maxillofac Pathol 2013;17:319.
9. C. L. Dunlap and B. F. Barker, "Central odontogenic fibroma of the WHO type," Oral Surg, Oral Med, Oral Pathol, 1984; 57:390–394.

Source of support: Nil **Conflict of interest:** None declared