ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 9, Issue, 01, pp.44919-44921, January, 2017

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

CEMENTO OSSIFYING FIBROMA OF MAXILLA: A CASE REPORT

***Dr. Rasika Pawar, Dr. Sumeet Rongate, Dr. Sangeeta Palaskar, Dr. Pushkar Gawande**

44/1 Off Sinhgad road, Vadgao(Bk), Pune 411041, India

ARTICLE INFO

Article History:
Received 26th October, 2016
Received in revised form
22nd November, 2016
Accepted 19th December, 2016
Published online 31st January, 2017

Key words:
Cemento-ossifying fibroma,
Odontogenic tumor,
Fibro-osseous lesion,
Maxilla, File Upload & Submit.

ABSTRACT

Cemento-Ossifying Fibroma (COF) is a benign odontogenic tumor which is believed to be derived from periodontal ligament cells. COF is considered under fibro-osseous lesion in WHO classification. It is relatively common in mandible but rare in maxilla. COF consist of highly cellular connective tissue with varying amount of calcifying mass that may resemble bone, cementum or both. It primarily affects middle age individuals with mean age of 42 yrs. We report a case of cement-ossifying fibroma of the posterior maxilla in a 25 yr. old male patient.

Citation: Dr. Rasika Pawar, Dr. Sumeet Rongate, Dr. Sangeeta Palaskar, Dr. Pushkar Gawande, 2017. "Cemento ossifying fibroma of maxilla: A case report", *International Journal of Current Research*, 9, (01), 44919-44921.

INTRODUCTION

Cemento-Ossifying Fibroma (COF) is classified under fibro-osseous lesion by World Health Organization (WHO) in 1971 (Sarwar, 2010). It is considered as a benign tumor which originates from periodontal ligaments (Verma, 2011). WHO in 1992 classification mentioned it under two histological types, cemento-ossifying fibroma and ossifying fibroma (Reichart, 2004). This neoplasm consists of fibrous tissue with variable mixture of cementum like spicules, bony trabeculae or both (Neville, 2009). Although central cemento-ossifying fibromas are common in mandible, involvement of maxilla is unusual. In 1872 Menzel first described a case of cemento-ossifying fibroma (Hamner, 1968). The presence of cementum or bone classifies the lesion as either cementifying fibroma or ossifying fibroma respectively, whereas cemento-ossifying fibroma in case of both (Sheikhi, 2013). It generally occurs in 3rd -4th decade of life. Female have more predilection with mandible being the most common site (Reichart, 2004; Sheikhi, 2013). Histopathology of COF is characteristic for their diagnosis as presence of cementum separates this from other similar looking lesions. It is thus mentioned as a group of lesions called fibro osseous lesions. Here we present with a case of COF which was previously diagnosed as ossifying fibroma on incisional biopsy but demonstrated cementum like areas on excision.

****Corresponding author: Rasika Pawar,***
44/1 Off Sinhgad road, Vadgao(Bk), Pune 411041, India.

23 year old male patient reported to our college with a chief complaint of swelling in right back region of upper jaw. The patient was apparently asymptomatic 8 months back when he developed a small swelling at right maxillary posterior region, which was gradually increased to attain present size. There was no significant past medical and dental history. On clinical examination facial asymmetry was noticed on right side. On intraoral examination single, uniform, well circumscribed, oval swelling present in the maxillary right posterior region measuring 4×3 cm in diameter. The overlying mucosa was coral pink in color with smooth surface (Figure 1, 2). Orthopentamograph was suggestive of unilocular, well defined radiolucent lesion extending from maxillary right first premolar up to second molar. There was no displacement of adjacent teeth (Figure 3). Computed tomography scan on coronal view revealed well defined expansile unilocular heterogeneous mixed lesion on right maxilla causing opacification of maxillary sinus with slight elevation of orbital floor and mesial displacement of lateral nasal wall; foci of radiopacity in the center (Figure 4). On axial section well demarcated mixed radiolucent lesion seen on right maxilla with foci of radiopacity in the center and is extended more on superoinferior than buccolingual aspect (Figure 5). An incisional biopsy was performed and it was suggestive of ossifying fibroma. After the incisional biopsy patient underwent complete resection of the tumor.

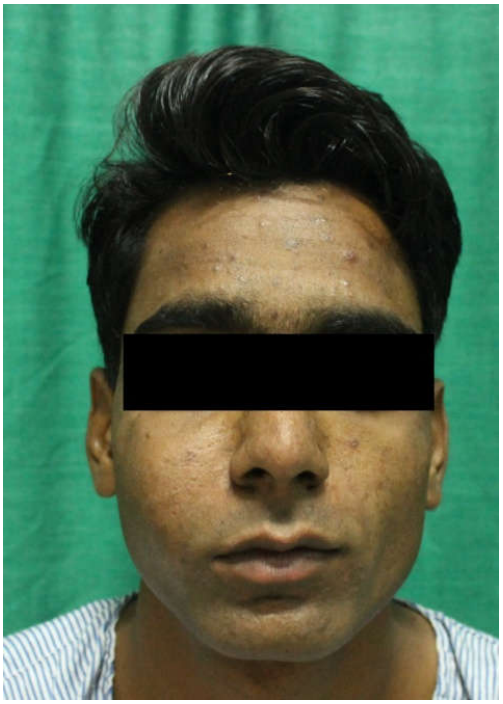

Figure 1. Extra oral photograph showing facial asymmetry

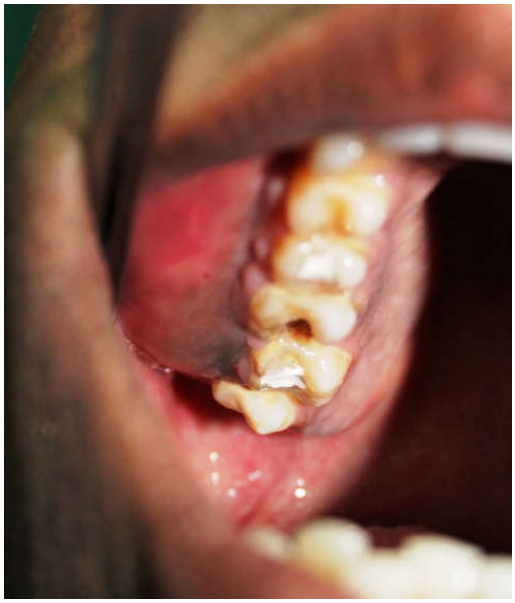

Figure 2. Intra oral photograph showinguniform, well circumscribed, oval swelling with normal overlying mucosa

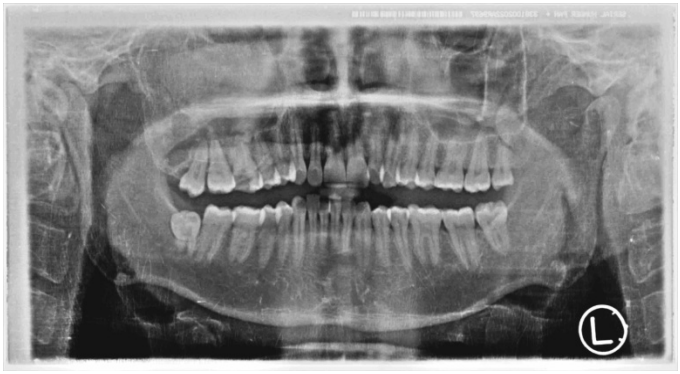

Figure 3. Orthopentamograph showing unilocular, well defined radiolucent lesion extending from maxillary right first premolar up to second molar

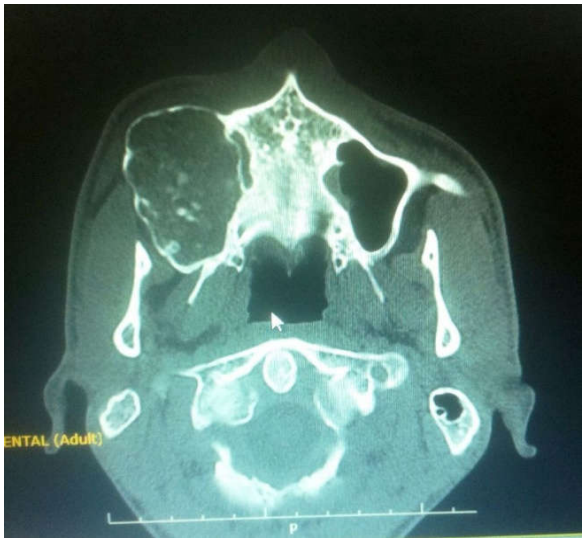

Figure 4. Computed tomography scan on coronal view revealed well defined expansile unilocular heterogeneous mixed lesion on right maxilla causing opacification of maxillary sinus with slight elevation of orbital floor and mesial displacement of lateral nasal wall foci of radiopacity in the center

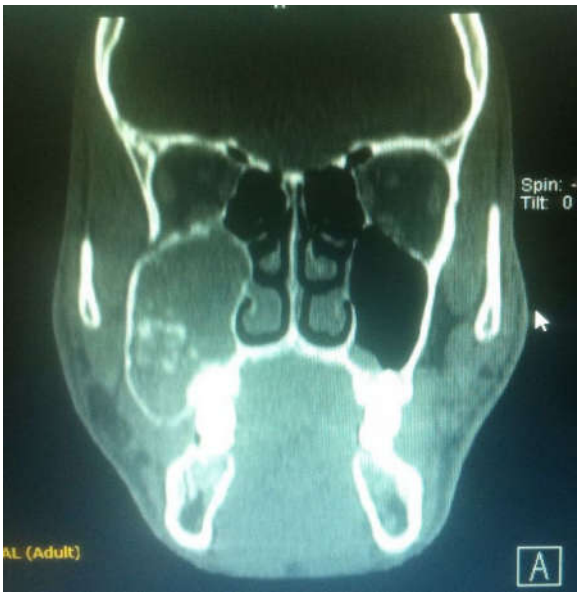

Figure 5. Computed tomography scan on axial section shows well demarcated mixed radiolucent lesion seen on right maxilla with foci of radiopacity in the center

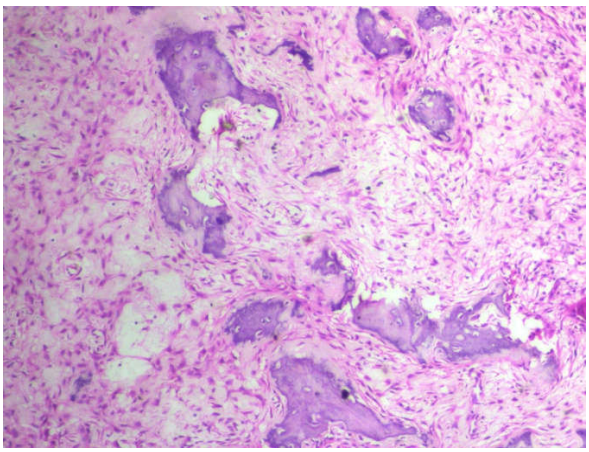

Figure 6. Photomicrograph showing fibrocellular connective tissue stroma. Areas of cementum like material with peripheral brush borders that blends into adjacent connective tissue stroma are evident (H. & E., 10X)

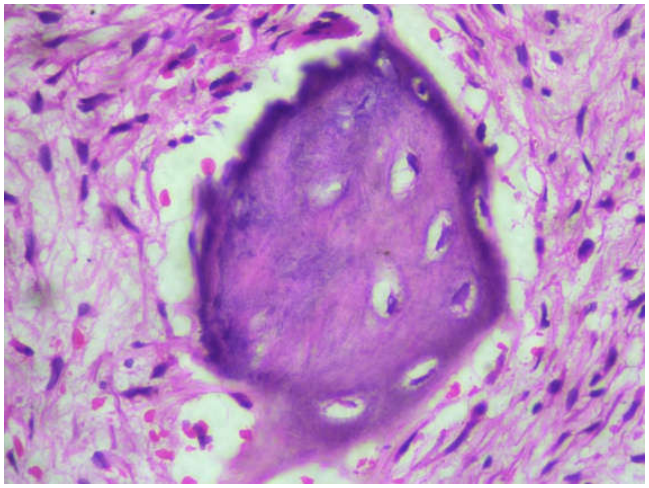

Figure 7. Photomicrograph showing fibrocellular connective tissue stroma with areas of cementum like material with peripheral brush borders (H. & E., 40X)

On grossing the specimen was well circumscribed mass, measuring about 2.5×2×2cm in size, firm in consistency, grayish white in color, irregular surface & borders. While slicing the mass was hard and gritty in consistency. Histopathological examination revealed a fibrocellular connective tissue stroma with areas of bone formation. Osteoblasts rimmed bony trabaculae were dispersed in highly cellular connective tissue stroma. In few areas spherules of cementum like material was demonstrated with peripheral brush borders that blends into adjacent connective tissue stroma. Multinucleated giant cells were seen in focal areas (Figure 6, 7). Based on the above histopathological features and correlating it with clinical and radiological findings a diagnosis of cemento-ossifying fibroma was made.

DISCUSSION

Cemento–ossifying fibroma is an odontogenic tumor which is uncommon in maxilla (Sarwar, 2010). It occurs in patients between 3rd-4th decade of life (Verma, 2011). When it arises in children it is usually of aggressive types. In our case patient was 23 yrs old. It has definite female predilection in a ratio of 5:1. It is common in mandible with 62 to 89% of patients (Reichart, 2004). Lesion in maxilla is usually more aggressive than mandible (Verma, 2011). Radiographically COF shows a well circumscribed, expansile lesion with scattered radiopaque foci in maxilla and mandible (Verma, 2011). Central COF is distinct from other benign fibro-osseous lesions of mandible and maxilla. It is thought to originate from periodontal ligament and consist of cementum, bone and fibrous tissue in varying amount. The name cemento-ossifying fibroma is used because it is a spectrum of fibro-osseous lesions (Verma 2011). WHO in 1971 used the unifying concept of cementomas where lesions containing cementum like tissues were group together thus forming complex group of lesions (Khan, 2011). Maxillary lesions present with a large mass indicating the capacity of tumor to expand freely within the maxillary sinus.[2] However the tumor is always well demarcated and circumscribed by surrounding bone, in contrast to true fibrous dysplasia (Sarwar, 2010). The histopathological examination showed a cellular fibroblastic tissue composed of proliferation of fibroblast, bony spicules and basophilic masses of cementum like tissues. The maxillary COF displays greater degree of immaturity as compared to mandibular lesions.

According to REED, the presence or absence of woven or lamellar bone on histopathological section can be used to differentiate the COF from other osseous lesions. Additionally COF may have areas of cementum appearing as psammoma bodies in a benign fibrous stroma (Sarwar, 2010). Thus the differential diagnosis of COF includes spectrum of lesions. The recommended treatment for COF includes complete excision of the tumor because of its expansile nature (Verma, 2011). This tumor is easy to resect because of well circumscribed borders. In our case complete excision of tumor was made. Recurrence has been reported in 28% of the cases with mandible and is unknown in maxilla, but it is thought to be higher in maxilla because of greater difficulty during a surgical removal (Kuta, 1995). Our patient showed no clinical evidence of recurrence after 1 year of post-surgical follow-up. Since the time elapsed from surgery is still short long term follow-up is required.

Conclusion

Cemento-ossifying fibromas come in spectrum of fibro-osseous lesions that can present separate clinical, radio-graphical, histological, entity. Variations in the terminologies in classification still causing a lot of confusion in diagnosis and treatment planning. Thus it is required to further study these lesions to determine their exact nature.

REFERENCES

Hamner, J.E. III, Scofield, H.H., Cornyn, J. 1968. Benign fibroosseous jaw lesions of periodontal membrane origin: an analysis of 249 cases. Cancer, 22(4):861–878

Hekmatnia, A., Ghazavi, A., Saboori, M., Mahzouni, P., Tayari, N., Hekmatnia, F. 2011. A case report of cemento-ossifying fibroma presenting as a mass of the ethmoid sinus. *J Res Med Sci.,* Feb; 16(2):224-8.

Khan, S.A., Sharma, N.K., Raj, V., Sethi, T. 2011. Ossifying fibroma of maxilla in a male child: Report of a case and review of the literature. *Natl J Maxillofac Surg.,* Jan- Jun; 2(1):73-9.

Kuta, A.J., Macdonald, W., Kauger, G.E. 1995. Central cemento-ossifying fibroma of the maxillary sinus: A review of six cases. *Am J Neuroradiol.,* 16:1282–6.

Neville, B.W., Damm, D.D., Allen, C.M., Bouquot, J.E. 3rd ed. Philadelphia: Saunders; 2009. Bone pathology. In, Oral and Maxillofacial Pathology; pp. 646-8.

Reichart, P.A., Philipsen, H.P. 2004. Odontogenic tumors and allied lesions. Illinois: Quintessence Publishing Co Ltd. 2004.

Sarita, M., Raj, K.A., Daya, S.M., Rohtas, K.Y. 2000. Cemento ossifying Fibroma of the maxilla. *Indian J Radiol Imaging.,* 10(2):103-4.

Sarwar, H.G., Jindal, M.K., Ahmad, S. 2010. A Case Report of Cemento-Ossifying Fibroma. *Journal of Maxillofacial & Oral Surgery.,* 9(2):178-181.

Sheikhi, M., Mosavat, F., Jalalian, F., Rashidipoor, R. 2013. Central cementifying fibroma of maxilla. Dent Res J (Isafahan). Jan- Feb; 10(1):122-5.

Verma, P., Rathore, P.K., Mrig, S., Pal, M., Sial, A. 2011. Cemento-Ossifying Fibroma of the Maxilla: A Case Report. *Indian Journal of Otolaryngology and Head & Neck Surgery.,* 63(Suppl 1):38-40.

****