

Ossifying Fibroma of Jaw : A Case Report on Treatment Modality

Sugam Neema¹, Rajesh Dhirawani², Sanyog Pathak³, Sumit Asrani⁴, Ankit Sharma⁵, Ajay Kumar⁶

*PG Resident¹,
Dept. of Oral Maxillofacial Surgery,
HDC&H,
Professor Emeritus²,
Dept. of Oral Maxillofacial Surgery,
HDC&H,
Professor & HOD³,
Dept. of Oral Maxillofacial Surgery,
HDC&H,
Reader⁴,
Dept. of Oral Maxillofacial Surgery,
HDC&H,
Consultant⁵,
JH&RC,
PG Resident⁶,
Dept. of Oral Maxillofacial Surgery,
HDC&H*

Abstract

Ossifying fibroma (OF) is classified and behaves like, a benign bone neoplasm and a type of fibro-osseous lesion (FOL) It can affect both mandible and the maxilla, particularly the mandible. This bone tumour consists of highly cellular, fibrous tissue that contains varied amounts of bone or cementum resembling calcified tissue. Present a 2 case of female patient having ossifying fibroma involving the maxilla in one case and mandible in another case, who presented to the department with a painless hard swelling. The lesion was treated by enucleation and curettage along with reconstruction of bone graft with PRF.

Keywords: ossifying fibroma, maxilla, mandible, bone graft, PRF

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. Ossifying fibroma (OF) is classified and behaves like, a benign bone neoplasm and type of fibro-osseous lesion (FOL)¹.

One thing that is common in all these lesions is that normal bone is replaced by connective tissue and fibroblasts; occasional foci of mineralisation is seen, with varying degrees of bone- or cementum-like tissue. The biological behaviour of these lesions ranges from benign and indolent to aggressive, inflammatory and neoplastic².

Ossifying fibromas occur most often in the posterior region of the mandible especially in the molar region and may also occur in the maxilla, commonly in the region of the canine fossa and in the area of the zygomatic arch. They are more common in females, and present greatest incidence in the third and fourth decades of life².

Ossifying fibroma is slow-growing and well-demarcated from the adjacent bone. Some lesions may grow to become massive, causing considerable aesthetic and functional deformities. Due to the presence of both bone and cementum-like tissue in ossifying fibromas, these lesions are described using the terms ossifying fibroma, cemento-ossifying fibroma, and cementifying fibroma³.

On radiographic examination, the edges of the lesion are usually well demarcated dependent on the maturity of the lesion, i.e.

purely radiolucent (initial stages); mixed with radiopaque foci or radiopaque, with an outline that depends on the form and quantity of the calcified material that is present. Histologically, ossifying fibroma is a well-circumscribed lesion comprising of fibroblastic stroma having lamellar bone and plexiform patterns in addition to acellular mineralized material⁴⁻⁵.

The aim of this study was to report on a clinical case of ossifying fibroma that was treated by means of enucleation & curettage and reconstruction with bone graft and PRF (platelet rich fibrin).

CASE REPORT

Case 1

A 33 year old female pt reported with a complain of swelling on rt upper jaw region since 6 month. On clinical examination facial asymmetry present on right side of face and swelling extending from ala of nose rt side upto the lateral canthal of eye anteroposteriorly from commissure of lip to the infraorbital region inferiorly 4cm x 2cm which firm non tender in consistency, no local rise in temperature Intraorally swelling extending from 13 region to 16, overlying mucosa appear normal, occlusal intact with normal mouth opening (**fig 1**)

Access this article online

Website:
www.healtalk.in

DOI:
[10.4880/zenodo.5820660](https://doi.org/10.4880/zenodo.5820660)

Quick Response Code:



How to cite this article: Neema Sugam et al.:
Ossifying Fibroma of Jaw : A Case Report on Treatment
Modality, HTAJ OCD.2022;May-June(5):30-33.

A CBCT scan was taken which showed the radiopaque specks lying in the lesion. (fig 2)

Aspiration biopsy of the lesion was negative therefore hemangioma and cyst were ruled out. The patient underwent an incisional biopsy under local anesthesia from the buccal vestibule which was reported as Ossifying Fibroma.

Surgical Technique

Under nasoendotracheal intubation, LA with adrenaline

1:200000 injected into right side of maxilla, crevicular incision taken to expose the tumour site. Tumour expose and excision done with extraction of 13,14,15, 16 (fig 3,4) followed by placement of corticocancellous bone from right iliac crest. The corticle bone adapted with 2mm x 10mm 2 screw and cancellous bone mixed with prf is placed in the defect (fig 5,6).

Closure done . After 10 month follow up bone is formed and 3 implant was placed (fig 7).



Fig.1 intraoral swelling on right maxilla



Fig 2 cbct reveals radiopaque specks mass in rt maxilla

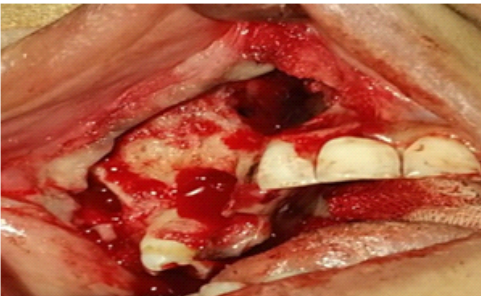


Fig 3. Incise and exposed lesion

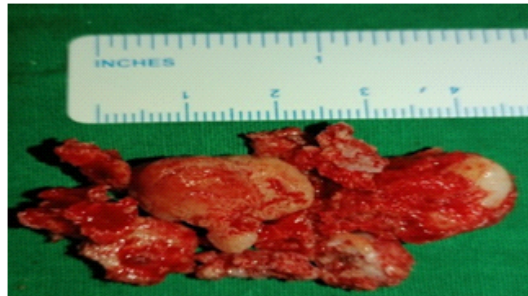


Fig4 . excised lesion

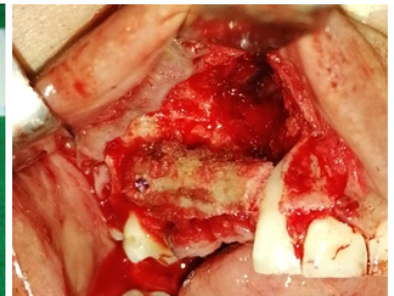


Fig 5. Corticocancellous Iliac crest placed in defect



Fig 6. bone graft with PRF placed



Fig7. 10 month follow with dental implant placement

Case 2

A 31year old female patient admitted with a complain of swelling in lower left jaw since 18 months. On clinical examination extraorally swelling present on left mandibular region involving left corner of mouth to inferior border of mandible superior-inferiorly. Non tender & firm in consistency

Intraorally bony hard diffuse swelling involving 33,34,35 region, vestibular obliteration present , TOP positive with 33,34,35 region (fig 8)

Opg reveals well defined radiolucency with sclerotic margin

(fig 9,10)

On incisional biopsy under local anesthesia from the buccal vestibule was reported as Ossifying Fibroma. (fig11)

Surgical Tecqnique

Under nasoendotracheal intubation la with adrenalin is administered. Left vestibular incision taken and exposed the lesion. Lesion was enucleated and curetted followed by extraction of 35 and prf was placed & closure done in layers(12,130)



Fig8. preop intraoral swelling pt on left mandibular region



Fig9. opg reveals radiolucency with radiopaque foci

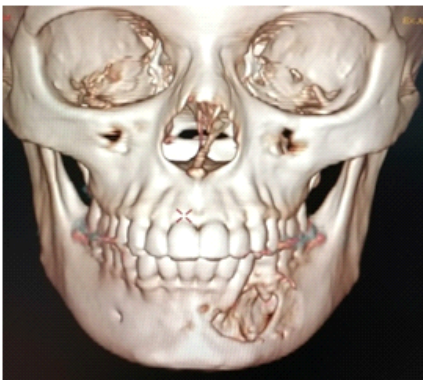


Fig 10. 3d ct showing corticle perforation with osteolytic changes

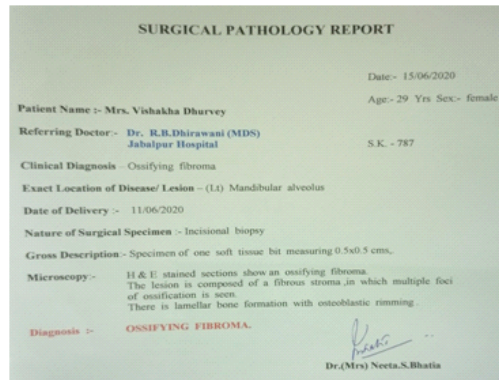


Fig11. incisional biopsy report

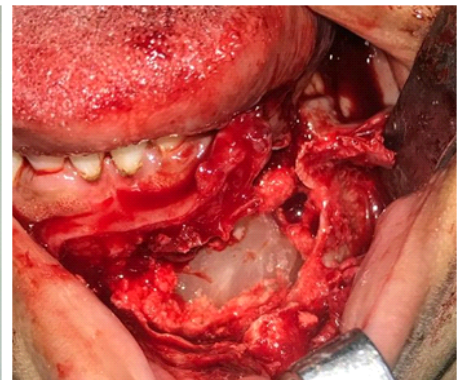


Fig12. incision given and lesion exposed

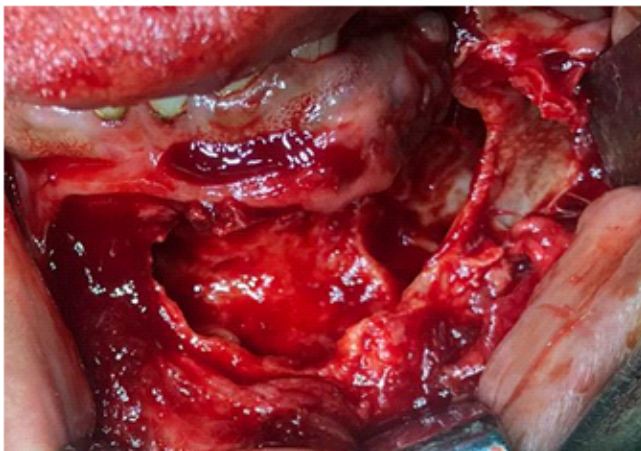


Fig13.enucleation and curettage done

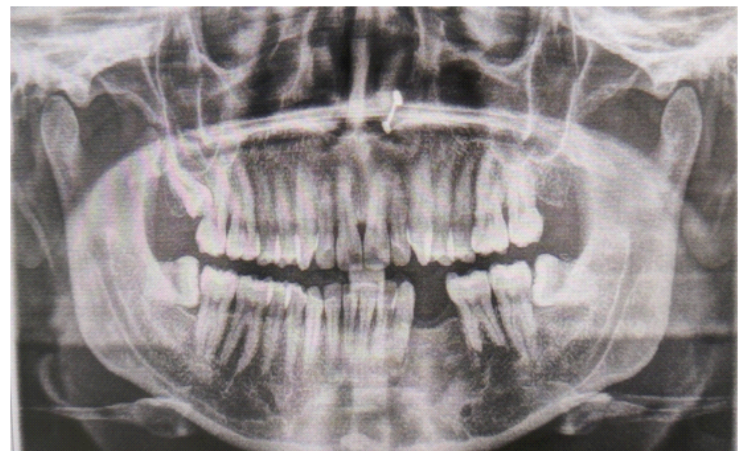


Fig14. Follow up 6 month

DISCUSSION

There are different classification but WHO classified (2005) divides into : fibrous dysplasia, ossifying fibroma, osseous dysplasia, central giant cell granuloma, cherubism³

Ossifying fibromas are formed from pluripotent mesenchymal cells that originate from the periodontal ligament. The cells are capable of forming bone tissue and cementum. Previous tooth extraction or periodontitis might provide a stimulus, or that the formation of ossifying fibromas might be simply linked to a disturbance of bone maturation of congenital origin. Ossifying fibromas are more common in females. They occur predominantly between the third and fourth decades of life. Small lesions are asymptomatic and, as they grow and expand, they cause tumefaction that is pain-free, despite significant facial

asymmetry. Their growth is relatively slow. Pain and paresthesia are only rarely associated with ossifying fibromas. Mobility and root reabsorption of the teeth involved are frequent findings and root divergence can be found in 17% of the cases⁵⁻⁶.

The patient presented facial asymmetry and did not report having any paresthesia or pain. In most cases, the lesions are radiolucent with radiopaque foci, depending on the quantity of tissue calcification, which gives rise to varying degrees of radiopacity. Aggressive lesions may show loss of the limits at the edges, similar to perforations in cortical bone⁷⁻⁹.

In this case report clinical feature, radiographic and tomographic images, was observed that the cortical bones had ruptured, radiolucent with radiopaque foci appears. Thus, the final diagnosis is made through a histopathological examination i.e ossifying fibroma. treatment planned is enucleation &

curettage along with placement of bone graft with PRF for better healing and follow up revealed satisfactorily normal healing and dental implant was placed in one case.

CONCLUSION

The importance of making an overall assessment of such patients needs to be emphasized and proper treatment planned should be made and reconstruction is also necessary for functional and aesthetic appearance. As reported in literature, the rate of recurrence is not very high but long term periodic follow up is warranted.

REFERENCES

1. Andrade, M. D., Silva-Sousa, Y. T. C., Marques, M. F. T., Pontual, M. L. D. A., Ramos-Perez, F. M. D. M., & Perez, D. E. D. C. (2013). Ossifying fibroma of the jaws: a clinicopathological case series study. *Brazilian dental journal*, 24, 662-666.
2. Eversole, R., Su, L., & ElMofty, S. (2008). Benign fibro-osseous lesions of the craniofacial complex a review. *Head and neck pathology*, 2(3), 177-202.
3. Barnes, L., Eveson, J., Reichart, P., & Sidransky, D. (2005). World Health Organization classification of tumours: pathology and genetics of head and neck tumours.
4. Silveira, D. T. D., Cardoso, F. O., Silva, B. J. A., Cardoso, C. A., & Manzi, F. R. (2016). Ossifying fibroma: report on a clinical case, with the imaging and histopathological diagnosis made and treatment administered. *Revista brasileira de ortopedia*, 51, 100-104.
5. Liu, Y., Wang, H., You, M., Yang, Z., Miao, J., Shimizutani, K., & Koseki, T. (2010). Ossifying fibromas of the jaw bone: 20 cases. *Dentomaxillofacial Radiology*, 39(1), 57-63.
6. Sreenivasan, B. S., Edward, J., & Sunil, S. (2010). Central ossifying fibroma of mandible-A case report. *Oral Maxillofac Pathol J*, 1(1), 1-4.
7. Keles, B., Duran, M., Uyar, Y., Azimov, A., Demirkan, A., & Esen, H. H. (2010). Juvenile ossifying fibroma of the mandible: A case report. *Journal of oral & maxillofacial research*, 1(2).
8. Kharsan, V., Madan, R. S., Rathod, P., Balani, A., Tiwari, S., & Sharma, S. (2018). Large ossifying fibroma of jaw bone: a rare case report. *The Pan African Medical Journal*, 30.
9. Dominguet, M. H. L., Dominguet, A. A. S., Matos, B. H., Dominguet, P. R., León, J. E., & Oliveira, L. R. (2014). Extensive presentation of central ossifying fibroma treated with conservative surgical excision. *Case reports in Dentistry*, 2014.