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Case Report

Ossifying fibroma of maxilla – A pediatric case

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ABSTRACT

Background: Ossifying fibroma (OF) is classified as, and behaves like, a benign bone neoplasm. It is often considered to be 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 case is an unusual report of ossifying fibroma involving the left side of maxilla in a 13-year old male patient, who presented to the department with a painless hard swelling. The lesion was treated by surgical enucleation and curettage.
Materials and Methods: Surgical enucleation and curettage was performed.
Results: Healing was uneventful, patient has been kept on a regular follow-up regimen.
Conclusions: The case report and treatment of an unusual case of Ossifying fibroma in the maxilla of a paediatric patient has been described. Based on our experience, we suggest that proper correlation of the clinical, radiological and histological features is necessary to establish a definitive diagnosis, as well as for proper surgical intervention. As reported in the literature, the rate of recurrence is not very high, but long term periodic follow-up is warranted.

1. Introduction

Ossifying fibroma (OF) is a benign bone neoplasm. It is repeatedly thought to be a type of fibro-osseous lesion (FOL). It can affect both the jaws. However, it is more commonly seen in the mandible with an incidence of 70-90% of the cases.[1–3] It consists of highly cellular, fibrous tissue that encloses unpredictable amounts of calcified tissue which resembles bone, cementum or both.[4] It is frequently seen in the third as well as fourth decades of life. In 1968, Hamner et al.[5] studied and categorised 249 cases of fibro-osseous jaw lesions which had periodontal membrane origin. In 1973, Waldron and Giansanti described 65 cases and established that this group of lesions was best considered as a range of processes that arises from cells in the periodontal ligament. In 1985, Eversole et al. defined the radiographic features of central ossifying fibroma, and described two chief radiographic patterns:- expansile unilocular radiolucent arrangement and multilocular arrangement. The recurrence rate is usually low.[1,6]

2. Case Report

A 13 year-old male patient, was brought by his parents with the principal complaint of swelling in left upper jaw since 2 years. The patient was apparently alright 2 years back when suddenly his mother started noticing slight swelling which was seen on left side of his face. The swelling was of peanut size initially. The swelling enlarged in size rapidly to the present size. The swelling was not accompanied by pain or difficulty in mastication. The patient had no history of trauma. The patient had no history of any recent hospitalization or did not have any infectious disease in the

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last 2 years.

On extraoral examination, the face was asymmetrical. Swelling was noted over the left side. On intraoral inspection, a diffuse hard swelling was noted labially and buccally in the second quadrant which was continuous with maxilla and was non-tender and non-fluctuant. Teeth present in the second quadrant were 21, 63, 25, 26, 27, 26 which were carious; 23, 24, 28 were impacted; 22 was missing. The provisional diagnosis was a fibro-osseous lesion of maxilla based on the history and clinical examination. CBCT was done for the patient which showed a radiopaque lesion extending from 63 to 26 buccally and was continuous with maxillary bone. Incisional biopsy was done, the result came back as ossifying fibroma. All routine investigations were done and the patient was planned for surgical enucleation and curettage.

Under general anesthesia, under all aseptic precautions, the patient was intubated orally. Throat pack was inserted. Scrubbing, draping and painting was done. 2% lignocaine with adrenaline infiltration was done. Anterior releasing incision was taken distal to 13 with crevicular incision extending from 13 to 26 with a 15 No. blade. A full thickness triangular mucoperiosteal flap was reflected. The lesion was exposed. It was completely separated from the overlying tissue. The entire boundary of the lesion was marked with chisel and mallet. Its separation from the maxillary alveolus was completed with 702 straight fissure bur. The bony hard lesion was surgically removed and sent for histopathological examination. 23 was identified and preserved. 63 was extracted. Complete curettage was done. The surgical site was irrigated thoroughly with normal saline and betadine solution. The flap was closed with non-resorbable simple interrupted sutures. Pressure pack was placed on the surgical site. Throat pack was removed. The patient was extubated. The procedure went uneventful. The patient was kept on intravenous antibiotics for 3 days postoperatively as per pediatrician's recommendations. The patient is recalled regularly.

Fig. 1: Asymmetry seen on left side

Fig. 2: Swelling over left side of maxilla buccally

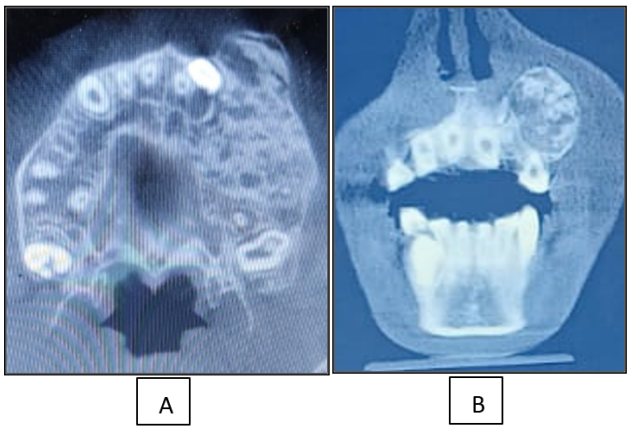

Fig. 3: A, B: Buccal cortical expansion noted

3. Discussion

In 1971, World Health Organization (WHO) categorised four types of cementum-including lesions; fibrous dysplasia, ossifying fibroma, cementifying fibroma and cement- ossifying fibroma. Based on the second WHO classification, benign fibro-osseous lesions in the oral and maxillofacial region were separated in two discrete groups, osteogenic neoplasm and non-neoplastic bone lesions in which cementifying ossifying fibroma fitted to the previous group. However, the word "cementifying ossifying fibroma" was changed to ossifying fibroma in the current classification in 2005.[1,7,8]

The source of Ossifying Fibroma is believed to be the periodontal membrane. Few OFs comprise predominantly

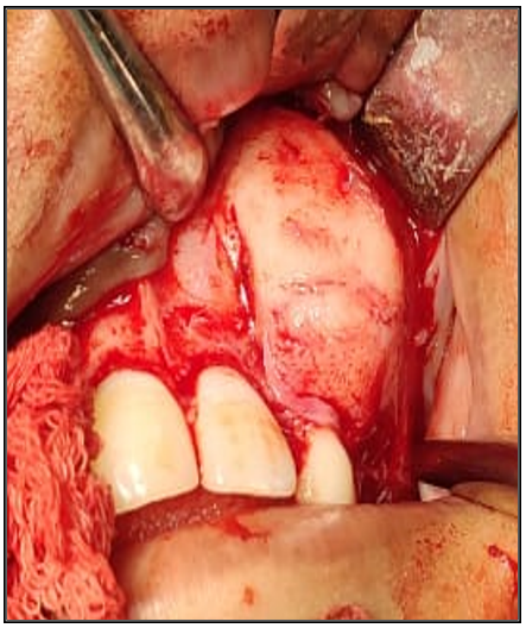

Fig. 4: Intraop – Exposure of the lesion

Fig. 5: Excised tissue sent for histopathological examination

Fig. 6: Closure done with 3-0 vicryl sutures

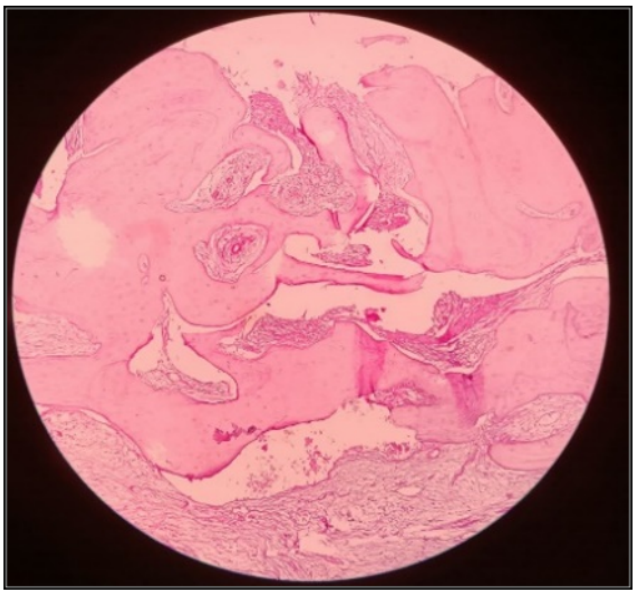

Fig. 7: Histopathological feature

cementum-like calcifications and the rest show just bony material, but a combination of the two categories of calcification is frequently seen in a solitary lesion.[4] There is comprehensive uniformity of belief with location of these lesions. The bulk of lesions (76-100%) are located in the posterior mandible. The premolar-molar region is the most common location.[9] It is crucial to know that Ossifying Fibroma of the jaw bone has more predilection for females.

Radiographically, these tumours are seen with variable arrangements on the basis of the amount of mineralization. Based on the volume of calcified material formed in the tumour, it may seem as unilocular or multilocular radiopaque image or a radiolucency with varied density of opacified material. In some cases, it is related with

root resorption. It may also be related with displacement of neighbouring teeth.[1] The radiographic features have two simple patterns: cystic lesion (might be unicystic or multicystic) and mixed-density lesion. The radiographic boundaries of the tumour seem comparatively smooth, well defined and corticated. The outline is regular. The lesion has a tendency to be concentric in the medullary part of the bone with noticeable expansion identical in all directions. A noteworthy fact is that the outer cortical plate, even if displaced and thinned out, stays intact.

Ossifying Fibroma necessitates radical surgery as it has propensity for recurrence and likelihood of conversion to malignancy. It is well-known that most Ossifying Fibromas, do not recur after thorough excision.[4,10]

4. Conclusion

We described and managed a rare case of Ossifying Fibroma in a pediatric patient in maxilla. Based on our knowledge and experience, we advise that proper association of the clinical, radiological and histological features is needed to formulate a final diagnosis, and also for appropriate invasive intervention. As described in the literature, the recurrence rate is low, nonetheless regular follow-up is warranted for a long duration.

5. Source of Funding

None declared.

6. Conflict of Interest

None.

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