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Ossifying Fibroma of the Anteriormaxilla: A Case Report

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Abstract: ***Ossifying fibroma is a benign tumor of connective tissue that resembles bone tissue, cementum or both that undergo a mineralization process with clear boundaries and usually no capsule. This tumor are generally found at mandible, only 7 % appears at maxilla and it may develop asymmetrical face appearance. Surgical management areenucleation, marginal or partial resection, or composite resection.This article reported a management ofunusual occurrence of ossifying fibroma at the anterior of maxilla. A 20 years old male patient came with complaint of a gradual growth on his palate since 1 year before admission. Histopathology examination showed a calcifying fibroma. The patient treated withpartial resection and placement of surgical obturator. 5 months follow up revealed no recurrence. Aggressive treatment of ossifying fibroma found to be effective but recurrence is unpredictable, therefore follow-up observation should be done over a long period of time.***

Keywords: Maxilla, ossifying fibroma, partial resection

1. Introduction

Ossifying fibroma of the jaw is benign, uncommon, monostotic well defined usually unilocular but occasionally multilocularfibro-osseous lesions of the jaw that are characterised by replacement of normal bone by fibro tissue containing a newly formed mineralized product. It is arising from periodontal ligament with calcified tissue resembling one. Other commonly included among the fibro-osseous lesions of the jaw are fibro dysplasia, focal cemento-osseous dysplasia, periapical cemento-osseous dysplasia and florid cemento-osseous dysplasia. Ossifying fibromas often occur in patients in the second to fourth decade of life with a definite female predilection but it may also affect children and adolescent. Mandibleis involved far more often than the maxilla, especially the premolar and molar region, only 7 % appears at maxilla and it may develop asymmetrical face appearance.[1,2,3]

Etiology ossifying fibroma still not be known with certainty, but according to experts suspected etiology related to chronic local irritation, reparative reaction associated with trauma, impacted teeth, and the rest of the epithelium Mallasez. The definitive diagnosis is based on histological examination with the identification of cellular connective tissue and the focal presence of bone or calcifications. Surgical management includes aggressive enucleation (with or without a curettage), marginal or partial resection and composite resection.[4,5,6]

2. Case Report

A 20 years old male patient reported to our department with complaint of a gradual growth on his palate since 1 year before admission. General physical examination did not reveal any abnormalities. There was facial asymmetry with swelling on the right cheek. The skin appears normal (Fig 1). On intra oral examination, a mass at left maxillawith 4 x 3 x 2 cm in size extending anteroposteriorly from lateral incisor to first molar region. Overlying tissue was nontender, on palpation there was no pain, fibrous and hard consistency, smooth surface, fixated, well defined border and same color with surounding tissue on the palate region but a reddish was noticed at the labial mucosa (Fig. 2).Oral hygiene was fair with no limited mouth opening. Radiographs showed a radioopaque appearance at right maxilla region with destruction of the medial wall of right maxillary sinus (Fig 3). Incisional biopsy was performed and histopathology examination revealed a calcifying fibromaPartial resection and installation of obturator was chosen as definitive therapy for the lession.

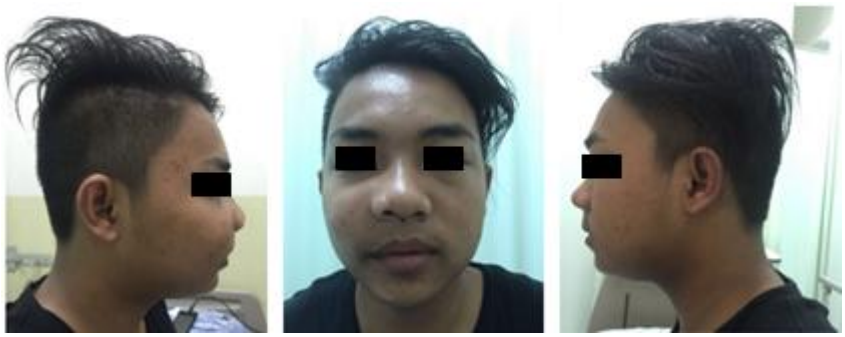

Figure 1: Pre operative facial profile showed a slight swelling at right facial region

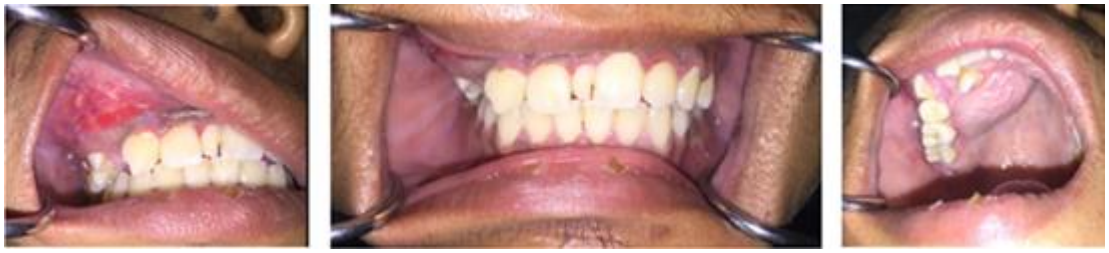

Figure 2: Intra oral photographs

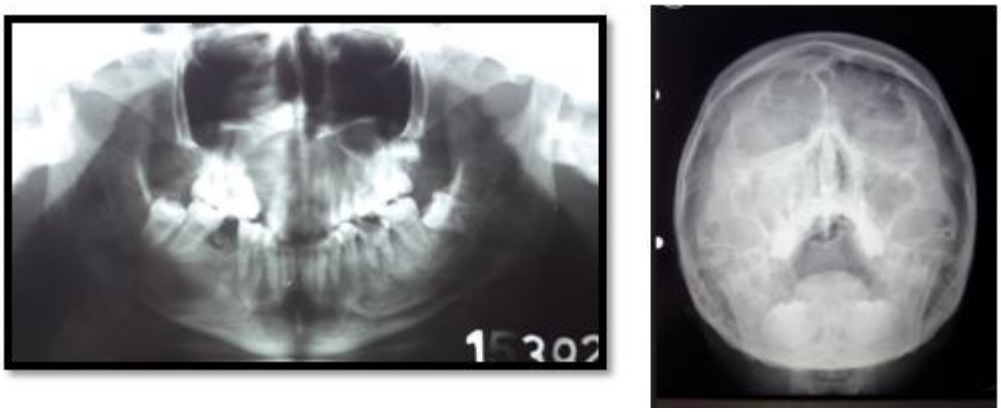

Figure 3: OPG and water's x-ray showed radioopacity with displacement of tooth and destruction of maxilla bone extended to right maxillary sinus

The surgical procedure was performed undergeneral anesthesia. Extra-oral approach with Weber-Fergusson incision was chosen to achieve good access to removing the whole tumor. Partial resection was performed to remove the entiretumor along with involved teeth to avoid recurrence (Fig.4). Surgical obturator then placed to maintain the shape of the jaw followed with post operatif care.

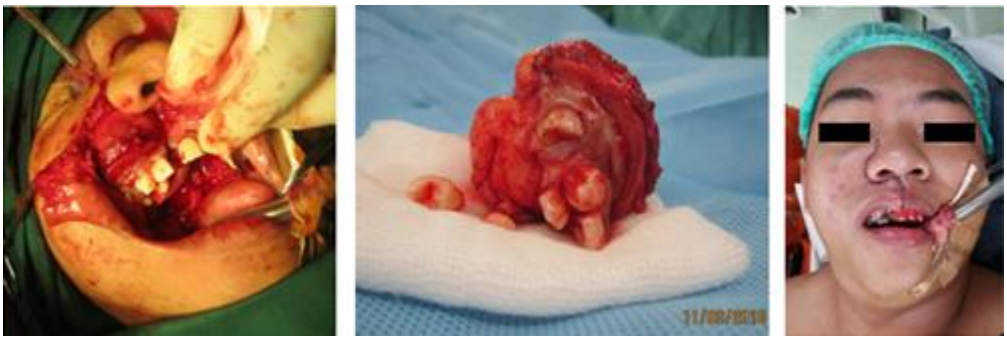

Figure 4: Intra operatif findings

Histopathologic examination showed oval shape fibrosit cells with spindle as a sign of hyperplastic growth. It is solidifies and the core within normal limits. Trabeculars bone was noticed with appearance of "psammoma like bodies". No evidence of malignancy. Histoplathological revealed as ossifying fibroma (Fig.5). At 5 months follow up after surgery, facial profile showed a slight asymmetry (Fig 6). Intra oral examination showed a good healing and good vascularization. Oral hygiene was good maintained and acrylic obturator was fit on place (Fig 7). Clinical and radiological examination showed no sign of recurrence (Fig. 8).

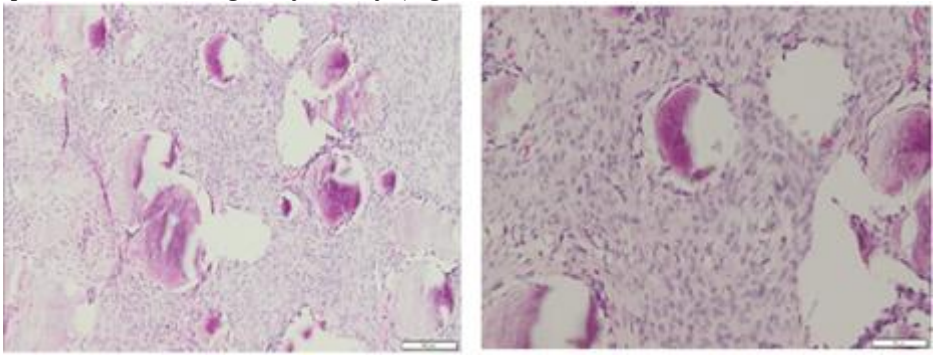

Figure 5: Histopathology appearance

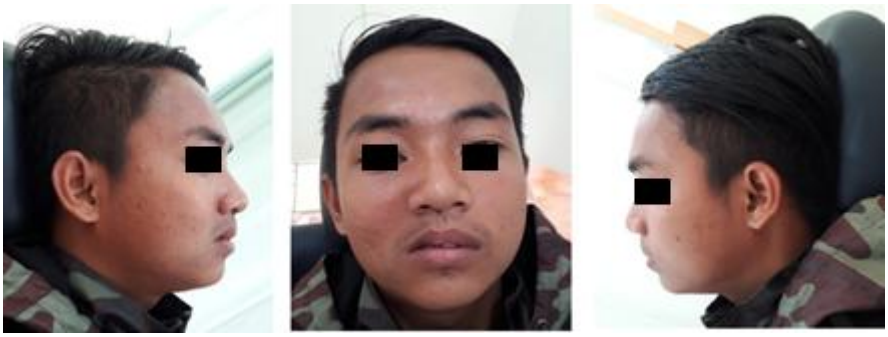

Figure 6: Facial profile on 5 months follow up

Figure 7: Intra oral photographs on 5 months follow up

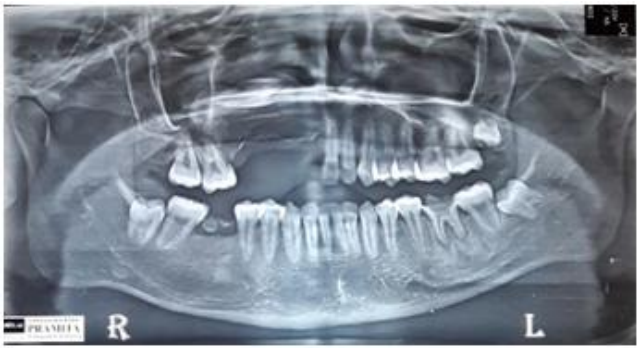

Figure 8: OPG on 5 months follow up

3. Discussion

Ossifying fibromas are a distinctfrom of benign fibroosseous lesions of the mandibleand maxilla. They are thought to arise from theperiodontal ligament and are composed of varyingamounts of cementum, bone, and fibrous tissue. Ossifying fibroma was first described by Menzelas a benign primary bone tumor that most often occurs in the jaw. Montgomery in1927 coined the term "Ossifying fibroma" as it is known today. Ossifying fibroma is well-circumscribed, slow growing, and sharply defined margins with a radiolucent peripheral component. The etiology of ossifying fibroma remains unknown, and it is considered a tumor arising from periodontal.[7,8,9]

The disorder is more common in women than men with a ratio of 4: 1, based on the age of the decade generally occurs in two to four decades and tend to be variable, the tendency is more common in the third or fourth decade. Mandible is the location that is most common in this disorder. Premolar and molar region is often affected. Su et al reported 75 cases of ossifying fibroma, 52 cases (70%) are located in mandible, with 43% between the region and the posterior mandibular rami, 22% are located in the posterior maxillaregion. Lumps on the bone that extends to buccal and or lingual is the most common clinical sign in ossifying fibroma.[9,10,11]

Ossifying fibroma most commonly involves mandible and extension of tumor mass into the ramus of the mandible and involvement of the inferior border may lead paresthesia of the inferior alveolar nerve. Involvement of maxilla is seldom (about 7%) and causes cortical expansion with obliteration of the gingivobuccal sulcus, extension into the nasal cavity, and if untreated could expand into orbital floor and leads to epistaxis and epiphora. Radiograph appears as an opaque areas that have destruction right maxillary medial wall of the right maxillary sinus with clear and firm boundaries.The radiologic differential diagnosis of ossifying fibroma necessarily includes the radiolucent lesions and lesions that contain radiopacities within well defined radiolucent mass depending on the degree of maturation at the time of presentation. Keeping the present case in view, lesions like Fibrous dysplasia, Chondrosarcoma, Osteosarcoma, Benign cementoblastoma, Pindborg tumor, Gorlin cyst and PCOD may be included under differential diagnosis [9,10,11]

Treatment of choice in this case waspartial resection. These lesions are aggressive therefor needs an aggressive treatment as wellto obviate local recurrence. Surgical resectionneeds to down to the underlying bone for extensive clearing of the base of the lesion Surgical treatment options includes ennucleation with or without curettage, surgical resection, andcomposite resection. Selection of type of therapy depends on the size of the lesion and its nature. Removal of local factors or irritants is also required.Prognosis is excellent and recurrence after tumor removal are rare. Some literature report rates of recurrences of 14-38% could be due to incomplete removal.Liu et al. observed that recurrence is unpredictable, ranging from 6 months to 7 years after surgery. Therefore, there should be follow-up observation over a long period of at least 10 years. In this case, 5 months after surgery clinical and radiological examination results does not seem any recurrence.[8,11,12]

4. Conclusion

The ossifying fibroma of the maxilla is an uncommon benign tumor. Facial asymmetry and dental occlusal problems are often the first symptoms of these lesions. The lesion caninvolve all the sinus walls, the hard palate, andthe nasal septum. Aggressive treatment of ossifying fibroma found to be effective but recurrence is unpredictable, therefore follow-up observation should be done over a long period of time.

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