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Ossifying Fibroma of Maxilla: A Diagnostic Engima

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Case Report
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ABSTRACT

Fibro-osseous lesions are a diverse group of processes that are characterized by the replacement of normal bone with fibrous tissue containing a newly formed mineralized product. Ossifying fibroma is a rare entity among the other type of fibro-osseous lesions which is a slow-growing, well-circumscribed benign tumor of bone that probably arise from the cells of the periodontal ligament. In the present case, the report discusses an 18-year-old female patient who reported painless swelling in the upper left back tooth with misleading clinical features.

Keywords: Fibro-osseous Lesion, Mandible, Ossifying Fibroma, Radiography.

Introduction

Ossifying fibroma is a fibro-osseous lesion arising from a periodontal membrane which is a non-destructive, deforming, slow-growing benign fibro-osseous tumor and is usually found in the craniofacial bones.[1] Mandible is the most common site of occurrence followed by orbit, paranasal sinuses, and maxilla.[2]

The specific terminology, ossifying fibroma was first coined by Montgomery in 1927 as he correlated the radiographic features of sharp delineation of the osseous lesion from the surrounding normal bone and microscopic elements of fibroblastic and osteogenic elements but Menzel in 1872 described the lesion.[3] The

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lesion is mostly asymptomatic but growth leads to swelling with displacement and mobility of teeth in the affected region.[4]

Case Report

An 18-year-old female patient reported to the department of oral medicine and radiology with the chief complaint of swelling in the upper left back teeth region for the one-month duration which was non-progressive and asymptomatic. the patient was moderately built and nourished. The swelling started with the peanut in size gradually increasing and attained the present stage. Extraoral swelling is seen in the upper left back region extending from 1 cm from the ala of the nose to the posterior part of the maxillary region. No infraorbital edema was noticed with no secondary changes of swelling with mild tenderness on palpation. Intraoral examination revealed a diffuse swelling extending from the lateral incisor to the second molar region of the left side involving the buccal vestibular region and maxillary region. No mobility was seen with all the teeth. The patient was subjected to a radiographic investigation such as OPG. Panoramic radiographs revealed diffuse radiopacity involving the left maxillary sinus with loss of medial border. The Posterior border of the sinus appears to be normal complete haziness is noted in the left maxillary region and the lower border of the sinus appears to be intact, change in the trabecular pattern of bone is noted in the region of 24 to 26 region. On the basis of clinical and radiographic findings, ossifying fibroma was considered. Differential diagnoses to be considered ad fibrous dysplasia and cemental osseous dysplasia.

Figure1. Shows obliteration of buccal vestibule

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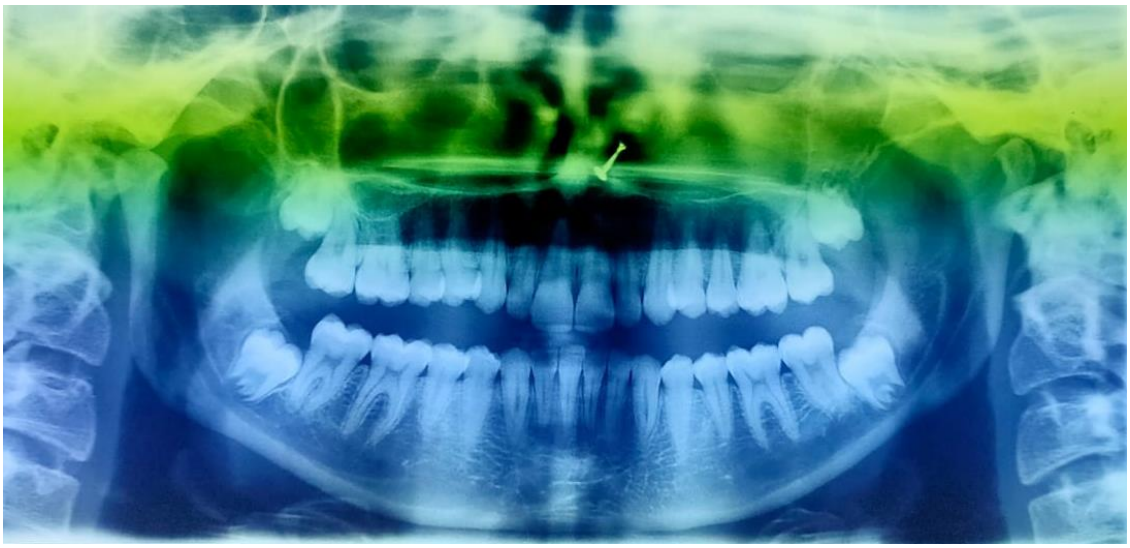

Figure 2: Diffuse radiopacity involving the left maxillary region

Discussion

Fibro-osseous lesions are a set of conditions in which normal bone is replaced by fibrous tissue including a newly produced mineralized product. In 1927, Montgomery invented the concept. As a result, ossifying fibroma was classified as a type of fibro-osseous lesion with expansile, clearly defined edges, and a radiolucent peripheral component.[5]

Eversole et al. recently described different radiographic aspects of ossifying fibroma, categorizing them based on radiolucency and radiopacity, superimposition on teeth, multilocularity, and radiographic aggressiveness.[6]

Women in their second to fourth decades of life (Eversole et al 1985) are most affected by ossifying fibromas with the mandibular molar- premolar region being the most common site of occurrence. In our case, the age of the patient was 18 years which reported the swelling in the maxillary region.[7]

Around 30% of cases occur in the maxilla but when the tumor arises in children, it is found to be more aggressive and is referred to as juvenile aggressive ossifying fibroma. Central ossifying fibroma is asymptomatic and slow-growing till they cause expansion. When the tumor arises in the maxillary sinus it expands considerably due to the wide-area available for its progression.[8] In our case it was reported that there was no expansion in relation to the maxillary region.

Radiographically the early lesion is radiolucent on the radiograph but as the lesion progresses radiopaque masses may consolidate to create enormous radiopaque foci surrounded by a radiolucent perimeter as the tumour expands which was the same radiographical picture in our case where a central opacification was surrounded by radiolucent rimming. In 53 percent of cases, the ossifying fibroma has a radiolucent appearance, 7% has a sclerotic radiodense, and 40% have a mixed or mottled appearance.[9]

Clinically these appear to be asymptomatic initially with slow-growing intrabony lesions. Lesions in the mandible Ossifying fibroma are distinguished from sarcoma and carcinomas by their well-defined borders.

Fibrous dysplasia has ill-defined borders and is usually not covered by a soft tissue capsule with a diffuse lamina dura whereas ossifying fibroma has well-defined margins that are encapsulated.[10]

Larger lesions in the maxillary region involve nasal the septum, infraorbital foramen, and orbital floor and it may need bone grafting and surgical excision as the treatment of choice for larger lesions and enucleation is the treatment of choice for the smaller lesion.

Conclusion

Ossifying fibroma is routinely diagnosed on the basis of radiographic features but sometimes an atypical picture leads to a misleading diagnosis. The lesion involving the maxillary region is less. Therefore, knowledge of radiology is essential and that is important in the diagnosis of the region.

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