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OSSIFYING FIBROMA OF MANDIBLE- A CASE REPORT

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ABSTRACT:
Ossifying fibroma was first described by Menzel as cemento ossifying fibroma, later the world health organization classified the cementum producing lesions into four distinct types namely ossifying fibroma, fibrous dysplasia, cemento ossifying fibroma, cementifying fibroma. Ossifying fibroma is a benign bone neoplasm often considered to be the type of fibro-osseous lesion can affect both maxilla and mandible, more frequently seen in mandible with an incidence of 70 to 90 percent of the cases. Trauma, irritation, caused by plaque and other etiologies remains the cause of ossifying fibroma, but the exact cause is still unknown. This paper describes a case of Ossifying fibroma of left mandible of a 23 years old male patient.

Keywords: Ossifying fibroma, Neoplasm, Mandible, Trauma

INTRODUCTION:

The benign proliferation of spindle cells with variable amounts of woven bone are called fibro-osseous lesion of maxillofacial bones.[1] Many distinct entities have been postulated on the basis of radiographic and histologic characteristics. However, by classifying lesions according to their radiographic presentation, the complex nomenclature can be clarified because there is a significant amount of overlap in the histologic features of different lesions. All three of these neoplasms can be classified as fibrous dysplasia(a), ossifying fibroma(B), or osseous dysplasia. The single characteristic that distinguishes this entity which share overlapping histologic feature is their development pattern as seen on conventional radiographs or CT scans of head and face.[2] An uncommon, benign, genuine neoplasm with growth potential, osseous fibroma more commonly affects the mandible than maxilla.

The premolar and molar regions of mandible are the most often affected sites, with the preference for female in the third and fourth decade of life.[3] The mature bones in these lesions are replaced by a highly cellular fibrous tissue that contains varying levels of bony trabeculae and/or cementum like spherules. On radiography, they appear well defined and unilocular. The majority of them are mixed lucent and opaque, and some have sclerotic borders and visible root divergence.[4] According to histology, the majority of lesions are clearly separated from the nearby bone and are not encapsulated. Therefore, histological, radiological and surgical finding aid in differentiating osseous fibroma from other benign fibro osseous tumours.[5]

CASE REPORT:

A 23 years old male reported to the outpatient department with a chief complaint of pain and swelling in left lower front tooth region for past 3 months. Patient had a history of pain in lower front tooth region and suddenly developed a swelling in the same site, and had been increasing gradually in size. The family History revealed no genetic conditions. Extraoral examination showed a large swelling at the left mandibular region which is hard on palpation. No skin colour change causing a facial asymmetry were seen. Cervical lymph nodes areas were intact and also facial sensibility was normal. Intraoral examination revealed a swelling of size approximately 2×2cm over then lower left labial vestibule extending anteriorly till labial mucosa in relation to 33, posteriorly till labial mucosa in relation to 35, medially into the labial vestibule and laterally over the lip and buccal mucosa. It was rubbery greyish pink soft tissue growth. On palpating the swelling was hard in consistency, fluctuating with the presence of tenderness. No bleeding and secondary changes over the swelling were observed. Orthopantomogram evaluation showed a radiopacity at the centre of the soft tissue shadow between 33,34 region.

FIG 1: SWELLING IN THE LEFT JAW

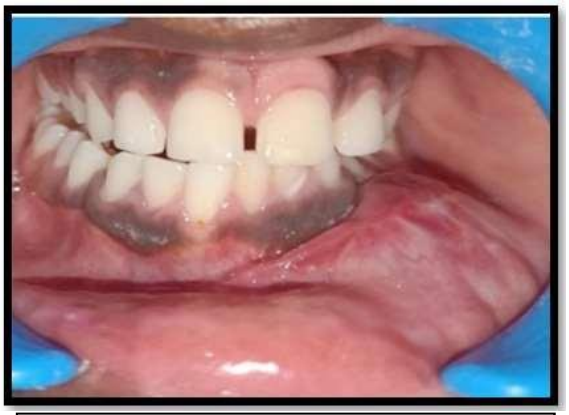

FIG 2: INTRAORAL SWELLING

Under general anaesthesia excision of the tumour with segmental mandibular recession and reconstruction of the mandible was done. The specimen was send to histopathological examination measuring 0.7×0.5×0.5cms. The results shown a circumscribed fibro-osseous neoplasm composed of predominantly short fascicles, whorls and storiform pattern of spindle shaped fibroblasts with moderate eosinophilic cytoplasm and uniform elongated regular nuclei without any nuclear atypia or increased mitotic activity, The spindle shaped cells are separated by varied proportions of unmineralised osteoid to mineralised trabecular bone many of which exhibit osteoblastic rimming along with scattered osteoclastic giant cell. There is evidence of increased vascularity throughout the lesion without any areas of necrosis.

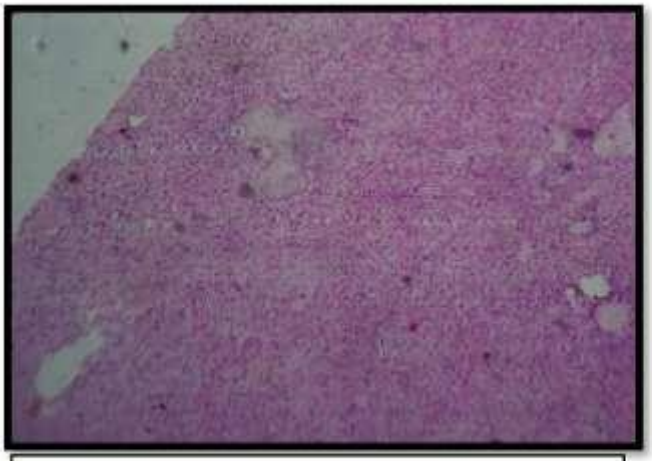

FIG 3A: Section shows fibro-osseous neoplasm composed of predominantly short fascicles, whorls and storiform pattern of spindle shaped fibroblasts.

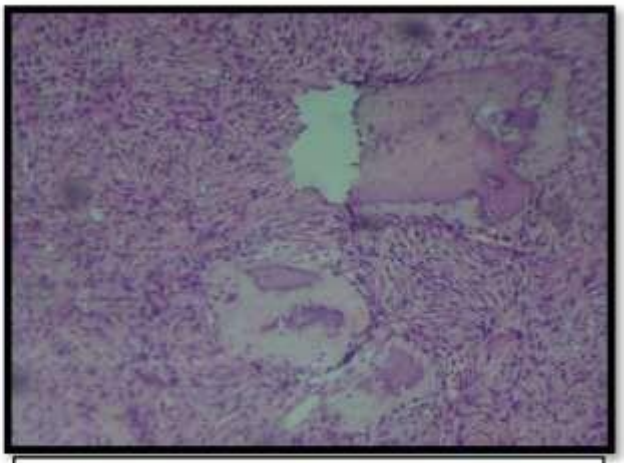

FIG 3B: Section shows spindle shaped cells are separated by varied proportions of un mineralised osteoid to mineralised trabecular bone.

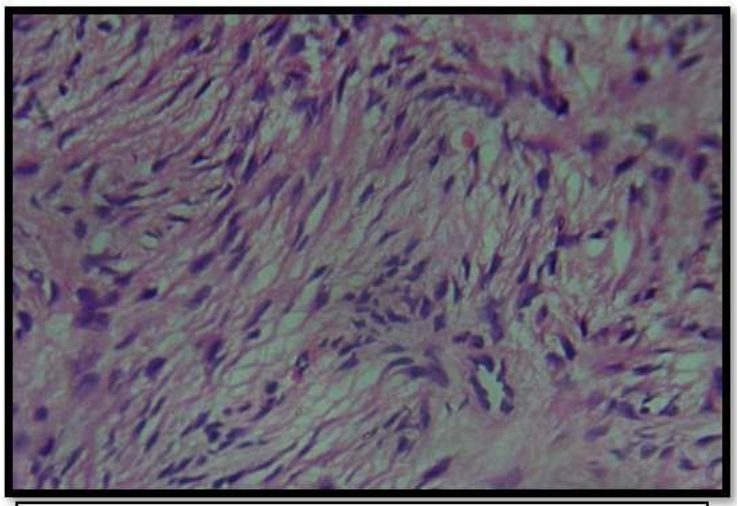

FIG 3C: H and E section shows fibroblasts with uniform elongated regular nuclei without any nuclear atypia or increased mitotic activity

Correlating the clinical and histopathological features final diagnosis of OSSIFYING FIBROMA OF MANDIBLE was given.

The patient was reviewed after two weeks, 6 weeks and 3 months and wound healing was good without any recurrence.

DISCUSSION:

The etiology of ossifying fibroma is not clear, it can be odontogenic, developmental or traumatic. According to kempsoh, He found that ossifying fibroma is formed by fibrous tissue as repairing attempts to a bony defects[6.]Weing suggested that trauma can stimulate the progenitor Cells.[7] Ossifying fibroma have increased frequency of occurrence the mandible. Majority of the cases are painless, perforating cortical bone plate. Histopathological features of ossifying fibroma reveals presence of few to many multinucleated giant cells in an background of ovoid to spindle shaped mesenchymal cells [8]. It is important to note specific clinical and histopathological characteristics to arrive at a diagnosis from other differential diagnosis such as fibrous dysplasia, Osteoid osteoma, osseofibrous dysplasia [9]. Conservative treatment is an effective option to reduce the fatality rate and

better health of the patient. Finally, with the reported cheif complaint correlating with the histopathological features and clinical characteristics. This article conclude that it is a known case of Ossifying fibroma of Mandible. Ossifying Fibroma can affect any part of the human body, but when confined to head and neck its prevalence is more in mandible (70-90%) around premolar and molar region. It rarely affects calvarium involving frontal bone. Ossifying fibroma tend to grow as round shaped mass by equal expansion in all directions. This is because of their centrifugal growth pattern. Complications of ossifying fibroma are rare. It sometimes may involve the nasal cavity causing epistaxis or it may involve the inferior border of mandible causing paraesthesia. Ossifying fibroma generally presents along with many syndromes. Sturge-Weber syndrome, Gnathodiaphyseal dysplasia, Buschke–Ollen- dorff syndrome are some of the associated medical conditions. Hyperthyroidism, hypercalcemia are also some of the systemic conditions associated with the increased risk of development of ossifying fibroma. Differential Diagnosis is based on the patient history, clinical presentation and radiographic findings and it includes peripheral ossifying fibroma, peripheral myxoma and malignant tumour.

CONCLUSION:

Fibrous dysplasia remains one of the curious prevailing cases in the world, Mostly asymptomatic and with sudden mysterious growth. Hence early diagnosis and conservative treatment of fibrous dysplasia is essential for good prognosis. The most preferred treatment options are enucleation, curettage, Surgical resection. In case of larger defects where segmental resection of bone is involved, Reconstruction surgery with a graft is indicated.

ANONYMITY:

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