



CEMENTO-OSSIFYING FIBROMA OF LOWER MANDIBULAR REGION – A RARE CASE REPORT

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ABSTRACT

Cemento-ossifying fibroma is an infrequent growth considered as an osteogenic or fibrous tumor. It is defined as a well-demarcated and occasionally encapsulated lesion consisting of fibrous tissue containing variable amounts of mineralized material resembling bone (ossifying fibroma), cementum (cementifying fibroma), or both.^{2,3} This case report describes a 48 yrs old male patient with cemento-ossifying fibroma involving right lower third molar and underlying bone. The clinical, surgical findings as well as the histological features are presented in this case. The rarity of this tumor prompts us to report this case.

KEYWORDS : Cemento- ossifying fibroma, molar, bone

Introduction:-

The term cemento-ossifying fibromas have been described as a rare osteogenic neoplasm composed of fibrous tissue containing varying amounts of mineralized material resembling cementum or bone.¹ But other authors have documented that, Cemento-ossifying fibroma is a rare benign fibro-osseous lesion which is reactive in nature in response to injury or foreign body^{7,10}. The probable cell of origin is periosteal cell. Chronic irritation of periosteal membrane leads to metaplasia of connective tissue eventually showing foci of dystrophic calcification and bone formation. Fibrosis of granulation tissue may also be present.¹¹ The term cemento ossifying fibroma is common in site like mandibular region.

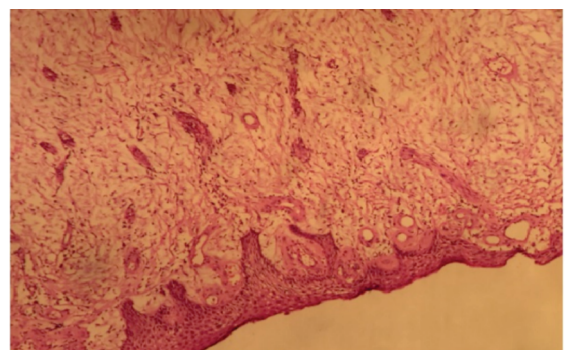
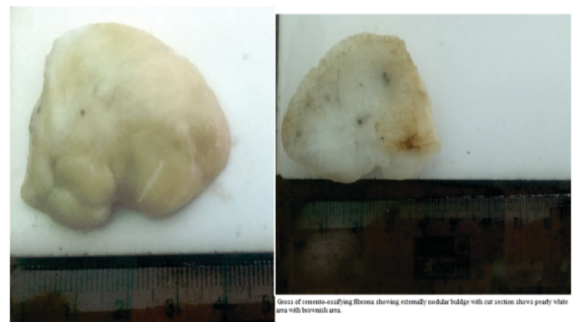
Few cases reported have shown that, it has a predilection for females⁸. Young adults and adolescents are affected more commonly⁹. It has a slow and indolent course of growth. Histologically, there is presence of dysmorphic round basophilic bone particles termed as cementicles along with spheroidal calcifications^{4, 6}. Due to their clinical and histopathological similarities, some Cemento ossifying fibromas are believed to develop fibrous maturation and subsequent calcification. The other probable differential diagnosis which can be considered in this case is desmoplastic fibroma, ossifying fibroma, peripheral ossifying fibroepithelial polyp, fibrous dysplasia, osseous dysplasia, Calcifying or ossifying fibrous epulis and calcifying fibroblastic granuloma.¹⁰

CASE REPORT:-

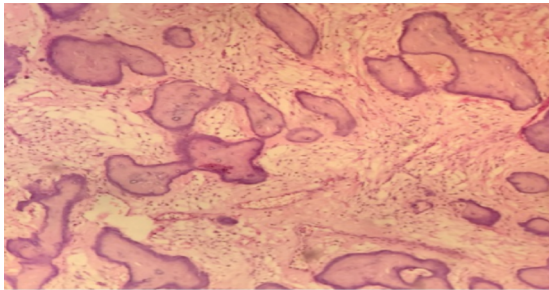
A 48-year-old male presented to our institute with non-tender nodular growth measuring 3 x 2 cm size over lingual side near right lower third molar. On examination, no lymphadenopathy was seen. Lingual bony cortex erosion was evident. The temperature and color of the local skin were normal. Computed tomography (CT) revealed well encapsulated mass 3*2 cm with areas of calcification. The lesion invaded the underlying mandible

Following an open biopsy, the mass was confirmed to be a cemento-ossifying fibroma. The patient underwent a resection of the tumor

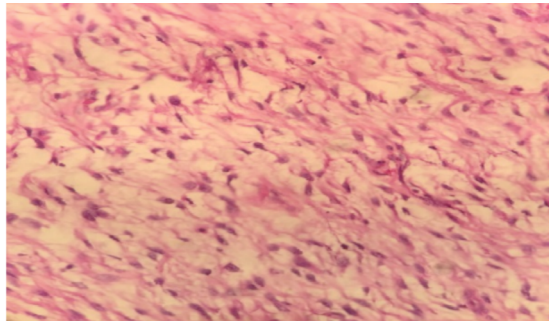
and the accompanying bone, [excision biopsy under local anaesthesia. Gross examination of the excised specimen revealed size 3.2 *2.3*1 cm circumscribed firm nodular mass involving the lingual side near right lower third molar. Cut open section showed firm yellowish brown fibrous/bony tissue with foci of hemorrhagic areas. Microscopic examination revealed an unremarkable stratified squamous surface epithelium with underlying dense cellular fibrous connective tissue stroma containing numerous calcified osseous structures along with several round to ovoid cementum – like calcifications and woven bone, with low mitotic activity and no necrosis in the lesion.



H&E showing unremarkable squamous epithelium. (40 x)



H&E : Fibrous connective tissue with bony trabeculae (10 x)



H&E photo od cemento-ossifying fibroma shows proliferation of connective fibrous tissue (40x)

DIAGNOSIS :- A provisional diagnosis of a fibro osseous lesion could be made radiologically and clinically but the confirmatory diagnosis of cemento ossifying

fibroma was made by histopathologic evaluation of biopsy specimens. The following features were observed during microscopic examination:

- (1) unremarkable stratified squamous surface epithelium;
- (2) benign dense fibrous connective tissue with varying numbers of fibroblasts;
- (3) mineralized material consisting of mature, or woven osteoid,
- (4) basophilic cementum like material, or dystrophic calcifications;

DISCUSSION It is clinically and radiologically impossible to come to a definite diagnosis of cemento-ossifying fibroma'. The diagnosis can be confirmed only histopathologically and further confirmation by immunohistochemistry. Cemento ossifying fibromas shows immunoreactivity for keratin sulfate and chondroitin 4 sulfate⁵ COF is a lesion with insidious course, the growth of which is generally limited. Many cases will progress for long periods before patients seek treatment because of its asymptomatic presentation for a longer course of time. POST OP FOLLOW UP necessary since recurrence rate is fairly high.

2 months have passed following excision and our patient is doing well and he is on regular follow up. Unfortunately, its incidence has increased in last few years.

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