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Conservative Management of Central Odontogenic Fibroma of Mandible- A Rare Presentation

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ABSTRACT: Central odontogenic fibroma (COF) is a rare benign tumor. It is a lesion associated with the crown of an unerupted tooth. In this report, a 25-year-old female patient is presented, who was diagnosed with central odontogenic fibroma from clinical, radiological, and histopathological findings.

KEYWORDS: Central odontogenic fibroma, WHO(World Health Organization)

I. INTRODUCTION

Central odontogenic fibroma is a way rare tumor of mesodermal in origin. WHO has regarded the tumor as benign odontogenic neoplasm derived from a mesenchymal odontogenic tumor.[1]

Central odontogenic fibroma is a lesion of fibrous connective tissue in origin. It contains inactive odontogenic epithelium with/without evidence of calcification.[2]Thesetumors occur more commonly in the mandibular posterior region associated with impacted teeth.There is an age predilection of 11-80 years with a mean age group of 34 years. These lesions show slight predominance in females.[3]

The tumor is a slow-growing painless one which results in a delay of early diagnosis. These tumors derive from periodontal ligaments dental follicle, dental papilla of an impacted tooth. These tumors contain fibrous connective tissue with odontogenic epithelium.

There are 2 variants of ossifying fibroma.[4]

1. Extra osseous / Peripheral variant
2. Intraosseous / central variant

Here we present a case of central ossifying fibroma in a 25year age female patient.

II. CASE REPORT:

A 25-year old female patient presented to the Department of Oral and Maxillofacial Surgery with a complaint of the right lower cheek region for 6 months. Her medical and family history shows no significant abnormality. Local examination shows swelling of size 2×2cms extending from the angle of the mandible to the 1st molar region, supero-inferiorly from the ramus to the lower border of the mandible (**Fig.1**). The swelling was firm in consistency with no markable change in temperature and color. Intraoral examination revealed the absence of lower right 1st and 2nd molars (**Fig.2**). The swelling extends from the distal to the 1st molar to the retromolar trigone. There is no derangement of occlusion. With no evidence of paresthesia. The swelling is firm to hard inconsistency. Orthopantomogram showed a radiolucency on the posterior right mandible extending from the 2nd molar socket to the posterior border of the ramus of the mandible with impacted tooth and radiopaque flecks resemblingcalcifications inside the lesion (**Fig.3**).

Incisional biopsy was done and confirmed as an odontogenic fibroma.Excision of tumor done under General anesthesia through the intraoral approach (**Fig.4**). The tumor which is a solid mass with an impacted tooth is removed (**Fig.5and Fig.6**).Histopathological examination revealed ODONTOGENIC FIBROMA. The patient is followed for one year with no signs of recurrence (**Fig.7**).

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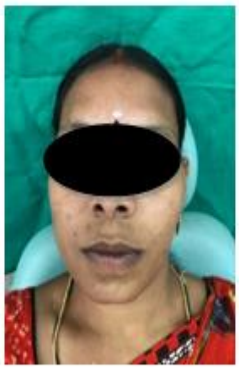

Fig.1-Pre-operativephotogrpah

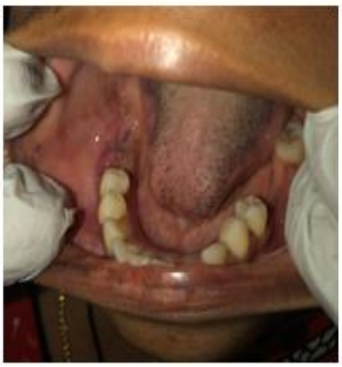

Fig.2- Intra-oral photograph showing missing lower right 1st and 2nd molars

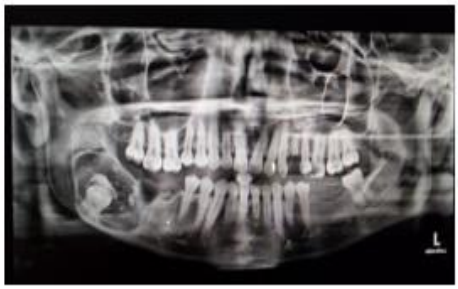

Fig.3-Orthopantomogram showed a radiolucency on the posterior right mandible

Fig.4-Exposure of tumor through intra-oral approach

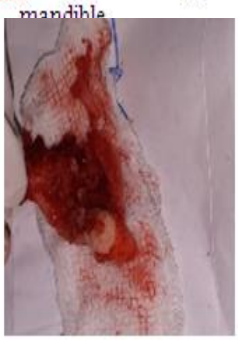

Fig.5-excised tumor along with impacted teeth

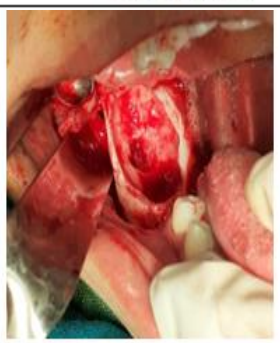

Fig.6-site after excision of tumor

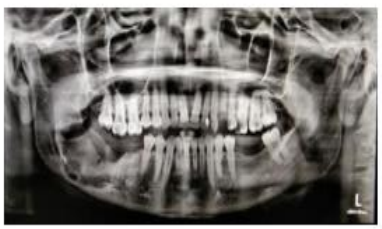

Fig.7-Orthopantomogram showed no recurrence after 1 year

III. DISCUSSION:

Odontogenic fibromas are lesions of odontogenic ectomesenchyme in origin.World Health Organization defined it as a rare neoplasm of mature fibrous connective tissue, with variable

amounts of mature fibrousconnective tissue, with variable amounts of inactive looking odontogenic epithelium, with/without evidence of calcification.[2]

Central odontogenic fibroma seen in posterior surface of mandible. The mean age of predilection is 34 years with slight female domination. The lesion is a painless slow-growing tumor with the expansion of the cortical plates.[5]Radiographically the lesion shows unilocular radiolucency in small lesions and multilocular pattern in larger lesions usually associated with an impacted tooth, root resorption displacement of inferior alveolar canal inferiorly.Various histopathological have been reported in the literature. Grardner in 1980 classified central odontogenic fibroma into Hyperplastic dental follicle, Simple type, and complex/WHO type.[6]Langhan in 1995 classified central odontogenic fibroma into simple type / complex type/WHO type and granular type.

WHO in 2005 classified epithelium-poor type(simple) epithelium-rich type (complex/WHO type).WHO in 2017 reclassified central odontogenic fibroma by excluding simple subtype due to poorly defined and documented epithelial poor type.Simple type contains plump fibroblasts uniformly placed and interspread equidistant in mature collagen fibers.The complex or WHO type is more cellular and has more epithelial rests and may also contain calcification resembling dysplastic dentin, cementum, or osteoid.

The granular cell variant is derived from odontogenic ectomesenchyme and secondarily contains abundant odontogenic epithelium which is uniformly distributed.Conservative surgery by the enucleation of the lesion is the option for the treatment of central odontogenic fibroma. Causes of rare recurrence, are not related to histologic type but due to incomplete surgical removal of the lesion.

IV. CONCLUSION:

Central odontogenic fibroma lesions present a higher prevalence in females, with a mean age of 34 years old. The main site affected is the posterior mandible. Concerning treatment, it was observed that enucleation is an effective treatment choice, since the lesion can be easily removed and shows no tendency for malignant transformation.

CONFLICT OF INTERESTS:

The authors declare that there is no conflict of interestsregarding the publication of this paper.

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