A RARE FINDING IN WHO TYPE OF CENTRAL ODONTOGENIC FIBROMA -A CASE REPORT

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Abstract

The central odontogenic fibroma(COF) is a benign odontogenic neoplasm occurring within the jaw. The COF is a rare tumor that accounts for 0.1% of all odontogenic tumors. Radiologically It may be unilocular with well defined borders or multilocular. It responds well to surgical enucleation. We describe a case of COF in lower anterior jaw in a 35 year old female patient.

Key Words : Central odontogenic fibroma, Who type

INTRODUCTION

The central odontogenic fibroma(COF) as the name suggests is a benign odontogenic neoplasm occurring within the jaw.[1] Histopathologically there are two types of odontogenic fibromas: an epithelium-poor type (simple type) and an epithelium rich type (WHO or complex type). Depending on its primary location, two variables can be distinguished, one central or intraosseous and other peripheral or extraosseous.[2] The COF is a rare tumor that accounts for 0.1% of all odontogenic tumors. In maxilla, the lesion appears frequently in the anterior region, whereas in mandible the lesion tends to be in posterior area. It has a female predilection of 2.8:1.[3]

CASE REPORT

A 35 year old female patient presented with a painless asymptomatic swelling on lower anterior jaw. The patient first noticed the swelling 3 years back and it was increasing slowly. The patient was having discomfort during mastication. Other past history were non-contributory. History of consulting a medical practitioner for the swelling and being under medication (nature unknown) for two days along with salt water rinse. Since it didn't provide any relief, patient visited department of Oral and Maxillofacial Surgery. The extra oral examination showed slight facial asymmetry and was not associated with cervical lymphadenopathy. The intraoral examination revealed a cortical, solitary, dome shaped swelling in anterior lingual aspect of mandible extending from distal side of 32 to mesial side of 45, measuring about 3 x 2.5 cm in greatest dimension, involving marginal and attached gingiva and extending upto the floor of the mouth (fig 1). The swelling was firm in consistency, non fluctuant, non pulsatile, non tender and no discharge noted. The overlying mucosa was pale pink and had a hue of melanin pigmentation near the cervical margin.The panaromic radiograph revealed unilocular radiolucent well defined area between 32 and 45. the radiolucent area did not appear to provoke root resorption of the teeth. 41,42,43 were tender on percussion and non mobile. The occlusal radiograph revealed expansion of the lingual cortex (fig 2). A provisional clinical diagnosis of central ossifying fibroma was made and excisional biopsy was performed. Lingual mucoperiosteal flap was raised and the cortical bone was exposed. The lingual cortical bone was eroded by the lesion. The firm solid mass was attached to the mucoperiosteum along with pieces of eroded lingual cortical bone. The solid mass was easily enucleated from the bone. The flap was closed using black silk suture. The surgical specimen was fixed in 10% neutral formalin and submitted to histological examination.

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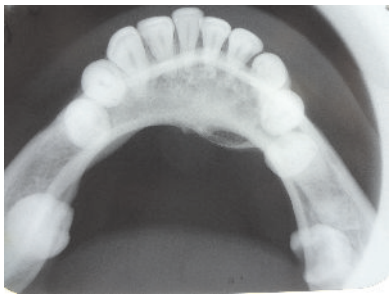

Figure 1: Pre op - intra oral view

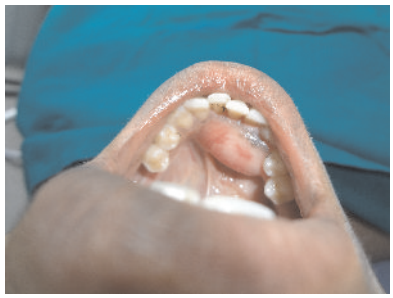

Figure 2: Pre op - occlusal radiograph of mandible

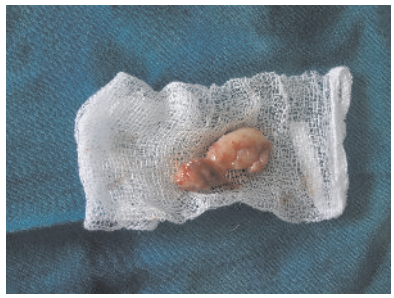

Figure 3: The lesion

Histopathology

A solid mass measuring about 1.5x0.8x0.5 cms, creamish brown in color having smooth surface was received. It was cut into two and both bits processed.

Hematoxylin & Eosin stained sections showed cellular connective tissue stroma. The mature collagenous stroma consisted of collagen fibers with fibroblasts and numerous nests and strands of inactive odontogenic islands and areas of hyalinization. It also consisted of areas of calcifications. A peculiar finding observed in the present case was that of clusters and sheets of eosinophilic hyaline droplets, associated closely with the epithelial islands. These droplets were negative for amyloid. Based on these findings, diagnosis of central odontogenic fibroma, WHO type with eosinophilic droplets was given.

Follow up of the patient for six months has been uneventful.

DISCUSSION

Central odontogenic fibroma is an extremely rare tumour of the oral cavity, accounting 0.1 % of all odontogenic tumours.[4]

Gardner[5] in 1980 classified them into three different, yet probably related, lesions as the hyperplastic dental follicle, simple type and odontogenic fibroma (WHO type).

COFs have been observed in those aged 4-80 years with a peak incidence in the second decade of life and mean age of 37 years. Regarding sex, a female to male ratio of 2.8:1is observed.[3] However, analysis of the current update shows female to male ratio of 1.8:1.5 In our present case a female patient aged 35 years was affected.

This lesion was originally thought to occur almost exclusively in the mandible.[6] But it has been observed that there is almost equal distribution between maxilla (54.4%) and mandible (45.6%). Clinically, COF manifests as a painless slow growing swelling that results in cortical expansion.[7] Similarly in the present case, the lesion presented as a slow, persistent growth that resulted in a painless cortical expansion.

Radiologically, COF can show radiolucent or mixed finding. It may be unilocular with well defined borders or multilocular.[5] Multilocular radiolucency is similar to that of ameloblastoma.[1] The present case showed a unilocular radiolucent lesion with well defined margins extending from 32 to 45 with no evidence of root resoption.

It is believed to arise from the mesenchymal odontogenic tissue, either from the dental papilla, dental follicle or periodontal ligament.

In the present case, the lesion was of epithelium rich type, consisting of calcifications in a cellular collagenous stroma and hence classified as WHO type of COF.

The current treatment of choice for COF is conservative surgery i.e. enucleation and curettage.5 Although recurrence is uncommon and prognosis is good, few recurrent cases have been reported.[8,9] The present case was treated conservatively by enucleation and curettage and a complete bone healing was observed by radiographic examinations at the follow up visits. Follow up for 6 months since, has also been uneventful.

Conflicting Interest : NIL

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