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Case Report

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Unicystic Ameloblastoma of Anterior Mandible in a Middle-Aged Patient – A Rare Case Report

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Abstract

Ameloblastoma is the term first suggested by Churchill in 1934. This is an odontogenic tumour where epithelium is the neoplastic component with no involvement of ectomesenchyme. As a well known fact that ameloblastoma is a benign tumour which invades locally with most common site being the third molar region mandibular jaw. Most commonly ameloblastoma occurs in mandibular third molar region upto 66%, followed by 11% in mandibular premolar region, 10% in mandibular anterior region, 6% in maxillary anterior and posterior region and only 1% in maxillary premolar region. Here in this case report we present a rare case of unicystic ameloblastoma occuring in anterior mandibular region crossing the midline along with radiographic investigations done in two dimensional and three dimensional imaging.

Keywords: Ameloblastoma, Unicystic, Mandible, 2D Imaging, 3D Imaging.

INTRODUCTION

According to the recent 4th edition of WHO classification ameloblastoma, unicystic type is classified under benign epithelial odontogenic tumour1.As the name suggests it can arise from the enamel organ which doesnot gets differentiated to form hard tissue or from the residual epithelial tissue or from the epithelial components of odontogenic cysts. The term unicystic ameloblastoma (UA) is a type of cystic lesions that resembles clinically, radiographically, or grossly to any other jaw cyst. Histologic examination reveals a typical ameloblastomatous epithelium lining a cyst cavity[2]. 10-15% of all intraosseous ameloblastomas are unicystic type [3].

CASE REPORT

A male patient aged 42 years came with a swelling in lower anterior region since one month. there was no pain or discomfort and no difficulty in mastication or speaking. On examining extraorally, A single, diffuse, ovoid swelling of size measuring approximately 3x2 cms extending supero-inferiorly from 0.5 cms below the lower lip to 0.5 cms beyond the inferior border of mandible and antero-posteriorly 1.5cms from midline on both sides. skin overlying the swelling is normal and surface is smooth with no visible pulsations. On palpation, the swelling is firm consistency, non-compressible, Non-pulsatile, there is no localised rise in temperature, skin over the swelling is non pinchable.

On intraoral examination, A diffuse, grossly ovoid swelling measuring about 3x2cms extending medio-laterally from mesial side of 44 to distal side of 35 on the other side oblitering the vestibule. Mucosa overlying the swelling is normal. surface is smooth with well defined borders. On palpation Margins are well-defined, firm consistency, non-compressible, Non-fluctuant, non-reducible, Non-pulsatile.no expansion of lingual cortical plate associated with the involved teeth. Tenderness irt 33 and 43 is noted.

An intraoral digital photo stimulable phosphor radiographs were taken which showed large radiolucent area involving the periapical regions of involved teeth and root resorption involving the apical one third of roots irt 31,32,33,34,35. True mandibular occlusal radiograph revealed radiolucent area in the periapical region crossing the midline.

Panaromic radiograph showed a well- defined radiolucency with non- corticated borders involving symphyseal, para-symphyseal and partially body of mandible on both sides. Resorption of roots irt 31,32, 33, 34, 35 is noted in apical third region.

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Cone beam computed tomography (three dimensional) scan showed a expansile cystic lesion crossing the midline in the anterior mandible completely destructing the buccal cotical plate and thinning of lingual cortex in the axial section. The coronal and sagittal section revealed root resorption irt 31,32,33,34,35 in apical third region. The lesion measured approximately 26.2mm supero-inferiorly, 37.3mm medio-laterally and 19.5mm bucco-lingually, No evidence of any calcifications or septa is obtained when viewed in all three dimensions.

Based on the nature size extension (crossing midline) and both clinical and radiological interrogation we came to the provisional diagnosis as central gaint cell granuloma. Differential diagnosis is Unicystic fibroma, odontogenic keratocyst, radicular cyst.

FNAC performed and a bloody tinged aspiration obtained. Complete surgical resection was done and the whole resected section was sent for histopathological examination.

Histology reports revealed unicystic ameloblastoma.

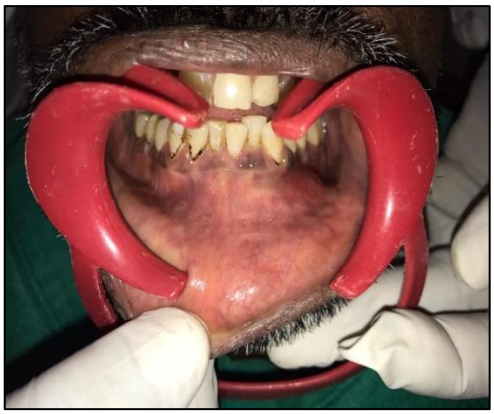

Figure 1: labial vestibular obliteration

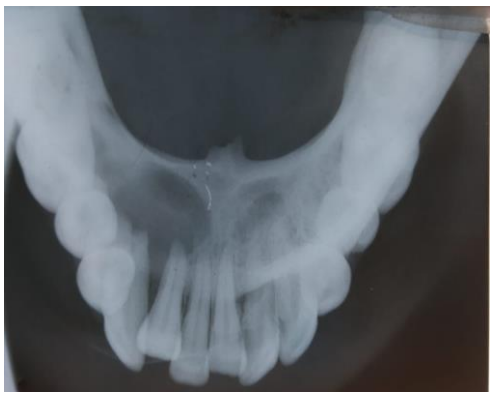

Figure 2: occlusal view

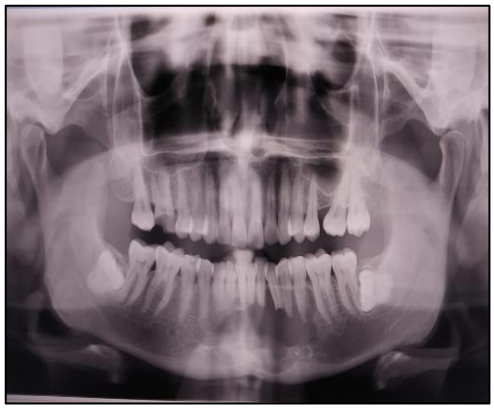

Figure 3: opg showing radiolucency crossing midline.

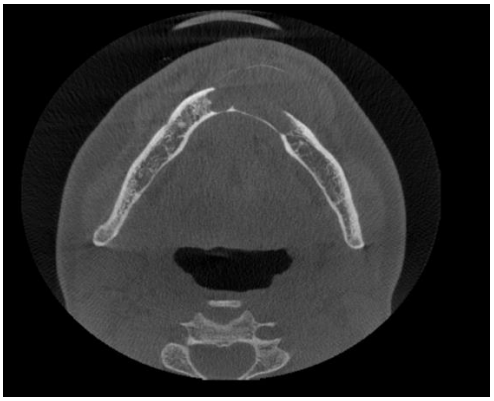

Figure 6: axial view of cbct

Fig 7: FNAC

DISCUSSION

Ameloblastoma is classified under tumours arising from odontogenic epithelium without ectomesenchyme according to WHO 1992 classification. Ameloblastoma doesnot show any clinical findings or symptoms of pain in its initial stages and is found on routine dental examinations.

The cause for the occurrence is said to be due to remnants of enamel organ or dental lamina or disturbances in developing of enamel organ. Of all the oral tumours present occurance of ameloblastoma is only 1% and 9-11% of all tumours originating from odontogenic epithetlium. It is generally a slow-growing but locally invasive tumor[4]. Occurance of Ameloblastoma in indian population is 60.3% at mean age of 30.2 years. Most commonly occurring in mandibular molar-ramus region with slight male predilection.[5] Ameloblastoma occurs in uncystic, multicystic and solid forms. Six histological variants of ameloblastoma are follicular, granular, plexiform, desmoplastic, basal cell and acanthomatous.

Unicystic ameloblastoma accounts for 5-15% of all the types of ameloblastoma. In 1977, Robinson and Martinez first used the term "UA" [6]. "Cystogenic Ameloblastoma" was also named by WHO in international histologic classification of odontogenic tumours in second edition [7]. Young patients, commonly in their second decade of life are affected by Unicystic Ameloblastoma [10]. Ameloblastoma's becoming completely cystic may be due to defects in desmosomal attachments or degradation of central zone of the enamel organ by metalloproteinases, serine proteinases after the development of tooth [8]. Radiologically unicystic ameloblastoma mimics any other odontogenic cyst only histologically it is differentiated by the presence of ameloblastic epithelial lining. It is divided into luminal and mural type. In luminal variant, the tumour is confined to the luminal surface. present case show no evidence of tumour infiltration within the fibrous wall. Whereas in the mural variant, there are invasive islands of ameloblastomatous epithelium within the fibrous wall. UA is prognostically distinct. Recurrence rate is 6.7-35.7%, with approximate average interval of 7 years [9]. According to Abhishek *et al*, Immunopositivity of p53 in cases

of UA indicates a probable reason of its neoplastic transformation which otherwise shows benign course and low recurrence rate [11].

CONCLUSION

Unicystic ameloblastoma although rare but is not confined to certain age or location when it is occurring in the jaws. Both radiological and histological examinations are necessary to confirm the diagnosis. Although it is variant of amelobastoma which is benign in nature it can show neoplastic transformation due to immunopositivity of p53. Complete resection and long term Follow up's are always necessary at regular intervals to check any sign of recurrence.

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Nil.

Conflict of Interest

The authors declare no conflict of interest.

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