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Unicystic Keratocystic Odontogenic Tumour of Posterior Mandible: A Rare Radiographic Appearance.

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Abstract

Keratocystic odontogenic tumor is thought to be a benign tumor of jaw bone. It is considered to be third most common cyst of oral cavity. A case with odontogenic keratocyst of the left posterior mandible is been presented over here with clinical and radiographic examinations along with histo-pathological investigation. KCOT lesion was successfully excised surgically. Post operative radiograph was evaluated after 1 month with no evidence of recurrence.

Keywords: Cystic neoplasm, keratocystic odontogenic tumor, odontogenic cyst, odontogenic keratocyst

Introduction

Keratocystic odontogenic tumor (KCOT) is a benign tumor of jaw bone. It was first described by Philipsen in 1956 as (OKC)[1] Odontogenic keratocyst is now been considered as tumor as because of its neoplastic potential. It is renamed as “KCOT” by World Health Organization (WHO) classification of head and neck tumors in the year 2005[2] Presenting here a case report of unicystic KCOT of left mandible with a review of literature.

Case Report

A 23-year-old male reported to Department of Oral medicine and Radiology with a complaint of sensitivity in lower right and left back teeth region since 1month. He expands his history of presenting illness with mild intraoral swelling in lower left back teeth with respect to 36,37,38 region. No extra-oral swelling was observed. No gross facial asymmetry was detected. Lymph nodes were non palpable. Synchronized condylar movements were reported bilaterally. On intraoral examination, patient had dental caries in relation to 46 with mild dentinal hypersensitivity by cold beverages. Mouth opening was normal, mild vestibular tenderness was present with respect to the posterior left buccal vestibule [Figures 1 and 2].There was no previous history of any trauma or any other surgical procedure. Medical history was unremarkable. The patient gave no history of hazardous habit. On radiographic examination, unilocular well

defined radiolucent lesion was present associated with the roots of 36, 37 38 measuring around 4x5cm in anterioposterior dimension from interadicular region of 36 till mesial aspect of 38. Lesion resorb lower border of mandible along with divergence of roots of 36, 37. Mild scalloping present in anterior aspect of the lesion around 36 with well defined corticated margin. Lesion causes suppression of mandibular nerve canal. Vitality of teeth was intact with more of anterioposterior expansion of lesion within the jaw. Radiographic examination was suggested (intraoral peri-apical radiograph [IOPA], mandibular occlusal, orthopantamogram. IOPA of the left posterior mandible with respect to 36, 37, 38 revealed a well-defined radiolucency present extending from interadicular region of 36 and extending till distal to the distal root of 37, with slightly scalloped borders. Occlusal radiograph revealed no bucco-lingual expansion of cortical plates in favor of OKC. On panoramic radiograph an apparently unilocular unilateral radiolucency was present on left mandible involving mandibular body on the left side 5 cm × 4 cm in greatest in antero-posterior dimension and 3 cm × 3 cm superior-inferiorly with no septa present within internal radiolucent lumen giving unilocular appearance.[figure 3] Radiographic diagnosis KCOT of the left mandible was given. Aspiration of the cystic lumen was taken consisted of cheesy material. Incisional biopsy was done. Histopathological examination showed cyst wall consisted of 7-8 cells thick keratinized stratified squamous epithelium and non-inflammatory fibrous connective tissue wall along with small satellite islands of odontogenic epithelium and keratinaceous debris. Based on clinical and histo-pathological investigations with a final diagnosis of a KCOT. Surgical segmental resection of the left mandible was performed with removal of complete cystic lining with surrounding soft tissue with the use of Carnoy's solution, to minimize the chances of recurrences.[figure 4,5,6,7] Post-operatively patient managed with intravenous antibiotics, analgesics and other supportive measures. Post operative OPG was taken with 1 month follow up and it showed no sign of recurrence [figure 8].

Discussion

KCOT is defined as "a benign uni- or multi-cystic, intraosseous tumor of odontogenic origin,originate from dental lamina cells, with a characteristic lining of parakeratinized stratified squamous epithelium and potential for aggressive, infiltrative behavior." WHO in 2005 included OKC under a tumor. Most commonly occur in third and fifth decade. There is slight male predilection.[3] Mandibular occurrences are more as compared to the maxilla, with a marked tendency to involve posterior body and ascending mandibular ramus.[4] OKC tends to grow in anteroposterior direction within the medullary cavity without causing much of buccolingual bone expansion. Radiographically, a well-defined radiolucency with smooth corticated sometimes scalloped margins with internal septae within the medullary cavity gives it a multilocular appearance[5,6] OKC shows less instances of root resorption as compared to the dentigerous cyst. The histological finding shows thin uniform fibrous wall with non-inflammatory changes and small satellite cysts/island of odontogenic epithelium, considered to be the classic cause of recurrence[7,8] The differential diagnosis for KCOT includes ameloblastoma, central giant cell granuloma, odontogenic myxoma, calcifying epithelial odontogenic cyst, and dentigerous cyst. The tendency for multiplicity associated with a gene level disturbance of chromosome 9 as in nevoid basal cell carcinoma syndrome, an autosomal dominant trait, also referred to as Gorlin-Goltz syndrome. The radiographic features of OKCs are not specific, particularly in smaller unilocular cystic cavity[9,10] It may simulate other

odontogenic and non-odontogenic cysts, such as radicular cyst, lateral periodontal cyst or nasopalatine cyst.

Teaching point

OKC is to an important odontogenic tumor with neoplastic characteristics. Proper clinical and radiographic examination along with histopathological investigations should be performed to rule out such rare entity with unilocular appearance that can be confused with other cystic lesions of jaw.

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Legends Figures

Figure 1: Showing front profile of patient

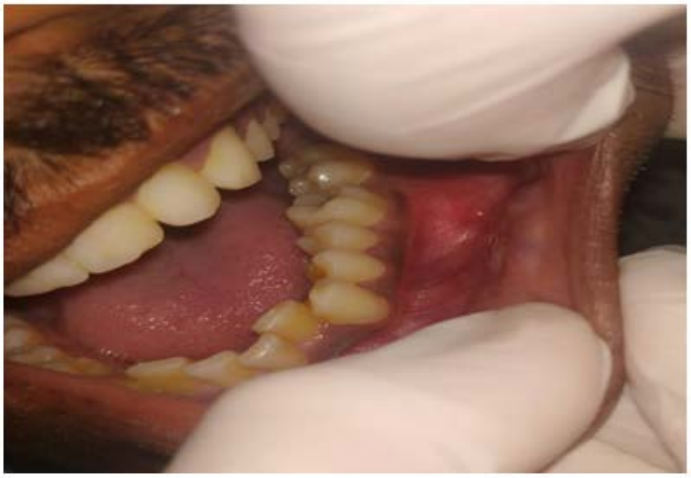

Figure 2: Showing intraoral picture of left mandible.

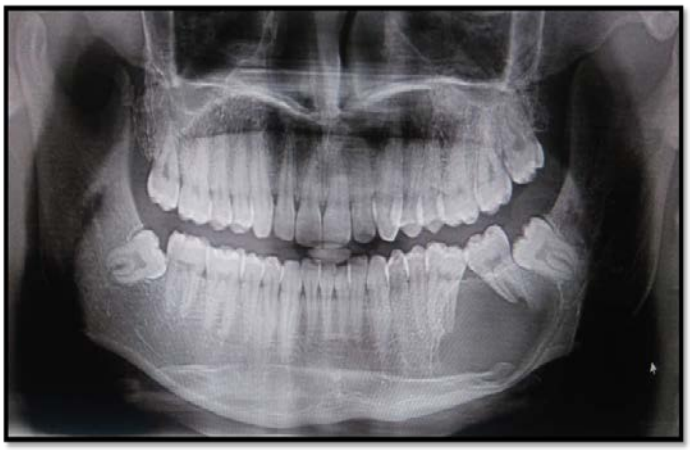

Figure 3: Showing OPG of the patient with unilocular lesion on left side involving body of mandible

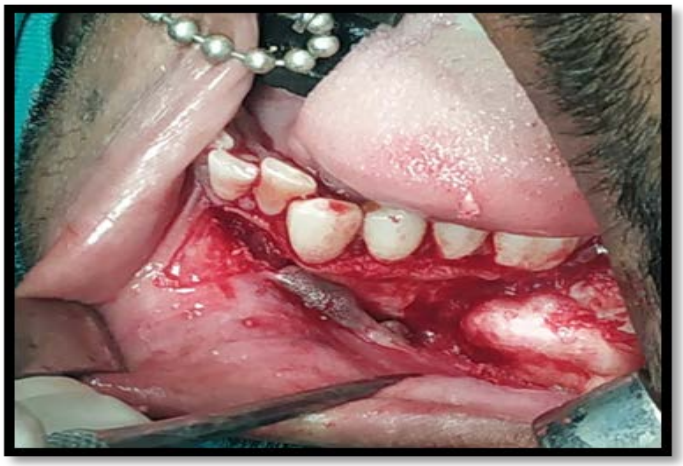

Figure 4: showing cystic lesion cavity

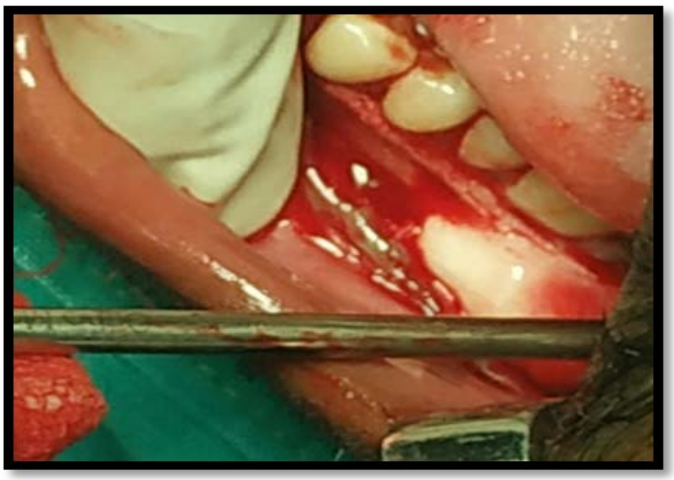

Figure 5: Showing removal of cyst

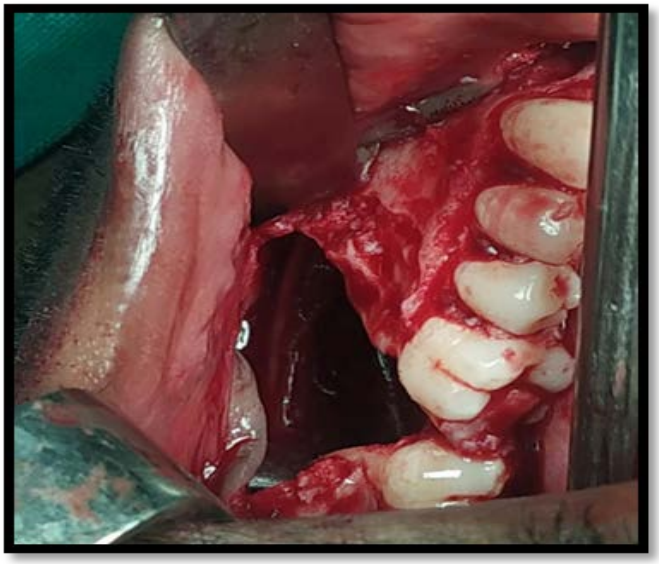

Figure 6: showing window formation and removal of cyst lining in total

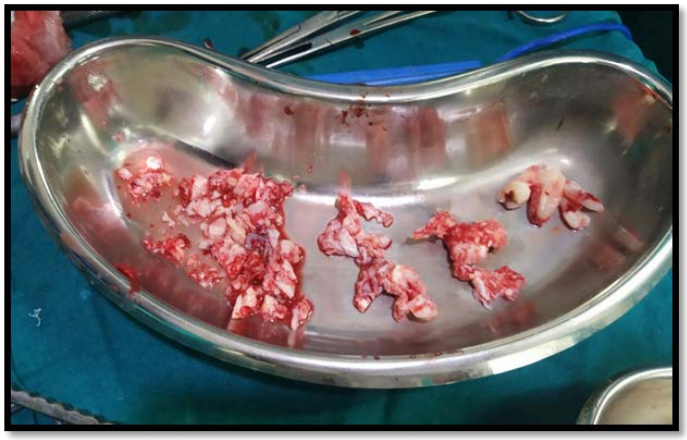

Figure 7: showing excised portion of the cystic cavity along with the teeth involved ie, 36,37,38.

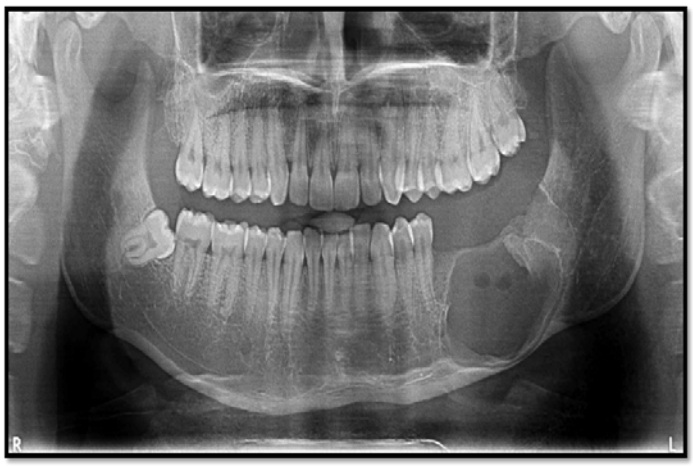

Figure 8: An OPG Showing excised lesion with 1 month follow up of no recurrence.