Case Report

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OKC: A Great Mimic

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ABSTRACT

Background: Odontogenic keratocyst (OKC) is the cyst arising from the cell rests of dental lamina. It can occur anywhere in the jaw, but commonly seen in the posterior part of the mandible. Being a common odontogenic tumour, it is usually mistaken in the diagnosis due to its varied nature of occurrence. Radiographically, mostly they are unilocular when present at the periapical region and can be mistaken for radicular or lateral periodontal cyst. When the cyst is multilocular and located at the molar ramus area, it may be confused to ameloblastoma. One of the most important characteristics of this tumour is wide extension with lack of distinctive clinical expansion. The present article is a case of OKC with distinctive expansion in the anterior region of maxilla with the history of trauma causing loss of teeth in the same region . Based on history, clinical and radiological findings it was diagnosed as residual cyst. Due to the different clinical and radiographic manifestations of OKC, it is necessary to completely evaluate any cyst-like lesions in unusual locations with uncommon clinical characteristics.

Keywords: Odontogenic cyst, KCOT, Residual cyst, Anterior Maxilla.

INTRODUCTION

Odontogenic Keratocyst (OKC) was first described by Philipsen in 1956. It is the cyst arising from the cell rests of dental lamina, very aggressive due to its high recurrence rate and tendency to invade surrounding structure. It can occur anywhere in the jaw, but commonly seen in the posterior part of the mandible.[1,2] The clinical feature and radiographic appearance of OKCs are not characteristic causing misdiagnosis especially when the lesion is in relation to a nonvital tooth.[3,4]OKC tends to grow in an anteroposterior direction within the medullary cavity of the bone without causing obvious bone expansion. [1]The radiographic appearance of OKC may range from a small unilocular radiolucency to a large multilocular radiolucency. Hence it may resemble ameloblastoma, dentigerous cyst, lateral periodontal cyst, and radicular cyst.[3,4] Multiple OKCs are associated with Nevoid basal cell carcinoma syndrome (NBCCS).[2] Early diagnosis and followup of the patient with OKC is important because of possibility of such patient to develop other features of NBCCS in the future.

CASE REPORT

A 45 year old female patient came to department of oral medicine and radiology with chief complain of swelling in anterior tooth region since 1 year. Patient was apparently alright 2 year back when she met with an accident causing her anterior teeth to be slightly mobile. Since last 1 year she complains of gradually increasing swelling in anterior region associated with occasional episode of pus discharge from same and occasionally pain in the same region which was mild to moderate intermittent throbbing type localized .She visited dental clinic for same 10 days back due to increasing swelling and periapical radiograph was taken following which she underwent extraction of 2 anterior teeth. Patient was under antibiotic following extraction but the

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swelling didn't subsided after the extraction so she visited to our OPD .

Extraorally a solitary , well defined 3.5 cms in size non tender firm to hard in consistency non compressible extending anterioroposteriorly from philtrum to nasolabial fold superioroinferiorly from floor of right nasal cavity is lifted, temperature of swelling not raised overlying skin same as adjacent.(Fig 1).Intra-orally there is a diffuse swelling extending from 11 to 13 with sulcular obliteration. (Fig 2) . Palatally there was no swelling (Fig 3). Missing 11,12 , grade 1 mobility in relation to 13 . Chairside vitality testing showed 13 non vital. Aspiration yielded a yellowish straw-coloured fluid which was consistent with the diagnosis of a cystic lesion.

Past periapical radiograph (taken 10 days back) revealed a solitary well defined corticated radiolucency extending from mesial of 21 to distal of 13 with external root resorption in relation to 11,12 with obliterated pulp chamber (Fig 4). Clinically it resembled infected residual cyst .

Periapical radiograph 11,12 region showed missing 11,12 (extraction socket) unilocular well corticated at apical region radiolucency extending from mesial of 21 to distal of 13 with no cortication in mesial and distal border.(Fig 5). Maxillary occlusal view shows well defined dark dense radiolucency extending from mesial of 21 to distal of 13 with cortication in superior region corticated margin with missing 11,21 (Fig 6). Panoramic view was taken to know the extent of the lesion as well as to rule out the possibility of any other site involved. It showed solitary well defined radiolucency in relation to missing 11,12. (Fig 7) .Provisional diagnosis of infected residual cyst with differential diagnosis of Central Gaint Cell Granuloma, OKC, ameloblastoma was given. Biopsy specimen was taken which confirmed the lesion to be OKC.(Fig 8).

Patient was referred to department of oral and maxillofacial surgery where surgical enucleation of the cystic lesions was performed. Endodontic treatment of 13 was also performed. The patient is on regular follow up since eighteen months, there is no signs of recurrence of the lesion.

Fig 1: lifted right nasal floor.

Fig 2: Sulcular obliteration

Fig 3: Palatal view.

Fig 4: Past periapical radiograph showing a well defined corticated radiolucency with root resorption & obliterated pulp chamber.

Fig 5: Present periapical radiograph showing radioluceny.

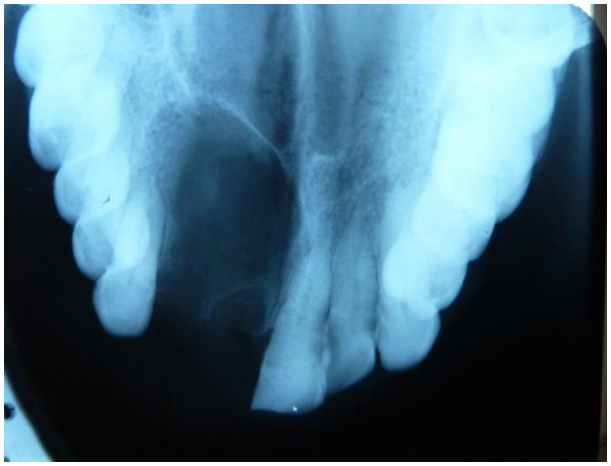

Fig 6: Maxillary occlusal view shows well defined dark dense radiolucency extending from mesial of 21 to distal of 13 with cortication in superior region corticated margin with missing 11,21.

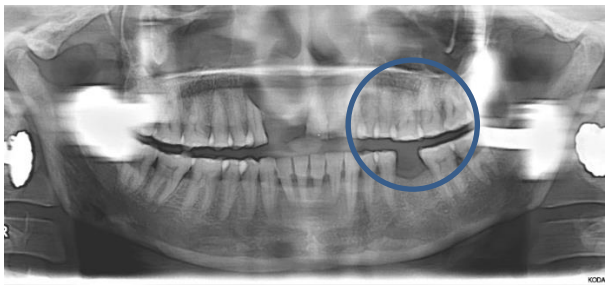

Fig 7: Panoramic view showing well defined solitary radiolucency.

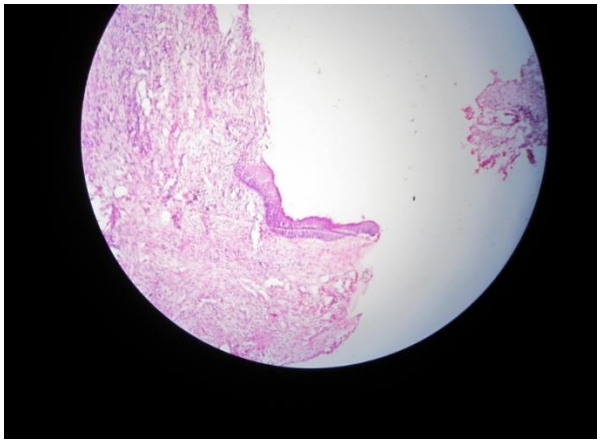

Fig 8: Histological section.

DISCUSSION

The odontogenic keratocyst is derived from the remnants of the dental lamina with a biologic behaviour similar to a benign neoplasm. Because of this aggressive nature, recently World health organization used the term "keratocystic odontogenic tumor" to describe this cyst.[1,2]Keratocystic odontogenic tumor (KCOT) is considered to be a benign cystic neoplasia of jaw bone with a higher rate of recurrence. It is noted to be third most common odontogenic cyst after radicular and dentigerous cyst. Most commonly occur in third and fifth decade with slight male predilection. [5] The presented patient is also in this range of age but in female. Most of the reported cases were involving the mandible, especially in posterior areas, [6] but the presented case was in the anterior region of the maxilla. One of the most diagnostic characteristics of KCOT lesion is the extension through the bone with minimal bone expansion, thus until the tumor does not reach to significant dimensions, expansion is less important. [6] In the presented case, expansion is in consistent with extension and was more significant than the

past reported cases. [7] thus making the diagnosing a dilemma.

In the present case the history, clinical picture as well as radiograph pointed towards residual cyst with Central Gaint Cell Granuloma as most important differential diagnosis. Being a common identity it is often not given a diagnosis due to its varied clinical and radiological characteristics. In this case it showed non classic behaviour with less usual location. Despite the simulating pattern and aggressive behaviour it can easily mimic the reactive lesions like central giant cell granuloma , vascular lesions, periapical cysts, and periodontal lesions.

The treatment options include enucleation, curettage, marsupialization, decompression, carnoy solution and completely resection considering the patient's general health status, age, disease progression and the degree of cooperation. [8,9,10] In this case surgical enucleation was performed. High recurrence rate and tendency to develop multiple cyst associated with nevoid basal cell carcinoma syndrome , regular follow up is mandatory.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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