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Conservative Management of Okc Using Chemicalcauterization: A Case Report

Dr. Aastha Choudhary

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ABSTRACT
Odontogenic keratocyst (OKC) is a developmental maxillofacial cyst. Cystic intraosseous pathologic entities that make a differential diagnosis with odontogenic keratocyst (OKC) share similar clinical characteristics and present as painless swelling which increases with facial asymmetry, with the mandibular bone being involved mostly. The osteolytic lesions (OL), have similar radiographic patterns like OKC which are, being radiolucent or hypodense, unilocular or multilocular. The purpose of this paper is to describe the case of a 31-year-old male patient who presented painless swelling which increased, located in the left mandibular region and facial asymmetry was seen over the period of 1 year and 6 month. Radiographically, an extensive unilocular radiolucent lesion was observed, without root resorption and displacement of mandibular molars on the left side. Biopsy confirmed the diagnosis of OKC. In this case, the clinical-behavioral characteristics of the OKC are presented to differentiate it from other Osteolytic Lesion
The management was done by enucleation, peripheral ostectomy and then the application of Carnoy's Solution to the bony cavity. Regular follow-up were done at 6, months time interval showed complete recovery and no evidence of recurrence.

I. INTRODUCTION

An **odontogenic keratocyst** is a rare and benign but locally aggressive developmental cyst. It can occur anywhere in the jaw, but commonly seen in the posterior part of the mandible and most commonly presents in the third decade of life.Odontogenic keratocysts make up around 19% of jaw cysts

Odontogenic Keratocyst (OKC) was first described by Philipsen in 1956. It is the cyst arising from the cell rests of dental lamina. It has very high recurrence rate. The clinical feature and radiographic appearance of OKCs are not characteristic. This may lead to misdiagnosis especially when the lesion is in relation to a nonvital tooth.

OKC tends to grow in an anteroposterior direction within the medullary cavity of the bone without causing obvious bone expansion. 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. Multiple OKCs are associated with Nevoid basal cell carcinoma syndrome (NBCCS). Early diagnosis and followup of the patient with OKC is important because possibility of such patient there is a develop to other features of NBCCS in the future.[1]

II. CASE REPORT

The patient, a 31-years-old man, came to department of Oral and Maxillofacial Surgery, complaining of a bony hard swelling in the posterior left lower jaw region which was painless, non tender and had been gradually been increasing in size over the time period of 1 and half year.
Patient gave no history of any systemic medical condition and also didn't have a past dental history.

After a through medical details described above intra oral examination was done which showed and increase in volume of the vestibular bone area in relation to tooth no 35- 38.
The increase in size in the vestibular area was firm, non tender, non mobile. Orthopantomography was performed, in which a large radiolucent area was seen

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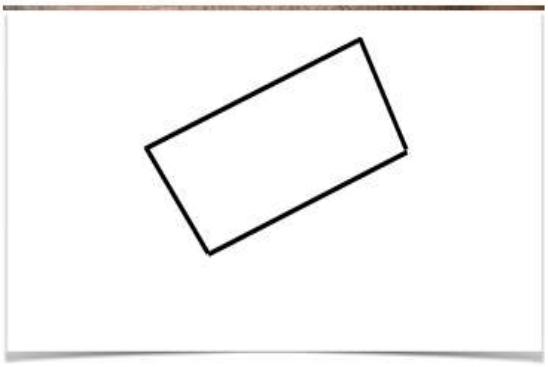

EXTRA ORAL IMAGES DEPICTING THE AREA OF LESION

The teeth associated with the swelling were firm and non tender on percussion. The surrounding mucosa was also healthy with no erthemyia, gingival inflammation or any periodontal pathologies.

Orthopantomography was performed, in which a large radiolucent area was visible which was unilocular in the lower left jaw region. In the region itself of these teeth, an accentuated loss of bone support was found, at the level of the middle and apical third, only the cervical third of the roots was preserved.

As the clinical and radiographic examination of the lesion was performed and the initial diagnosis was compatible with odontogenic keratocyst.

INRTA ORAL PICTURES OF THE AFFECTED AND NON AFFECTED SIDE

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PRE OPERATIVE RADIOGRAPH

Surgical resection of the lesion was performed under general anesthesia. A vestibular incision was made in the mandibular area, covering the teeth present and extending to the external oblique region. After this, the mucoperiosteal flap was lifted, exposing the vestibular cortical bone to obtain a complete and improved direct view of the lesion.

Subsequently, a peripheral osteotomy was performed to enable direct visualization of the odontogenic keratocyst, using surgical drills and a gouge clamp. In addition to the surgical procedure of excision of the lesion, enucleation and vigorous curettage were performed

The teeth involved were extracted and Carnoy´s solution was applied as an agent for chelating the remaining bone tissue, embedded in a gauze for 3 minutes. Afterward the gauze with Carnoy's solution was removed and the anatomical layers were repositioned using simple stitches with Vicryl 3.0

Post operatively the patient was recalled for follow up and alginate impression was taken and an obturator was made for the oral cavity overlying the bony defect to prevent post surgical mandibular fracture.

Post-surgical control was performed for the removal of the stitches, observing adequate healing of the postoperative wound, without signs of dehiscence and surgical bed infection. In addition, plans were made for follow-up consultations a month later, at three months, and at one year, with control panoramic radiography, in which satisfactory functional results were observed and without signs of recurrence.Clinical and radiographic examination was performed after 6 months of follow-up, and a favorable healing process was observed without signs of recurrence of the lesion

POST-RADIOGRAPHS AFTER 7 DAYS

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OBTURATOR PLACED TO COVER THE UNDERLYING BONY DEFECT

6 MONTHS POST OPERATIVE RADIOGRAPH

6 MONTHS POST OPERATIVE SURGICAL SITE

III. DISCUSSION

The odontogenic keratocyst is derived from the remnants of the dental lamina with a biologic behaviour similar to a benign neoplasm. The cyst occurs in any age group, but most commonly seen in the second and third decades of life with male predilection. There are no characteristic clinical manifestations. The more common features are pain, soft tissue swelling, expansion of bone, drainage, and paraesthesia of the lip or teeth.Rather than characterising a lesion, radiological imaging is thought to be more beneficial in determining its size and consequences on nearby structures.The combination of clinical and radiographic features has been documented to help restrict the differential diagnosis and, in certain circumstances, make the accurate diagnosis in various OKCs.[3] Radiographically, most OKCs are unilocular with scalloped margin when presented at the periapex 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. The septa present in ameloblastoma are coarse and curved; originate from the normal bone trapped within the tumor. Hence these septa have honeycomb or soap bubble appearance which is not seen in OKC. In odontogenic myxoma, septa present are thin, sharp, and straight. A simple bone cyst has similar scalloped margin, but this margin is delicate and not distinct.

The following imaging findings are more useful for making a tentative diagnosis of OKC:

In the posterior aspect of the jaws, a well-defined unilocular osteolytic lesion, There are few septa in this large osteolytic mandibular lesion, and the buccolingual extension is limited.[3]

In the present case report, enucleation alone was performed as the first choice treatment, and the use Of Carnoy's solution. It is applied in the bone cavity for the purpose of eliminating the tumor tissue remnants by promoting a superficial chemical necrosis of up to 1.5mm[4].

Tumor location and particularly the overall examination of the lesion justified the approach adopted, since there was no bone fenestration and lesion communication with the surrounding soft tissues. The integrity of the surgical space was observed and the surgical planning ruled out the necessity for adjacent soft tissue excision. In addition to which, the macroscopic aspects of the lesion with integrity of the fibrous capsule during curettage reaffirmed the choice of peripheral ostectomy, which was performed in the initial surgical management

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