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CASE REPORT

Conservative management of a Keratocystic Odontogenic Tumor in children: A Case Report

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ABSTRACT-

Keratocystic odontogenic tumor is characterized by benign intraosseous neoplasm of odontogenic origin with high recurrence rates. Conservative or aggressive management has been suggested a method of treatment. Conservative approaches have some advantages in that they avoid adverse effects on the development of involved teeth and the jaw when the patient is young, although aggressive methods, including surgical resection, can be recommended considering the nature of the neoplasm. Here we presenting a case report of 9 year patient with KCOT treated with marsupialization.

Key words: Odontogenic keratocyst, KCOT, Children.

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INTRODUCTION –

KCOT was first described by Philipsen in 1956, the odontogenic keratocyst (OKC) is now designated by the World Health Organization (WHO) as a keratocystic odontogenic tumour (KCOT) and is defined as “a benign uni- or multicystic, intraosseous tumour of odontogenic origin, with a characteristic lining of parakeratinized stratified squamous epithelium and potential for aggressive, infiltrative behaviour.” WHO “recommends the term keratocystic odontogenic tumour as it better reflects its neoplastic nature¹.”

It is one of most aggressive, odontogenic cyst of the oral cavity. KCOTs are generally thought to be derived from either the epithelial remnants of the tooth or basal cell layer of the surface epithelium. These lesions grow to sizes larger than any other odontogenic cyst. They more often penetrate the bone rather than expanding and growing in anterior to posterior direction. Despite this aggressive growth, they often remain asymptomatic. Unfortunately there is no

specific treatment plans was recommended varies from surgical management marsupialization and enucleation to enbloc resection. This paper showed conservative management of KCOT in 9 year child .

CASE REPORT-

A 9 year old child report to department of oral and maxillofacial surgery with chief complaint a painless swelling in the lower right back tooth region from the past 1-2 months. The swelling progressively increased to reach the present size.

Extraoral examination revealed that asymmetry of face due to swelling in lower jaw making the mandible prognathic since last 1-2 months

Intraoral examination find out to be single ,diffuse swelling present extending right 1st molar to left 1st molar along with pus discharge since 15 days. Swelling was non tender, hard in consistency with expansion of buccal cortical plate

,along with displacement of anterior teeth .All permanent teeth were vital.

Radiographic View a large multi-locular radiolucency along with well defined scalloped borders extending from mesial surface of right first molar to mesial surface of left first molar. Thinning of inferior border of mandible was noticed.

Inferior alveolar canal was not clearly noticed. Root resorption was seen in deciduous teeth (left canine and left molar).Aspiration was positive with yellowish fluid and with low protein content (<4g/100ml).and provisional diagnosis KCOT were made



Profile view



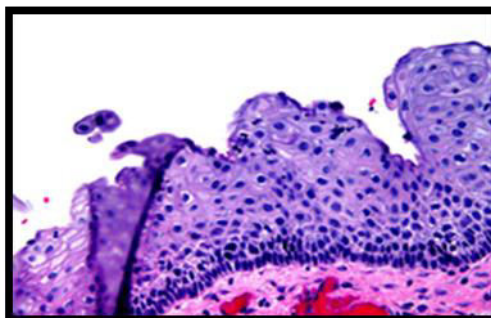
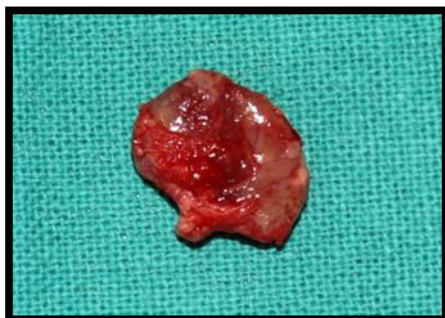
Intraoral view



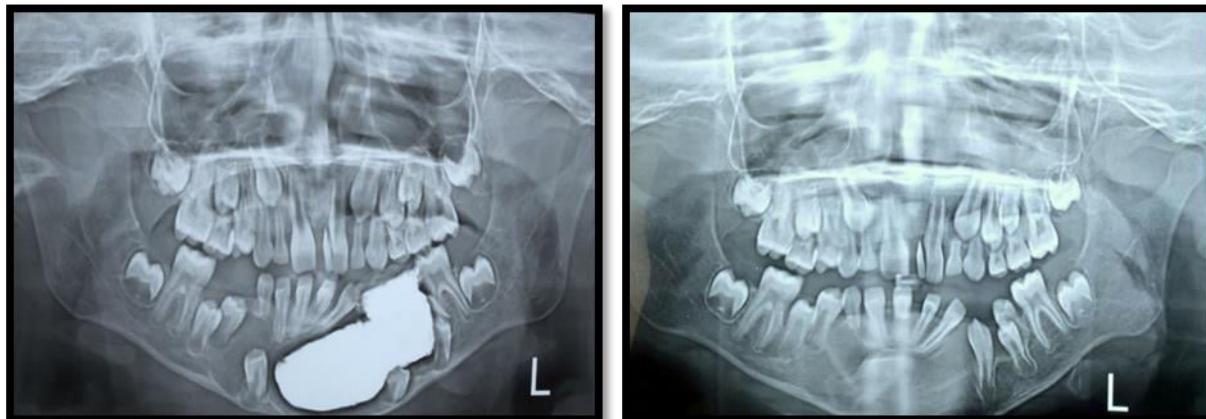
Panoramic view of the lesion

MANAGEMENT- Under all aseptic condition, patient was taken under general anesthesia planned enucleation in combination with Carnoy's solution. A crevicular incision was given right 1st molar along with anterior release incision upto right deciduous canine. The purpose was to get good accessibility ,cyst lining was exposed and marsupialization along with extraction of deciduous right 1st molar and canine and left 1st molar and canine were extracted ,preserve the permanent tooth buds Specimen was send for histopathological examination .

Specimen view



Histopathological examination of surgical specimen revealed thin parakeratinised stratified squamous epithelial lining with palisading of basal cell layer. Epithelium was of uniform thickness without rete ridges thrown up into folds and surface corrugations. Cyst wall mainly consist of plump fibroblast with scanty inflammatory cells, chiefly lymphocytes confirming the diagnosis of KCOT.



Post operative image 6 week and 10 week

DISCUSSION - Mikulicz in 1876 first described the KCOT as a part of familial condition affecting the jaws, but the term OKC was first introduced by Philipsen in 1956. Three quarters of all OKCs occur in the mandible, especially in the posterior body and ramus, anterior mandible is an uncommon site with the lesion crossing the midline being a unique occurrence.

In children who have permanent teeth that have yet to be erupted, conservative management should be considered first because an aggressive operation can have an adverse effect on teeth development, the eruption process, and the development of the involved jaw. It has been reported that marsupialization followed by enucleation results in the lowest recurrence rate among the conservative treatments. Recurrence of KCOT occurs for several reasons. Incomplete removal of the cystic lesion allows new cyst formation or epithelial islands in the wall of the original cyst remain in the surrounding bone or soft tissue. New

KCOTs can also develop from the basal layer of the oral epithelium.

The need for long-term follow-up of these patients cannot be overemphasized, as recurrence is reported up to 10 years after treatment.

CONCLUSION:

We have a case report of KCOT in children where conservative management was done to preserve permanent tooth buds. To prevent the recurrence a long follow up should be done.

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