

RESEARCH ARTICLE

PARAKERATINIZED ODONTOGENIC KERATOCYST: A CASE REPORT WITH 8 YEARS FOLLOW-UP

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Manuscript Info

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Abstract

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Introduction:-

The parakeratinized odontogenic keratocyst (OKC) is a benign, developmental and locally aggressive cyst of odontogenic origin. It arises from cell rests of dental lamina and classified as a developmental cyst.^[1,2,3]

Epidemiologically, OKC involves 11% of all the jaw cysts. Prevalence in sexes varies to male: female in the ratio of 1.6:1.^[4] Predominantly occurrence is seen in 11- to 40-year age group. The body-angle-ramus areas of mandible are the most common sites. 93.7% lesions were diagnosed histologically as parakeratinized OKC.^[5]

The OKC has a thin and friable capsule, with approximately eight to ten layers of epithelial cells. The intra-luminal space is composed of a cheesy material that shows the presence of keratin.^[6] The epithelial layers, in a corrugated tissue contain islands of epithelium that represent satellite cysts or daughter cysts, due to which they often tend to recur after treatment. Broad spectrum treatment modalities are available for management of OKC.

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The aim of this case report is to describe the results obtained with conservative surgical approach in a patient diagnosed with parakeratinized OKC and after 8 years follow up, in contrast with the results reported in contemporary literature.

Case Report

A 14-year-old girl presented with facial asymmetry and complaint of asymptomatic growth in the left mandibular posterior region. Clinically buccal sulcus was obliterated from 46 to 33 tootl region with bony expansion from 45 to 41 tooth region lingually.

OPG demonstrated a unilocular radiolucency extending from tooth region 46 to 34 with displacement of 42 and 44. Occlusal view gave evidence of perforation of buccal and lingual cortical plates.

FNAC revealed dirty white fluid cheesy in consistency. Incisional biopsy was taken which was suggestive of parakeratinized odontogenic keratocyst.

We performed enucleation and peripheral ostectomy under general anesthesia. On excision we found, the lining of the lesion to be glossy and thick in nature. Once enucleation with peripheral ostectomy was achieved, chemical cauterization was performed with Carnoy's solution.

After achieving hemostasis, primary closure of the defect was done. Postoperatively, dehiscence of wound was noticed which was managed by an acrylic prosthesis called obturator, which supports healing by secondary intention. Routine follow up showed gradual decrease in the depth and diameter of the obturator which was a sign of healing.

Histopathological examination of the enucleated surgical specimen confirmed the diagnosis and presented the characteristics of parakeratinized odontogenic keratocyst. Bone formation was monitored by taking periodic radiographs and was complete after 8 years of follow up which had the same quality as adjacent normal bone seen in radiograph [Figure 1].



Figure 1: Follow up of the respective lesion

Discussion:-

The term OKC was first coined by Philipsen in 1956 which was classified under developmental odontogenic cyst of jaw by WHO in 1971 & 1992 and reclassified as keratocystic odontogenic tumor (KCOT) in 2005. In recent WHO classification of tumors of head and neck, the name KCOT has been again changed to OKC.^[7] Syndromes generally associated with multiple OKC are Nevoid Basal cell carcinoma syndrome (NBCCS) or Gorlin goltz syndrome.^[8] In our case sufficient radiographic investigations were done to rule out any syndrome related OKC.

Treatment modality should be selected on basis of both patient factors and lesion characteristics. Patient factors include age and general medical condition. Lesion characteristics include size, location, extent, recurrent lesion, presence of cortical perforation and/or involvement of soft tissue and adjacent structures.^[9] Therefore, keeping in mind the age of the patient we chose a conservative path of treatment for this lesion.

Treatments are usually classified as conservative like enucleation with or without curettage and marsupialization; aggressive like peripheral ostectomy and chemical cauterization with Carnoy's solution, cryotherapy, or electrocautery and finally resection.^[10] As in our case we treated the patient conservatively by enucleation adjunct with peripheral ostectomy followed by chemical cauterization with Carnoy's solution to overcome the odds of recurrence.

Choice of treatment modalities is depending on type of histopathology obtained in biopsy. Two variants are associated with OKC: Parakeratinized & Orthokeratinized.^[3]

Management should not only depend on the biological behavior but also should depend on the surgical findings of the respective lesion. The thick cystic lining was enucleated without leaving any remnants behind to curb the risk of recurrence hence managed conservatively.

So, taking into consideration the young age of the patient, respecting the delicate anatomical structure of the jaws and morbidity associated with resection, this case was treated conservatively with long term follow up. Clinical and radiographic follow-up showed subsequent growth of mandible and facial contour and with no recurrence of the lesion.

According to our experience conservative modality should always be preferred prior to invasive modality.

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