

# Odontogenic Keratocyst

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## Abstract

Odontogenic keratocyst is now considered as a tumor rather than a cyst because of its aggressive behaviour. It is a common odontogenic cyst of jaws and has the highest recurrence rate. It is radiolucent and can mimic other cysts and tumors of jaws. The definitive diagnosis is made only by histopathological examination. The treatment is enucleation with curettage. We report a case of odontogenic keratocyst which was successfully treated and a 3 year follow-up was done.

## Introduction

The keratocystic odontogenic tumor (KCOT), formerly known as the odontogenic keratocyst (OKC), received its new designation in order to better convey its neoplastic nature<sup>1</sup>. A male predominance has been reported for KCOT in previous studies, the general distribution being 60% male and 40% female<sup>2</sup>. Etiopathogenesis attributed are increased mitotic activity, hydrostatic pressure, raised osmolalities, mural growth, enzymatic mechanism, bone resorbing factor, and dental lamia/proliferating basal cells<sup>3</sup>. We report here a case of odontogenic keratocyst.

## Case Report

A 38 year old female patient came with a complaint of a creamy discharge from lower left back region of the jaw since 1 year and few loose teeth since 2-3 months. Patient was apparently alright 1 year back when she noticed a thick creamy discharge from the lower left back region of the jaw with some foul odor for which she visited a dentist and was prescribed some medicines with which there was no relief. Further, the discharge persisted and the patient used to press the cheek and remove the discharge regularly. There was no pain and hence the patient did not seek any treatment for the same. But 2-3 months back she noticed few loose teeth in the lower left back region of the jaw for which she consulted us. Her past medical and dental history was not relevant. On Clinical Examination, Puckering of mucosa and thick creamy foul smelling discharge was seen with lower left third molar region. Slight buccal expansion was felt on palpation [Fig. 1]. No pain or tenderness was felt by the patient

during palpation. Her lower left first molar was missing. Lower left second premolar and second molar had Grade I mobility. On the Orthopantomograph, a large partially corticated, radiolucency with ill defined borders was seen involving the left side of the body and ramus of the mandible extending horizontally from mesial of 33 upto the posterior border of the left side of the ramus of the mandible and vertically from alveolar crest upto the lower border of the mandible in the Left body of mandible and from just below the sigmoid notch upto the antegonial notch in the Left ramus of the mandible. There was slight thinning of the left lower border of the mandible. The left inferior alveolar nerve canal was seen displaced inferiorly. The roots of 33 34 35 37 teeth were seen within the radiolucency and slight root resorption is seen with 34 35 and 37 teeth [Fig. 2]. On histopathological examination, a characteristic parakeratinized epithelial lining was noticed. The epithelial lining was 6 to 8 layers thick and was corrugated [Fig. 3]. The basal cell layer showed palisaded appearance [Fig. 4]. Also at places epithelial lining was seen separating from the underlying connective tissue. A diagnosis of Odontogenic keratocyst was made.

## Discussion

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 nature"<sup>4</sup>. The analysis of total soluble protein concentration, the ratio of albumin to globulins, and the presence of epithelial squames seem to be reliable in preoperative diagnosis of keratocysts<sup>5</sup>. The differential diagnosis of cysts of the jaws may embrace a host of entities ranging from anatomical landmarks to bizarre lesions such as myelomatosis<sup>6</sup>. Although odontogenic

keratocysts are benign they are often locally destructive and tend to recur after conservative surgical treatment. They must therefore be distinguished from other cysts of the jaw<sup>7</sup>. Although normal Hematoxylin and Eosin stain is enough for the diagnosis, various studies of immunohistochemistry for OKC are documented and have given good results. The treatment for OKC remains controversial. Treatment includes simple enucleation with or without curettage, chemical curettage with Carnoy's solution and resection<sup>8</sup>. Our patient was treated with enucleation with curettage.

## Conclusion

OKC is considered to be a very aggressive cyst and due to its aggressive biological behavior it is considered as a tumor. Recurrence is a common problem with OKC. Even with proper treatment recurrence cannot be controlled sometimes. Our patient was treated and a follow-up of 3 years showed no recurrence.

## References

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## Legends

- Fig. 1: Intraoral examination showing buccal expansion.  
Fig. 2: Orthopantomograph showing large partially corticated, radiolucency with ill defined borders.  
Fig. 3: Histopathology shows parakeratinized epithelium with corrugated borders.  
Fig. 4: Basal cell layer showing palisaded appearance.

