

A Case Report of Odontogenic Keratocyst in Anterior Mandibule Position

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Abstract

Odontogenic Keratocyst (OKC) is an odontogenic cyst and because of its ability in growth and creation tumoral lesions is placed in odontogenic tumor (OKT). Present study is a case report of a 22 year old man presenting with a symptomatic swelling on the gingiva between the mandibular right premolars and canine. On radiographic examination had seen a completely radiolucent unilacunar well-defined corticated scalloped lesion with teeth movement, without cortical perforation. The lesion was successfully treated by complete enucleation. The aim of the study is to report a case of odontogenic keratocyst that was different from routine (clinical and radiographic findings). For this reason all cysts should be considered and evaluated exactly.

Key words: Odontogenic Cysts, Odontogenic Keratocyst, Jaw Cysts, Mandible, Cysts

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Introduction

Odontogenic keratocyst was first explained by Phillipson in 1956 [1]. According to latest World Health Organization (WHO) classification, OKC is termed like tumor because it has neoplastic nature. It is a benign tumor with many diagnosing clinical and histopathological views. It has locally destructive behavior (extension more than expansion), high recurrence rate and association with nevoid basal cell carcinoma syndrome or "Gorlin syndrome" [2, 3].

OKC is common in males and occurs over a wide age range with a peak in the second and third decade of life. OKC may occur in any part of the jaws but it more common in posterior body of the mandible and ramus. The epicenter of it is usually superior to the inferior alveolar nerve canal. OKC often have no symptoms. Sometimes there is a little swelling [2].

In this article we report OKC that nearly have not any of the usual criteria of this lesion.

Case Report

A 22 year old man reported to the outpatient department with severe swelling and mild pain located on the mandibular right premolars, canine and lateral incisor. Duration of this lesion was four months. He had attended that the swelling was growing rapidly.

Clinical examination revealed an obvious swelling, almost two centimeter in diameter, fluctuant on palpation and located on the attached gingiva between the mandibular right first premolar and canine. The lesion was caused crowded teeth (Fig 1). The mandibular right first premolar and canine were found to be vital to electric pulp testing. The mandibular right premolars and canine had mobility grade II. However no one of the involved teeth had not clinically apparent caries. The patient had not any systemic diseases, trauma history, hospitalization, drug use and operation history.

A radiograph of the site was taken. The cropped panoramic image showed an almost round (unilacunar) complete radiolucency (without any septa or particle) with a radiopaque margin (well-defined) located between the roots of the first premolar and canine that superior border of lesion had penetrated (scalloped) between the roots of the teeth (Fig 2). The lesion had been caused displacement of the said teeth but tooth resorption was not seen. Lamina Dura had completely disappeared in mandibular right premolars and canine. There was no destruction of the mandibular inferior cortex.

In occlusal film of patient was seen significant expansion in buccal and lingual cortex without any perforation. The severe tooth displacement of right premolars could be seen in this view (Fig 3).

Finally after biopsy and the pathology report the lesion was diagnosed OKC. The lesion was completely removed with a margin of healthy tissue by oral and maxillofacial surgeon.



Figure 1. Clinical view of the swelling in the mucobuccal fold between right canine and premolars.



Figure 2: Cropped panoramic radiograph showing well-defined corticated radiolucency between right canine and premolars with severe root displacement.



Figure 3: Occlusal film of right body of mandible showing significant expansion in buccal and lingual tablet without any perforation.

Discussion

The OKCs more were seen in second and third decades, with a slight male predominance. Based on studies, odontogenic cysts included about 7 - 12% of all biopsies in oral and maxillofacial region [4, 5]. In between OKC included 7.8% of all Jaw cysts [3, 6].

Important point in this report was "this lesion despite of relatively limited size had significant expansion". This finding is unusual for OKCs.

Considered differential diagnoses: radicular cyst, calcifying odontogenic cyst (COC), mural ameloblastoma, OKC. Radicular cyst was rejected because teeth were vital and had not any caries or restoration. The mural ameloblastoma and the COC cause root resorption but in this case there is no root resorption. On the other hand mural ameloblastoma occurs in mandibular third molar. Nonetheless age of this patient was compatible with age of occurrence in mural ameloblastoma and COC [2, 3].

So it can be said that dentists should be more careful in his examination and diagnosis. As mentioned OKCs were occurred in posterior body of mandible and ramus and its propensity

to grow along the internal aspect of the jaws, causing minimal expansion [2] but in this case OKC was appeared Anterior to the first molar with significant expansion.

Surgical treatment may vary and can include resection, curettage, or marsupialization to reduce the size of large lesions before surgical excision. Studies have shown that OKCs had recurrence 12-51% after treatment. This recurrence can be occurring 40 years after initial treatment. After surgical treatment, it is important to make periodic posttreatment clinical and radiographic examinations to detect any recurrence [2, 3].

Conclusion

This case has defined that, the clinical impression and radiographic picture are not distinctive enough to be used as the only standard for rendering a diagnosis of any cyst occurring on the jaws. We can't confine ourselves associated symptoms such as age, sex, location and shape of the lesion. Due to high recurrence rate and aggressive behavior of OKCs all the tissues removed, should be submitted for histopathological evaluation and a definitive diagnosis.

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References

1. Shear M, Speight P. Cysts of the Oral and Maxillofacial region. 4th ed, Singapore: Blackwell Munksgaard; 2007, 223.
2. White S.C, Pharoah M.J. Oral Radiology Principles and Interpretation. 6th ed, Elsevier, Philadelphia, 2009, Chapter 21; 351-353.
3. Wood N.K, Goas P.W. Differential diagnosis of oral and maxillofacial lesions. 5th ed, Elsevier, Philadelphia, 1997, Chapter 17; 280-288.

4. Mosqueda T.A, Irigoyen Camacho ME, Diaz Franco MA, Torres Tejero MA. Odontogenic Cysts: Analysis of 856 cases. *Med Oral* 2002; 7: 89-96.
5. Ledesma Montes C, Hernandez Guerrero JC, Garces Ortiz M. Clinico-pathologic study of odontogeniccysts in a Mexican sample population. *Arch Med Res* 2000; 31:373-376.
6. Neville BW, Damm DD, Allen CM, Bouquot JE. Oral and maxillofacial pathology. 2nd ed. Saunders Elsevier, Philadelphia, 2002.