ACTA SCIENTIFIC DENTAL SCIENCES (ISSN: 2581-4893)

Volume 3 Issue 8 August 2019

Case Report

OKC- Common Lesion More Misdiagnosed

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Received: July 25, 2019; **Published:** July 29, 2019

DOI: 10.31080/ASDS.2019.03.0605

Abstract

One of the common cystic lesion seen in oral cavity is Odontogenic keratocyst. Initially given as cystic lesion later on WHO classified it as being lesion, Now in 2017 WHO reclassified as cyst. We present a case report of 45 year old male patient having huge odontogenic keratocyst in maxillary left posterior region involving maxillary sinus without any specific clinical and radiological presentation of OKC which made it more difficult to diagnose and treat.

Keywords: Keratocyst; Maxillary Sinus; Keratinised

Introduction

Odontogenic cyst consist 17% of all pathologies occurring in the mandible, of which 3- 13% of all jaw cyst are odontogenic. More commonly in mandible rarely in maxilla involving posterior quadrant. Since the day it was discovered it's still a very unique lesion. OKCs are known for their vague behaviour, origin, development, more tendency to recur and various treatment modalities.

Case Report

A 43 years old male patient reported to the department with chief complaint of pain and swelling in upper left posterior region of jaw since a month. History of trauma on left cheek 1 year back. Pain was sudden in onset, dull, intermittent, with swelling which was initially smaller in size gradually increased to present size, with heaviness on cheek. Patient also gives history of tobacco and lime chewing since 3 years.

On examination- mild fullness present on left cheek, intraorally diffuse swelling present in maxillary left vestibular area which is of 1x2 cms in size. Swelling is non tender and hard on consistency. On vitality test 24,25,26,27,28 were non vital. So provisional diagnosis is given as radicular cyst.

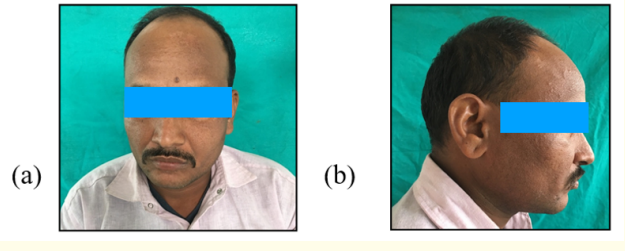

Figure 1: a and b showing front profile and lateral profile.

Figure 2: Showing intraoral diffuse swelling in left buccal vestibule.

Figure 3: Showing yellowish white cheesy aspiration.

Investigations- Routine laboratory parameters were normal. Patient is advised for IOPA, OPG, CBCT, routine investigation, aspiration and biopsy. Aspiration yielded a yellowish white cheesy fluid which was consistent with the diagnosis of a cystic lesion. IOPA revealed single unilocular well defined radiolucency surrounded by corticated border which is extending from 25 to posterior with loss of lamina dura.

Panoramic radiograph revealed a single well defined radiolucency surrounded by corticated border extending from 25 to 28 region with loss of lamina dura, involving floor of maxillary sinus. To determine complete extension of lesion patient is advised for CBCT evaluation revealed single unilocular well defined hypodense areas observed in left maxilla starting from distal of 24 to posteriorly 28 region having size of 32.3 mm anteroposteriorly, 22.2 mm mediolaterally and 37.9 mm superoinferiorly lesion involving 24,25,26,27,28 region. Buccal and palatal cortical plate are thin and expanded. Hypodense lesion involving left maxillary sinus thereby reducing the space. Posterior wall and lateral wall of maxillary sinus is destructed and anterior wall is expanded anteriorly. Based on clinical and radiological examination it was given as Radicular cyst/ benign lesion of left maxilla.

(a)

(B)

Figure 4: a) IOPA showing unilocular radiolucency involving 24,25,26,27 region, b) OPG showing unilocular radiolucency from 24-28 region involving maxillary sinus.

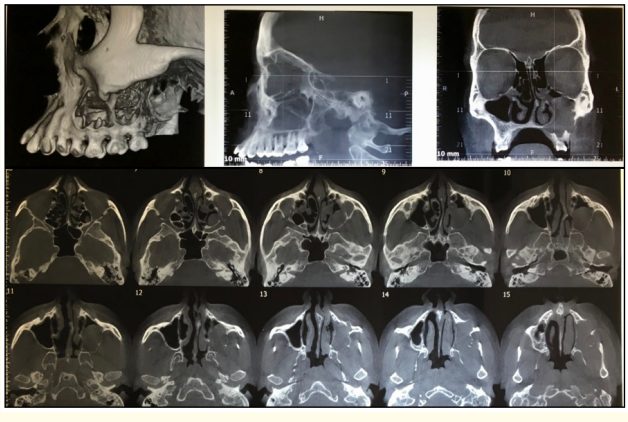

Figure 5: CBCT scan showing hyperdense lesion involving left maxillary sinus with posterior wall destruction.

Histopathological examination

Microscopic examination revealed cystic wall lined by parakeratinized stratified squamous epithelium of variable cell thickness with surface corrugation. The basal cells showed nuclear hyperchromatism and palisading giving picket fence appearnce. Curettage and enucleation of the lesion followed by application

of Carnoy's solution used for reducing the recurrence rate under general anaesthesia. The lesion was suspected primarily to be a radicular cyst/traumatic cyst based on the clinical and radiographic presentation of the lesion but on histopathological examination it was diagnosed as odontogenic keratocyst.

Discussion

Philipsen in 1956, first described the term 'odontogenic keratocyst', it is a development cyst of jaw. Histologic criteria to detect OKC was given by Pindborg and Hansen . Keratocystic odontogenic tumor (KCOT) is defined as a benign uni or multicystic intraosseous tumor of odontogenic origin, with a characteristic lining of parakeratinized stratified squamous epithelium and potentially aggressive, infiltrative behaviour [2]. OKC is commonly encountered in the mandible than the maxilla, particularly involving the premolar, molar area and ramus of the mandible. Involvement of the maxillary sinus by KCOT is rare with <1% cases reported in the literature [3]. Ahlfors., *et al*. [4] believed that folding of the epithelial lining into the connective tissue capsule is due to active epithelial proliferation, which is responsible for aggressive nature of KCOT.

These lesions grow to sizes larger than any other odontogenic cyst. They more often penetrate the bone rather than expand it and grow in an anterior to posterior direction as seen similar in our case [5]. The luminal content can have different consistencies as a ''straw-coloured fluid''; ''thick pus like'' material; or a caseous, thick, cheesy, milk white mass. The varying consistencies reflect various densities of keratinaceous debris as seen in our case cheesy yellowish white material on aspiration [6].

As OKC appearance in the maxillary sinus is very rare, its radiographic image in such situation may be indistinguishable and misinterpreted. Cone beam computed tomography can provide information on the extent of these lesions, contributing to diagnosis and preoperative preparation. OKC has clinical diagnostic difficulties due to relative lack of specific clinical and radiographic characteristics. In present case cystic lesion present on maxillary posterior without involving impacted tooth or more common site, there is history of trauma which is making it more confusing to judge from any other cystic lesion.

Origin of OKC in the maxillary sinus or involving it, is controversial, presumably arising from the entrapment of odontogenic epithelium within the sinus because of the close anatomic relationship between the dental lamina and developing antrum or the primordium of the canine and the floor of the sinus and close relation of maxillary molars and antrum floor leads to involving it. In the present case, we arrived at few modes of origin. First, it must have originated de novo from entrapped odontogenic epithelium as described above. Second, history of patient revealed that patient had trauma that could have triggered the cell rests and resulted in cyst formation, as seen in our case patient gives history of trauma.

Ideally a biopsy specimen examination and accurate clinical, radiographic, trans-surgical observation are essential to determine the most effective treatment in order to avoid recurrence [8]. Vague history with vague clinical presentation to appearance, it makes it more to involve in most of the differential diagnosis of cases.

Conclusion

Diagnosis of such lesion is challenging as clinical examination and radiographs doesn't show any characteristic features. As OKC involving maxillary sinus or occurring in it, is a rare occurrence, as it is very vague and versatile and it does not present characteristic clinical and radiographic features has to be kept in differential diagnosis of benign or cystic lesion. The difference between OKC and other jaw cyst is its potential aggressive behaviour and recurrence. Due to lack of extensive literature, it is difficult to predict the nature, behaviour and recurrence of OKC.

- Key points- uni or multilocular cystic lesion in posterior mandible and rare maxilla, with growth in anterio-posterior direction.
- No such clinical sign or symptoms and aggressive lesion.
- Corticated/ non corticated, scalloped and expanded.
- Radiological Types of Keratocyst- Envelopment type, Replacement, Extraneous, Collateral.
- The epithelial lining is composed of a uniform layer of stratified squamous epithelium, usually six to eight cells in thickness. The epithelium and connective tissue interface is usually flat. The basal cell layer has columnar/ cuboidal cells with reversely polarised nuclei, imparting a "picket fence" or "tombstone" appearance.

Bibliography

1. El-Hajj G and Anneroth G. "Odontogenic keratocysts - A retrospective clinical and histologic study". *International Journal of Oral Maxillofacial Surgery* 25.2 (1996): 124-129.

2. Barnes L., *et al*. "World Health Organization Classification of Tumours". Pathology and Genetics of Head and Neck Tumours. Lyon: IARC Press; (2005): 3067.

3. Silva GC., *et al*. "Odontogenic keratocyst in the maxillary sinus: Report of two cases". *Oral Oncology* 42 (2006): 2314.

4. Ahlfors E., *et al*. "The odontogenic OKC: A benign cystic tumor?" *Journal of Oral Maxillofacial Surgery* 42 (1984): 109.

5. Williams TP and Connor FA Jr. "Surgical Management of the odontogenic keratocyst: Aggressive approach". *Journal of Oral Maxillofacial Surgery* 52 (1994): 964-966.

6. Wright JM. "The odontogenic keratocyst: orthokeratinized variant". *Oral Surgery Oral Medicine Oral Pathology* 51 (1981): 609-618.

7. Cioffi GA., *et al*. "Odontogenic keratocyst of the maxillary sinus". *Oral Surgery Oral Medicine Oral Pathology* 64 (1987): 64851.

8. Chapelle KA., *et al*. "Rational approach to diagnosis and treatment of ameloblastomas and odontogenic keratocysts". *British Journal of Oral Maxillofacial Surgery* 42 (2004): 381-90.

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