

## ODONTOGENIC KERATOCYST (OKC) - A CASE REPORT AND REVIEW OF LITERATURE

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### ABSTRACT

odontogenic keratocyst are unique odontogenic lesion that have a potential to behave aggressively and which can recur. It usually occurs in mandibular ramus region which is the third most common site for odontogenic cysts. OKC may occur at any age mostly in 2<sup>nd</sup> and 3<sup>rd</sup> decades of life with male predilection, with presenting features as pain and swelling, a case of 42 years male presented with pain and swelling and clear radiological evidence of OKC and confirmed by histopathological proof.

**KEY WORDS:** Odontogenic Keratocyst, Mandible.

### INTRODUCTION

The term odontogenic keratocyst was first used by Philipsen in 1956, while Pindborg and Hansen in 1963 described the essential features of odontogenic keratocyst. Which now called as a keratocystic odontogenic tumor abbreviated **KCOT**<sup>7</sup>. Their etiopathogenesis is attributed to increased mitotic activity, hydrostatic pressure raised osmolalities, neural growth, enzymatic mechanism, bone resorbing factor, and dental proliferative basal cells with high recurrence rate associated nevoid basal cell carcinoma.

### Case Report:

A 42 year old male presented with pain and swelling on the right cheek. Pain is intermittent and occasional since 1 year, the swelling which he noticed 1 yr back is slowly progressing in size. On clinical examination there was an extra oral swelling present on right lower side half of the face which is diffuse, slightly tender and hard in consistency which is crossing midline, intra orally swelling extending from lower right 1<sup>st</sup> molar to lower left 2<sup>nd</sup> premolar with expansion of buccal and lingual cortical plates. Lower anterior teeth are grade 2 mobile with missing left lower canine, left lower premolars. Ortho Pantamography shows multi locular radiolucency extending from right 3<sup>rd</sup> molar region to left 1<sup>st</sup> molar region with sclerotic borders. On histopathology a thin and friable epithelial lining which consist of unified stratified squamous epithelium which is around 6 to 8 cells in thickness

with flat epithelial and connective tissue interface and without any rete ridges.<sup>6</sup>



**Fig 1-** Shows extraoral swelling on the right lower half of face



**Fig 2-** Shows intraoral buccal and lingual cortical plate expansion



**Fig 3-** OPG shows multilocular radiolucency

#### DISCUSSION:

Odontogenic keratocyst is defined by WHO are known for their peculiar behavior, varied origin, debated development unique tendency to recur and varied treatment modalities<sup>2</sup>. It most often affects the posterior mandible. These cysts have marked tendency to recur. As such, there were suggestions that OKC be regarded as benign cystic neoplasm rather than cyst that is keratocystic odontogenic tumour<sup>7</sup>.

Its high recurrence rate associated with nevoid basal cell carcinoma syndrome, aggressive biologic behavior and typical histological features places OKC in a unique position within the spectrum of odontogenic lesions. This is an autosomal dominant inherited condition comprising multiple basal cell carcinomas of skin, OKC, intracranial calcification and bifid rib as well as vertebral anomalies. Prevalence of this syndrome is estimated to be about 1 in 60 000.

The common view is that the origin of the odontogenic keratocyst comes from dental lamina remnants in the mandible and maxilla. Another origin of the odontogenic keratocyst is from basal cells of the overlying oral epithelium<sup>5</sup>.

OKC in the jaws may affect patients between the ages 10 to 94 yrs with peak incidence in 2<sup>nd</sup> and 3<sup>rd</sup> decades of life. Men are affected more than females (male: females – 1.3: 1)<sup>4</sup>. In the maxillofacial region mandible is more affected than maxilla (66.8: 33.2)(4), in the maxilla canine region is mostly affected. In the maxilla facial region the most odontogenic keratocyst occur in the mandibular molar – ramus region 34.4%, 10.3 % in premolar region, 10.3% in canine region, 8.3% in 1<sup>st</sup> and 2<sup>nd</sup> molar area

It is said that they tend to grow more in antero-posterior direction along the cancellous component without producing much expansion of the cortical plates especially the lingual plate, for a long period of time<sup>8</sup>

Radiographically, odontogenic keratocyst present predominantly as a unilocular radiolucency with well-developed sclerotic borders. They may also present as a multilocular radiolucency with a ratio of unilocular to multilocular varying from 3:112 to 1:1.3<sup>7</sup>

In view of the marked recurrence rate, treatment of OKC has always been challenging. As with most cysts, OKC is usually treated by enucleation and curettage. Complete enucleation is difficult, however, because of the thin, friable nature of the cyst wall. This has contributed to the reported frequency of recurrence, ranging from 5 to 62%<sup>4</sup>. The importance of histopathological diagnosis after surgery is to confirm complete excision of the cyst to prevent recurrence and confirmation, in histopathology we usually find epithelial lining consisting of stratified squamous epithelium usually 6-8 cells thickness, the epithelium and connective tissue interface is often flat and rete ridge formation is often inconspicuous, detachment portions of a cystic lining epithelium from the fibrous wall is observed.

#### CONCLUSION:

A 42 year old male who presented with pain and swelling on the right lower half of the face. Orthopantomograph shows multilocular radiolucency extending from right 3 molar region to left 1 molar region with sclerotic borders. This report matched with many studies of Odontogenic Keratocyst in gender, age, site of the lesion, radiographic and histopathologic findings.

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