

CASE REPORT

GIANT ODONTOGENIC KERATOCYST OF MANDIBLE OPERATED UNDER LOCAL ANESTHESIA- A CASE REPORT

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ABSTRACT

Odontogenic keratocyst (OKC) consists of 11% of jaw cysts. It is a type of developmental epithelial cyst. Various treatment options for OKC are present in the literature due to its high recurrence rate which is broadly classified as conservative and aggressive. In giant OKC cases most often aggressive treatment is approached but we preferred a conservative approach and achieved excellent result. We recommend our treatment option for giant Odontogenic keratocysts.

Keywords: *Odontogenic Keratocyst, Keratocystic Odontogenic Tumor, Giant, Pathology.*

INTRODUCTION

Odontogenic Keratocyst (OKC) is also called as Keratocystic Odontogenic Tumor (KCOT). It is a very common pathological condition of the maxillofacial region.¹ It has the highest recurrence rate of all pathologies.² It is more common in mandible as compare to maxillary jaw.³ OKC can occur in different sizes and region. It can be unilocular or multilocular.⁴ There are two histological patterns of OKCs parakeratinized and orthokeratinized.⁵ Surgical treatment is the only option for OKC. Cases involving small area are preferred to be operated under local anesthesia but giant OKCs are always operated under general anesthesia. Taking care of financial status of the patient surgery was planned under LA. Here by we present a case report of giant

OKC of mandible which was operated under local anesthesia smoothly without any complications with a successful healing.

CASE REPORT

A 27 year old female came with a chief complaint of severe pain in mandibular right posterior region since 13 days. Clinical examination elicited a continuous throbbing pain in the right mandibular body and ramus region radiating to ear and temple region. On inspection there was a vestibular swelling present on the same region. On palpation region was mild tender. Lesion was approximately 6x3 cm anteroposteriorly, 3x3 cm mediolaterally and 10x3 cm superoinferiorly. An OPG was advised which showed well defined bi locular radiolucency involving 47,48 impacted tooth. Further a biopsy was advised for contents of the swelling. Complete scaling and polishing was done. A small triangular flap raised from distal to 46 to 48 region and small window was created in buccal cortex of the 47 region between 47 & 48 tooth. Lesion was slowly approached to remove and curettage of cystic contents was done. To avoid injury to inferior alveolar nerve a small collagen sheet of 3x3cm was placed above the canal on which the graft was placed. Tissue was sent for histopathological examination. Surgical closure was done with 3.0 silk sutures and patient recalled after 5 days for check up. On follow up pain was reduced but tenderness over the mandibular ramus and body region are persistent. The histopathology report suggested Odontogenic keratocyst but due to certain constraints it was not feasible to get the images. Final surgery was planned under Local Anesthesia. Pre medication were given which include Tab. Phenergan 10mg tablet PO, Inj. Voveran IM, Inj. Dexona 4mg IM. These were administered 30 min prior to surgery. Standard protocol for draping and antiseptic application was done both extra & intra orally. 4% articaine with 1:1 lakh adrenaline ratio 6 cartridges used for IANB and local infiltration was given. 15ml blood was withdrawn from cubital fossa for preparation of Platelet rich fibrin in centrifugal machine which was mixed with 5 cc bio-oss bone graft. After incision on retromolar trigone access hole was made in the bone by using bur. 47 and 48 was extracted, cystic lining was separated from the bone. All the cystic contents were removed and cystic lining was completely

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Fig. 1: Pre Op. clinical picture and OPG



Fig. 4: Grafting of Area



Fig. 2: Incision & Exposure

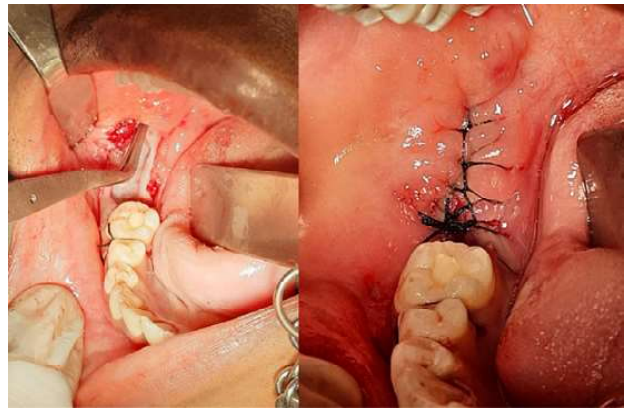


Fig. 5: Surgical Closure



Fig. 3: Excision of Lesion

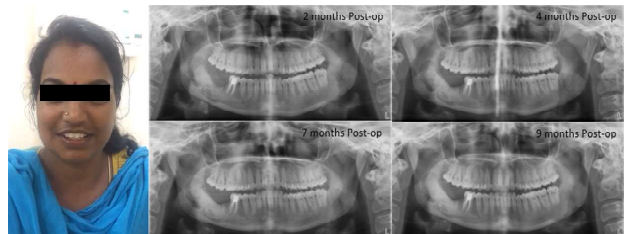


Fig. 6: Post-operative follow-up Clinical Picture and OPG

enucleated using curettes, inferior alveolar nerve was identified and preserved by using healguid strip. Thorough betadine irrigation was done and membrane slough cleaned. Graft was filled in cystic cavity extending form 47 48 region to superior portion of ramus across angle of the mandible. All the borders of cystic cavity are smoothed and healguid was used to cover all the borders of the cavity and was tucked below the soft tissue. Flabby tissue around sutures were removed. Air tight soft tissue closure was done using 3.0 silk sutures. Compression pack was given. Following Surgery Inj. Voveron IM was given. Post surgical

instructions and medications were given. On post operative follow up healing was satisfactory. Suture removal was done post operative 14th day.

DISCUSSION

It is always a dilemma in surgeons mind when it comes to treatment planing and strategies about OKC. The war goes in between conservative and aggressive treatment modalities. Agressive deals with direct resection and conservative is broadly divided into enucleation, marsupialixation and decompression.²⁻⁴ Other complementary options is peripheral osteotomy. Chemical acuterization with Carnoy's solution is very beneficial.⁵ OKC belongs to cyst category with highest chances of recurrence rate but the recent classification by world health organization has considered it to be moved under neoplasm category.⁶ Due to this now a days aggressive approaches are preferred more as the recurrence chances are reduced. Even though performing marsupilaization with chemical cauterization has a good results.⁷ In young patients going aggressively is avoided due to compromise in function and aesthetics which decrease the quality of life. Important factors like age of patient, site and extent of lesion must be considered before initiating any treatment plan. But even this day the dilemma continues when it comes to treatment planning for giant OKCs.

CONCLUSION

Diagnosis and treatment planning are very important part of any succesfull surgery. Execution of treatment in the best way psoiible is a golden duck for any surgeon. Looking on the condition and criteria surgeries should be planned in the correct manner. Our case reports suggest that even larger OKCs can be traeted under Local anesthesia under proper care.

REFERENCES

1. **Dammer R, Niederdellmann H, Dammer P, Nuebler-Moritz M.** Conservative or radical treatment of keratocysts: a retrospective review. *Br J Oral Maxillofac Surg* 1997; 35(1):46-8.
2. **Meara JG, Shah S, Li KK, Cunningham MJ.** The odontogenic keratocyst: a 20-year clinicopathologic review. *Laryngoscope* 1998; 108(2):280-3.
3. **Brøndum N, Jensen VJ.** Recurrence of keratocysts and decompression treatment. A long-term follow-up of forty-four cases. *Oral Surg Oral Med Oral Pathol.* 1991;72(3): 265-9. [https://doi.org/10.1016/0030-4220\(91\)90211-T](https://doi.org/10.1016/0030-4220(91)90211-T)
4. **Pogrel MA.** Decompression and marsupialization as definitive treatment for keratocysts: a partial retraction. *J Oral Maxillofac Surg.* 2007;65(2):362-3. <https://doi.org/10.1016/j.joms.2006.09.032>
5. **Zachariades N, Papanicolaou S, Triantafyllou D.** Odontogenic keratocysts: review of the literature and report of sixteen cases. *J Oral Maxillofac Surg* 1985; 43(3):177-82.
6. **Chow HT.** Odontogenic keratocyst: a clinical experience in Singapore. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 1998;86(5):573-7. [https://doi.org/10.1016/S1079-2104\(98\)90348-1](https://doi.org/10.1016/S1079-2104(98)90348-1)
7. **Chi AC, Owings JR Jr, Muller S.** Peripheral odontogenic keratocyst: report of two cases and review of the literature. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2005; 99(1):71-78.