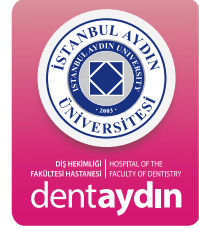




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CONSERVATIVE MANAGEMENT OF KERATOCYSTIC ODONTOGENIC TUMOR WITH MARSUPIALIZATION FOLLOWED BY ENUCLEATION: A CASE REPORT

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ABSTRACT

Keratocystic odontogenic tumor (formerly odontogenic keratocysts) (KCOT) is an unique cyst because of its locally aggressive behavior, high recurrence rate and characteristic histological appearance. The present case report describes the conservative surgical management of a large

keratocystic odontogenic tumor in an adult patient with no evidence of recurrence at two years follow-up.

Keywords: *Keratocystic odontogenic tumor, marsupialization, acrylic stent obturator*

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MARSÜPYALİZASYONU TAKİBEN YAPILAN ENÜKLEASYON İLE KERATOKİSTİK ODONTOJENİK TÜMÖRÜN KONSERVATİF TEDAVİSİ: BİR OLGU SUNUMU

ÖZ

Keratosistik odontojenik tümör (eski adıyla odontojenik keratosist) (KCOT), lokalize agresif davranışa, yüksek nüks oranına ve karakteristik histolojik bir görünümüne sahiptir. Bu olgu sunumunda, erişkin bir hastada büyük

bir keratosistik odontojenik tümörün konservatif cerrahi tedavisi yapılmış ve iki yıllık takibinde nüks görülmemiştir.

Anahtar Kelimeler: Keratosistik odontojenik tümör, marsüpyalizasyon, akrilik stent obtüratör

INTRODUCTION

Keratocystic odontogenic tumor (formerly odontogenic keratocysts) (KCOT), defined by the World Health Organization as a benign neoplasm, is a unique cyst because of its locally aggressive behavior, high recurrence rate and characteristic histological appearance.

[1] KCOT's are more commonly found in the mandible than in the maxilla. It accounts for approximately 12-14% of all odontogenic cysts of the jaws. This tumor affects individuals of both genders, with a slight predilection for males, and shows a more incidence in the third decade of life.[2] Radiographic image, is most often unilocular or multilocular well-circumscribed radiolucent lesion, lined by smooth or scalloped margins with sclerotic borders. KCOT has presumably arisen from cell rests of the dental lamina or from offshoots of the basal cell layer of the oral epithelium[1]. The differential diagnosis involves odontogenic cyst, dentigerous cyst, and ameloblastoma. Signs and symptoms most frequently found include pain, abscess, swelling, infection and discharge, cellulitis, and trismus. A perceptible number of cases is diagnosed incidentally during regular dental inspections.[3]

The conservative treatment for this pathology includes marsupialization, decompression, enucleation, and curettage. More aggressive approach is based on osteotomy, lesion

resection, use of chemical agents like Carnoy's solution, cryotherapy with liquid nitrogen or peripheral osteotomy.[4] The type of treatment is controversial, but depends on innumerable factors including: Localization and size of the lesion; patient age; or whether the KCOT is recurrent or primary.

CASE REPORT

33 year-old male patient admitted to clinic for routine follow-up. After taking panoramic radiograph and examining intraorally, a unilocular radiolucent cystic lesion with sclerotic border in mandibular ramus region was diagnosed incidentally. (Figure 1a) Clinical examination revealed no pain, no intra and extra oral swelling, good plaque control, and no periodontal disease. After intraoral and radiographic examination, Cone Beam Tomography (CBCT) was requested for further examination. CBCT scan showed a cavity in the left mandibular ramus with a partial absence of lingual bone plate and part of the buccal bone wall preserved. (Figure 2) Incisional biopsy was done and at the same time impression for acrylic stent obturator was taken. (Figure 3) Histological diagnosis of cyst was established as keratocystic odontogenic tumor (KCOT). Control radiographs (Figure 1b, 1c, 1d) were taken every 6 months in 2 years follow-up. Supplementary enucleation was done when the cyst cavity was reduced.

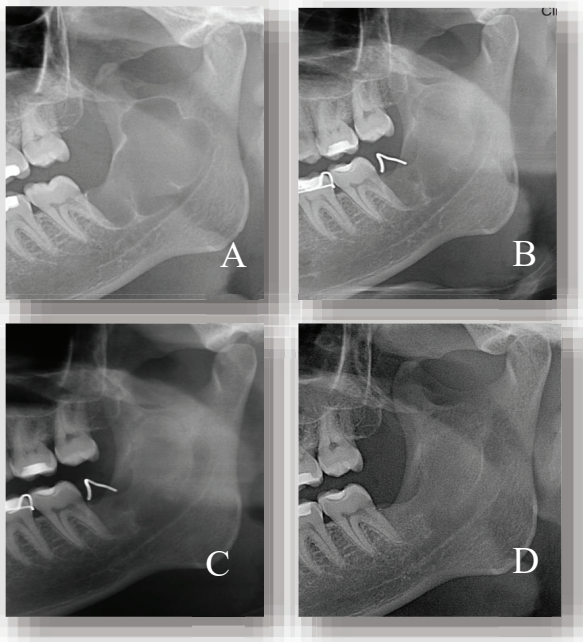


Figure 1: a; Pre-op panoramic radiograph showed a radiolucent area surrounded by a radiopaque border in mandibular ramus region. b; Follow-up panoramic radiograph 6 months after marsupialization. c; Follow-up panoramic radiograph 1 year after marsupialization. d; Follow-up panoramic radiograph 2 years after marsupialization.

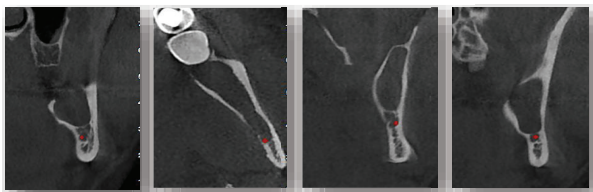


Figure 2: CBCT scan showed a cavity in the left mandibular ramus region (red point showed mandibular nerve)



Figure 3: Acrylic stent obturator image

DISCUSSION

There was no complication and recurrence at 2 years follow-up. In addition, there was sign of healthy bone formation in the cavity. At 2 years follow-up radiograph, the radiolucency had reduced to almost completely. (Figure 1d) The treatment proposed was efficient in removing the KCOT with minimal surgical morbidity and optimal healing process.

CONCLUSION

Marsupialization has been considered as effective as a preliminary treatment for large KCOTs and it seems not to affect the recurrence tendency of this type of cyst. Contiguous structures such as tooth, the maxillary sinus or the inferior alveolar canal can be saved from damage. The procedure is highly successful in decreasing the cyst size before enucleation, and is useful to avoid extensive surgery, and is considered the first option for the treatment of large KCOT.^[5] It is important to notice that the decompression procedure was done with supplementary enucleation reduced the requirement of marginal resection. The authors advocated marsupialization as a definitive treatment for KCOTs in a certain number of cases. The authors showed that in some cases only the marsupialization for decompression, associated with hygiene and antibiotics were sufficient to promote the reduction of the lesion until its complete disappearance, followed by new bone formation.^[6]

In this case, because of the close relationship with mandibular canal, application of Carnoy's solution at cyst cavity was not preferred. There was no complication and recurrence at 2 years follow-up.

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