

RADIOGRAPHIC EVOLUTION OF DECOMPRESSION AND ENUCLEATION OF A RADICULAR CYST



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INTRODUCTION

The radicular cyst is the most common cystic lesion of the oral cavity.¹ It is characterized as a cavity lined by nonkeratinized stratified squamous epithelium and connective tissue with inflammatory cells and small blood vessels.² Despite the fact that the diagnosis can only be confirmed by histologic analysis, the radiographic exams are essential for the differential diagnosis and for the longterm control of the lesion's evolution.^{1,3}

CASE REPORT

DESCRIPTION

Male patient, 48 years old, a smoker, without any general health problems, first came to the clinic in January 2016 reporting pain in the 4th quadrant.

Clinically, teeth 44 and 45 presented extensive cavities and coronary destruction. The radiographic exam showed a radiolucent unilocular lesion with radiopaque contour.

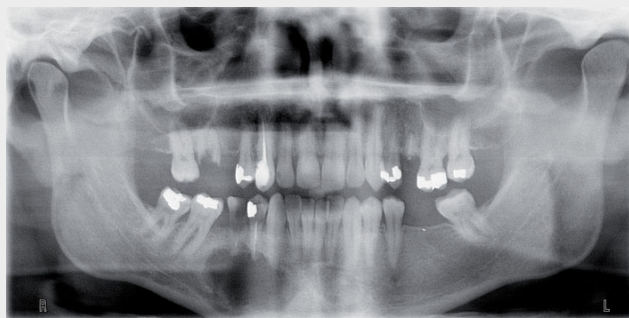


Fig 1: Inicial orthopantomography showed a radiolucent lesion in the 4th quadrant.

A CT Scan was performed and a 3D image of the lesion was obtained. Its close relationship with the alveolar nerve was confirmed.

DECOMPRESSION BY PLACING OF A DRAIN

In the next appointment, teeth 44 and 45 were extracted and a drain was placed through the alveolus of tooth 45.

Healing through 1st intention was obtained by suturing with silk 4-0. The drain was sutured with nylon 4-0.

Prednisolone 5mg 4 pills/day, single administration for 5 days, clonixin 300mg up to 8/8 hours during 48h and as needed after and amoxicilin + clavulanic acid 875 mg + 125 mg 12/12 hours for 8 days were prescribed.

DECOMPRESSION - 1 MONTH CONTROL

Patient was asymptomatic and with good soft tissue healing. Oral hygiene and disinfection of the drain were satisfactory. The 1st control OPG was done.

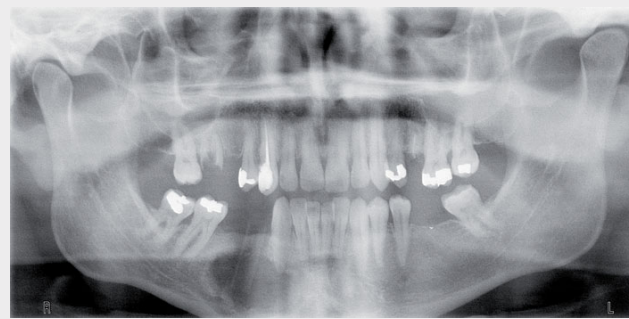


Fig 2: OPG 1 month after placing the drain.

DECOMPRESSION - 3 MONTHS CONTROL

Patient was asymptomatic and with good soft tissue healing.

The patient was instructed to maintain the drain for 3 more months and to do a CT after that period of time. The radiographic exam showed new bone formation.

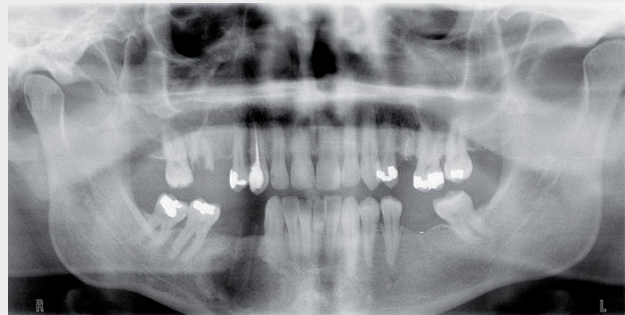


Fig 3: OPG 3 months after placing the drain

DECOMPRESSION - 7 MONTHS CONTROL

Loss of the drain was reported. Irrigation with a saline solution was done.

The new CT showed that the lesion decreased in size. The distance to the alveolar nerve was increased by 2mm.

The date for the enucleation was set and the patient was instructed to start amoxicilin + clavulanic acid 875 + 125mg every 12 hours, 48 hours before the procedure.

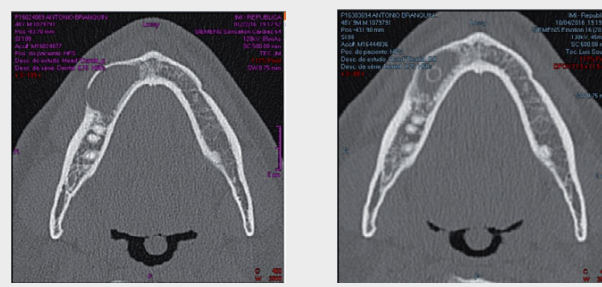


Fig 4: Initial CT Scan (lesion with 27mm mesio-distal diameter, 15mm vestibular-lingual and 20mm craniocaudal) and CT Scan 6 months after drain placing (24mm MD and 11mm VL)

ENUCLEATION OF THE CYSTIC LESION

A crestal incision and sulcular incision with a mesial releasing incision on tooth 43 was done. During surgery we realized that there was mental nerve involvement which was visible at the inferior cystic wall. Furthermore, the lesion extended apically to teeth 43 and 42. Suturing was done with silk 4-0. The lesion was sent for histopathological examination.

Clonixin 300mg up to 8/8 hours during the first 48 hours and as needed after, deflazacort 30mg 2 pills/day during 3 days and ibuprofen 600mg 8/8 hours starting on the 3rd day were prescribed. The patient was instructed to finish the antibiotic.

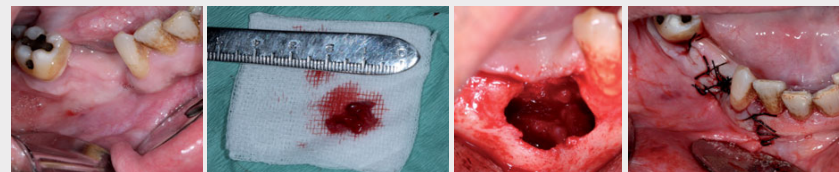


Fig 5-8: Situação pré-operatória; peça enviada para análise histopatológica; loca após enucleação quística; sutura.

One week after the procedure the patient was asymptomatic and with a good soft tissue healing. The sutures were removed.

The histopathological exam confirmed the provisional diagnosis of radicular/inflammatory cyst.

ENUCLEATION OF THE CYSTIC LESION- 3 MONTHS CONTROL (11 MONTHS POST DECOMPRESSION)

Patient was asymptomatic and with good soft tissue healing. The radiographic exam showed extensive bone formation.

Tooth 43 had a normal response to the cold sensitivity test and the patient didn't report any sensitivity deficit in the mental nerve territory.

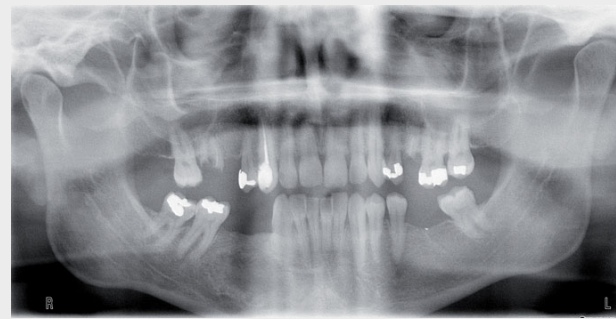


Fig 9: OPG 3 months after the enucleation.

DISCUSSION

The radicular cysts are the most frequent cystic lesion in the oral cavity.¹ Their treatment depends on their dimensions and their proximity to noble structures. In this case report, the lesion showed significant expansion and close relationship with the alveolar nerve. Therefore, before the enucleation was done, it was decided to perform decompression by placement of a drain. This approach made it possible to decrease the lesion's volume and to minimize the risk of damaging the vascular and nervous structures.

CONCLUSION

Periapical lesions can be asymptomatic for long periods of time and they can grow up to very significant dimensions. This leads to more complex treatments that may need to be done in various stages.

REFERENCES

1. Mohammad Razavi, S., Kiani, S., & Khaledi, S. (2015). Periapical Lesions: a Review of Clinical, Radiographic, and Histopathologic Features. *Avicenna Journal of Dental Research*, 7(1), 1-7. 2. Tsai CH, Huang FM, Yang LC, Chou MY, Chang YC. Immunohisto-chemical localization of cyclooxygenase-2 in radicular cysts. *Int Endod J*. 2002;35(10):854-8. 3. Neville BW, Damm DD, Allen CM, Bouquot JE. *Oral and Maxillofacial Pathology*. 3rd ed. Missouri: Saunders/Elsevier; 2009.