

RADICULAR CYST BY TRAUMA A CLINICAL CASE PURPOSE

SAMPAIO, N.^{1,2}, MARTINS, T.^{1,3}, MARTINS, F.^{1,3}, CASTRO, J.; ALFAIATE, D.^{1,2,4}

1. Núcleo CIRO; 2. Instituto Universitário de Ciências da Saúde/CESPU; 3. FCS-UFP; 4. FMUP, ICBAS



Clinical case description: Male patient, 48 years old, came to dental clinic for a routine visit. After panoramic radiography, it is evident the presence of large dimensions radiolucent image, unilocular and edges defined in the anterior mandibular region (Figure 1). The history revealed the occurrence of trauma to the anterior mandibular region. Enucleation of the lesion and guided bone regeneration with resorbable synthetic bone substitute and membrane was made.

CLINICAL CASE



Figure 1 – Inicial orthopantomography



Figure 2 – Inicial photography.

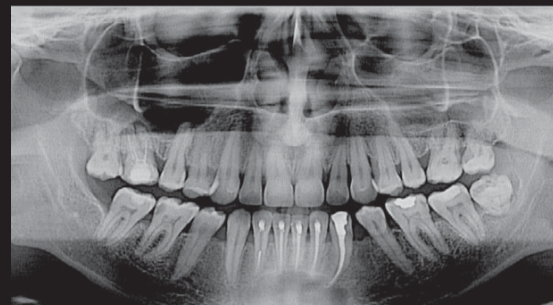


Figure 3 – 6 month follow up orthopantomography

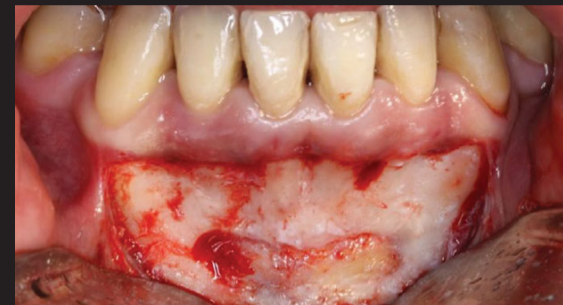


Figure 4 – Access to the lesion

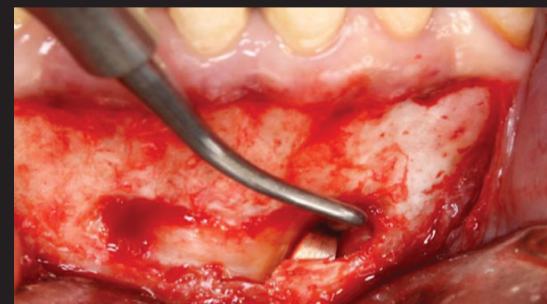


Figure 5 – Beginning of the enucleation.



Figure 6 – Complete detachment of lesion.

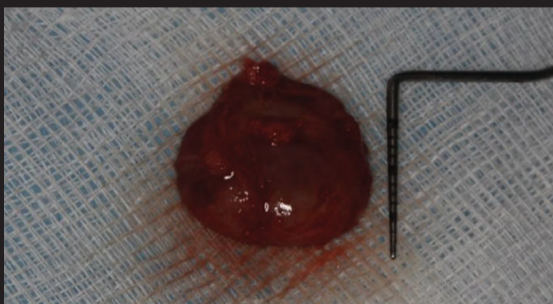


Figure 7 – Appearance of lesion. Note the large dimensional size



Figure 8 – Filling the cystic cavity with sintetic bone substitute

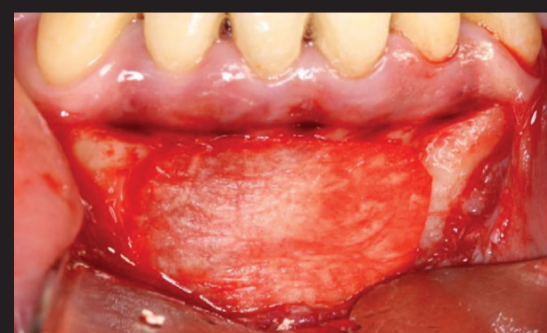


Figure 9 – Placement the resorbable membrane.



Figure 10 – 4-0 no resorbable suture



Figure 11 – 12 months follow up photography.



Figure 12 – 12 months follow up orthopantomography.

Surgery Dr. David Alfaiate

Discussion: The etiology of radicular cysts is in most cases due to *Malassez* epithelial debris, cells in the periodontal ligament. According to WHO, the radicular cysts are a subdivision of odontogenic cysts group, which also includes the development cysts (Oliveira, D., *et al.*, 2011). In this case the etiology of radicular cyst may have been trauma occurred in the anterior mandibular region, causing necrosis of the dental teeth 33 to 42. According to the literature, inflammatory substances from the necrosis tooth inducing *Malassez* cell proliferation and subsequent formation of radicular cysts. According to several authors, the treatment of this type of injury can have two types of therapeutic approaches: marsupialization and/or enucleation. The therapeutic approach depends on: size, location of the lesion, bone integrity involving the cystic lesion, and proximity to vital structures (Riachi, F., *et al.*, 2010; Ghezta, N., 2012). The treatment of large radicular cyst in recent years have been subject of discussion among the scientific community (Ghezta, N., 2012). As mentioned above, the marsupialization or decompression is the creation of access to the lesion surface, making the emptying of the cystic contents. The enucleation is based on complete removal without encountering disruption of the membrane surrounding the lesion. This therapeutic approach can be an advantage, it is an one surgical phase needed, removing the lesion totally. The fact of removing all the lesion allows a histopathological analysis of specimen obtained, to make a histological diagnosis (van Doorm, M., 1972; Manor, E., *et al.*, 2012).

Conclusions: The therapeutic approach depends on: size, location of the lesion, bone integrity involving the cystic lesion, and proximity to vital structures (Ghezta, N., 2012). The existence of asymptomatic intra-osseous lesions reveals the importance of conducting routine radiographs as a means to diagnose this type of injury.

Bibliography

Manor, E., Kachko, L., Puterman, M., Szabo, G., Bodner, L. (2012). *Cystic Lesions of the Jaws – A Clinicopathological Study of 322 Cases and Review of the Literature*. Int. J. Med. Sci., 9(1):20-26; van Doorm, M. (1972). *Enucleation and primary closure of jaw cysts*. Int J Oral Surg;1:17-25.; Oliveira, D., *et al.* (2011). *Cisto Residual com Grande Dimensão: Relato de Caso e Revisão da Literatura*. Rev. Cir. Traumatol. Buco-Maxilo-Fac., Camaragibe v.11, n.2, p. 21-26; Riachi, F., *et al.* (2010). *Effective management of large radicular cysts using surgical enucleation vs. marsupialisation*. IAJD:1:44-51.; Vasconcelos, R. *et al.* (2012). *Therapeutic Approach in Radicular Cyst of Great Proportions: a Case Report*. RBCS. V. 16; n°3; pp 467-474; Enislidis, G., *et al.* (2004). *Conservative treatment of large cystic lesions of the mandible: a prospective study of the effect of decompression*. Br. J. Oral Maxillofac. Surg.; 42: 546-550; Pozzer, L., *et al.* (2009). *Cistos odontogênicos em crianças: análise da decompressão cirúrgica em dois casos*. Rev Cir Traumatol Buco-Maxilo-fac., 9(2):17-22; Ghezta, N. (2012). *Surgical enucleation of large radicular cyste – Case report*. JDFS; 1(2): 29-32; Lia, R., *et al.* (2004). *Clinical, radiographic and histological evaluation of chronic periapical inflammatory lesions*. J Appl Oral Sci;12:117-20; Kadam, N., *et al.* (2014). *Management of Large Radicular Cyst by Conservative Surgical Approach: A Case Report*. Journal of Clinical and Diagnostic Research. Vol-8(2):239-241