Management Of Cyst –Review

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Abstract:

cyst is a Pathological cavity containing solid ,liquid, gases substance but not by the pus which does not always with epithelial lining. its is a pathological lesion , even it is a bengin it required a attention ,large cyst may cause the destruction and displacement of the anatomical structure.killey and kay gave a definition of the cyst in 1966 that was modified by Kramer in 1974 due to the modification found in epithelial lining by Kramer in 1974. The treatment planning of the cyst in oral cavity is various according to the location, size and the involvement of the structure that occurs.

Keywords: Partch-1, Partch-2, Whiteheads Varnish, Carnoy Solution.

Introduction:cyst management is highly required in the large lesion and even in small lesion greater than 2cm surgical management of the cyst is necessary to avoid the loosening and displacement of the teeth and in the large lesion may cause the fracture of the bone ,vital structure displacement around the cystic region, displacement of inferior alveolar canal.surgical management should completely remove the pathological lesion and restore the normal function. ³Various surgical technique involved in the cyst removal. Initially with partch-1 cystectomy ,followed by the various technique.

Material and methods: : over 20 article where selected for review following a comprehensive search of the literature from pubmed central.

Development Cyst initiation: bacteria involved in the teeth causes periapical inflammation lead to periapical granuloma

Cyst formation: small cavity formation by the death of central cells by the proliferation of the epithelial lining. **cyst enlargement:**enlargement of the cystic cavity various for each and every type of the cyst. Malcolm harris in 1975 gives the various theory in cyst enlargement mural growth theory by two proportion peripheral cell division, and by the accumulation of cellular conent .i.e., Kubota et al⁵ in 2002 explained IL-1alpha stimulates the enzymatic degradation of the extracellular matrix.osmotic theory was given by james and tratman explained the expansion of hydrostatic cyst.bone resorptiontheory by the harris et al by the factors prostaglandin PGE2,PGE3 and leukotrines in increased in volume of conent.

Treatment Of Cyst

ENUCLEATION MARSUPIALIZATION RESECTION *Partch -1(decompression *Enucleation and packing **MANDIBLE MAXILLA** and marsupialization) *Enucleation and primary *modifications closure *Marginal/ *Partial Waldrons procedure(enbloc *Enuclaetion and curetteage maxillectomy marsupialization and *segmental enucleation) *Enucleation and peripheral *Semimaxillec osteotomy tomy Marsupialization by opening into maxillary sinus or nose *Enucleation and primary *Total closure withgraft maxillectomy /reconstruction *Enucleation andchemical cauterization with carnoys solution/liquid nitrogen/cryotherapy

General principle of treatment planning:

1.removal of the complete cystic lining to eliminate the damage of jaw.

2. unerupted and impacted tooth should be preserved from the infection.

3.preservation of the adjacent vital structure like neurovascular bundle etc. In 1892 ,partsch¹ explained the partsch 1 technique of decompression and marsupilization. Where partsch suggested the partsch 2² in 1910 enucleation and cystectomy followed by the antibiotic .

Discussion: Based on all the previously discussed factors, the following treatment protocol is advised.

For inflammatory cysts, which presented as periapical radiolucencies in relation to discoloured or fractured non vital teeth (commonly in the anterior maxilla of young adult male patients), ¹⁰decayed or should be extracted and the cyst to be enucleated the lesion of the cystic cavity are completely curetted to prevent from the recurrence. In radicular cysts salvageable in non vital tooth and so the procedure should be combination of the apicectomy with root canal treatment. Teeth deemed unsalvageable should be extracted

For dentigerous cysts, Craig G et al., 19 which are often seen as a unilocular radiolucency related to the crown of an unerupted tooth, the status of the tooth/teeth in relation to the cyst should be evaluated first. The tooth eruption can be guided by the orthodontic treatment and followed by the marsupilization with the preservation of the tooth. The tooth is found to be malposed and difficult in reconstruct to the normal form and function the tooth should be extracted along the cystic lining, the treatment of odontogenic keratocysts has remained un conclusive so far. usually it is unilocular radiolucencies or multilocular radiolucencies, scalloped margin mostly present in the third molar region at the distal end of the mandibular region. They tend to grow in a horizontal fashion, expand both the cortical plates, and at times perforate cortices. They are also more often associated with resorption of related tooth roots. Even in the small cystic lesion the electrocautry are used to treat the cyst and preserved the region even in the medically compromised patients. 11 Large cysts, which are mutilocular or unilocular with scalloped margins, and associated with aggressive features like resorption of related teeth, both buccal and lingual cortical expansion, and multiple perforations, required a aggressive surgical management like segmental recection given by Shear et al¹⁶ Main et al., ¹⁸Non odontogenic epithelial cysts like nasopalatine cysts are treated by simple enucleation, hemorrhagic cysts is curettage is favourable for all the patients. Grafting of the cyst in the region of dead space. Cyst of minaor salivary gland should be removed along the salivary gland present near the cyst(mucocele). 12

Conclusion: the successful management of a oral cyst by various technique like decompression, enucleation, grafting, and site rehabilitation. It various fordifferent type cyst with different loacality. Cyst is a cavity of solid ,liquid or agases substance that should be care taken to operate based on the size and amount of destruction and deformation.

Reference:

- 1.partsch c.u.berkiecysten .deutsche monatsschift für zahnheikunde 1892,10:271-304
- 2.partsch c.zurbehandlung der kiefervzysten .deutsche monatsschrift zahnhekunde 1910 ;28:252-60
- 3.reichart .P A ,Philipsen H P .Aneurysmal bone cavity (cyst).In : odontogenic tumours and allied lesions.London: Ouintessence.2004.
- 4.Kramer I R. Changing views on oral disease. Proc R Soc Med 1974; 67: 271–276.
- 5.Barnes L, Eveson J W, Reichart P, Sidransky D . World Health Organization classification of tumors. Pathology and genetics of head and neck tumours. Lyon: IARC Press, 2005.
- 6.Pindborg J J, Kramer I R H, Torloni H . *Histological typing of odontogenic tumours, jaw cysts, and allied lesions*. Geneva: World Health Organization, 1971.
- 7. Soames J V, Southam J C. Oral pathology. Oxford University Press, 2005, p. 6f.
- 8. Hjørting-Hansen E, Andreasen J O, Robinson L H . A study of odontogenic cysts, with special reference to location of keratocysts. *Br J Oral Surg* 1969; 7: 15–23.
- 9.Meningaud J P, Oprean N, Pitak-Arnnop P, Bertrand J C . Odontogenic cysts: a clinical study of 695 cases. *J Oral Sci* 2006; **48**: 59–62.
- 10.Lin L M, Ricucci D, Lin J, Rosenberg P A. Nonsurgical root canal therapy of large cyst-like inflammatory periapical lesions and inflammatory apical cysts. *J Endod* 2009; **35**: 607–615.
- 11.Browne R M, Smith A J. Pathogenesis of odontogenic cysts. In: Browne R M (ed), *Investigative pathology of odontogenic cysts*. Boca Raton, FL: CRC Press, 1991.

- 12. Avelar R L, Antunes A A, Carvalho R W, Bezerra P G, Oliveira Neto P J, Andrade E S. Odontogenic cysts: a clinicopathological study of 507 cases. *J Oral Sci* 2009; **51**: 581–586.
- 13. Mosqueda Taylor A, Irigoyen Camacho M E, Diaz Franco M A, Torres Tejero M A . Odontogenic cysts. Analysis of 856 cases. *Med Oral* 2002; 7: 89–96.
- 14. Shear M. Developmental odontogenic keratocysts. An update. J Oral Pathol Med 1994; 23: 1–11.
- 15. Stoelinga P J W, Peters J H. A note on the origin of keratocysts of the jaws. Int J Oral Surg 1973; 2: 37–44.
- 16.Pitak-Arnnop P, Chaine A, Oprean N, Dhanuthai K, Bertrand J C, Bertolus C. Management of odontogenic keratocysts of the jaws: a ten-year experience with 120 consecutive lesions. *J Craniomaxillofac Surg* 2010; **38**: 358–364.
- 17. Shear M, Pindborg J J. Microscopic features of the lateral periodontal cyst. *Scand J Dent Res* 1975; **83**: 103–110.
- 18.Main D M. Epithelial jaw cysts: a clinicopathological reappraisal. Br J Oral Surg 1970; 8: 114–125.
- 19. Craig G T. The paradental cyst. A specific inflammatory odontogenic cyst. Br Dent J 1976; 141: 9–14.
- 20.Main D M G. Epithelial jaw cysts: 10 years of the WHO Classification. J Oral Pathol 1985; 41: 1–7.
- 21. Shear M, Speight P M. Cysts of the oral and maxillofacial regions. 4th ed. Oxford: Blackwell Munksgaard, 2007.
- 22. Daley T D, Wysocki G P, Pringle G A. Relative incidence of odontogenic tumours and oral and jaw cysts in a Canadian population. *Oral Surg Oral Med Oral Pathol* 1994; 77: 276–280.
- 23. Kramer I R H, Pindborg J J, Shear M. Histological typing of odontogenic tumours. Berlin: Springer, 1992
- 24.Horner K, Forman G H, Smith N J . Atypical simple bone cysts of the jaws. I: Recurrent lesions. *Clin Radiol* 1985; **39**: 53–57.
- 25.Brandsetter B F, Weissman J L, Kaplan S B. Imaging of a Stafne bone cavity: what MR adds and why a new name is needed. *Am J Neuroradiol* 1999; **20**: 587–589.
- $26. Evans \ G \ E, \ Bishop \ K, \ Renton \ T \ . \ \textit{Guidelines for surgical endodontics}. \ London: \ Royal \ College \ of \ Surgeons \ of \ England, \\ 2012. \ http://www.rcseng.ac.uk/fds/publications-clinical_guidelines/documents/surgical_endodontics_2012.pdf$