

SURGICAL MANAGEMENT OF RESIDUAL CYST: A CASE REPORT

Mayur Vilas Limbhore, Viren Shirish Patil, Shandilya Ramanojam

Department of Oral and Maxillofacial Surgery

Bharati Vidyapeeth Dental College, Katraj, Pune, Maharashtra, India-411030

Received on : 07-03-2018

Accepted on : 18-05-2018

ABSTRACT

Inflammatory odontogenic cysts are benign osteolytic asymptomatic lesions and can destroy the surrounding bone and let it infected. The term residual cyst is used most often for retained radicular cyst from teeth that has been removed. Residual cysts are among most common cysts of the jaws. It can be concluded that early detection and accurate diagnosis are essential for the proper treatment of the residual cysts. This case report reveals some of the technical considerations in managing huge maxillary midline residual cyst surgically.

KEYWORDS: Maxillary midline cyst, Pus discharge, Appropriate treatment, Asymptomatic.

INTRODUCTION

A cyst contains fluid or semisolid material and is lined by an epithelium-lined sac. The epithelial cells first proliferate, later undergoes degeneration and liquefaction, leading to the formation of a cyst. There is equal pressure on the walls of the cyst from inside which is applied by the liquefied material. The cyst grows spherical in shape due to this reason, but in some cases the shape changes due to unequal resistance produced by the surrounding teeth. This may also lead to displacement of teeth and sometimes even the cortical bone by the pressure produced during the expansion of the cyst. Cysts are broadly classified as odontogenic cysts and non-odontogenic cysts. Odontogenic cysts originate from the epithelium of the developing teeth. The epithelium arises from the enamel organ, the cell rests of Malassez, the reduced enamel epithelium or the remnants of the dental lamina. The epithelial rests can also cause the formation of a residual cyst after the extraction of a tooth (1). The term residual cyst is used most often for retained radicular cyst from teeth that has been removed. Residual cysts are among most common cysts of the jaws. The location of all odontogenic cysts is usually intraosseous. The peripheral (extraosseous) presentations are rare (2) and commonly seen in the elderly (3). Radiology showed a round to oval radiolucency of variable size within the tooth bearing regions of jaws at the site of a previous tooth extraction, as the cyst ages, degeneration of the cellular contents within the lumen occasionally leads to dystrophic calcifications and radiographic opacities (4). Residual cyst occurs due to incomplete surgical removal of a radicular or other inflammatory cyst. The histological and clinical features of the radicular cyst are very similar to those of the residual cyst except for

the site of the extracted teeth. Residual dental cysts harbour an innocuous pathosis and are often discovered as incidental findings on routine radiographs. Unless infected, it is rare to find symptomatic residual dental cysts which will result in clinical signs or symptoms that will concern the patient enough to seek treatment (5).

CASE REPORT

A 43 years male patient reported to the department of our institute with a chief complaint of painless swelling and pus discharge from maxillary left lateral incisor region since two to three months. Intraoral examination revealed missing left lateral incisor in maxillary region with healed extraction socket and normal alveolar mucosa.

Radiographic Investigation (OPG)

The radiographic feature is a well-defined unilocular radiolucent structure of varying size at the edentulous area of a previous extracted tooth site.

CBCT findings reveals

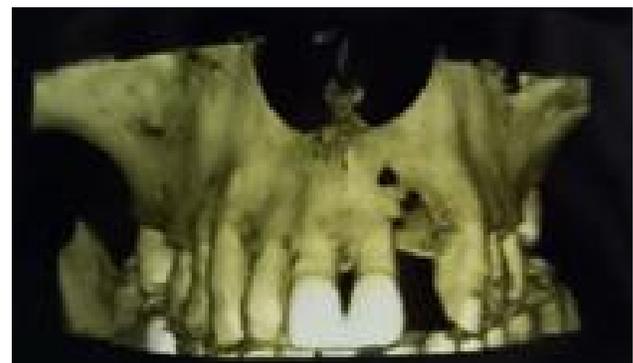


Fig 1: Cone Beam Computed Tomography.

The lesion has caused the expansion and resorption of the labial and palatal cortical plates, resorption and thinning of the floor of the nasal fossa and part of nasal septum, the resorption and possible involvement of the cortical lining of the nasopalatine canal.

Enucleation of cyst was planned under local anaesthesia.

Non inflammatory drugs two doses were given one hour before surgery two hours prior to surgery were given.

Painting and draping was done, bilateral extraoral infraorbital nerve block was given by injecting 3 ml of lignocaine and adrenaline solution by using a 25-gauge inch needle by inserting at the level of the infraorbital notch and was advanced medially approximately 15 degrees off the perpendicular to avoid entering the foramen. The needle was advanced until it approached the periosteum of the underlying bone. After gentle aspiration, 3 mL of solution was injected in a fanlike distribution.

Intraorally nasopalatine nerve block was given in the mid palatine region in between two maxillary central incisors and also bilateral greater palatine block was given as it reduces bleeding during surgery to repair the nasal septum and help control posterior epistaxis. Splash block in the nasal floor was given to best achieve anesthesia for a painless surgery.

Crevicular incision was taken from left maxillary central incisor to left maxillary canine and then releasing incision was taken distal to left maxillary central incisor and left maxillary canine Mucoperiosteal Flap was raised. Bony window was made in the left lateral incisor region. The borders of the cyst were separated from bone and was enucleated.



Fig 2: Operative

Extraction of left maxillary canine and left maxillary central incisor was done.

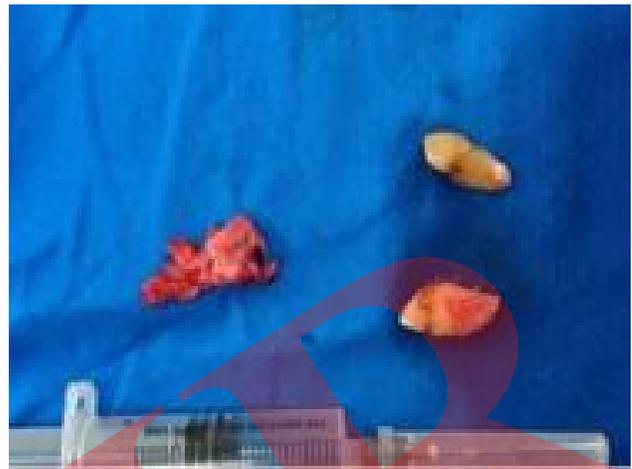


Fig 3: Cyst Removal With Extraction Of Adjacent Teeth.

Irrigation with betadine and normal saline at the operated site was done. The operated site was approximated by 4 '0' Vicryl suture material. Excise specimen was then sent for histopathology which then revealed residual cyst as a histopathology diagnosis. Post operative analgesics, antibiotics and chlorhexidine mouth wash was prescribed. Follow up of the patient was done which revealed no recurrence after a month.

DISCUSSION

Residual cyst occurs due to incomplete surgical removal of a radicular or other inflammatory cyst. The histological and clinical features of the radicular cyst are very similar to those of the residual cyst except for the site of the extracted teeth. Initially the tooth is extracted with the periapical pathological area, if any, is left behind in the bone which may lead to the formation of residual dental cyst over time. After a few years, the cyst size may either resolve, remain the same size or increase in size (5).

The radiographic feature is a well-defined unilocular radiolucent structure of varying size at the edentulous area of a previous extracted tooth site (6). A detailed study of clinical, histopathological and radiological findings are important as there are numerous cysts that are similar clinically and radiographically (7).

Approximately 10% of odontogenic cysts are most commonly asymptomatic (8). Its very rare when patients have voluntarily come with a sole complaint of the residual cyst because they are usually asymptomatic and commonly diagnosed after a routine clinical and radiographic examination. In the

present case, even though the patient had pus discharge from maxillary anterior left edentulous region (22), he finally visited the dental department with complaint of pus discharge. Residual cysts comes under inflammatory cysts and are usually present periapically and remain after the extraction of associated tooth. The patient had a history of extraction in the area of the cyst, in the present case as well. Types of treatment that can be conducted for the residual cyst is either marsupialisation or enucleation depending on the size of the cyst. In the case presented here, due to the smaller size and intact cortical lining, enucleation of the cyst was performed. Also if the cortex of the lesion is intact, usually there will be complete bone repair, hence no bone grafting was required to rebuild the post-op bone cavity. Splash block was used (9).

CONCLUSION

Residual cyst is an oral manifestation which is often missed by the patient as it is asymptomatic, unless infected. A thorough case history, oral, radiographic & cytological examination is a must to provide an adequate diagnosis. We conclude that if the maxillary midline region is affected the cyst, it is important to anaesthetize the region properly and enucleate it in a pathology in a precise manner.

REFERENCES

1. Adappa D, Chatra L, Shenai P, Veena KM, Rao PK, Prabhu RV. Residual Cyst: A Case Report. *International Journal of Advanced Health Sciences*. 2014;1(4):24-7.
2. Jamdade A, Nair GR, Kapoor M, Sharma N, Kundendu A. Localization of a Peripheral Residual Cyst: Diagnostic Role of CT Scan. *Cas Rep in Dent*. 2012; 2012:1-6.
3. Thiagarajan B. Odontogenic cysts of upper jaw an analysis. *Rhinology* 2013; 3(3): 1-13.
4. Morrison A. Mandible - Maxilla Odontogenic cysts Residual cyst Pathology *Outlines.com, Inc*. 2014: [http:// www.pathologyoutlines.com/topic/mandiblemaxillaresidualcyst.html](http://www.pathologyoutlines.com/topic/mandiblemaxillaresidualcyst.html).
5. Dimitroulis G, Curtin J. Massive residual dental cyst: Case report. *Aust Dent J*. 1998;43(4):234
6. Oehlers FA. Periapical lesions and residual dental cysts. *Br J Oral Surg*. 1970; 8: 103-13
7. Kavita R, Smitha-Umadevi HS, Priya NS. Clinicopathological study of 100 odontogenic cysts reported at V S Dental College- A retrospective study. *J Adv Oral Res*. 2011; 2: 51-8
8. DM Main. Epithelial jaw cysts: A clinicopathological reappraisal. *Br J Oral Maxillofac Surg*. 1990; 8: 114-25.
9. Limbhore MV., Ramanojam S., Patil V., Pain Control : Current Understanding And Multimodal Approach In Management Of Maxillary Midline Cyst. 2017; 5(1): 1-4.

