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Surgical Removal of Odontogenic Cyst: A Case Report

Raymond Melrose*

Department of Oral Pathology Associates, Inc., 11500 West Olympic Boulevard, Suite 390, Los Angeles, CA 90064, USA

Abstract

Odontogenic cysts are common pathologies that can arise from remnants of the tooth-forming apparatus. These cysts typically develop within the jawbones and can cause significant morbidity if left untreated. Surgical removal is often necessary to alleviate symptoms, prevent complications, and ensure optimal oral health. This case report describes the surgical management of an odontogenic cyst, highlighting the diagnostic process, treatment planning, surgical technique, and postoperative outcomes.

Keywords: Odontogenic cysts • Surgical removal • Malocclusion

Introduction

Patient presentation

A 42-year-old male presented with a chief complaint of swelling and discomfort in the right mandible. The patient reported that the swelling had gradually increased in size over the past few months and was accompanied by occasional pain. Clinical examination revealed a firm, expansile swelling in the posterior mandible, associated with displacement of adjacent teeth. Intraoral examination showed no signs of infection or sinus communication. Panoramic radiograph and Cone-Beam Computed Tomography (CBCT) revealed a well-defined radiolucent lesion in the right mandibular molar region, suggestive of an odontogenic cyst [1].

Diagnosis and treatment planning

Based on the clinical and radiographic findings, a provisional diagnosis of an odontogenic cyst, possibly a dentigerous cyst, was made. The patient's medical history was unremarkable, and no systemic conditions were identified. After discussing the treatment options and obtaining informed consent, surgical removal of the cyst was planned.

Literature Review

Surgical procedure

Under local anesthesia, a mucoperiosteal flap was raised to expose the lesion. Careful dissection was performed to preserve the surrounding vital structures, including nerves and blood vessels. Once adequate access was achieved, the cyst was carefully dissected and enucleated in its entirety. The associated tooth, in this case a partially erupted third molar, was also extracted. Thorough irrigation with sterile saline was performed to remove any residual cystic contents and promote hemostasis. The surgical site was then closed primarily using sutures [2].

***Address for Correspondence:** Raymond Melrose, Department of Oral Pathology Associates, Inc., 11500 West Olympic Boulevard, Suite 390, Los Angeles, CA 90064, USA, E-mail: rmelrose320@msn.com*

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Postoperative management

Postoperatively, the patient was prescribed analgesics and antibiotics to manage pain and prevent infection. Instructions on maintaining oral hygiene and dietary modifications were provided. The patient was advised to follow up for regular wound assessment and removal of sutures [3].

Follow-up and outcomes

The patient was seen for postoperative follow-up visits at regular intervals. Clinical examination revealed satisfactory healing of the surgical site, with no signs of infection or recurrence. Radiographic evaluation confirmed the complete removal of the cyst and uneventful healing of the surrounding bone. The patient reported resolution of the preoperative symptoms, including the reduction in swelling and discomfort. The surgical removal of an odontogenic cyst is a procedure aimed at eliminating the cystic lesion and preventing its recurrence. Odontogenic cysts are pathological cavities that form in the jawbones and are derived from remnants of the tooth-forming apparatus. These cysts can cause various symptoms, including swelling, pain, and displacement of adjacent teeth, necessitating surgical intervention [4].

Discussion

The procedure begins with a thorough assessment of the patient's clinical and radiographic findings. Clinical examination involves evaluating the site of the cyst, assessing the size and consistency of the swelling, and examining the surrounding oral structures for any signs of infection or sinus communication. Radiographic imaging, such as panoramic radiograph or Cone-Beam Computed Tomography (CBCT), provides a detailed view of the cyst's location, size, and relationship with adjacent structures. After diagnosing the odontogenic cyst and obtaining informed consent, the patient is prepared for surgery. Local anesthesia is administered to ensure the patient's comfort throughout the procedure. In some cases, conscious sedation or general anesthesia may be considered depending on the patient's medical condition and the complexity of the surgery [5].

The surgical removal of an odontogenic cyst typically involves the following steps:

Incision and flap elevation: An incision is made in the overlying mucosa to expose the cystic lesion. The size and shape of the incision depend on the location and extent of the cyst. A mucoperiosteal flap is then elevated to provide adequate access and visualization of the cyst.

Dissection and enucleation: Careful dissection is performed to separate the cystic lining from the surrounding tissues. This dissection is done with precision to preserve vital structures such as nerves and blood vessels. The cystic lining is gently dissected and separated from the adjacent bone, ensuring complete enucleation of the entire cyst.

Extraction of associated teeth (if necessary): In cases where the cyst

is associated with a tooth, such as a dentigerous cyst, the tooth is extracted along with the cyst. This ensures the removal of the entire cystic lesion and eliminates the potential for recurrence.

Irrigation and hemostasis: Thorough irrigation of the surgical site is carried out using sterile saline solution to remove any residual cystic contents and promote hemostasis. This helps minimize the risk of postoperative infection and ensures a clean surgical field.

Closure of the surgical site: The surgical site is closed primarily using sutures. The choice of sutures may vary depending on the size and location of the incision. Sutures are carefully placed to achieve optimal wound closure and promote proper healing [6].

Conclusion

This case report demonstrates the successful surgical management of an odontogenic cyst. Prompt diagnosis, treatment planning, and meticulous surgical technique were essential for achieving a favorable outcome. Surgical removal of the cyst not only resolved the patient's symptoms but also prevented potential complications. Dentists and oral surgeons should remain vigilant in identifying and managing odontogenic cysts to ensure optimal oral health and patient well-being. Further research and long-term follow-up studies are warranted to evaluate the long-term outcomes and recurrence rates associated with surgical removal of odontogenic cysts.

Acknowledgement

None.

Conflict of Interest

None.

References

1. Sankaranarayanan, Rengaswamy, Kunnambath Ramadas, Gigi Thomas and Richard Muwonge, et al. "Effect of screening on oral cancer mortality in Kerala, India: A cluster-randomised controlled trial." *Lancet* 365 (2005): 1927-1933.
2. Chuang, Shu-Lin, William Wang-Yu Su, Sam Li-Sheng Chen and Amy Ming-Fang Yen, et al. "Population-based screening program for reducing oral cancer mortality in 2,334,299 Taiwanese cigarette smokers and/or betel quid chewers." *Cancer* 123 (2017): 1597-1609.
3. Huang, Shao-Yi, Ho-Min Chen, Kai-Hsin Liao and Bor-Sheng Ko, et al. "Economic burden of cancers in Taiwan: A direct and indirect cost estimate for 2007–2017." *BMJ Open* 10 (2020): e036341.
4. Wu, Ying-Hui, Chyong-Huey Lai, Ling Chien and Yun-Chung Pan, et al. "Economic burden of cervical and head and neck cancer in Taiwan from a societal perspective." *Int J Environ Res Pub Health* 20 (2023):3717.
5. Yang, Yi-Hsin, Saman Warnakulasuriya, Hsu-Fei Yang, Li-Ju Lin, et al. "Public health measures to reduce areca nut and betel quid use for control of oral cancer in Taiwan." *Oral Oncol* 108 (2020):10-1016.
6. Kim, Dongyeop, Juan P. Barraza, Rodrigo A. Arthur and Anderson Hara, et al. "Spatial mapping of polymicrobial communities reveals a precise biogeography associated with human dental caries." *Proc Natl Acad Sci* 117 (2020): 12375-12386.

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