ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul733

Beneath the Blink- A Kid's Impacted Canine: A Case Report

Dr. Navaneeth Y[1]; Dr. Shivaraj S Wagdargi[2]; Dr. Veerendra Sai. K[3]; Dr. Bhoomika. B[4]

[1]Assistant Professor, Department of oral and Maxillofacial Surgery, Subbaiah Institute of Dental Sciences, Shivamogga, India.
[2]Professor and Head of Department, Department of oral and Maxillofacial Surgery, Subbaiah Institute of Dental Sciences, Shivamogga, India.
[3]Third Year Post Graduate Student, Department of oral and Maxillofacial Surgery, Subbaiah Institute of Dental Sciences, Shivamogga, India.
[4]Third year post Graduate Student, Department of Pediatric and Preventive Dentistry, Subbaiah Institute of Dental Sciences, Shivamogga, India

Corresponding Author: Dr. Veerendra Sai. K

Publication Date: 2025/07/17

Abstract: Dentigerous cysts are benign, slow-growing odontogenic cysts of developmental origin. They show a higher prevalence in males and are most commonly associated with maxillary canines and mandibular third molars, though they can also involve supernumerary or ectopically positioned teeth. Here, we present a case of a 9-year-old boy who reported to our department with a one-month history of painful swelling over the left cheek. Imaging with computed tomography revealed a well-defined, unilocular radiolucent lesion in the left maxilla, enclosing two impacted teeth — one located at the infraorbital rim and the other within the maxillary sinus. Both impacted teeth were surgically extracted, and the cyst was enucleated through a Caldwell–Luc approach. Histopathological examination confirmed the diagnosis of a large dentigerous cyst associated with the impacted teeth.

Keywords*: Dentigerous Cysts, Impacted tooth, Odontogenic Cyst.*

How to Cite: Dr. Navaneeth Y; Dr. Shivaraj S Wagdargi; Dr. Veerendra Sai. K; Dr. Bhoomika. B; (2025) Beneath the Blink- A Kid's Impacted Canine: A Case Report. *International Journal of Innovative Science and Research Technology*, 10(7), 1070-1073. https://doi.org/10.38124/ijisrt/25jul733

I. INTRODUCTION

A dentigerous cyst is a benign odontogenic cyst that develops due to fluid accumulation between the enamel crown and the enamel epithelium, which triggers cystic proliferation of the reduced enamel epithelium after crown formation. It is the most common developmental odontogenic cyst found in the jaws. While it is most often associated with maxillary canines and mandibular third molars, it can also arise in connection with supernumerary or ectopically positioned teeth.(1) The teeth most frequently involved, in descending order, include the mandibular third molars, maxillary third molars, maxillary canines, and mandibular second premolars. Dentigerous cysts originating from impacted supernumerary or ectopic teeth in the anterior maxilla are rare, representing only about 5.5% of reported cases. Even more uncommon are lesions extending into the infraorbital rim or invading the maxillary sinus.(2)

This report describes a sporadic case of a large dentigerous cyst associated with impacted anterior maxillary teeth, extending into the infraorbital rim.

II. CASE REPORT

A 9-year-old boy presented to our department with a one-month history of painful swelling on his left cheek. Despite prior treatment with antibiotics and analgesics, his symptoms persisted. He had no relevant medical history and denied any trauma to the maxillofacial region. On examination, facial asymmetry was noted due to maxillary expansion. Both visual acuity and ocular movements were intact. The swelling was diffuse, extending vertically from the lower margin of the left infraorbital rim to the corner of the mouth, and horizontally from the left lateral nasal wall to the tragus. The overlying skin appeared normal. Palpation revealed a bony-hard, tender, non-fluctuant mass. Regional lymph nodes were not palpable, and there was no evidence

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul733

of left inferior alveolar nerve paresthesia. Intraorally, an oval swelling measuring approximately 4 × 3 cm was evident in the left maxillary vestibule, involving the region of teeth 51, 21, 62, 63, 64, and 26. Radiographic evaluation revealed a cystic lesion associated with impacted left maxillary lateral incisor, canine, and premolars, extending into the roof of the maxillary sinus and involving the infraorbital rim. Based on these findings, a provisional diagnosis of a dentigerous cyst was made.

After obtaining informed consent from the patient's mother, surgery was performed under general anesthesia. A vestibular incision was made from the 21 to 26 region, followed by elevation of a mucoperiosteal flap. Using a round bur, a bony window was created on the anterior wall of the maxillary sinus to access the cyst. The cystic lining, along with the impacted teeth and sinus contents, was completely removed. Hemostasis was achieved, and the surgical site was closed with 3-0 polyglactin sutures. The postoperative period was uneventful, and the patient was discharged on the second day. At the 10-day follow-up, healing was satisfactory, with no complications or signs of paresthesia.

Fig 1 Facial Asymmetry and Expansile Swelling Overlying the left Maxilla Ary Sinus.

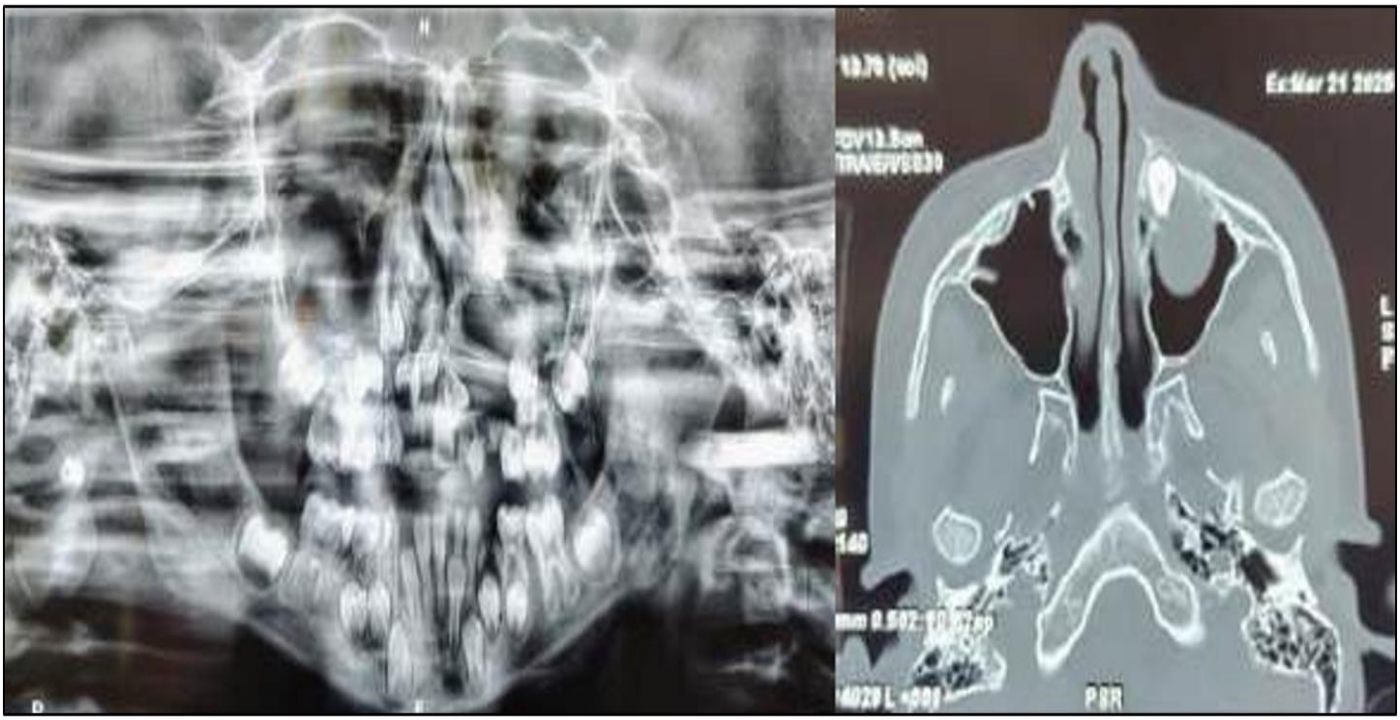

Fig 2 An Ectopic Canine in the Infraorbital Rim.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul733

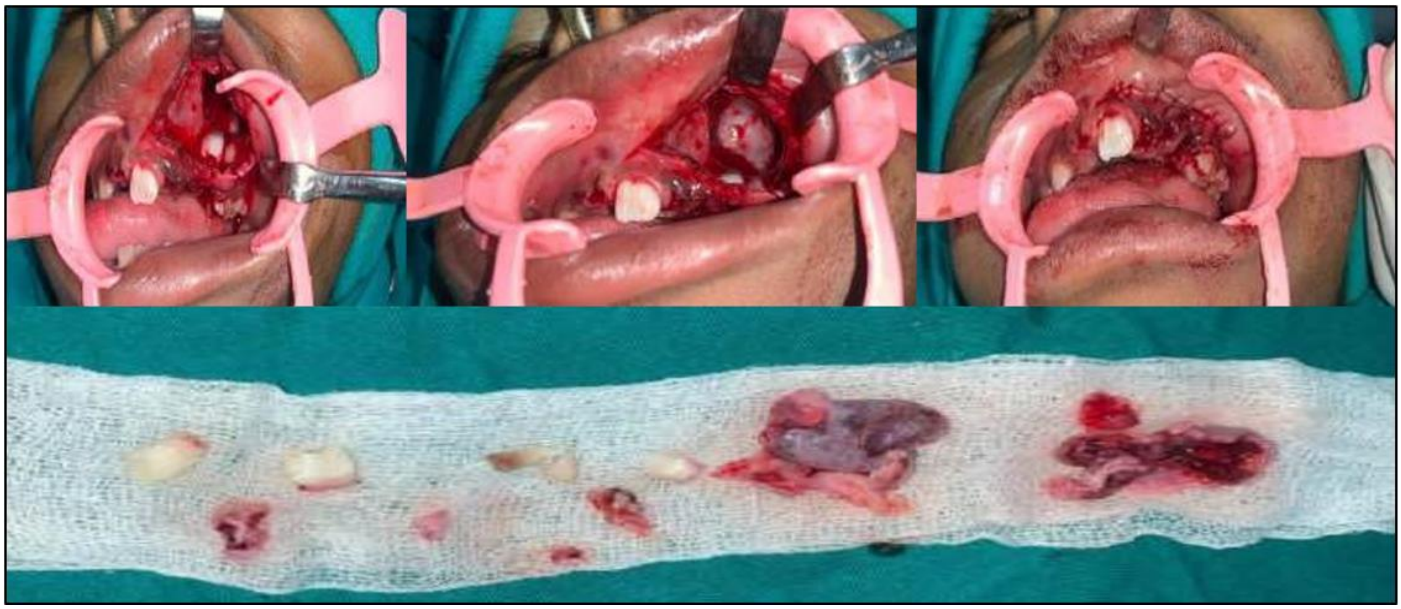

Fig 3 Enucleation of cystic lesion and ectopic tooth.

III. DISCUSSION

Dentigerous cysts represent the second most common odontogenic cyst, accounting for roughly 20–24% of all cystic lesions of the jaws. These lesions are typically associated with the crowns of unerupted or impacted teeth, with a predilection for the mandibular third molars and maxillary canines [(3)].

In pediatric patients, dentigerous cysts tend to exhibit more aggressive growth due to the relative elasticity of developing bone, resulting in considerable expansion before clinical detection[(4)]. In this case, the cyst was diagnosed in a 9-year-old child and was found to involve the infraorbital rim an unusual and rare extension. Such superior extension suggests significant expansion of the cyst into the maxillary sinus and potentially affecting the orbital floor. Although uncommon, maxillary dentigerous cysts have been reported to cause orbital floor elevation, resulting in displacement of the globe and infraorbital nerve disturbances such asparesthesia, none of which were noted in the present case (5). Radiographically, dentigerous cysts typically appear as well-defined, unilocular radiolucent lesions surrounding the crown of an unerupted tooth. In cases with orbital involvement, CT imaging is particularly valuable to assess cortical integrity, proximity to the orbit, and displacement of adjacent structures(6). The current case presented as a well-circumscribed oval- shaped cystic lesion involving the left maxillary alveolus abutting the left infraorbital rim. The primary treatment modality for a dentigerous cyst involves complete surgical enucleation of the lesion along with extraction of the associated unerupted tooth. In pediatric patients, conservative approaches like marsupialisation may be considered when cysts are large or in proximity to vital structures to preserve tooth eruption potential and avoid disruption of skeletal growth (7). However, in this case, enucleation was chosen due to the extent of expansion, potential risk to the infraorbital nerve and orbital contents and to avoid risk of formation of an oro-antral fistula . Postoperative monitoring for infraorbital nerve function and orbital position is essential, particularly when the cyst has eroded into the orbital floor (8). Orbital floor reconstruction is usually not required unless a significant defect is present, which may lead to enophthalmos or diplopia. The absence of such symptoms post-enucleation in this case negated the need for immediate orbital reconstruction. However, long-term follow-up is crucial to monitor bone regeneration, evaluate facial symmetry, and identify any late-onset complications (9).

IV. CONCLUSION

Although dentigerous cysts are benign lesions, their potential for significant anatomical disruption, especially in children, necessitates careful radiologic assessment and individualised treatment planning. Complete enucleation remains a reliable and definitive modality in cases with extensive expansion, provided that postoperative growth and function are meticulously monitored.

REFERENCES

[1]. Girish G, Kumar M, Umashankar D, Sharma R, Veeresh M, Bhandari A. Dentigerous cyst in maxillary sinus: a rare occurrence. Int J Oral Maxillofac Pathol. 2011;2:19-23.
[2]. Gaurkar SS, Deshmukh PT, Singh CV, Khan FQ, Deshmukh P. A rare presentation of dentigerous cyst. Cureus. 2022 Jun 19;14(6):e25976.
[3]. Shear M, Speight PM. Cysts of the oral and maxillofacial regions. 4th ed. Oxford: Blackwell Munksgaard; 2007.
[4]. Shadman N, Gholami N, Fattahi S, Golshah A. Dentigerous cyst associated with an ectopic maxillary canine in a 6- year-old child: a rare case report. Iran J Otorhinolaryngol. 2017;29(92):177-81.
[5]. Wang WC, Lin PY, Chen JY, Chiang CP, Chen YK. Dentigerous cyst involving the whole maxillary sinus: a case report. J Oral Pathol Med. 2006;35(10):623-5.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul733

[6]. Ram H, Mohammad S, Husain S, Singh G. Large dentigerous cyst in maxillary sinus causing proptosis: a case report. J Maxillofac Oral Surg. 2011;10(4):345-9.
[7]. Bodner L. Dentigerous cysts associated with supernumerary teeth. Int J Oral Maxillofac Surg. 2002;31(4):355-8.
[8]. Lustmann J, Bodner L. Dentigerous cysts associated with supernumerary teeth. Int J Oral Maxillofac Surg. 1988;17(2):100-2.
[9]. Arjona-Amo M, Serrera-Figallo MA, Hernández-Guisado JM, Gutiérrez-Pérez JL, Torres-Lagares D. Surgical treatment and reconstruction in a large dentigerous cyst. Med Oral Patol Oral Cir Bucal. 2014;19(1):e1-4.