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Eruption Cyst: A Case Report

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Abstract
An eruption cyst (EC) is a benign, nonodontogenic lesion. It appears as a Semi-spherical swelling in the mucosa overlying an erupting tooth. This condition occurs when the dental follicle separates from the crown, leading to the formation of a fluid-filled space. Eruption cysts usually have an epithelial lining and are encased in fibrous connective tissue.
In a case involving an eleven-year-old girl, a painless, dome-shaped swelling was observed in the lower left posterior region of her jaw. This was diagnosed as an eruption cyst associated with tooth 35. An inferior alveolar nerve block was administered under local anesthesia. An access opening on tooth 75 was made and horizontal incision was given to drain the cystic fluid. Post-operative care included antibiotics and pain management. Follow-up visits showed significant healing, and subsequently pulpectomy and placement of a stainless-steel crown on tooth 75 was carried out. This case highlights the importance of conservative management for eruption cysts in pediatric patients, ensuring effective treatment while minimizing discomfort.
Keywords: *Benign cyst, Eruption cyst, Horizontal incision.*

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I. Background

An eruption cyst is a harmless bump that appears on the gums where emergence of a tooth is expected. It forms in the soft tissue above the emerging tooth. The dental follicle separates from the crown, forming a follicular space. Fluid accumulation occurs within this follicular space.[1,2]

Clinically, EC is a dome-shaped raised swelling in the mucosa of the alveolar ridge, soft and fluctuant in consistency, with colour ranging from transparent, bluish, purple to blue-black. The general involvement of the unerupted crown area usually includes part or the whole of the area, often extending to the lingual aspect. It can be associated with primary or permanent tooth and may be unilateral or bilateral. The majority of the ECs come off by themselves and often do not require any treatment. Cysts that cause pain, bleeding, or infection may require surgical intervention to expose the tooth and drain the cyst. These cysts commonly occur in the lower molar regions. Their color can range from normal to bluish-black or brown, depending on the amount of blood within the cystic fluid.[3]

II. Case Report

An eleven-year-old female patient presented to the Department of Pedodontics and Preventive Dentistry, MCDRC, Durg, with the chief complaint of swelling in the lower left posterior region of the jaw for three days. Intraoral examination revealed a solitary, well-defined, dome-shaped swelling, which completely covered the alveolar ridge in the region of tooth 75. It extended from the distal aspect of tooth 74 to the mesial aspect of tooth 36, crossing over to the buccal gingiva. It was reddish pink in colour, painless, smooth surfaced, soft, and fluctuant on palpation.

Radiovisiography i.e. RVG revealed a developing tooth 35 with half root completion, corresponding to Nolla stage 6. A well-defined, oval, corticated border was observed over a radiolucent area in the coronal portion of tooth 35. Physiological root resorption was noted in tooth 75, accompanied by bone loss in the furcation area. Additionally, radiopacity in the coronal portion of tooth 75 suggested previous restorative treatment. (Figure: 1.1)

On the basis of clinical and radiological findings, the provisional diagnosis of an eruption cyst was made. Figure 1.1 shows presence of the cyst. Given the benign nature of the eruption cyst and the parents' concern regarding the swelling, parental consent was obtained for immediate intervention. The procedure was performed under 2% lignocaine with 1:80000 adrenaline. An inferior alveolar nerve block was administered in the mandibular left posterior region. An access opening was made on 75, followed by horizontal incision using a

scalpel with a 15A blade over the swelling, allowing the drainage of blood-filled fluid. Thorough irrigation with betadine was carried out at the site of the swelling. An open dressing was given, and patient was recalled after three days. (Figure: 1.2).

Following the surgical procedure, the patient and parents were provided with detailed post-operative instructions. The medications prescribed were Amoxicillin-clavulanate (375 mg) and Metronidazole (200 mg), both to be taken twice daily for a duration of five days. Additionally, analgesic was prescribed for pain management. The patient was advised to adhere strictly to the medication regimen to facilitate optimal recovery.

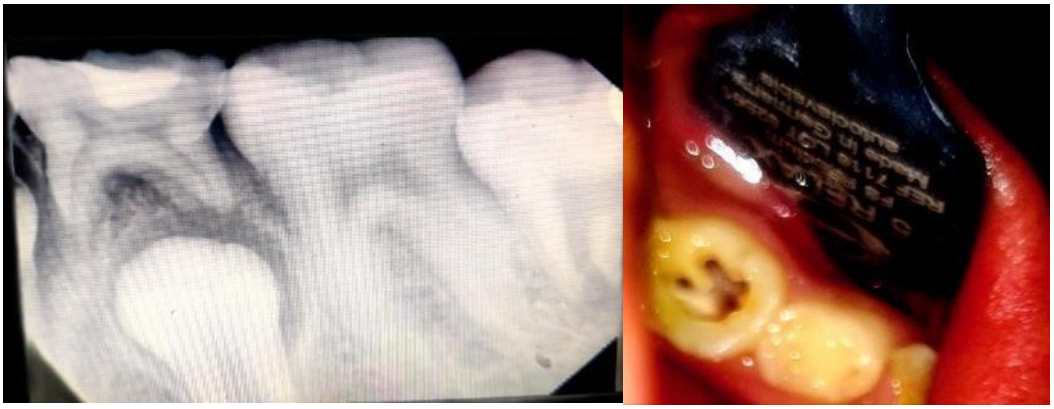

Figure1.1
Radiographic Image Of Tooth Associated With Lesion
Figure 1.2
Access Opening Done With 75

The patient was recalled for a follow-up appointment three days post-operation. Upon intraoral examination, a significant reduction in swelling and healing of incision site i.e surgical scar was observed. (Figure: 1.3). During the subsequent visit, a pulpectomy was performed, followed by the placement of a stainless-steel crown on tooth 75. (Figure: 1.4)

Figure:1.3 **Figure:1.4**
Surgical Scar SSC Cementation With 75

III. Discussion

The eruption cyst, according to the World Health Organization, represents a variant of soft tissue dentigerous cyst.[7]

Eruption cysts is a relatively rare lesion which may or may not usually present symptomatically. While most of the eruption cysts disappear by themselves, Anderson reported 54 histologically diagnosed cases in a period of 16 years. Aguilo *et al*. in their study found 36 eruption cysts over a period of 15 years. Eruption cysts are most often encountered during the first decades of life. Sexual dimorphism differs among the studies. Such cysts may appear both in deciduous and permanent teeth, developing simultaneously with the eruption of molars and incisors. Neonates and even adults can also present with ECs. Common sites include the incisal and molar regions, with better visibility in the incisal region.[2,8]

The etiopathology of eruption cysts involves degenerative changes in the reduced enamel epithelium, accumulation of fluid/blood around the dental follicle, and potential contributions from remnants of dental lamina. Controversially, drugs like cyclosporine (CyA) during tooth eruption may hinder eruption and contribute to cyst formation. Trauma, infections, and changes in the reduced enamel epithelium due to medications like Cyclosporine A are also associated with these lesions, although specific factors remain elusive.[5]

Eruption cysts appear as dome-shaped, raised swellings on the gums. They are soft, compressible, and can range in colour from reddish black to bluish. Although they typically do not cause symptoms, they can be painful when touched, especially if there is trauma or infection. X-rays are not necessary for diagnosis, but an intraoral periapical radiograph can help evaluate the tooth and surrounding bone. Histologically, these cysts show a surface layer of oral epithelium with varying amounts of inflammatory cells in the underlying connective tissue.

The deeper part consists of dense fibrous connective tissue covered by a thin layer of nonkeratinizing squamous epithelium.[9,10]

Eruption cysts typically resolve on their own and do not require treatment. Surgical intervention is necessary only if they cause pain, bleeding, infection, or aesthetic concerns. The common treatment protocol is a "wait-and-watch" approach, allowing the cyst to rupture spontaneously and permit tooth eruption. Some cases may require surgical excision or laser treatment. A study found that most eruption cysts (86.8%) required no treatment, while surgical intervention was necessary in 13.2% of cases. [10]

IV. Conclusion

Eruption cysts usually do not cause symptoms and might not need treatment. However, when accompanied by secondary infection and pain requires surgical intervention may be needed. Dentists must be aware of the manifestations of eruption cysts and parents may be guided accordingly.

References

[1] Shafer WG, Hine MK, Levy BM. Shafer's Textbook Of Oral Pathology. 6th Ed. Philadelphia: Elsevier; 2009. 71-110.
[2] Gaddehosur CD, Gopal S, Seelinere PT, Nimbeni BS. Bilateral Eruption Cysts Associated With Primary Molars In Both The Jaws. Case Reports. 2014 May 1;2014:Bcr2013202606.
[3] American Academy Of Pediatric Dentistry. Management Considerations For Pediatric Oral Surgery And Oral Pathology. The Reference Manual Of Pediatric Dentistry. Chicago, Ill.: American Academy Of Pediatric Dentistry; 2023:527-36.
[4] Bansal MB, Kumari A, Asrani KH, Yadav A. Eruption Cyst Treated With Diode Laser: A Case Report. International Journal Of Clinical Pediatric Dentistry. 2022 Mar;15(2):215.
[5] Kumari A, Thomas AM, Kundra R, Kumar R. Eruption Cyst: A Literature Review And Case Report. International Journal Of Applied Dental Sciences. 2021;7(1):363-6.
[6] Figueiredo NR, Meena M, Dinkar AD, Khorate M, Satoskar SK. Eruption Cyst: A Case Report. Ann Essence Dent. 2013 Oct 1;5:9-11.
[7] Ruschel HC, Braga DH, Ferreira SH, Da Silva AD. Eruption Hematoma In Deciduous And Permanent Dentition. Stomatos. 2018;24(47).
[8] Bodner L, Goldstein J, Sarnat H. Eruption Cysts: A Clinical Report Of 24 New Cases. Journal Of Clinical Pediatric Dentistry. 2005 Jan 1;28(2):183-6.
[9] Parampill AJ, Shah PK, Bhatia R, Girotra C, Rastogi R. Eruption Cyst: A Case Report. Saudi Journal Of Oral Sciences. 2020 May 1;7(2):120-3.
[10] Malik S, Choudhary A, Chauhan C, Paras. Anterior Maxillary Eruption Cyst: A Case Report. Case Rep Odontol. 2021;8(2):15-19.