Extraoral Swelling Secondary to Possible Unerupted Tooth #31

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Abstract

This case report involves a 10-year-old male patient who presented to the Rutgers School of Dental Medicine with an extraoral swelling and pain on the lower right mandible.
A clinical exam revealed #T and #30 to be dentally healthy. Teeth # R and #S had recently exfoliated. A panoramic radiograph was taken to determine the source of the swelling. An oral pathologist was consulted, and the patient was recommended to be seen in OMFS for possible incision and drainage.
A CT scan was prescribed, and upon radiographic exam, the infected cystic lesion was apical to unerupted #31. The lesion had eroded through buccal and lingual cortical bone in the posterior mandible. With parental consent obtained, incision and drainage, and surgical extraction of Tooth #31 were done with local anesthesia and nitrous. A biopsy was performed, and a histological analysis determined to be an acute and chronic inflammatory lesion. Patient followed up for 3 post op visits and was scheduled to return for extraction of #32 via IV sedation but failed to show for that appointment.

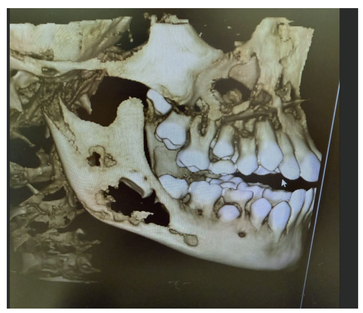
Background

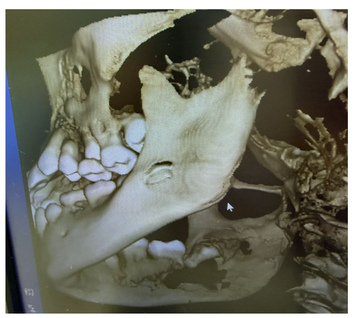
Dentigerous cysts, presumed to be of developmental origin from a tooth follicle, are one of the oral cavity's most common odontogenic cysts. These true cysts are more prevalent in males and Caucasians compared to females and Blacks. Third molars are the most commonly involved teeth. Dentigerous cysts envelop the crowns of unerupted teeth by expansion of the tooth follicle onto the CEJ. Dentigerous cysts can resemble radicular cysts of nonvital teeth at the periapical region and must be carefully distinguished through different modalities, such as fine needle aspiration cytology and biopsy.
This case report is interesting because, upon clinical exam, no carious lesions were visible in the lower right quadrant. Additionally, the patient presented with cellulitis involving the submandibular and subperiosteal space, which usually is associated with extensive carious lesions. Radiographic findings, clinical exam, and a biopsy were needed to determine the definitive diagnosis for this lesion.

Radiographic Interpretation

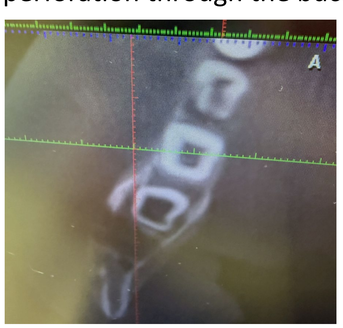
A: Initial panoramic taken at first visit at RSDM with no significant findings

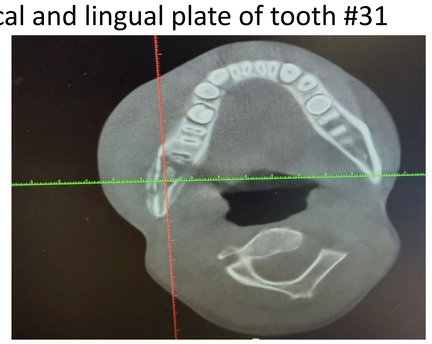
B. Bone Model of CT scan showing a through-and-through perforation of the lower right mandible





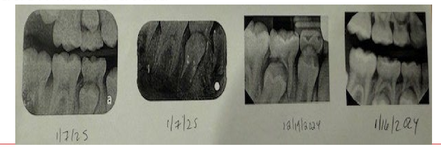
C : CT scan reveals soft tissue swelling along with a radiolucent perforation through the buccal and lingual plate of tooth #31





Patient History

Med Hx: non-contributory, no dental surgeries or hospitalizations
HPI: Patient started experiencing pain in December 2024. The patient and parent went to the ER and were prescribed Amoxicillin with little to no relief. The patient was then seen by another dental provider, where a BW and PA were taken (see images). He was referred to RSDM for an evaluation.
Allergies: NKDA,
No Medications
Social Hx: denies
Ht: 57 in; Wt: 76 lbs
EOE: right facial asymmetry, right cervicofacial swelling, cellulitic submandibular and subperiosteal space; swelling indurated and tender to palpation; nonpalpable inferior border of mandible; moderate trismus, mild dysphagia, no dyspnea, denies odynophagia, no respiratory distress, midline trachea, neck freely able to move. No external fistula
IOE: mixed dentition, erythema and swollen right buccal vestibule tender to palpation, no fistula, no discharge or pus noted. #31 and #32 not present in mouth. No decay on tooth #30 and #T. Floor of mouth soft and not elevated. No palatal draping, no deviation in the uvula



Results

01/08/25: Incision and Drainage were done along with the extraction of #31 under local anesthesia and nitrous oxide. The culture and sensitivity site was obtained and used for biopsy. Due to poor patient cooperation, it was decided to extract #32 under intravenous sedation in the future
Final Diagnosis indicates an acute and chronic inflammatory lesion. Histological analysis reveals fibrocollagenous tissue lined in part by stratified squamous epithelium. Lymphocytes, neutrophils, and plasma cells were noted in the stroma. The definitive diagnosis is Cellulitis secondary to a dentigerous cyst of an unerupted tooth #31.

Reference

Patil AS, Jathar PN, Panse AM, Bahutule SR, Patil RU, Patil M. Infected Dentigerous Cyst and its Conservative Management: A Report of Two Cases. Int J Clin Pediatr Dent. 2019 Jan-Feb;12(1):68-72. doi: 10.5005/jp-journals-10005-1578. PMID: 31496577; PMCID: PMC6710952.