Oral Cutaneous Fistula: A Case Report

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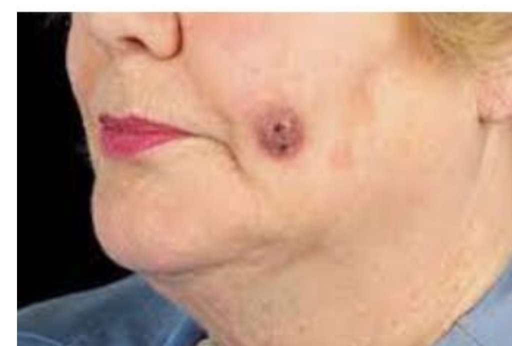
Background

- Oral cutaneous fistula is a rare extraoral path of infection that communicates the oral cavity and the extraoral skin.
- The inflammatory process leads to cortical bone and periosteum resorption that spreads into fascial spaces.
- It's location varies depending on the tooth affected and muscle attachment.
    - 80% occur on the mandibular body due to mandibular molars.
    - Maxillary region: fistula secondary to osteomyelitis.
        - more likely in uncontrolled DM, ORNJ, Paget's Disease
- The fistula can present as dimpling or a nodule with purulent discharge in the chin or jaw.

Etiology

- Most commonly due to **chronic dental infections**
- Other causes:
    - trauma
    - dental implant complications
    - salivary gland lesions
    - neoplasms
    - MRONJ

Due to chronic nature of infection, patients are asymptomatic.



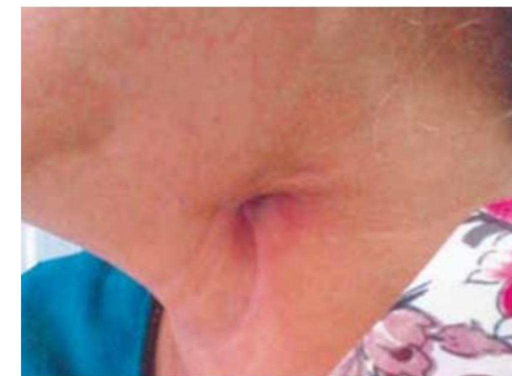


Fig. 1: Fistula in left side of the neck

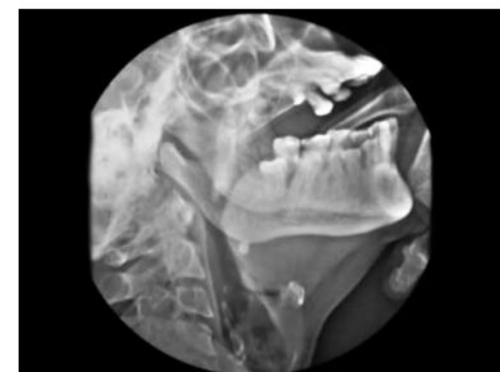
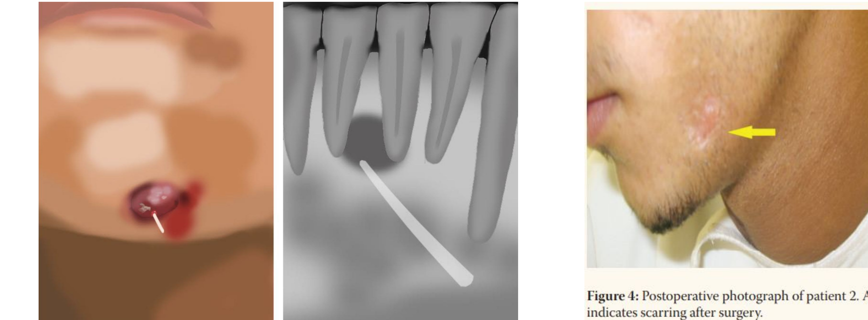


Fig. 2: Calculus inferior to angle of mandible

Diagnosis/ Treatment

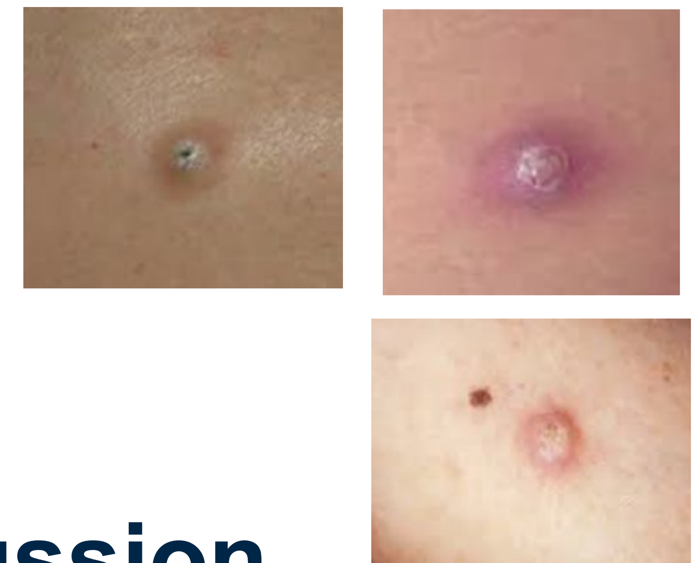
- **To diagnose:** radiographs, CBCT, and placing a gutta percha into fistula can help determine source.
- No systemic antibiotics needed as the lesion is a localised entity unless patient has a complex medical history.
- 50% of patients are misdiagnosed and undergo biopsy, skin surgeries, chronic antibiotic therapies and radiotherapies.
- Commonly **dermatologists will be consulted before dentists.**

- **Treatment options:** RCT or Extraction
- Once tooth is treated appropriately fistula resolves in 1-2 weeks.
- Prognosis: very good. Leaves a scar that may require surgery to improve esthetics based on patient's preference.



Differential Diagnosis

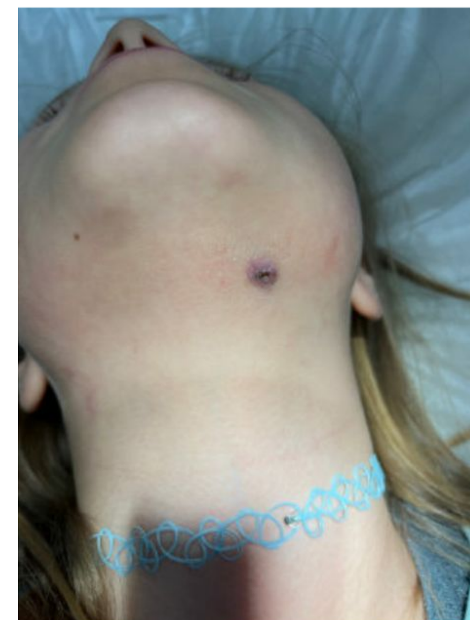
1. **Epidermal Cyst**
2. **Furuncle**
3. **Squamous cell carcinoma**
4. **Basal cell carcinoma**
5. **Branchial Cyst**



Discussion

- Importance of post-op instructions and monitoring for symptoms after placement of large restoration.
- Articles were mixed if antibiotics are indicated.
    - Re-evaluate necessity of antibiotics for this patient as several courses have already been completed.
- Assess need for surgical involvement for esthetics after RCT.
- Dental etiology should be considered as a part of a differential diagnosis for any orofacial skin lesions.

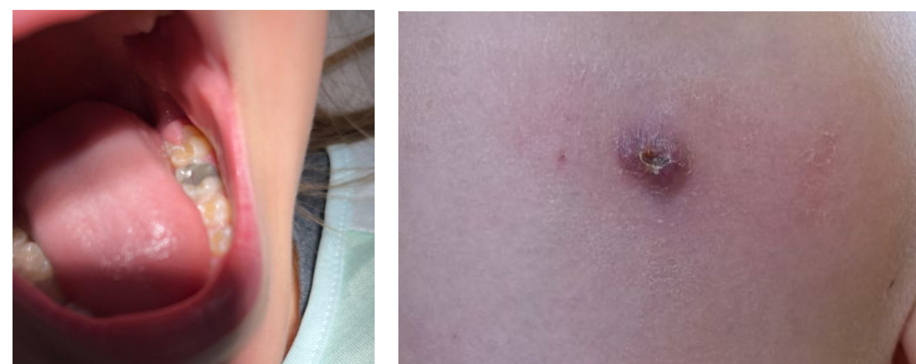
Case Report



Chief Complaint

10 yr 9 m female presents 09/23/22 for an urgent exam with chief complaint "Lower left facial swelling."

No pertinent medical history, medications and allergies.



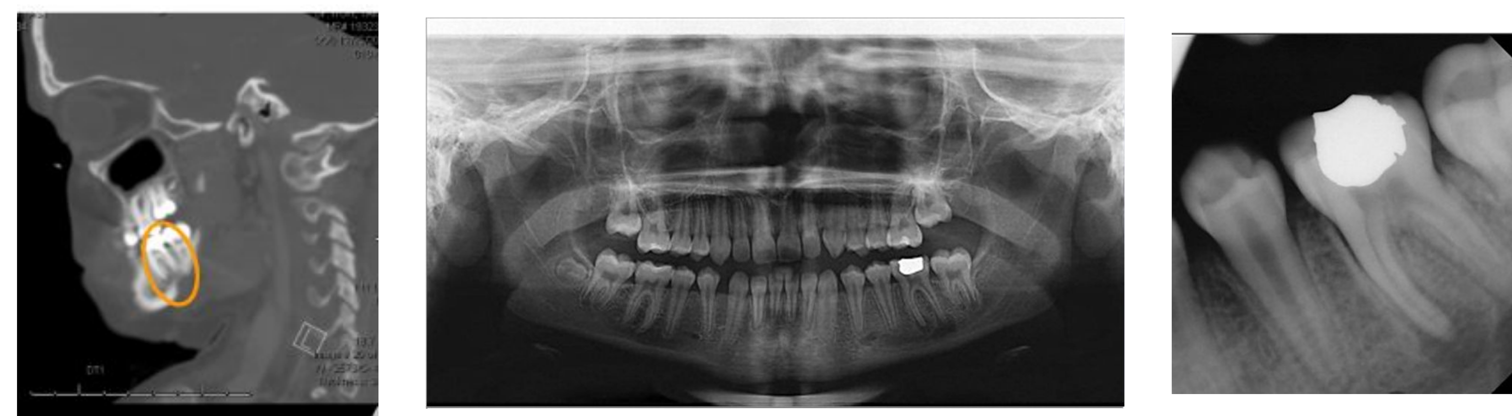
History of Present Illness

- 09/22/22: Presents to ED with chronically draining lesion in the left submandibular area.
    - Referred to ED by private dentist
    - Tx: prescribed augmentin
    - Last course of abx: 1 month ago
    - CT scan taken
        - Results: odontogenic infection seen involving the left lower second premolar tooth with cortical break along the lingual surface of the mandible.
- 03/2022: Restoration was completed
    - Soon after, pt experienced intermittent pain in L submandibular area followed by intermittent drainage

Clinical Exam

- #19-O amalgam
- Extraoral exam: Fistula over left mandible, scarred over. No drainage present. No tenderness to palpation. No increased temperature.
- Intraoral exam: Negative to palpation/percussion. Tooth deemed restorable.

Radiographic Finding



Treatment Plan

- Assessment: #19- necrotic pulp with chronic apical abscess
- Presented treatment options of Ext and RCT to mother, mother elects RCT.
- Plan: Refer to Endodontist for RCT on #19. Establish dental home at MCHC.
- Recommended to complete 7 day course of Augmentin.

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