

Gossypiboma in a 5-year-old: a Case Report

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Introduction:

Gossypiboma is a term which refers to a nonabsorbable material such as gauze sponge or swabs left unintentionally inside a surgical site during an operation. The challenge in diagnosing it is attributed to an array of clinical presentations and vague radiographic findings.

Literature reveals 48-69% of retained surgical items are surgical cotton gauze which can result in more serious tissue reaction than metal fragments. Such mishaps are oftentimes discovered following an abdominal surgery and hardly ever following a surgical procedure in the oral and maxillofacial region. According to the current literature only five cases of Gossypiboma in the oral cavity have been published.

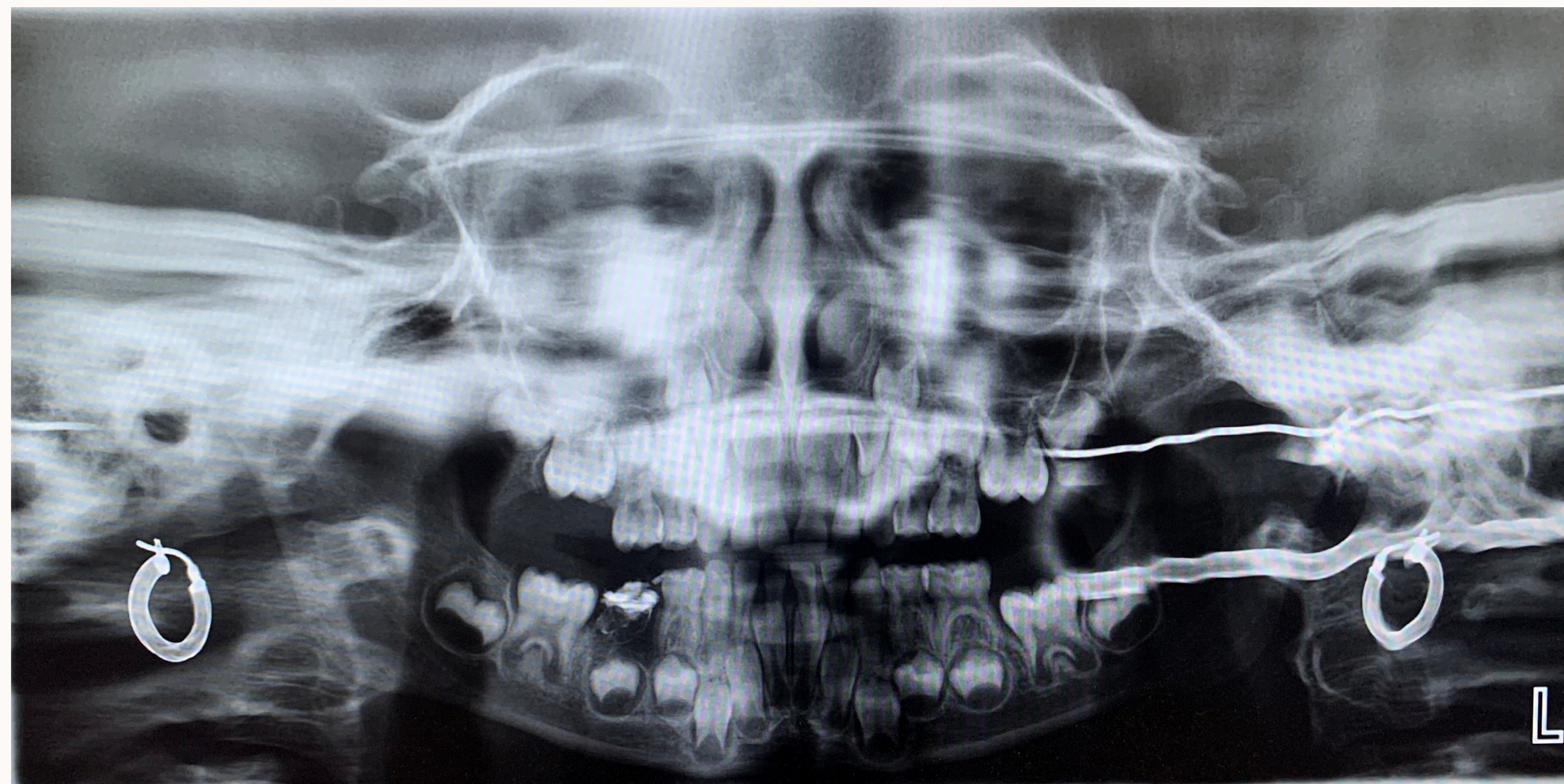
In general there are approximately 1 in 10,000 retained surgical items discovered after surgical procedures. The time elapsed from the prior surgery to the presentation with Gossypiboma ranges between 1 day and 40 years.

The trapped surgical sponge can trigger an aseptic fibrinous reaction resulting in encapsulation and granuloma formation or an exudative reaction causing an abscess. The condition is usually confused with a neoplasm or a cystic lesion based on diagnostic findings. It is often associated with pain, swelling, pyrexia and suppuration.

Imaging:

CT and CBCT scans are the most effective diagnostic tools.

MRI gives the best picture of gauze granuloma. Confocal laser scanning helps identify changes in the tissues.



Panoramic Radiograph

Case Description:

Presenting Patient : A 5-year-old female new patient presented to Rutgers School of Dental Medicine Pediatric Dentistry Department as an emergency patient.

Mother gives a history of some treatment done in relation to tooth T using protective stabilization and now reports patient is traumatized. After the procedure was completed at an outside facility the tooth developed an abscess and an extraoral swelling on the right side of the face for which patient went to the Emergency Room at an unspecified hospital in New Jersey. Amoxicillin was prescribed and parent reports they started taking it. Parent reports that subsequently the swelling was not responding to the Amoxicillin and they returned to the Emergency Room. Azithromycin was then prescribed in addition. Shortly after that the patient developed an allergic reaction in response to one or both of the antibiotics and had to go to the Emergency Room again. All antibiotics were then stopped. A week later with the extra oral swelling still intact patient presents to University Hospital Newark, NJ and Clindamycin was prescribed. The patient was then referred to Rutgers School of Dental Medicine for follow-up and care.

Chief Complaint: Parent says "she has an abscess" and points to the area of tooth T

Medical History : Nothing significant

Allergies: Amoxicillin or Azithromycin parent is unsure

Extra Oral Exam : A diffuse swelling seen in relation to the angle of the mandible, tender, slightly firm and indurated.

Intra Oral Exam: IRM seen protruding from dental socket where T was present.

Swelling seen intra-orally extending from the distal of S to erupting number 30.

Swelling obliterates the vestibule.

Radiographic findings: PA reveals a radiolucency with striations of radiopacity in the distal part of the socket in relation to extracted tooth #T, retained mesial root of T and a radiopaque material at the coronal end of the radiolucency.

Differential Diagnosis: Cyst, Fibro-osseous lesion

Treatment Plan Options Presented :

1. Remove the existing material, extract the mesial root tip and debridement of the socket at our clinic using protective stabilization.
2. Patient could be referred to OS for management
3. Have patient return to original dentist

Treatment Completed:

Mom only wanted removal of material and debridement today and did not want Protective stabilization. Patient sat in mother's lap, throat pack placed and mouth prop used. The socket was debrided and a cotton pellet with IRM packing was extracted. Gentle curettage was done and bleeding induced.

Final Diagnosis: Gossypiboma

References: Sayan, B., Yamansavci Sirzai, E., & Yildizeli, B. (2022). A Word of Caution for Gossypiboma. *The Thoracic and Cardiovascular Surgeon*, 70(7), 579-582.
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Periapical radiograph



Cotton roll with IRM on top extracted from the abscessed socket

Conclusion:

In this case when inquiring about the history of present illness mother was very vague in providing information on where and what procedure was done in relation to T. With patient's behavior being uncooperative and mother not wanting us to extract the retained root. We took care of the emergency as best as we could. We recommended a follow up visit to address the problem in entirety, but the patient never returned. This 5 year old patient went through so much turmoil due to abscess, swelling, fever and multiple visits to ER. The parent was not able to provide any details on the previous practitioner and it suggests that the person performing the extraction may not have been a legitimate practitioner of dentistry.