

Facial Swelling, Fever, and a Feather: A Case of Persistent Pediatric Infection



Rahul D. Patel, BS¹; Valerie R. Stichert, BS¹; Vilok Desai, MD²; Douglas C. von Allmen, MD²

¹University of Cincinnati College of Medicine

²Cincinnati Children's Hospital Medical Center, Department of Otolaryngology



Introduction

- Foreign body induced abscesses in children are uncommon and may present in atypical locations, such as the scalp.
- Feather-related abscesses are exceedingly rare; previously reported cases have involved the neck and throat (periparotid, peritonsillar, parapharyngeal, and submandibular regions).
- Persistent swelling or failure of standard therapy should raise suspicion for retained foreign bodies, especially in children unable to report a history of trauma or foreign body exposure.
- This case highlights the need for multimodal imaging, multidisciplinary collaboration, and a high index of suspicion when treating atypical pediatric infections.

Case Presentation

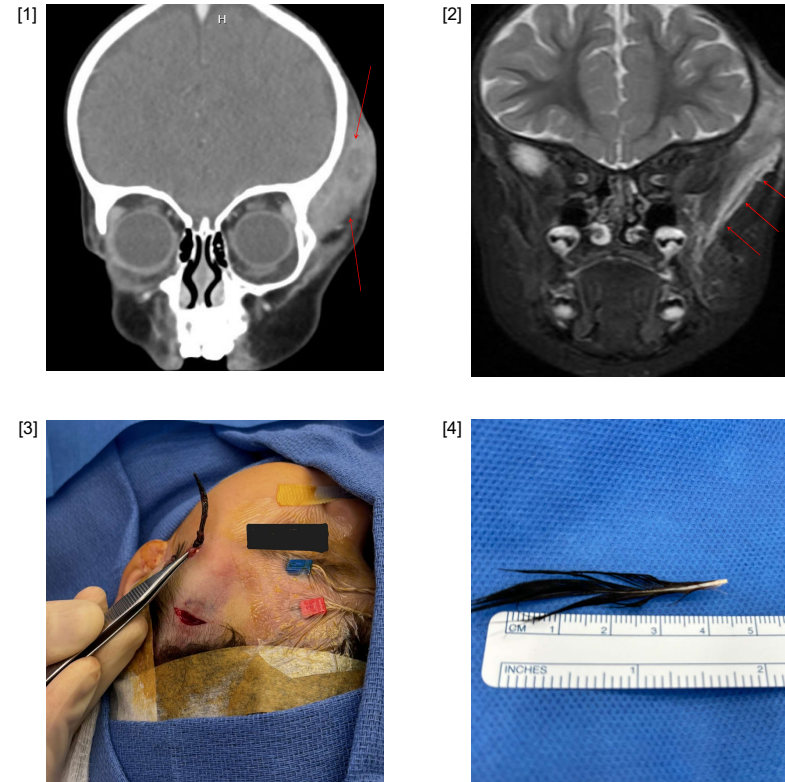
- A previously healthy 13-month-old male initially presented with fever, vomiting, and progressive left facial swelling. His symptoms failed to respond to standard courses of antibiotics, eventually prompting advanced imaging that revealed a temporal abscess harboring a 5 cm feather extending from the temporal region to buccal space.

Methods and Workup

- Comprehensive literature review:** A PubMed search using “feather” and “abscess” identified 12 publications, with 5 describing relevant cases localized to the head and neck. A secondary search combining “feather,” “abscess,” and “temporal” yielded no results, underscoring the novelty of this case.
- Case review methodology:** Detailed chart review was performed, including history, physical exam findings, laboratory workup, imaging studies, and operative notes.
- Diagnostic evaluation:** Imaging modalities included X-ray, ultrasound, MRI, and CT, each contributing to progressive identification of abscess formation and suspicion of a retained foreign body.

Results and Workup

- Patient was initially diagnosed with cellulitis and treated with oral amoxicillin-clavulanate.
- Despite initial mild improvement, worsening temporal swelling prompted repeat ED visits and imaging, which revealed a temporal abscess with a suspected foreign body.
- Incision and drainage revealed a 5 cm feather in the infratemporal fossa, with purulent material cultured as *Staphylococcus aureus*. Intubation was complicated by significant trismus, requiring careful anesthetic management.
- Postoperative trismus and granulation tissue at the incision site were managed successfully with physical therapy and topical corticosteroids.
- Swelling, erythema and drainage resolved within two months, with no recurrence or functional deficits at seven-month follow-up.



- [1] Coronal CT with contrast depicting left frontotemporal and masticator space soft tissue swelling.
[2] T2 MRI revealing a heterogeneous left temporal mass with abscess features and a tubular structure consistent with a retained foreign body.
[3] Intraoperative photograph of the feather immediately following removal.
[4] Intraoperative photograph of the feather next to a ruler demonstrating its length (5 cm).

Discussion

- Persistent or atypical pediatric facial infections unresponsive to antibiotics should raise suspicion for retained foreign bodies, with multimodal imaging (ultrasound, MRI, CT) aiding diagnosis.
- Surgical management may be complicated by critical anatomy, and prolonged therapy may be required for foreign body-related abscesses.
- Multidisciplinary intervention is essential for accurate diagnosis, effective treatment, and full recovery.

References:

- Shah, R., & McLearn, P. W. (2013). Neck abscess caused by feather foreign body. *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*, 149(3), 515–516. <https://doi.org/10.1177/0194599813490897>
- Gonzalez de Alba, C., Garcia, E., Molina Berganza, F., & Fergie, J. (2016). Foreign Body as Cause of Submandibular Swelling in an Infant. *The Pediatric infectious disease journal*, 35(8), 930. <https://doi.org/10.1097/INF.0000000000001196>