Scope: Hospital-wide Patient Care
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Dental Abscess with Facial Swelling Clinical Practice Guideline

Version: 4

Introduction

Patients with acute dental abscesses frequently present to the Paediatric Emergency Department (ED) with acute onset of facial swelling, warranting urgent assessment and therapy. Management of these patients involves surgical elimination of the source of infection, with adjunctive antibiotic therapy and appropriate analgesia.

This patient population generally remains clinically stable, hydrated and typically demonstrates rapid response to therapy with dental extraction and antibiotics. Given the predictable clinical course and limited nursing care required, previously healthy paediatric patients with dental abscesses and associated facial swelling can often be managed in an ambulatory setting.

This Clinical Pathway is intended to guide the ambulatory management of patients who present to SickKids with a dental abscess and associated facial swelling.

Objectives:

In the target population, the objectives of this guideline are to:

- Emphasize the surgical elimination of the source of infection as the initial priority where possible;
- Streamline the care of these patients from hospital arrival to discharge;
- Decrease the use of unnecessary diagnostic studies;
- Outline each service's role and responsibilities, as well as facilitate clear communication and handover among parties;
- Optimize the patient experience when presenting to the hospital with this condition;

Target Patient Population

- Clinically stable children with a dental abscess and associated facial swelling and no significant comorbidities or chronic health conditions

Target users

Target Users include, but are not limited to:

- Emergency Medicine physicians, nurses, advanced practice providers ((APPs) including nurse practitioners (NPs) and physician assistants (PAs)), and trainees
- Paediatric Medicine physicians, APPs (NPs and PAs), and trainees,
- Nurses in the Alternate Care Environment
- Dentistry team
- Pharmacists
- Patients and families

Exclusion Criteria

This Pathway is not intended for use in patients who:

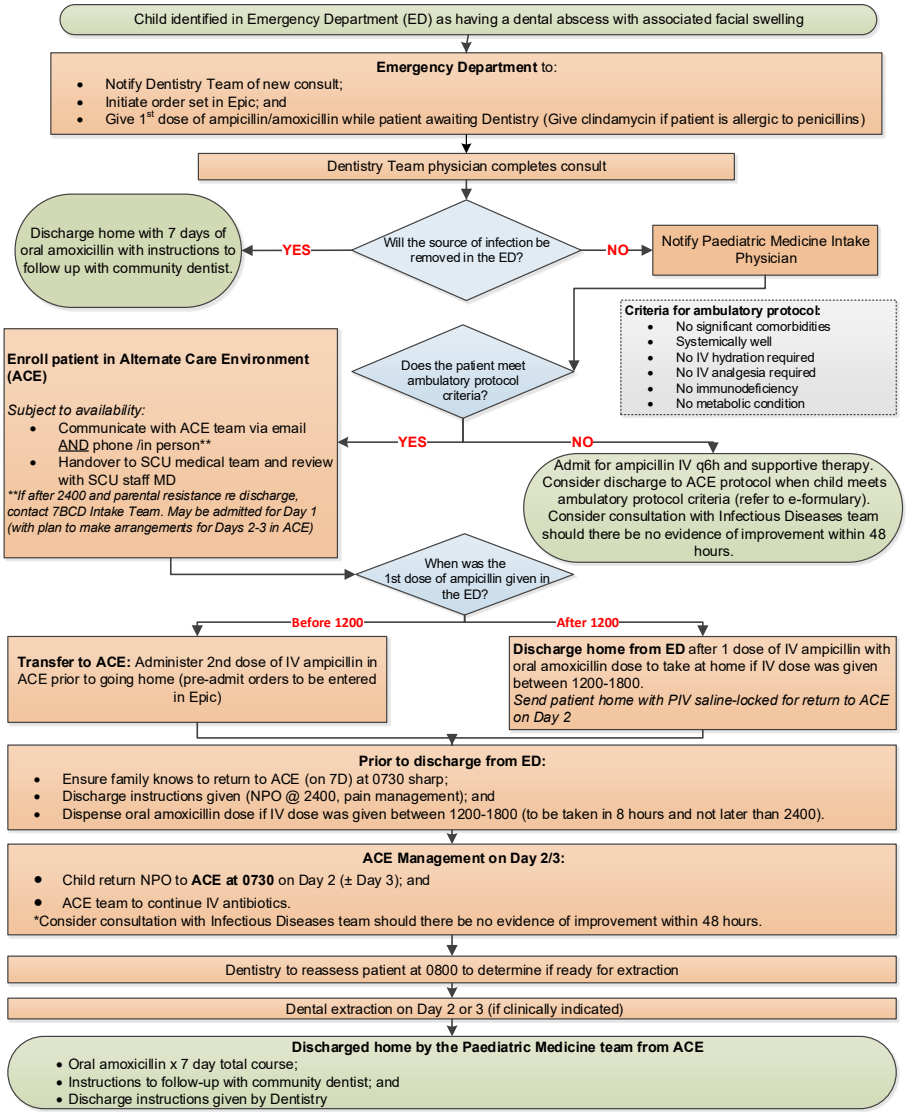
- Are systemically ill (ill-appearing, hemodynamically unstable);
- Have an immunodeficiency;
- Have a metabolic disorder;
- Have significant comorbidities*;
- Are in significant pain requiring IV analgesia; or
- Are unable to maintain adequate oral hydration or tolerate oral antibiotics

***** *Exceptions may be made on a case-by-case basis and require discussion with and acceptance by the Dentistry and Intake Physicians*

Clinical Pathway

Printable version

Dental Abscess with Facial Swelling Management Pathway



**To book a patient into ACE:
Email ACE.requests@sickkids.ca with the following info: name, MRN, time IV ampicillin was given in ED, pertinent history / concerns / social issues/ language

Clinical pearls for discharge from ACE:

- Surgical elimination of the source of infection via extraction or endodontic treatment and drainage of pus is recommended as soon as clinically possible
- Systemically ill, immune-deficient, and metabolic patients warrant admission.
- Life-threatening complications include sepsis, airway compromise, toxic shock syndrome, cavernous sinus thrombosis, descending necrotizing mediastinitis, brain abscess, and Ludwig's angina.
- In children who appear unwell, including signs and symptoms above, blood cultures are recommended.
- *Amoxicillin/ampicillin* is recommended as the first line treatment due to the polymicrobial anaerobic nature of dental infections. *Clindamycin* is recommended should the patient have an allergy.
- Consider consultation with Infectious Diseases team should there be no evidence of improvement within 48 hours.
- **Discharge criteria**: Considerable improvement on IV antibiotics, afebrile > 24 hours, well-controlled pain, tolerating oral intake and oral medications well

Related Documents

- Guideline on Paediatric Oral Surgery : American Academy of Paediatric Dentistry, 2020
- Guideline on use of Antibiotic Therapy for Paediatric Dental Patients: American Academy of Paediatric Dentistry, 2022
- Cellulitis and Abscess Pathway : Seattle Children's Hospital, 2020
- Antimicrobial Guidelines for Dental Abscess, Royal Children's Hospital Melbourne, 2020

References

1. American Academy of Pediatric Dentistry. (2020). Guideline on Pediatric Oral Surgery. Retrieved from: http://www.aapd.org/media/Policies_Guidelines/G_OralSurgery.pdf
2. American Academy of Pediatric Dentistry. (2022). Guideline on Use of Antibiotic Therapy for Pediatric Dental Patients. Retrieved from: https://www.aapd.org/research/oral-health-policies--recommendations/use-of-antibiotic-therapy-for-pediatric-dental-patients/
3. Brook, I., Lewis, M., Sandor, G., Jeffcoat, M., Samaranayake, L., & Vera Rojas, J. (2005). Clindamycin in dentistry: More than just effective prophylaxis for endocarditis? *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology,100*(5): 550-558. doi: 10.1016/j.tripleo.2005.02.086
4. Chunduri, N., Madasu, K., Goteki, V., Karpe, T., & Reddy, H. (2012). Evaluation of bacterial spectrum of orofacial infections and their antibiotic susceptibility. *Annals of Maxillofacial Surgery 2*(1):46-50. doi: 10.4103/2231-0746.95318
5. Flynn, T. R. (2011). What are the antibiotics of choice for odontogenic infections, and how long should the treatment course last?. *Oral and Maxillofacial Surgery Clinics*, *23*(4), 519-536.
6. Jevon, P., Abdelrahman, A., & Pigadas, N. (2020). Management of odontogenic infections and sepsis: an update. *British Dental Journal*, *229*(6), 363-370.
7. Lockhart, P., Tampi, M. P., Abt, E., Aminoshariae, A., Durikin, M. J., Fouad, A. F., Gopal, P., Hatten, B. W., Kennedy, E., Lang, M. S., Patton, L. L., Paumier, T., Suda, K. J., Pilcher, L., Urquhart, O., O'Brien, K. K. & Carrasco-Labra, A. (2019). Evidence-based clinical practice guideline on antibiotic use for the urgent management of pulpal- and periapical-related dental pain and intraoral swelling. *Journal of American Dental Association, 150*(11), 906-921. Doi: https://doi.org/10.1016/j.adaj.2019.08.020
8. Martins, J. R., Chagas Jr, O. L., Velasques, B. D., Bobrowski, Â. N., Correa, M. B., & Torriani, M. A. (2017). The use of antibiotics in odontogenic infections: what is the best choice? A systematic review. *Journal of Oral and Maxillofacial Surgery*, *75*(12), 2606-e1.
9. Michael, J., & Hibbert, S. (2014). Presentation and management of facial swellings of odontogenic origin in children. *European Archives of Paediatric Dentistry, 15*, 259-268. doi: 10.1007/s40368-014-0110-7
10. Robertson, D., & Smith, A. (2009). The microbiology of the acute dental abscess. Journal of Medical Microbiology, 58, 155-162. doi: 10.1099/jmm.0.003517-0
11. Royal Children's Hospital Melbourne. (2020) Clinical Practice Guidelines: Antimicrobial Guidelines for Dental Abscess. Retrieved from: https://www.rch.org.au/clinicalguide/guideline_index/Antimicrobial_guidelines/

12. Seattle Children's Hospital. (2013). Cellulitis and Abscess Pathway. Retrieved from: https://www.seattlechildrens.org/globalassets/documents/healthcare-professionals/clinical-standard-work/cellulitis-and-abscess-org-pathway.pdf
13. Zirk, M., Buller, J., Goeddertz, P., Rothamel, D., Dreiseidler, T., Zoeller, J. E., & Kreppel, M. (2016). Empiric systemic antibiotics for hospitalized patients with severe odontogenic infections. *Journal of Cranio-Maxillofacial Surgery*, *44*(8), 1081-1088.

Implementation

- Pathway has been implemented since 2015 with good effect and no patient safety concerns have arisen during this time
- Divisions of Paediatric Medicine and Emergency Medicine need to continue to build awareness during new trainee orientation
- ED and Inpatient Medical Director to communicate any updates in practice to ED and Paediatric Medicine Divisions respectively.

Evaluation

- Ongoing monitoring of adherence to the pathway

Attachments:

Dental Abscess Pathway Jan. 2022 FINAL.pdf