Introduction

Patients with acute dental abscesses frequently present to the Paediatric Emergency Department (ED) with acute onset of facial cellulitis, warranting urgent assessment and therapy. Management of these patients involves dental surgery or extraction to control the source, with adjunctive intravenous antibiotic therapy.

This patient population remains clinically stable and typically demonstrates rapid response to therapy with IV antibiotics. Given the predictable clinical course and limited nursing care required, previously healthy paediatric patients with dental abscesses and associated facial cellulitis are managed on an ambulatory basis in Paediatric Medicine's Alternate Care Environment (ACE).

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

Objectives:

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

- 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;
- Increase hospital bed capacity for acutely ill patients

Target Patient Population

- Clinically stable children ≥ 2 years old and ≤ 18 years old with a dental abscess and associated facial cellulitis and no significant comorbidities or chronic health conditions
Target users

Target Users include, but are not limited to:

- Emergency Medicine physicians, nurses, nurse practitioners, and trainees
- Paediatric Medicine physicians, nurse practitioners, and trainees,
- Nurses in the Alternate Care Environment
- Pharmacists
- Patients and families

Exclusion Criteria

This Pathway is not intended for use in patients who:

- ≤ 2 years old
- 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 Intake Physician
Dental Abscess with Facial Cellulitis
Clinical Practice Guideline

Clinical Pathway

Dental Abscess with Facial Cellulitis Management Pathway

Child identified in ED as likely dental abscess with associated facial cellulitis

Emergency Department to:
- Notify Dentistry and Pediatric Team Lead physician of new consult;
- Initiate order set in Epic; and
- Give 1st dose of Clindamycin while patient awaiting Dentistry; initiate physician consult (consult Infectious Disease team if allergy to Clindamycin)

Dentistry and Pediatric Team Lead physician completes consult

Does the patient meet ambulatory protocol criteria?

YES
- Admit for Clindamycin IV q8h and supportive therapy. Consider discharge to ACE protocol when child meets ambulatory protocol criteria (refer to e-formulary)

NO
- Notify Pediatric Team Lead of new consult

Intake Physician to enroll patient in the ACE Space

To enroll patient in Alternate Care Environment (ACE/Pediatric Medicine Day Hospital):
- Communicates with ACE team via email and phone
- Person in ED
- Hands over to SCU medical team and review with SCU staff MD
- If after 2400 and parental resistance to discharge, contact "WEBCARE Bed Board" May be admitted for Day 1 (with plan to make arrangements for Days 2-3 in ACE)

Transfer to ACE: Admission 2nd dose of IV clindamycin in ACE prior to going home (pre-admit orders to be entered in Epic)

Discharge home directly from the ED after 1 dose of IV clindamycin with oral clindamycin dose to take at home if IV dose was given between 1200-1800

Prior to discharge from ED:
- Ensure family knows to return to ACE Space at 0730 sharp and directions given to TID;
- Discharge instructions given (NPO @ 2400, pain management), and;
- Dispense oral clindamycin dose if IV dose was given between 1200-1800 (to be taken in 8 hours and not later than 2400)

ACE Management on Day 2/3:
- Child return NPO to ACE at 0730 on Day 2 (or Day 3); and
- ACE team to continue IV antibiotics.

Dentistry to reassess patient at 0800 to determine if ready for extraction

Dental extraction on Day 2 or 3 (if clinically indicated)

Discharged home by the 7E team from ACE

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

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Clinical pearls for discharge from ACE:

- 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 appear unwell, including signs and symptoms above, blood cultures are recommended.
- **Clindamycin** is recommended as the first line treatment due to the polymicrobial anaerobic nature of dental infections.
- The Infectious Diseases team should be consulted should the patient have an allergy or intolerance to clindamycin
- Surgical elimination of the source of infection via extraction or endodontic treatment and drainage of pus is recommended as soon as clinically possible
  - **Discharge criteria**: Considerable improvement on IV antibiotics, afebrile > 24 hours, well-controlled pain, tolerating oral intake and oral medications well

Related Documents

- [Guideline on use of Antibiotic Therapy for Paediatric Dental Patients](#): American Academy of Paediatric Dentistry, 2014
- [Guideline on use of Local Anesthesia for Paediatric Dental Patients](#): American Academy of Paediatric Dentistry, 2015
- [Guideline for Monitoring and Management of Paediatric Patients during and after Sedation for Diagnostic and Therapeutic Procedures](#): American Academy of Pediatrics and the American Academy of Paediatric Dentistry, 2011
- [Cellulitis and Abscess Pathway](#): Seattle Children's Hospital, 2013
- [Systemic Antibiotics in Periodontics](#): American Academy of Periodontics, 2004

References

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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:
- pathway_aug_6.pdf