

**COMMON CLINICAL DIAGNOSES AND CONDITIONS****SKIN AND SOFT TISSUE INFECTIONS****INTRODUCTION**

Skin and soft tissue infections are infections of the skin, subcutaneous tissue and muscle, such as cellulitis or abscess. They do not include infections of the bone, ligaments, cartilage and fibrous tissue. Skin and soft tissue infections are a common cause of hospitalization in children. The most common infectious etiologies of soft tissue infections are streptococcus or staphylococcus species, traditionally treated with Beta-lactam antibiotics. However, infections due to methicillin-resistant staphylococcus aureus, particularly community-acquired methicillin-resistant staphylococcus aureus (CA-MRSA), and other organisms are on the rise. Pediatric hospitalists should be aware of the changing epidemiology of pathogens and resistance patterns to ensure efficient and effective treatment of these infections.

**KNOWLEDGE**

*Pediatric hospitalists should be able to:*

- Compare and contrast the key features of the history and physical examination noted in cellulitis versus soft tissue infection.
- Provide indications for hospital admission and determine the appropriate level of care.
- List common bacterial organisms causing skin and soft tissues infections and state how these differ based on age and exposure histories.
- Describe risk factors for infection such as host immunity, dermatoses, environmental exposures and others.
- Discuss the influence of community prevalence of skin pathogens and antimicrobial use on predominant organisms and resistance patterns.
- Review how patient and antibiotic characteristics influence treatment choices.
- List indications for hospitalization.
- Discuss how culture and identification of the organism and susceptibility pattern aids in making treatment decisions, as applicable.
- Compare and contrast emergent versus urgent complications requiring pediatric surgery consultation, such as necrotizing fasciitis and abscesses.
- Explain why early identification and surgical intervention in necrotizing fasciitis can improve outcomes.
- Compare and contrast the utility of various imaging modalities such as plain film, nuclear medicine scan, computed tomography and magnetic resonance imaging and list indications for each.
- Summarize the approach toward evaluation and treatment of patients with recurrent staphylococcal infections, including indications for evaluation for systemic disease, household colonization, and environmental exposures.

**SKILLS**

*Pediatric hospitalists should be able to:*

- Demonstrate proficiency in medical interviewing correctly eliciting information such as onset and timing of spread of infection, past history of similar infections, and specific exposures.
- Demonstrate proficiency in conducting a physical examination of skin and soft tissue infections, determining extent and severity of the infection and making proper border demarcations to assist with assessing further spread.
- Order appropriate laboratory and radiographic tests to guide treatment and ensure proper isolation.
- Accurately interpret radiographic studies and engage consultants as appropriate.
- Direct an evidence-based treatment plan including appropriately selected antibiotic therapy attending to the most likely organisms and antibiotic susceptibility patterns.
- Perform careful reassessments daily and as needed, note changes in clinical status, and respond with appropriate actions.
- Adjust antibiotics according to the identification of the organism and/or antibiotic susceptibility pattern and clinical progression/improvement.
- Correctly determine when consultation with a surgeon is indicated.
- Consult appropriate subspecialists early to assist in evaluation and treatment as appropriate.
- Identify patients requiring extended evaluation for underlying anatomic or systemic disease.
- Create a comprehensive discharge plan including home care as appropriate.

**ATTITUDES**

*Pediatric hospitalists should be able to:*

- Recognize the importance of consulting with interdisciplinary teams such as pediatric surgeons, radiologists, pharmacists, and the laboratory early in the hospital course to facilitate rapid diagnosis, treatment and discharge.
- Communicate effectively with patients, family/caregiver, primary care provider and subspecialists regarding the reasons for diagnostic testing and treatment choices.
- Educate the family/caregiver on the etiology of the infection, including the importance of hand washing and minimizing environmental exposure in the prevention of infection.
- Display proactive, engaged behavior regarding proper isolation measures to prevent spread of the etiologic agent in the hospital.

**SYSTEMS ORGANIZATION AND IMPROVEMENT**

*In order to improve efficiency and quality within their organizations, pediatric hospitalists should:*

- Work with hospital administration and subspecialists to acquire local laboratory testing that is critical for evaluation and management, such as susceptibility testing.
- Incorporate knowledge of outcomes research, changing microbial epidemiology and resistance patterns, cost, and management strategies into patient care.
- Lead, coordinate, or participate in the development and implementation of cost-effective, safe, evidence-based care pathways to standardize the evaluation and management of skin and soft tissue infections.

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