PAEDIATRIC ACUTE CARE GUIDELINE	
Cellulitis and Necrotizing Fasciitis	
Scope (Staff):	All Emergency Department Clinicians
Scope (Area):	Emergency Department

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Cellulitis and Necrotizing Fasciitis

Assessment

- There is often an obvious injury to the skin (laceration, abrasion) which has served as a point of entry for infection

Investigations

- The majority of children have mild disease and require no investigations
- Indicated only if systemic symptoms, suspicion of underlying infection or in immunocompromised patient
    - FBC, CRP and Blood cultures are indicated in the unwell child who appears septic
    - X-Ray if cellulitis in close proximity to bone (osteomyelitis, septic arthritis)
    - Swab (M,C & S) if discharge
    - Consider immunoflurescence for HSV if suggestive of herpes
    - Consider biopsy in the immunocompromised patient or if the infection is subacute or chronic

Management

Cellulitis
• Cellulitis is a non-necrotizing infection of subcutaneous loose tissue, usually caused by bacteria (occasionally fungal in immunocompromised patients) • Cellulitis presents as an area of tender, warm skin with overlying oedematous erythema, often associated with regional lymphadenopathy and systemic signs such as fever or chills

Cellulitis, erysipelas or soft tissue infection < 1 month of age • This includes neonates with periumbilical cellulitis (omphalitis) or those with suspected staphylococcal scalded skin syndrome • All neonates with cellulitis should be admitted for a septic work-up and IV antibiotics • Discuss patient with Infectious Diseases or Clinical Microbiology services
Mild cellulitis or erysipelas ≥ 1 month of age • Usually *Staphylococcus aureus* or *Streptococcus pyogenes* • Bacteraemia is unlikely • Oral antibiotics as an outpatient • Oral Cephalexin; see Antibiotics
Moderate cellulitis, erysipelas or soft tissue infection ≥ 1 month of age • Admit • IV Flucloxicillin; see Antibiotics
Severe skin and soft tissue infection (rapidly progressive cellulitis, cellulitis with persisting fever or tachycardia despite 24 hours of therapy) • Admit • Surgical review to consider/exclude necrotising fasciitis or deeper infection • IV Flucloxicillin; see Antibiotics • IV Vancomycin • Add IV Clindamycin in severe cellulitis with shock
Periorbital/Orbital Cellulitis • Refer Cellulitis – Periorbital and Orbital
Suspected or proven necrotizing fasciitis
• Uncommon, but very serious rapidly progressive soft tissue infection • Characterised by extreme tenderness of the soft tissues and systemic toxicity • There may be palpable gas in the skin • General Surgery review is required in all cases suspected of necrotizing fasciitis (fasciotomy/debridement may be indicated) • Admit • Patients need aggressive broad spectrum; see Antibiotics ◦ IV Flucloxacillin ◦ IV Vancomycin ◦ IV Clindamycin • Discuss patient with Infectious Diseases or Clinical Microbiology services

Nursing

- Apply emla if patient condition is suggestive of requiring intravenous antibiotics

Observations

- Baseline observations include heart rate, blood pressure, respiratory rate, oxygen saturations, temperature and neurovascular observations (if circumferential or significant swelling).
- Minimum of hourly observations should be recorded whilst in the emergency department.

- Any significant changes should be reported immediately to the medical team.

References

1. WA Health Child and Adolescent Health Service. Skin, Soft Tissue and Orthopaedic Infections ChAMP Empiric Guidelines Version 2, August 2014
External Review: Christopher Blyth (Infectious Diseases Consultant) September 2015

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