

Cellulitis

Definition: Diffuse inflammation of skin involving dermis and subcutaneous fat, also referred to as Skin and Soft Tissue Infections (SSTI)

Typical pathogens: Streptococcus species: Group A (most common), B, C, G, *Staphylococcus aureus* (including MRSA). Think Streptococcus if non-purulent, lymphangitis, or erysipelas, and Staphylococcus if purulent (i.e. associated with boil or abscess)

Unique clinical scenarios:

1. Dog bite: *Pasteurella multocida*, *Capnocytophaga canimorsus*
2. Human bite: *Eikenella corrodens*, oral anaerobes, *S. aureus*
3. Fresh water exposure: *Aeromonas hydrophilia*, *Plesiomonas shigelloides*
4. Salt water exposure: *Vibrio vulnificus*
5. Neutropenia, presence of ecthyma: Gram negatives (including *Pseudomonas aeruginosa*)
6. Immunocompromised: Fungal (including candida species, Cryptococcus), *Nocardia*, non-tubercular mycobacteria)

Initial work-up/assessment:

1. Blood culture if systemic signs and symptoms of infection
2. Consider imaging:
 - a. Ultrasound for underlying abscess
 - b. CT/MRI useful if necrotizing fasciitis or pyomyositis suspected (but should not delay surgical consultation)
2. Obtain urgent surgery consultation if rapid spread of infection, crepitus, or air in tissues or pain dramatically out of proportion to exam

First line therapies (if no Staphylococcus suspected):

Inpatient:

- a. IV Ceftriaxone 2g q24h
- b. IV Cefazolin 2g q8hrs
- c. IV Clindamycin 600-900 mg IV q8h

Outpatient:

- a. Cephalexin 500mg PO QID
- b. Clindamycin 300-450mg PO QID

Notes: Anti-Staphylococcal antibiotics should be provided for purulent cellulitis, in addition to incision and drainage, if possible. Clinical appearance may often appear to worsen initially despite adequate therapy. Always elevate the extremity for more rapid clinical improvement!

Anti-staphylococcal therapy:

Methicillin-resistant *Staphylococcus aureus*

Moderate-Severe infection, critically ill:

1. Vancomycin IV

Mild infection:

2. TMP/SMX 1-2 DS tabs PO BID
3. Doxycycline 100mg PO BID

Methicillin-susceptible *Staphylococcus aureus*

Moderate-Severe infection, critically ill:

1. Nafcillin 2g IV q4h
2. Cefazolin 2g IV q8h

Mild infection:

3. Cephalexin 500mg PO QID
4. Dicloxacillin 500mg PO QID
5. Clindamycin 300-450mg PO QID