Skin and Soft Tissue Infection in Non-Pregnant Adults

**Key points**
- Beta-hemolytic streptococci are the most common cause of non-purulent cellulitis
- MRSA is the most common cause of cutaneous abscess and purulent infections
- Drainage is the primary therapy for abscess; several studies show that antibiotic therapy may not add benefit to drainage alone
- Short-course antibiotic therapy has been shown to be as effective as longer courses

**Possible signs and symptoms of skin and soft tissue infection (SSTI):**
1) Cutaneous erythema
2) Cutaneous warmth
3) Swelling
4) Pain
5) Tenderness to palpation
6) Fever

**Clinical picture consistent with SSTI?**
- Yes
- No

**Hospital admission**
- Yes
- No

**Severe infection or systemic illness?**
- Yes
- No

**Consider alternative etiologies**

**Fluctuant mass consistent with cutaneous abscess?**
- Yes
- No

**Cutaneous abscess**
(MRSA most common pathogen)

- Incision and drainage
- If antibiotics to be initiated, send purulent material for gram stain/bacterial culture
- Extensive surrounding cellulitis
- Inadequate drainage
- Diabetes mellitus
- Valvular heart disease
- Immunosuppressing condition or medication

- Yes
- No

**Antibiotic therapy may not be necessary†**

**Purulent drainage or exudate?**
- Yes
- No

**Purulent cellulitis/ wound infection**
(MRSA common)

- 1st line: Clindamycin 300-450mg PO TID OR Doxycycline 100mg PO BID*
  OR TMP-SMX DS 1-2 tabs PO BID*
- Severe β-lactam allergy OR Recent treatment with recurrence

- Yes
- No

**Duration of antibiotic therapy: 5 days**

**Non-purulent cellulitis**
(Streptococci most common)

- 1st line: Cephalexin 1gm PO TID (if non-severe PCN allergy)

**Encourage adjunctive therapies:**
1) Elevate affected area
2) Ibuprofen 600mg PO Q8hrs if NSAIDs deemed safe

**Note** This is intended only as a guide for evidence-based decision-making; it is not intended to replace clinical judgment. Assess for antibiotic allergies and use alternative agents as appropriate. Suggested antibiotic doses are for normal renal function; adjust for renal impairment when necessary.

*Trimethoprim-sulfamethoxazole and doxycycline may lack sufficient coverage against Grp A streptococci; not recommended for simple cellulitis
**Duration of therapy may be extended for poorly responsive disease
†several studies suggest incision and drainage alone may be sufficient for immunocompetent patients with skin abscess: Antimicrob Agents Chemother 2007;51:4044-8; NEJM 2006;355:666-74; Arch Surg 2006;141:850-4