Antimicrobial Stewardship Collaborative of South Carolina

Acute Bacterial Skin and Skin Structure Infections

Nonpurulent
(Impetigo[a], Ecthyma, Erysipelas, Cellulitis)

Antibiotics[b,c,d]

Preferred:
- Cephalexin 500 mg PO TID or QID[e]
- Dicloxacillin 500 mg PO QID
- Cefadroxil 500 mg PO BID[e]

Alternative:
- Linezolid 600 mg PO BID[f]

Duration: 5 days

Purulent[g]
(Cutaneous Abscesses, Furuncles, Carbuncles)

Mild
(Without systemic signs[#])

I & D +/- Antibiotics

[#]Systemic signs:
- Temperature >38°C
- Heart rate >90 bpm
- Respiratory rate >24 bpm
- WBC >12,000 or <400 cells/uL

Moderate[c]
(With systemic signs[#])

I & D + Antibiotics

Preferred:
- SMZ-TMP 1 DS PO BID[e]
- Linezolid 600 mg PO BID[f]
- Doxycycline 100 mg PO BID

Duration: 7 days

e. In obese patients (BMI >30 kg/m^2), consider: Amoxicillin/clavulanate 500/125 mg TID, Cephalexin 1000 mg TID or QID, Cefadroxil 1000 mg BID, SMZ-TMP 8-10 mg/kg/day (adjusted BW) in divided doses.[9]

Animal/Human Bites

Prevention of Infection

Presence of Risk Factors?

- Immunocompromised
- Asplenic
- Advanced liver disease
- Pre-existing resultant edema of the affected area
- Moderate to severe injuries to hand/face that may have penetrated the periosteum or joint capsule (e.g., penetrating cat bite)

No → No prophylactic antibiotics indicated

Yes →

Prophylactic antibiotics indicated[h]

<u>Preferred:</u> Amoxicillin/clavulanate 875/125 mg PO BID[e]

<u>Alternatives:</u>

- Doxycycline 100 mg PO BID
- Cefuroxime 500 mg PO BID plus metronidazole 500 mg PO TID
- SMZ-TMP 1-2 DS PO BID plus metronidazole 500 mg PO BID - TID[e]

Duration: 3-5 days

Vaccination Consideration (if indicated)

- Consider tetanus toxoid vaccine
- Consider post-exposure rabies prophylaxis with consultation of local health officials/infectious diseases (see www.cdc.gov/rabies/exposure/animals/)

Treatment of Infection

<u>Preferred</u>: Amoxicillin/clavulanate 875/125 mg PO BID[e]

<u>Alternatives:</u>

- Animal bites only:
  - Doxycycline 100 mg PO BID
  - Cefuroxime 500 mg PO BID plus metronidazole 500 mg PO BID - TID
  - SMZ-TMP 1-2 DS PO BID plus metronidazole 500 mg PO BID - TID[e]
- Human bites only:
  - Levofloxacin 750 mg PO daily plus metronidazole 500 mg PO BID - TID

Duration: 5-10 days[i]

Vaccination Consideration (if indicated)

- Consider tetanus toxoid vaccine
- Consider post-exposure rabies prophylaxis with consultation of local health officials/infectious diseases (see www.cdc.gov/rabies/exposure/animals/)

e. In obese patients (BMI >30 kg/m^2), consider: Amoxicillin/clavulanate 500/125 mg TID, Cephalexin 1000 mg TID or QID, Cefadroxil 1000 mg BID, SMZ-TMP 8-10 mg/kg/day (adjusted BW) in divided doses.[9]

h. Prophylactic regimen should be initiated within 12-24 hours of injuries. Consider extending the course to treatment duration (e.g. 5 -10 days) if the injuries become infectious after completing prophylactic course.

i. Treatment duration may be extended due to lack of clinical response or in an immunocompromised patient.

References

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3. Henness DM and Gordon WE. Effective once- or twice-daily treatment of skin and skin structure infections with a new cephalosporin (cefadroxil). *Infection* 1980; S633-7
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8. CLEOCIN HYDROCHILORIDE – clindamycin hydrochloride capsule [package insert]. Sun Pharmaceutical Industries, Inc: 2009.
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Footnotes

a. For impetigo only: in the absence of numerous lesions or outbreaks affecting several people, can consider mupirocin ointment (apply to lesions BID) x5 days.

b. Consider coverage against MRSA: penetrating trauma, evidence of MRSA infection elsewhere, nasal colonization with MRSA, or IVDU.

c. If coverage for both *Streptococcus* spp. and MRSA is desired: linezolid or SMZ-TMP monotherapy, or doxycycline with a beta-lactam (e.g. cephalexin) combination therapy.

d. Blood cultures and cutaneous aspiration/biopsies prior to administration of antibiotics for erysipelas and cellulitis are recommended for patients with malignancy on chemotherapy, neutropenia, severe cell-mediated immunodeficiency, immersion injuries, and animal bites.

e. In obese patients (BMI >30 kg/m^2), consider: Amoxicillin/clavulanate 500/125 mg TID, Cephalexin 1000 mg TID or QID, Cefadroxil 1000 mg BID, SMZ-TMP 8-10 mg/kg/day (adjusted BW) in divided doses.[9]

f. Consider avoiding the use of linezolid in patient with the following risk factors: baseline platelet level of <50 $x10^3/mm^3$, the use of monoamine oxidase inhibitor within the last 2 weeks, and concomitant use of agents high risk for serotonin syndrome including citalopram, escitalopram, and methadone.[5]

g. Cultures of pus from abscesses, carbuncles, or furuncles prior to administration of antibiotics are recommended, but treatment without them is reasonable

h. Prophylactic regimen should be initiated within 12-24 hours of injuries. Consider extending the course to treatment duration (e.g. 5 -10 days) if the injuries become infectious after completing prophylactic course.

i. Treatment duration may be extended due to lack of clinical response or in an immunocompromised patient.

- Recommendations are modified from the Infectious Disease Society of America (IDSA) 2014 SSTI Management and World Society of Emergency Surgery (WSES)/Surgical Infection Society Europe (SIS-E) 2018 Consensus for the Management of SSTI.[6-7]
- All dosages provided assume normal renal and hepatic function.
- Clindamycin has a black box warning for high risk of severe colitis which may end fatally. Consider reserving the use of clindamycin for serious infections for which less toxic antimicrobial agents are inappropirate.[8]
