

A full description of the treatment of all the clinical entities described herein is beyond the scope of this chapter. As a guide to the clinician in selecting appropriate treatment, the antimicrobial agents useful in the most common and the most fulminant cutaneous infections are listed in **Table 156-2**.

Furuncles, carbuncles, and abscesses caused by MRSA and MSSA are common, and their treatment depends upon the size of the lesion. Furuncles <2.5 cm in diameter are usually treated with moist heat. Those that are larger (4.5 cm of erythema and induration) require surgical drainage, and the occurrence of these larger lesions in association with fever, chills, or leukocytosis requires both drainage and antibiotic treatment. A study in children demonstrated that surgical drainage of abscesses (mean diameter, 3.8 cm) was as effective when used alone as when combined with trimethoprim-sulfamethoxazole treatment. However, the rate of recurrence of

new lesions was lower in the group undergoing both drainage and antibiotic treatment.

Early and aggressive surgical exploration is essential in cases of suspected necrotizing fasciitis, myositis, or gangrene in order to (1) visualize the deep structures, (2) remove necrotic tissue, (3) reduce compartment pressure, and (4) obtain suitable material for Gram's staining and for aerobic and anaerobic cultures. Appropriate empirical antibiotic treatment for mixed aerobic-anaerobic infections could consist of ampicillin/sulbactam, ceftiofur, or the following combination: (1) clindamycin (600–900 mg IV every 8 h) or metronidazole (500 mg every 6 h) plus (2) ampicillin or ampicillin/sulbactam (1.5–3 g IV every 6 h) plus (3) gentamicin (1–1.5 mg/kg every 8 h). Group A streptococcal and clostridial infection of the fascia and/or muscle carries a mortality rate of 20–50% with penicillin treatment. In experimental models of streptococcal and clostridial necrotizing fasciitis/myositis, clindamycin has exhibited markedly superior efficacy, but no comparative clinical trials have been performed. A retrospective study of children with invasive group A streptococcal

TABLE 156-2 TREATMENT OF COMMON INFECTIONS OF THE SKIN

Diagnosis/Condition	Primary Treatment	Alternative Treatment	See Also Chap(s).
Animal bite (prophylaxis or early infection) ^a	Amoxicillin/clavulanate, 875/125 mg PO bid	Doxycycline, 100 mg PO bid	167e
Animal bite ^a (established infection)	Ampicillin/sulbactam, 1.5–3 g IV q6h	Clindamycin, 600–900 mg IV q8h, <i>plus</i> Ciprofloxacin, 400 mg IV q12h, <i>or</i> ceftiofur, 2 g IV q6h	167e
Bacillary angiomatosis	Erythromycin, 500 mg PO qid	Doxycycline, 100 mg PO bid	197
Herpes simplex (primary genital)	Acyclovir, 400 mg PO tid for 10 days	Famciclovir, 250 mg PO tid for 5–10 days, <i>or</i> Valacyclovir, 1000 mg PO bid for 10 days	216
Herpes zoster (immunocompetent host >50 years of age)	Acyclovir, 800 mg PO 5 times daily for 7–10 days	Famciclovir, 500 mg PO tid for 7–10 days, <i>or</i> Valacyclovir, 1000 mg PO tid for 7 days	217
Cellulitis (staphylococcal or streptococcal ^{b,c})	Nafcillin or oxacillin, 2 g IV q4–6h	Cefazolin, 1–2 g q8h, <i>or</i> Ampicillin/sulbactam, 1.5–3 g IV q6h, <i>or</i> Erythromycin, 0.5–1 g IV q6h, <i>or</i> Clindamycin, 600–900 mg IV q8h	172, 173
MRSA skin infection ^d	Vancomycin, 1 g IV q12h	Linezolid, 600 mg IV q12h	172
Necrotizing fasciitis (group A streptococcal ^b)	Clindamycin, 600–900 mg IV q6–8h, <i>plus</i> Penicillin G, 4 million units IV q4h	Clindamycin, 600–900 mg IV q6–8h, <i>plus</i> Cephalosporin (first- or second-generation)	173
Necrotizing fasciitis (mixed aerobes and anaerobes)	Ampicillin, 2 g IV q4h, <i>plus</i> Clindamycin, 600–900 mg IV q6–8h, <i>plus</i> Ciprofloxacin, 400 mg IV q6–8h	Vancomycin, 1 g IV q6h, <i>plus</i> Metronidazole, 500 mg IV q6h, <i>plus</i> Ciprofloxacin, 400 mg IV q6–8h	201
Gas gangrene	Clindamycin, 600–900 mg IV q6–8h, <i>plus</i> Penicillin G, 4 million units IV q4–6h	Clindamycin, 600–900 mg IV q6–8h, <i>plus</i> Ceftiofur, 2 g IV q6h	179

^a*Pasteurella multocida*, a species commonly associated with both dog and cat bites, is resistant to cephalexin, dicloxacillin, clindamycin, and erythromycin. *Eikenella corrodens*, a bacterium commonly associated with human bites, is resistant to clindamycin, penicillinase-resistant penicillins, and metronidazole but is sensitive to trimethoprim-sulfamethoxazole and fluoroquinolones. ^bThe frequency of erythromycin resistance in group A *Streptococcus* is currently ~5% in the United States but has reached 70–100% in some other countries. Most, but not all, erythromycin-resistant group A streptococci are susceptible to clindamycin. Approximately 90% of *Staphylococcus aureus* strains are sensitive to clindamycin, but resistance—both intrinsic and inducible—is increasing. ^cSevere hospital-acquired *S. aureus* infections or community-acquired *S. aureus* infections that are not responding to the β-lactam antibiotics recommended in this table may be caused by methicillin-resistant strains, requiring a switch to vancomycin, daptomycin, or linezolid. ^dSome strains of methicillin-resistant *S. aureus* (MRSA) remain sensitive to tetracycline and trimethoprim-sulfamethoxazole. Daptomycin (4 mg/kg IV q24h) or tigecycline (100-mg loading dose followed by 50 mg IV q12h) is an alternative treatment for MRSA.