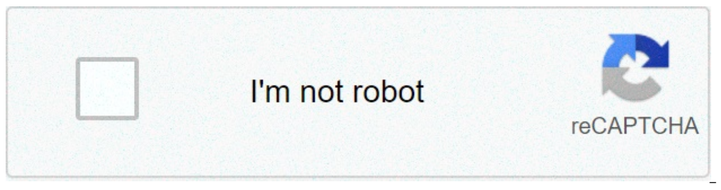

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Cellulitis idsa guidelines pdf

The Infectious Diseases Society of America (IDSA) has released evidence-based guidelines on the diagnosis and treatment of skin and soft tissue infections. The recommendations were published in the November 15, 2005, issue of Clinical Infectious Diseases and are available at and soft tissue infections have diverse etiologies that depend, in part, on the epidemiologic setting. Thus, obtaining a careful history, including information about the patient's immune status, travel history, recent trauma or surgery, previous antimicrobial therapy, lifestyle, hobbies, and animal exposure, is key to developing the differential diagnosis. Recognizing physical examination findings and understanding the anatomic relationships of skin and soft tissue also are crucial in establishing the correct diagnosis. Biopsy and aspiration of tissue may be necessary in some patients, and radiographic procedures may be useful to determine the level of infection and the presence of gas or abscess. Surgical exploration and debridement are important diagnostic and therapeutic procedures in immunocompromised patients and in those with necrotizing infections or myonecrosis.Three problems commonly affecting the clinical evaluation of patients with skin and soft tissue infections are diagnosis, infection severity, and pathogen-specific antibiotic resistance patterns. Dozens of microbes may cause soft tissue infections, and although specific bacteria may cause a particular type of infection, considerable overlaps in clinical presentation exist.The IDSA recommends that patients with soft tissue infection have blood drawn for laboratory testing if signs and symptoms of systemic toxicity are present (e.g., fever or hypothermia, tachycardia, hypotension). Laboratory testing should include blood culture and drug susceptibility tests; blood cell count with differential; and measurement of creatinine, bicarbonate, creatine phosphokinase, and C-reactive protein (CRP) levels. Hospitalization should be considered for patients with hypotension or an elevated creatinine level, low serum bicarbonate level, elevated creatine phosphokinase level (i.e., two to three times the upper limit of normal), marked left shift, or a CRP level greater than 13 mg per L (123.8 nmol per L). Gram stain culture and culture of needle aspiration or punch biopsy specimens should be performed to determine a definitive etiology, and a surgical consult should be considered for inspection, exploration, and drainage. The following findings may signal potentially severe, deep soft tissue infection and require emergent surgical evaluation: Cutaneous hemorrhageGas in the tissuePain disproportionate to physical findingsRapid progressionSkin anesthesiaSkin sloughingViolaceous bullae.Emerging antibiotic resistance in Staphylococcus aureus and Streptococcus pyogenes (methicillin and erythromycin resistance, respectively) is problematic because both of these organisms are common causes of several skin and soft tissue infections, and because empiric choices of antimicrobials must include agents with activity against resistant strains. Minor skin and soft tissue infections may be treated empirically with semisynthetic penicillin, first- or second-generation oral cephalosporins, macrolides, or clindamycin (Cleocin). However, 50 percent of methicillin-resistant S. aureus (MRSA) strains have inducible or constitutive clindamycin resistance. Progression despite antibiotic therapy could be the result of infection with resistant microbes or because a deeper, more serious infection exists than was realized.Patients who present with severe infection or whose infection is progressing despite empiric antibiotic therapy should be treated more aggressively; the treatment strategy should be based on results of appropriate Gram stain, culture, and drug susceptibility analysis. In the case of S. aureus, the physician should assume that the organism is resistant, and agents effective against MRSA (i.e., vancomycin, linezolid [Zyvox], or daptomycin [Cubicin]) should be used (Table 1).TABLE 1Antimicrobial Therapy for Impetigo and Skin and Soft Tissue InfectionsThe rightsholder did not grant rights to reproduce this item in electronic media. For the missing item, see the original print version of this publication.IMPETIGO AND CELLULITISImpetigo may be caused by infection with S. aureus or S. pyogenes. Treatment depends on the number of lesions, their location, and the need to limit the spread of infection to others. The best topical agent is mupirocin (Bactroban), although resistance has been reported. Patients with numerous lesions and those who are not responding to topical agents should receive oral antimicrobial therapy effective against S. aureus and S. pyogenes.Cellulitis may be caused by numerous organisms. Cellulitis associated with furuncles, carbuncles, or abscesses usually is caused by S. aureus. In contrast, diffuse cellulitis most commonly is caused by streptococcal species. Important clinical clues to other causes include physical activities, trauma, water contact, and bites from animals, insects, or humans. In these circumstances, appropriate culture material should be obtained. The same should be done in patients who do not respond to initial empiric therapy directed against S. aureus and S. pyogenes. Aspiration of skin is not helpful in 75 to 80 percent of patients with cellulitis, and results of blood cultures rarely are positive.Patients with cellulitis generally should be treated with a penicillinase-resistant semisynthetic penicillin or a first-generation cephalosporin. Patients allergic to penicillin should be treated with clindamycin or vancomycin. Lack of clinical response could be the result of unusual organisms, resistant strains of staphylococcus or streptococcus, or deeper processes. Necrotizing fasciitis, myonecrosis, and toxic shock syndrome should be considered in patients who become increasingly ill or who experience increasing toxicity, and antibiotic treatment should be modified on the basis of Gram stain results, culture results, and antimicrobial susceptibilities of organisms obtained from surgical specimens.NECROTIZING INFECTIONSNecrotizing fasciitis may be monomicrobial and caused by S. pyogenes, Vibrio vulnificus, or Aeromonas hydrophila. Polymicrobial necrotizing fasciitis may occur after surgery and in patients with peripheral vascular disease, diabetes, decubitus ulcers, or spontaneous mucosal tears of the gastrointestinal or gastrourinary tract. As with clostridial myonecrosis, gas in the deep tissues often is found in these mixed infections. Gas gangrene is a rapidly progressive infection caused by Clostridium perfringens, Clostridium septicum, Clostridium histolyticum, or Clostridium novyi. Severe penetrating trauma or crush injuries associated with interruption of the blood supply are the usual predisposing factors. C. septicum, a more aerotolerant Clostridium species, may cause spontaneous gas gangrene in patients with colonic lesions, adenocarcinoma, or neutropenia. Antimicrobials directed against aerobic gram-positive and gram-negative bacteria, as well as against anaerobes, may be used to treat mixed necrotizing infections. Table 2 lists antibiotics and dosages used to treat necrotizing infections.TABLE 2Treatment of Necrotizing Infections of the Skin, Fascia, and MuscleThe rightsholder did not grant rights to reproduce this item in electronic media. For the missing item, see the original print version of this publication.INFECTIONS AFTER ANIMAL OR HUMAN BITESAnimal bites account for 1 percent of all emergency department visits, and dog bites are responsible for 80 percent of these cases. Pasteurella species are the most common isolates; however, cat and dog bites contain an average of five different aerobic and anaerobic bacteria per wound, often including S. aureus, Bacteroides tectum, and Fusobacterium, Capnocytophaga, and Porphyromonas species. The decision to administer oral or parenteral antibiotics depends on the depth and severity of the wound and on the time since the bite occurred. Patients who are not allergic to penicillin should receive oral amoxicillin/clavulanate (Augmentin), intravenous ampicillin/sulbactam (Unasyn), or ertapenem (Invanz; see Table 3). Cefoxitin (Mefoxin) or carbapenem antibiotics could be used parenterally in patients with mild penicillin allergies. Patients with previous severe reactions may be treated with oral or intravenous doxy-cycline (Vibramycin), trimethoprim/sulfamethoxazole (TMP/SMX; Bactrim, Septra), or a fluoroquinolone plus clindamycin.TABLE 3Recommended Antibiotic Therapy for Infections Following Animal or Human BitesThe rightsholder did not grant rights to reproduce this item in electronic media. For the missing item, see the original print version of this publication.Human bites may occur from accidental injuries, purposeful biting, or closed-fist injuries. The bacteriologic characteristics of these wounds are complex but include infection with aerobic bacteria, such as streptococci, S. aureus, and Eikenella corrodens, as well as with multiple anaerobic organisms, including Fusobacterium, Peptostreptococcus, Prevotella, and Porphyromonas species. E. corrodens is resistant to first-generation cephalosporins, macrolides, clindamycin, and aminoglycosides. Intravenous treatment with ampicillin/sulbactam or cefoxitin is the best choice for these patients.SURGICAL SITE INFECTIONSSurgical soft tissue infections include those occurring postoperatively and those severe enough to require surgical intervention for diagnosis and treatment. Surgical site infections rarely occur during the first 48 hours after surgery, and fever during that period usually arises from noninfectious or unknown causes. In contrast, surgical site infection is a more common source of fever after 48 hours, and careful inspection of the wound is indicated. Observation, dressing changes, or opening the incision site suffices for patients with a temperature of less than 101.3°F (38.5°C) who do not have tachycardia. However, patients with tachycardia or a temperature greater than 101.3°F generally require antibiotics as well as opening of the suture line. Postsurgical infections involving nonsterile tissue (e.g., colonic, vaginal, biliary, or respiratory mucosa) may be caused by a combination of aerobic and anaerobic bacteria. Antimicrobial therapies for patients with surgical site infections are listed in Table 4, and an algorithm for the diagnosis and treatment of surgical site infections in given in Figure 1 (page 1228).TABLE 4Antimicrobial Therapies for Surgical Site InfectionsThe rightsholder did not grant rights to reproduce this item in electronic media. For the missing item, see the original print version of this publication.Treatment of Patients with Surgical Site InfectionsThe rightsholder did not grant rights to reproduce this item in electronic media. For the missing item, see the original print version of this publication.Figure 1.Editor's note: A recent observational study of patients with purulent or abscessed skin infection in 12 U.S. emergency departments found that more than one half of patients had community-acquired MRSA.1 Drainage and administration of an oral antibiotic such as TMP/SMX or doxycycline are recommended as initial therapy for suspected community-acquired MRSA in patients with no systemic toxicity.2,3—mark h. ebell, m.d., m.s.Page 2 Practice Guideline BriefsAm Fam Physician. 2006 Oct 1;74(7):1228-1230.Although child fatalities from motor vehicle crashes declined from 1978 to 2004, partially because of the use of child safety restraints, nearly 1,200 children younger than 12 years died in motor vehicle crashes in 2004. The Centers for Disease Control and Prevention (CDC) analyzed data from the National Electronic Injury Surveillance System-All Injury Program (NEISS-AIP). The full report was published in the June 9, 2006, issue of Morbidity and Mortality Weekly Report and is available at NEISS-AIP included data on injury and restraint use in children younger than 12 years who presented to an emergency department after a motor vehicle crash. The data showed that children who were unrestrained were twice as likely to have multiple diagnoses and more than three times as likely to require hospitalization than those who were restrained. Fifty-nine percent of the children were restrained appropriately, compared with 40 percent who were not. The CDC supports vigorous promotion and enforcement of appropriate child motor vehicle restraints to further reduce child fatalities from motor vehicle crashes.To see the full article, log in or purchase access. Page 3 Practice Guideline BriefsAm Fam Physician. 2006 Oct 1;74(7):1230.ACOG Releases Guideline on Tamoxifen for Postmenopausal WomenTamoxifen (Nolvadex) is a nonsteroidal antiestrogen agent commonly used to treat and prevent breast cancer. However, tamoxifen may be associated with endometrial proliferation, hyperplasia, polyp formation, invasive carcinoma, and uterine sarcoma in postmenopausal women. The American College of Obstetricians and Gynecologists (ACOG) Committee on Gynecologic Practice has reviewed the risks of tamoxifen in postmenopausal women and released recommendations on its use in this population. The full guideline was published in the June 2006 issue of Obstetrics & Gynecology.The guideline includes the following recommendations for postmenopausal women taking tamoxifen: Patients should be monitored closely for endometrial hyperplasia or cancer and be informed about the risks associated with the drug.Abnormal vaginal bleeding, bloody discharge, and staining or spotting should be evaluated.Because some evidence suggests a higher risk in women who had benign endometrial polyps before tamoxifen therapy, pretherapy screening may have a role.Routine endometrial surveillance is not recommended unless the patient is at high risk of endometrial cancer.Tamoxifen should not be used for more than five years.If atypical endometrial hyperplasia develops, patients should receive appropriate treatment, and the use of tamoxifen should be reassessed. Hysterectomy should be considered if tamoxifen must be continued.To see the full article, log in or purchase access. Page 4CDC Reports on Racial and Socioeconomic Disparities in BreastfeedingThe Centers for Disease Control and Prevention (CDC) analyzed data from the 2004 National Immunization Survey to find current estimates of racial and economic disparities in breastfeeding in the United States. Its report was published in the March 31, 2006, issue of MMWR Weekly and is available at breastfeeding initiation rates increased and breastfeeding disparities decreased in past decades, the 2004 data showed substantial racial and economic disparities in breastfeeding initiation and continuation rates to at least age six months. Race and demographic factors were associated with breastfeeding independently of each other. About 72 percent of white children and 50 percent of black children were ever breastfed. Rates of ever-breastfeeding were 10 to 17 percentage points lower among black children than white children in each income group. Within each race, the proportion of children ever breastfed was 23 to 26 percentage points higher in the highest income group than in the lowest. About 54 percent of white children who were ever breastfed were being breastfed at six months of age, compared with about 43 percent of black children.The greatest differences between breastfeeding rates in each race occurred among children in rural areas. Children were more likely to have ever been breastfed if they were not eligible for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); if their mothers were 20 years or older, married, or had some college education; if they lived in the West or in urban areas; or if their families were above the federal poverty threshold. Factors positively associated with breastfeeding at six months in both races were older maternal age, higher maternal education, mother being married, and living in the Northeast.Increasing breastfeeding rates is crucial to improving children's health, reducing childhood overweight, and reducing health care costs. Barriers to initiation and continuation of breastfeeding include lack of social support, lack of proper guidance from health care professionals, lack of adequate and timely postpartum follow-up care, and disruptive hospital maternity-care practices (e.g., delays in breastfeeding initiation, use of pacifiers for newborns, promotion of formula through discharge packs). Public health measures to promote breastfeeding should target those with low initiation rates, including black mothers living in rural areas or those who are younger than 20 years, mothers who have not completed high school, and participants in the WIC program. Breastfeeding interventions should take into account racial, ethnic, and socioeconomic variations in attitudes. The CDC's Guide to Breastfeeding Interventions provides an introduction to interventions that promote and support breastfeeding.Page 5 Please note: This information was current at the time of publication. But medical information is always changing, and some information given here may be out of date. For regularly updated information on a variety of health topics, please visit familydoctor.org, the AAFP patient education website. Am Fam Physician. 2006 Oct 1;74(7):1179-1180.Colds and the flu cause many of the same symptoms. But colds are usually mild, while the flu tends to be more severe.A cold often starts with feeling tired, sneezing, coughing, and having a runny nose. You may not have a fever, or you may run a low fever—just 1 or 2 degrees higher than usual. You may have muscle aches, a scratchy or sore throat, watery eyes, and a headache.The flu starts suddenly and hits hard. You will probably feel weak and tired and have a fever, dry cough, a runny nose, chills, muscle aches, a bad headache, eye pain, and a sore throat. It usually takes longer to get over the flu than a cold.More than 100 different viruses can cause colds. There aren't as many viruses that cause the flu. That's why there is a shot for the flu and not for colds. To keep from getting the flu, all children between six months and five years of age, adults older than 50 years, and people with asthma or lung problems should get a flu shot every October or November.There is no cure for a cold or the flu. Antibiotics don't work against viruses. Unless you have the flu and see your doctor within two days after your symptoms start, all you can do to feel better is treat your symptoms while your body fights off the virus. You can also use over-the-counter cold medicines to help you feel better. Do not give children cold medicine without checking with your doctor first. People who take prescription medicine also should check with their doctor before taking over-the-counter cold medicine.Most people do not need to see a doctor when they have a cold or the flu. But if you have any of the symptoms in the box below, call your doctor.To see the full article, log in or purchase access. This handout is provided to you by your family doctor and the American Academy of Family Physicians. Other health-related information is available from the AAFP online at . This information provides a general overview and may not apply to everyone. Talk to your family doctor to find out if this information applies to you and to get more information on this subject.