



Sports Shorts

GUIDELINES FOR PHYSICIANS AND SCHOOL NURSES

Staph and skin infections

Methicillin-resistant *Staphylococcus aureus* (MRSA) remains a serious and common community acquired (CA) skin and soft tissue infection. These strains differ from the more resistant MRSA acquired in health-care settings. CA-MRSA is susceptible to 2 or 3 classes of antibiotics. Because some MRSA strains may carry virulence factors, infections caused by any of these Staph strains are potentially life-threatening. The prevalence of CA-MRSA varies geographically but definitely is on the rise worldwide. In one report MRSA accounted for half of the *Staphylococcus aureus* hospitalizations in children in the U.S.

Risk factors for CA-MRSA

1. Skin trauma (abrasions, body shaving, body piercings, tattoos and lacerations)
2. Skin-to-skin contact
3. Sharing contaminated personal items and sport equipment (razors, towels, etc.)
4. Crowding
5. Poor personal hygiene

Clinical spectrum of Staphylococcal infections

1. Soft tissue abscesses or boils (most common)
2. Impetigo and cellulitis
3. Invasive infections including osteomyelitis, pneumonia, sepsis and endocarditis

Many individuals are colonized with *Staphylococcus aureus* and serve as a reservoir. The most common site for colonization is the anterior nares but consider vaginal, rectal areas and skin sites also. Attempts to decolonize individuals have been only partially successful; many individuals get recolonized. There is no way to successfully eliminate these infections. The most important measure is to practice scrupulous and frequent hand hygiene to avoid infections and recurrences of these infections in the same individual and family members. Coaches, trainers and parents need to be vigilant to limit exposure to MRSA. Athletes should not be allowed to participate in sports while lesions remain open and draining. Regular, thorough cleaning of all sporting equipment with antibacterial solutions is critical to reducing the spread of infection. Sports trainers should discourage sharing of sports equipment or personal items.

For recurrent Staphylococcal infections

There is no clear and well-accepted strategy. Decolonization may be effective, but unfortunately in many cases are only temporary, due to repeated contact with a carrier (family member or classmate). Consider the following strategies:

- Cover the area with clean bandages
- All household members wash their hands frequently
- Always wash after coming in contact with the lesion
- Fingernails kept clean and short

Management of skin abscesses

- Drain pus incision and drainage (I&D) and submit it to the laboratory for culture and susceptibility testing.
- For abscesses less than 5 cm in size, I&D often is sufficient to treat.
- If the physician prefers, I&D can be followed by a short course of an appropriate oral antibiotic.
- Appropriate antibiotics include: clindamycin, doxycycline (for > 7 years of age) and trimethoprim/sulfamethoxazole (TMP/SMX). Methicillin sensitive Staph strains can be treated with the "old" antibiotics: cephalexin, or trimethoprim/sulfamethoxazole, doxycycline or clindamycin. Cellulitis or abscess caused by Group A Streptococcus cannot be treated with TMP/SMX.
- Follow up is suggested within 48 hours.
- For large abscesses both surgical I&D and oral antibiotic therapy are necessary.
- If a child is febrile or a good follow up cannot be assured, hospitalize and start on empirical intravenous clindamycin. Keep in mind that some strains of MRSA and even methicillin sensitive Staph are resistant to clindamycin. In more severe cases add vancomycin until susceptibilities become available.
- If the patient has severe infection (limb-threatening infection, toxic-appearing), the patient needs to be hospitalized, surgery performed promptly, and vancomycin plus nafcillin started intravenously.

With repeated recurrences, consider placing the patient on a 5-day course of TMP/SMX plus rifampin following completion of your therapy for the acute infection.

- Soiled linens, pjs and all clothing should be washed in hot water and separate from the rest of the family
- No contact sports should be allowed until all lesions are healed
- Sites of new skin trauma should be cleansed and mupirocin (Bactroban) ointment applied 3 times daily
- Once infection has cleared, the patient may take bleach baths
- All household members should apply mupirocin ointment into the anterior nares 2 times a day for 5 days