

# Keep Tabs on CA-MRSA by Obtaining Cultures

*For many abscesses caused by CA-MRSA, incision and drainage alone may clear the infection.*

BY MIRIAM E. TUCKER

BETHESDA, MD. — Draining abscesses and obtaining cultures are now more important to the management of pediatric skin and soft tissue infections in the era of community-acquired methi-

cillin-resistant *Staphylococcus aureus* infections, according to Dr. Sheldon L. Kaplan.

Skin and soft tissue infections remain the most common manifestations of community-acquired MRSA (CA-MRSA) infection, which has increased dramati-

cally in the past decade. Draining abscesses and obtaining cultures from purulent skin infections help physicians keep tabs on local and regional antibiotic susceptibility patterns, he said at the annual conference on antimicrobial resistance sponsored by the National Foundation for Infectious Diseases.

"It's important to send cultures, which wasn't the case years ago. It helps to know what we're dealing with on a local level," said Dr. Kaplan, head of the pediatric infectious disease section at Baylor College of Medicine and chief of the infectious disease service at Texas Children's Hospital, both in Houston.

Although invasive CA-MRSA infections are increasingly a concern, skin and soft tissue infections continue to make up the majority of CA-MRSA infections. Among the 12,876 children with community-acquired *S. aureus* infections who were seen at Texas Children's between Aug. 1, 2001, and June 30, 2009, 73% had a MRSA infection. Of those, 97% were skin and soft tissue infections, compared with 93% of the methicillin-susceptible *S. aureus* (MSSA) infections.

Over the 8 years, children with CA-MRSA skin and soft tissue infections were more likely to be admitted to the hospital than were those with CA-MSSA isolates (58% vs. 51%).

Virtually all CA-MRSA isolates remain susceptible to trimethoprim-sulfamethoxazole (TMP-SMX), and about 90% remain susceptible to doxycycline-minocycline, although few pediatric data are available for those agents and they can be used only in children over 8 years of age, he noted.

Clindamycin susceptibility varies widely around the country. Data for 2000-2005 suggest that resistance rates in children with CA-MRSA ranged from 3% in Baltimore (*Pediatr. Infect. Dis. J.* 2007;26:852-4) to 22% in Chicago (*Emerg. Infect. Dis.* 2006;12:631-7).

In Houston, rates of clindamycin resistance have slowly increased from about 2%-3% in 2001 to approximately 10% for the last few years, Dr. Kaplan noted.

The good news is that for many abscesses, incision and drainage alone may clear the infection.

A study published a few years ago showed that this was the case for both CA-MRSA and non-MRSA staph infections. Of 69 children with skin and soft tissue abscesses caused by CA-MRSA, 62

had their abscesses drained and 45 had wound packing. All were treated with empiric antibiotics, which were ineffective in 58. After culture results were known, an antibiotic active against CA-MRSA was given to 21 of those 58. However, no significant differences in response were observed between those who never received an effective antibiotic and those who did.

Having an initial lesion larger than 5 cm was a significant predictor of hospitalization, whereas initial ineffective



**Skin and soft tissue infections, as shown by this pustule with cellulitis, are the most common CA-MRSA manifestations.**

COURTESY DR. SHELDON L. KAPLAN

antibiotic therapy was not, the authors concluded (*Pediatr. Infect. Dis. J.* 2004; 23:123-7).

And in a study presented at an infectious disease conference last year, there were no differences in response between clindamycin and cephalexin at 48-72 hours or at 7 days after surgical or spontaneous drainage among 200 children with uncomplicated skin and soft tissue infections, including the 69% of infections caused by CA-MRSA.

The researchers concluded that "antibiotic therapy may be of limited value in the management of children with uncomplicated, drained skin and soft tissue infections."

A definitive answer to the question of how to treat uncomplicated skin and soft tissue infections may come from a current study funded by the National Institute of Allergy and Infectious Diseases, comparing TMP-SMX, clindamycin, or placebo in 1,310 nonhospitalized immunocompetent adults and children. The study began in April 2009 and is scheduled to be completed in July 2011.

"So here we are in 2010, still trying to figure out the best way to treat an abscess. Hopefully, 4-5 years from now, we'll have some information as to whether it helps to add a systemic antibiotic. We'll have to wait and see," Dr. Kaplan commented. ■

**Disclosures:** Dr. Kaplan has received clinical research grants from Pfizer and Cubist Pharmaceuticals.