Community, Nosocomial MRSA Forms Are Mixing

BY BARBARA J. RUTLEDGE
Contributing Writer

Methicillin-resistant *Staphylococcus aureus* (MRSA) strains that typically cause community-acquired infections are infecting patients in hospitals, and strains considered health care associated are infecting patients with no health care–related risk factors, reported Dr. R. Monina Klevens of the Centers for Disease Control and Prevention (CDC) and her associates.

The Active Bacterial Core Surveillance program of the CDC is a population-based surveillance system for invasive organisms, including MRSA infections. The surveillance is ongoing in California, Colorado, Connecticut, Georgia, Maryland, Minnesota, New York, Oregon, and Tennessee (Emerging Infectious Diseases 2006;12:1991-3).

Surveillance reports are generated when positive MRSA cultures are detected in normally sterile sites, such as blood or cerebrospinal fluid.

Laboratory reports are linked to the patient's medical record, and health care–related risk factors (HRFs) are abstracted from the medical record for inclusion in a surveillance database.

HRFs include the presence of an invasive device, history of MRSA infection or colonization, dialysis, hospitalization, residence in a long-term care facility, and surgery.

Obtaining a bacterial culture more than 48 hours after hospital admission also suggests infection with a health care–associated strain.

MRSA strains are empirically typed, based on the separation characteristics seen using pulsed-field gel electrophoresis. In earlier MRSA outbreaks, strains USA300 and USA400 were the predominant community-associated strains. USA100 and USA 500 were considered health care–associated strains.

From January 2004 through February 2006, more than 9,100 cases of invasive MRSA were reported and classified as classic health care–associated infections, with cultures obtained more than 48 hours after admission; cases with one or more HRF but with community-onset infections (less than 48 hours); or cases with community-associated infections and no HRF.

Of the 9,147 cases, 2,535 (28%) were classic health care–associated infections, 5,353 (59%) were health care associated, but community acquired, and 1,259 (14%) were community-associated infections.

One hundred isolates were selected for typing by pulsed-field gel electrophoresis. Seven of 27 isolates (26%) from community-associated cases were USA100 or USA500, and 8 of 29 (28%) classic health care–associated cases were strain USA300. Overall, 18%-28% of patients with HRFs were infected with strains considered to be community-associated MRSA strains.

"The distinction between health care– and community-associated MRSA is rapidly blurring," Dr. Klevens and her associates wrote. ■

Sipping Granules Preferred for Taking 'Bitter' Clarithromycin

BY SHERRY BOSCHERT
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SAN FRANCISCO — Children with respiratory tract infection and their parents generally preferred treatment with clarithromycin granules sipped through a strawlike device than with conventional clarithromycin suspension syrup, Dr. Dieter Adam reported.

A randomized, open-label study in 263 children aged 2-12 years treated for 7-10 days found no significant difference in efficacy after completion of the therapy, with the bacterial organism eradicated in 93% by either formulation.

In the sipping group, however, 23% had clinical symptoms resolve in 3-5 days compared with 13% in the suspension group, he said in a poster presentation at the annual Interscience Conference on Antimicrobial Agents and Chemotherapy.

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Parents assessed the sipped formulation as easier to administer and better tasting to the child, compared with the suspension form.

Rates of adherence to therapy were significantly higher with the sipped form than with the suspension in the first 5 days of therapy (92% vs. 38%) and at the end of treatment (94% vs. 86%), said Dr. Adam, a pediatrician at the University of Munich, Germany, and his associates.

The study was funded by Grünenthal GmbH, which markets the Siptechnology formulation in Latin America and some European countries. The company is pursuing U.S. approval, said Dr. Adam, who has no other affiliation with the company.

The Siptechnology consists of a plastic strawlike device loaded with a dose of drug granules with a film coating to mask the taste. The study randomized patients in a 2:1 ratio to the Siptechnology or suspension syrup. Children in the Siptechnology group used the device to sip their preferred soft drink through a liquid-permeable controller on the end of the "straw," ingesting both the soda and drug granules.

Both regimens delivered 15 mg/kg per day divided into two equal doses. Patients were treated for acute otitis media in 20% of cases, tonsillitis in 25%, pharyngitis in 30%, and acute bronchitis in 42%. (Some children had more than one infection.)

"Normally, clarithromycin has a bitter taste" that may interfere with adherence and might reduce cure rates in the real world compared with the Siptechnology, although efficacy was comparable in this trial setting, Dr. Adam said at the conference, sponsored by the American Society for Microbiology.

Patients or their parents reported the taste was good or very good in 62% of the Siptechnology group compared with 36% of the suspension group. Patients ingested the drug without resistance or resentment in 88% of doses in the Siptechnology group and 67% of doses in the suspension group. ■