MRSA Muddles Antibiotic Choice in Skin Infections

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NEW YORK — Methicillin-resistant *Staphylococcus aureus* is now the most common cause of serious skin and soft-tissue infections in many communities throughout the United States, Dr. Mark Lebwohl said at the American Academy of Dermatology's annual Academy 2007 meeting.

"If you're getting cultures, you're seeing this, because it is definitely there," said Dr. Lebwohl of the department of dermatology at Mount Sinai Medical Center, New York. "Where's it coming from? Everywhere!"

In one study he cited, methicillin-resistant *Staphylococcus aureus* (MRSA) accounted for 72% of all skin and soft-tissue infections seen at a major medical center and affiliated outpatient clinics in Atlanta (Ann. Intern. Med. 2006;144:309-17). MRSA is particularly common among athletes, military personnel, homeless people, and intravenous drug users, but in reality, everyone is at risk, he stressed.

The bad news is that MRSA isn't just resistant to methicillin. It seems to be increasingly resistant to most antibiotics these days. "Unfortunately, vancomycin resistance is emerging in MRSA organisms. Erythromycin borders on worthless, as almost all MRSA strains are erythromycin-resistant," he said.

Clindamycin is still effective in most communities around the country, but resistance to this drug also is starting to show up. Between 10% and 15% of all MRSA strains identified in Atlanta, Minnesota, and Baltimore are resistant to clindamycin. In Chicago, the number is over 50% for infected adults, Dr. Lebwohl noted.

Fortunately, trimethoprim-sulfamethoxazole (Bactrim) continues to work almost everywhere. In Baltimore, though, 17% of MRSA strains have been found resistant to this drug as well.

All of this bad news might lead one to conclude that antibiotic therapy for MRSA is ultimately futile. A study published several years ago suggested that, when treating MRSA-infected skin and soft-tissue abscesses, there were no significant differences whatsoever between allegedly effective and ineffective antibiotics, and that the key to treatment was incision and drainage (Pediatr. Infect. Dis. J. 2004;23:123-7).

Dr. Lebwohl cautioned against such antibiotic nihilism. "If there's no difference between the antibiotics, it's reasonable to ask: Why treat? But the point is, it is not the patient you are seeing that you worry about. It is the person you are not seeing: the patient's family members, neighbors, colleagues. MRSA can cause sepsis, coagulopathy, osteomyelitis. It can kill people. It is very serious. You need to use the right antibiotics, because in treating your patient properly you are also treating the whole community."

Clindamycin and Bactrim are still good options, as are doxycycline and minocycline, although they are not recommended for children. For adults, doxycycline and minocycline are the top choices, he said. Daptomycin (Cubicin) is also a good choice for deep-tissue infections, especially in the bones and joints (Curr. Med. Res. Opin. 2005;21:1923-6).

Dr. Lebwohl also had high praise for linezolid (Zyvox), a newcomer to the antibiotic front lines. MRSA seems to be very sensitive to this drug: A recent in vitro study of almost 3,400 MRSA isolates showed that all were sensitive to linezolid (Antimicrob. Agents Chemother. 2005;49:5024-32). Unfortunately, it is very expensive.

Generally, one should stay clear of using quinolones and macrolides, because they are ineffective against MRSA at this point. Rifampin may seem to work at first, but resistance tends to develop very quickly.

Dr. Lebwohl strongly advised colleagues to read and practice according to the Infectious Diseases Society of America's 2005 guidelines for the management of skin and soft-tissue infections (Clin. Infect. Dis. 2005;41:1373-406).

He also advocated routine culture and sensitivity testing. The more information physicians can gather about the infections they are confronting, the more intelligently they can choose the antibiotic therapy.

Over the past year, Dr. Lebwohl has been a consultant for a number of drug companies, including Galderma (clindamycin) and Pfizer (doxycycline). ■

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