In Kids, MRSA Leads to Musculoskeletal Infection

BY JANE SALODOF MACNEIL
Senior Editor

ALBUQUERQUE — Community-acquired methicillin-resistant *Staphylococcus aureus* is causing a growing number of sudden, severe musculoskeletal infections in otherwise healthy children, according to reports at the annual meeting of the Pediatric Orthopaedic Society of North America.

In separate interviews, Dr. John P. Lubicky, professor of orthopedic surgery at Indiana University, and Dr. Shawn R. Gilbert of the University of Alabama at Birmingham, suggested that unfamiliarity with musculoskeletal presentation of community-acquired MRSA infections may be causing dangerous delays in diagnosis.

"The kids are sick as hell. Some nearly die," Dr. Lubicky said, urging clinicians to raise their index of suspicion.

Searching for MRSA-positive musculoskeletal infections treated from January 2003 to February 2008, Dr. Lubicky found 12 community-acquired cases in children who did not have an underlying disease. The average age was 7.2 years (range 0.2-17.7 years). Nine were boys.

"A lot of the kids are blatantly healthy," Dr. Lubicky said, emphasizing that the children in the retrospective study had been active before taking sick.

The average hospital stay was 20.5 days (range 4-42 days). Eleven children required surgical interventions. Complications included pyomyositis in 7 children, septic arthritis in 6, and osteomyelitis in 10 (among them 3 cases that were multifocal and 2 fractures). Four children had septic emboli. One had pneumonia.

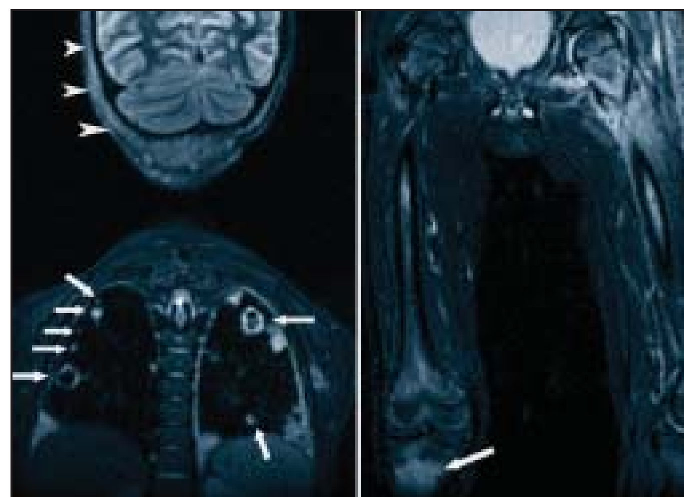
Dr. Lubicky recommended magnetic resonance imaging of the whole body to check for multiple remote sites. Abscesses should be drained early and repeatedly.

Dr. Lubicky said to start empiric antibiotic treatment against both methicillin-susceptible and methicillin-resistant bacterial strains. A 6-week course, starting with parenteral administration and followed by oral antibiotics against susceptible isolates, is usually adequate, they said. Eight children in the retrospective study were treated with vancomycin and clindamycin.

In Alabama, Dr. Gilbert and colleagues found 156 cases of culture-proven *S. aureus* infections when they searched community-acquired septic arthritis or osteomyelitis cases from 2001 to 2007. Of these, 66 cases (42%) were methicillin resistant, including 8 cases of multifocal musculoskeletal infection. In comparison, only 1 child among 90 with methicillin-sensitive infection was affected at more than one site—bringing the total number of multifocal musculoskeletal *S. aureus* infections to 9.

The number of multifocal infections doubled from three during 2001-2004 to six during 2005-2007. The number of sites also increased from 2-3 during the early period to 2-7 (average 3.8) during the later years.

Serious complications became more common over time. One child had bacteremia and none had septic emboli in the early multifocal group. Among the multifocal cases after 2004, four children presented with bacteremia and all six children had septic emboli. "Some joints that were affected weren't symptomatic, either because [the children] weren't having pain or they were so sick they couldn't tell you what was hurting," Dr. Gilbert said. He routinely samples all high-risk joints as well as any joints with obvious swelling. ■



IMAGES COURTESY DR. JOHN P. LUBICKY

Left: A chest with right parietal osteomyelitis, soft tissue swelling, and multiple lung abscesses. Right: An image is shown of a femur shows left hip effusion, left femoral osteomyelitis, left thigh pyomyositis, and right proximal tibia osteomyelitis.

Thanks!

For making us America's #1 Joint Care Brand.✧

We can't thank doctors enough for recommending Osteo Bi-Flex® to their patients. Now, doctors can feel even better about recommending Osteo Bi-Flex because it is the only joint care brand with Joint Shield™. Joint Shield is specially formulated with 5-Loxin® to help patients control joint flare-ups.* Taking 5-Loxin showed improvement in joint comfort within 7 days.† Plus, Osteo Bi-Flex has the naturally sourced Glucosamine and Chondroitin that help lubricate and cushion joints.* Osteo Bi-Flex is clinically tested and manufactured under the strictest standards for product purity and potency. It's no wonder doctors recommend Osteo Bi-Flex more than any other joint care brand.✧

Free Sample Kit.**

Call 1-888-848-2435 or visit www.osteobiflex.com to receive your free patient samples of Osteo Bi-Flex and for a free copy of "The Science Behind Osteo Bi-Flex."

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

✧Based on the results of the National Disease and Therapeutic Index syndicated report among physicians who recommend a branded Glucosamine/Chondroitin or Glucosamine supplement, December 2006.
**Allow 6-8 weeks for delivery. While supplies are in stock.
†This statement is based on a recent human study, using an objective measure. (Biomarker analysis)

©2007 Rexall Sundown, Inc. 021507ds