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Pediatric musculoskeletal MRSA infections on the rise

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Pediatric musculoskeletal *Staphylococcus aureus* bacterial infections have been evolving over the past decade, with more children diagnosed with the more virulent, methicillin-resistant *Staphylococcus aureus* (MRSA) today than 10 years ago. The result is longer hospitals stays, more surgeries and other related complications, according to an abstract presented Saturday, Oct. 26, at the American Academy of Pediatrics (AAP) National Conference and Exhibition in Orlando.

In "Staphylococcus Aureus Musculoskeletal Infections: A Changing Spectrum over the Past Decade," researchers studied pediatric patients with culture-positive *Staphylococcus aureus*, including MRSA and the less toxic methicillin-sensitive *Staphylococcus aureus* (MSSA), between January 2001 and June 2010, at a major urban children's hospital.

There were 148 cases of acute musculoskeletal *Staphylococcus aureus* infection, including 111 MSSA and 37 MRSA, with the proportion of MRSA cases jumping from 9 percent in 2001 to 29 percent (three-fold) in 2010. The MRSA-infected patients had longer hospital stays (13 days vs. 8 days), multiple surgical procedures (38 percent vs. 15 percent), and higher levels of C-Reactive Protein, the body's acute immune response to injury and infection, (38 percent vs. 15 percent). Complications, including deep vein thrombosis, septic emboli and septic shock, recurrent infection, and/or avascular necrosis, or cell death, were more common in patients with MRSA than MSSA infections (22 percent vs. 6 percent).

"As MRSA infections rise, prompt recognition and aggressive treatment of MRSA musculoskeletal infections are critical to avoiding life-threatening complications, and improving patient outcomes," said lead study author Eric Sarkissian.

"Our findings support prior concern about the increased virulence of MRSA compared to MSSA infections," said Sarkissian. "Optimizing patient outcomes will require increased healthcare provider vigilance, early broad-spectrum antibiotic administration and aggressive surgical management."

Provided by American Academy of Pediatrics

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