

Methicillin-resistant *Staphylococcus aureus* in Previously Healthy Neonates

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Methicillin-resistant *Staphylococcus aureus* infections are increasing in previously healthy term and late preterm neonates. Male infants are at greater risk, with symptom onset most often occurring between 7 and 12 days of age. Infants and mothers may have concurrent infection, and a family history of skin or soft-tissue infection is a significant risk factor. Infections range in severity from pustulosis to invasive infection. Evaluation strategies vary but should be based on the severity of infection. Abscesses often require drainage. Some infections may be associated with sterile cerebrospinal fluid pleocytosis. Treatment strategies also vary. Community isolate antibiotic susceptibility patterns should determine the empiric antibiotic choice. Antibiotic coverage should be adjusted after antibiotic susceptibility results are available for the patient's specific isolate. Some patients who have no systemic symptoms, a reliable family, and good follow-up may complete treatment safely at home. Outpatients should be monitored closely for treatment failure. The appropriate length of treatment is not known but should continue at least until all symptoms have resolved for 48 hours. Recurrence of infection months or years after the neonatal infection is possible.

Abbreviations: CA: community-acquired • CSF: cerebrospinal fluid • MRSA: methicillin-resistant *Staphylococcus aureus*

Methicillin-Resistant *Staphylococcus aureus*: An Emerging Risk for Circumcised Boys

George Hill

Abstract *Staphylococcus aureus* has been treated with antibiotic regimens for more than six decades. The organism has shown a remarkable ability to evolve resistance to commonly used antibiotics. The resistant strains commonly are called methicillin-resistant *Staphylococcus aureus* (MRSA). The antibiotic-resistant varieties, which commonly had been found in hospitals, recently have entered the community, where their prevalence, in many areas, are reaching epidemic proportions. MRSA is carried on the skin and in the nares of healthy people. Healthcare workers and parents may colonize newborn infants with MRSA. Any open wound, including a circumcision wound, increases the risk of infection. *Staphylococcus aureus* commonly causes skin infections, but it may also cause fulminating necrolytic pneumonia, meningitis, necrotizing fasciitis, and other life-threatening systemic infections. The community-associated strains (CA-MRSA) have developed new virulence factors not previously seen in hospital-associated strains (HA-MRSA). Treatment should be aggressive and immediate, but still the death rate is high. Avoidance of non-therapeutic circumcision is indicated.

Introduction

The report by the Centers for Disease Control (CDC) of the deaths of four children in Minnesota and North Dakota from fulminant CA-MRSA in the late 1990s served to wake up the medical community to the dangers of this emerging pathogen.¹ Since that time there has been extensive investigation of this virulent new pathogen. This review examines the risk that the presence of the MRSA pathogen in the community poses to newly circumcised boys.

Staphylococcus aureus

Staphylococcus aureus is a Gram-positive spherical bacteria that occurs in microscopic clusters resembling grapes.² *S. aureus* displays a golden color under the microscope, from which it derives its name.²

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