725. *Staphylococcus aureus* Bacteremia in Children: A Retrospective Review at a Tertiary Care Hospital

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Background. While *Staphylococcus aureus* bacteremia (SAB) is associated with high morbidity and mortality in adults, less is known about this condition in children. The objective of this study was to describe the characteristics, source, treatment and outcomes of children with SAB in an era when *methicillin-resistant Staphylococcus aureus*(MRSA) rates are increasing.

Methods. All children presenting to the Hospital for Sick Children, Toronto, between April 1, 2007 and April 1, 2010 with ≥1 positive blood culture for *Staphylococcus aureus* were included in the study. Charts were retrospectively reviewed as part of a multicenter study on SAB management in adults and children. SAB that developed after 48 hours was considered hospital acquired.

Results. A total of 147 children with a median age of 3 years (IQR 0,9) were included; 51% were male. Eight (5%) patients were not admitted to hospital and are not known to have received therapy. Almost all isolates (n = 142) were methicillin-sensitive *Staphylococcus aureus*. The most common source was a central line (n = 72, 49%), and 14 (19%) of these patients had a second site affected. Most central line infections were hospital acquired (n = 47, 65%, $p < 0.001$) and the line was removed in only 43% of cases (n = 31).

Other sources included osteomyelitis and septic arthritis (n = 39), pneumonia/empyema (n = 19), cellulitis (n = 12), surgical site infection (n = 11), infective endocarditis (n = 4), urinary tract infection (n = 1) and staphylococcus scalded skin syndrome (n = 1). Overall, 25% had more than one site affected.

The median antibiotic treatment duration was 23 days (IQR 14, 42). Thirty-five patients (24%) received less than 1 week of IV therapy and did not present back to this hospital with treatment failure. Treatment varied widely depending on the source of infection and the admitting service. A total of five patients died, but only one was felt to be related to *Staphylococcus aureus*.

Conclusion. SAB in children differs significantly from adults in terms of both morbidity and mortality and extrapolating treatment decisions based on adult literature may lead to inappropriate prolonged antibiotic exposure. There is significant variability in the treatment of pediatric SAB and prospective trials are needed to guide management.

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