

Central line-associated bloodstream infections (CLABSIs) account for significant morbidity and mortality in patients with long-term central venous catheters (CVCs). This study was performed to identify the characteristics and risk factors of CLABSIs among children with long-term CVCs” Moon et al (2017).

Abstract:

BACKGROUND: Central line-associated bloodstream infections (CLABSIs) account for significant morbidity and mortality in patients with long-term central venous catheters (CVCs). This study was performed to identify the characteristics and risk factors of CLABSIs among children with long-term CVCs.

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METHODS: A retrospective review of children who had a long-term CVC in Seoul National University Children’s Hospital between 2011 and 2015 was performed. Data on patient demographics, the isolated pathogens, and the status of CVC placement were collected. Clinical variables were compared between subjects with and without CLABSIs to determine the risk factors for CLABSIs. **>RESULTS.:** A total of 629 CVCs were inserted in 499 children during the five-year period. The median age at insertion was 6.0 years (14 days-17.9 years), and hemato-oncological disease was the most common underlying condition (n=497, 79.0%). A total of 235 CLABSI episodes occurred in 155 children, with a rate of 0.93 per 1,000 catheter-days. The most common pathogens were *Klebsiella pneumoniae* (n=64, 27.2%), coagulase-negative staphylococci (CNS; n=40, 17.0%), and *Staphylococcus aureus* (n=28, 12.0%). In the univariate analysis, the gender, underlying disease, catheter characteristics, and insertion technique did not increase the risk for CLABSI. In both the univariate and logistic regression analyses, patients with prior bloodstream infections (BSIs) (odds ratio 1.66; 95% confidence interval: 1.090-2.531, P=0.018) were more likely to have a CLABSI.

CONCLUSIONS: CLABSI prevention is of particular concern for children with a prior BSI. Furthermore, the antimicrobial resistance of major pathogens should be monitored to enable the empiric selection of appropriate antibiotics in patients with long-term CVCs.

Reference:

Moon, H.M., Kim, S., Yun, K.W., Kim, H.Y., Jung, S.E., Choi, E.H. and Lee, H.J. (2017) Clinical Characteristics and Risk Factors of Long-Term Central Venous Catheter-Associated Bloodstream Infections in Children. *The Pediatric Infectious Disease Journal*. November 30th. .

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