



FACTORS ASSOCIATED WITH CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTION (CLABSI) AMONG CHILDREN IN A TERTIARY GOVERNMENT HOSPITAL: A CASE-CONTROL STUDY

Joeraine Kristine L. Labapis, MD, DPPS; Mary Antonette Cudy-Madrid, MD, FPPS, FPIDSP
Section of Pediatric Infectious Diseases
Philippine Children's Medical Center

INTRODUCTION

CLABSI is a common hospital-acquired infection that may lead to severe sepsis, increased morbidity and mortality, and overinflated healthcare costs. This study aimed to determine the factors associated with CLABSI in children with central venous catheters. Understanding these risk factors is essential for guiding clinical decisions and recommending preventive measures in the pediatric population.

RESULTS

A total of 92 cases and 184 controls were included. Results of final analysis revealed that age group of 6 to 12 years old had the highest odds of acquiring CLABSI (OR=18.91, 95% CI 2.32 to 153.9). Those more likely to acquire CLABSI were patients with duration of CVC use of more than 14 days (OR=25.68, 95% CI 2.77 to 238.4), with blood transfusion as indication for central line insertion (OR=5.24, 95% CI 1.67 to 16.48), those who received TPN (OR=13.44, 95% CI 2.67 to 67.56) and chemotherapeutic or immunosuppressive drugs (OR=3.07, 95% CI 1.2 to 7.85).

METHODS

This retrospective case-control study employed random sampling to include confirmed cases of patients with CLABSI and controls without CLABSI. Patients were matched based on unit of admission. Odds ratios were obtained to determine factors associated with CLABSI using univariate and multivariate regression analysis.

DISCUSSION

Enhanced infection control measures should be implemented in patients who are likely to need blood transfusion, parenteral nutrition and chemotherapeutics to prevent CLABSI occurrence. More importantly, frequent hand hygiene, personnel training, use of skin antiseptics, provision of barrier methods, routine assessment and timely removal of catheters when no longer needed should consistently be put into practice.

KEYWORDS: *Central line-associated bloodstream infection, CLABSI, associated factors, children*