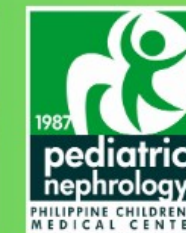


RISK FACTORS FOR NON-TUNNELED HEMODIALYSIS CATHETER-RELATED BLOODSTREAM INFECTIONS AND CATHETER COLONIZATION AMONG PEDIATRIC MAINTENANCE HEMODIALYSIS PATIENTS: A SINGLE-CENTER, RETROSPECTIVE COHORT STUDY



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INTRODUCTION

Hemodialysis using CVC provides prompt access for initiation; however, it is associated with complications, mainly catheter-related bloodstream infection (CRBSI). This study investigates the incidence, risk factors, outcomes, and microbiological culture results of CRBSI and CC.

METHODOLOGY

A retrospective cohort study of pediatric patients who underwent MHD via CVC at PCMC from January 2018 to July 2023 with suspected CRBSI

CONCLUSION

The duration utilization of CVC is higher in CRBSI and CC patients than those without, which means a need to improve bloodstream infection prevention strategies and utilization of permanent access for our pediatric patients.

RESULTS

- The incidence of CRBSI (0.37%) and CC (1.5%).
- Majority with CRBSI and CC, respectively, chronic glomerulonephritis the cause of ESRD (5.2%, 63.6%), on non-tunneled CVCs (95.2%, 100 %) and the mean duration of the catheter (174.78 days, 289.73 days). Causative organisms were predominantly gram-positive bacteria.
- Using multiple logistic regression, results show that there is not enough evidence to show that duration of catheter, hemoglobin level, WBC, platelet, CRP, and albumin are associated with CRBSI with odds ratio 95% confidence interval with one (1) and p-values > 0.05.
- The catheter management among CRBSI/CC were removal (54%, 55%), retention (22%, 18%), and guidewire exchange (24%, 27%). Metastatic infection occurs in 19% of the CRBSI group and 2% of the CC group (p = 0.60).

DISCUSSION

This study provides information as the first local study to identify CRBSI rates, factors, and outcomes among pediatric patients on maintenance hemodialysis. CVC is associated with complications, particularly CRBSI. The risk factors for CRBSI from the literature are divided into two aspects: hemodialysis catheter (duration of catheter & site of insertion) and related to the patient. A clinical suspicion of CRBSI is considered if the patient has a CVC and clinical manifestation.

KEYWORD

Catheter-related bloodstream infection, Catheter colonization, central venous catheter, hemodialysis, end-stage renal disease