

Risk factors for CLABSI in pediatric cancer patients with a TIVAP may be related to the severity of the child's condition at catheter insertion. Insertion of the catheter before chemotherapy and unfavorable conditions such as malnutrition and bone marrow aplasia can increase the risk of CLABSI" Viana Taveira et al (2016).

Abstract:

BACKGROUND: Totally implantable venous access ports (TIVAPs) are used for prolonged central venous access, allowing the infusion of chemotherapy and other fluids and improving the quality of life of children with cancer. TIVAPs were developed to reduce the infection rates associated with central venous catheters; however, infectious events remain common and have not been fully investigated in pediatric oncology patients.

ReTweet if useful... Totally implantable venous access port CLABSI risk in children
[@ivteam #ivteam](http://ctt.ec/7y7d2+)

Click To Tweet

PROCEDURE: A retrospective cohort was formed to investigate risk factors for central line-associated bloodstream infection (CLABSI) in pediatric cancer patients. Sociodemographic, clinical, and TIVAP insertion-related variables were evaluated, with the endpoint being the first CLABSI. A Kaplan-Meier analysis was performed to determine CLABSI-free catheter survival.

RESULTS: Overall, 188 children were evaluated over 77,541 catheter days, with 94 being diagnosed with CLABSI (50%). Although coagulase-negative staphylococci were the pathogens most commonly isolated, Gram-negative microorganisms (46.8%) were also prevalent. In the multivariate analysis, factors that increased the risk for CLABSI were TIVAP insertion prior to chemotherapy (risk ratio = 1.56; $P < 0.01$), white blood cell count less than 1,000 mm⁻³ on the day of implantation (RR = 1.64; $P < 0.01$), and chronic malnutrition (RR = 1.41; $P < 0.05$). Median time without CLABSI following TIVAP insertion was 74.5 days.

CONCLUSIONS: Risk factors for CLABSI in pediatric cancer patients with a TIVAP may be related to the severity of the child's condition at catheter insertion. Insertion of the catheter before chemotherapy and unfavorable conditions such as malnutrition and bone marrow aplasia can increase the risk of CLABSI. Protocols must be revised and surveillance increased over the first 10 weeks of treatment.

Reference:

Viana Taveira, M.R., Lima, L.S., de Araújo, C.C. and de Mello, M.J. (2016) Risk factors for central line-associated bloodstream infection in pediatric oncology patients with a totally implantable venous access port: A cohort study. *Pediatric Blood & Cancer*. September 26th.

doi: 10.1002/pbc.26225.

Thank you to our partners for supporting IVTEAM