



This study aims to evaluate the success, safety, and complications leading to surgical revision or premature removal of TCVC in this particular patient group” Martynov et al (2018).

Abstract:

BACKGROUND: There is a paucity of information on procedural and long-term outcomes of tunneled central venous catheters (TCVC) in infants and children younger than 3 years undergoing anticancer therapy. This study aims to evaluate the success, safety, and complications leading to surgical revision or premature removal of TCVC in this particular patient group.

METHODS: The clinical course of pediatric patients with percutaneous inserted TCVC, including Groshong (GC) and Hickman/Broviac (HB) catheters, has been analyzed retrospectively. The data analysis includes patient and device characteristics, adverse events during insertion, and dwell period complications.

RESULTS: A consecutive series of 238 children undergoing implantation of 273 TCVC, including 148 (54.2%) GC and 125 (45.8%) HB catheters, with a total of 38,209 catheter days at risk (cdr) were reviewed. The patient cohort consisted of 65 (23.8%) infants, 77 (28.2%) children aged 1-2 years, and 131 (48.0%) aged 2-3 years. The overall rate of adverse events during catheter insertion was 12.8% (n = 35) with no differences between age groups or devices. The overall rate of long-term complication was 28.2% (n = 77, catheter risk [CR] per

1,000 cdr = 1.75), with the highest prevalence in infants ($P = 0.01$). The most common complication was late dislocation ($n = 24$, 8.8%, CR = 0.47), followed by early dislocation ($n = 20$, 7.3%) and infection ($n = 18$, 7.4%, CR = 0.42).

CONCLUSION: Percutaneous landmark-guided insertion of TCVC in neonates and small children with cancer is safe. Patterns of long-term complications are different from those for older children and should be prevented through appropriate management.

Reference:

Martynov, I., Raedecke, J., Klima-Frysch, J., Kluwe, W. and Schoenberger, J. (2018) Outcome of landmark-guided percutaneously inserted tunneled central venous catheters in infants and children under 3 years with cancer. *Pediatric Blood & Cancer*. June 26th. .

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