Tunneled central venous catheters (tCVCs) are routinely used for long-term venous access in children with cancer and chronic diseases. They may be inserted by surgical venous cut-down or percutaneously” Blum et al (2017).

Abstract:

PURPOSE: Tunneled central venous catheters (tCVCs) are routinely used for long-term venous access in children with cancer and chronic diseases. They may be inserted by surgical venous cut-down or percutaneously. The aim of this study was to compare the operative times and intraoperative complications of both techniques.

METHODS: This study compared group A (surgical venous cut-down, years 2002-2006) with group B (percutaneous, years 2008-2012). Patient characteristics, operative times, and intraoperative complications were obtained from surgical reports. (IRB review and approval, number 6/15). Both Hickman/Broviac and Portacath catheters were included.

RESULTS: 343 patients in group A and 321 patients in group B were studied. Ages at implantation and underlying diagnoses were similar. Operative time was significantly shorter in group B. Only 60% of primarily dissected veins were suitable for surgical implantation, whereas successful vessel puncture was possible in 96% (87% on the first attempt, 9% on the second). Bleeding occurred in 2% of patients in group A, and pneumothorax occurred in 1.8% of patients in group B. Early catheter dislodgement was similar in both groups.

CONCLUSION: Percutaneous tCVC implantation is safe, less invasive, and faster than surgical implantation. Both techniques are feasible, and complication rates are low.

LEVEL OF EVIDENCE: Level III.


Thank you to our partners for supporting IVTEAM

- Review of nurse-led central venous catheter insertion
- Central venous catheter-related venous thrombosis in children
- Ultrasound assisted subclavian central venous catheter insertion