

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.

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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.

Blum, L.V., Abdel-Rahman, U., Klingebiel, T., Fiegel, H., Gfroerer, S. and Rolle, U. (2017) Tunnelled central venous catheters in children with malignant and chronic diseases: A comparison of open vs. percutaneous implantation. *Journal of Pediatric Surgery*. January 30th. .

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