



Ultrasound-guided (USG) cannulation of the brachiocephalic vein (BCV) has been shown to be technically easy. We hypothesised that adoption of USG in-plane cannulation of the BCV as the primary approach to central venous cannulation at our institution would lead to central venous cannulation for a greater variety of indications” Thompson (2017).

Abstract:

**OBJECTIVE:** Ultrasound-guided (USG) cannulation of the brachiocephalic vein (BCV) has been shown to be technically easy. We hypothesised that adoption of USG in-plane cannulation of the BCV as the primary approach to central venous cannulation at our institution would lead to central venous cannulation for a greater variety of indications.

**METHODS:** We performed retrospective, descriptive comparison of all central lines placed in patients aged <16 years who underwent any surgical operation during calendar years 2012-2014 at a small, free-standing children’s hospital. The use and management of a central line was reviewed until the patient was discharged from the hospital. Analysis of the data was performed using simple comparative statistical methods.

**RESULTS:** Forty-nine patients were identified, 20 who weighed <10 kg and 29 who weighed >10 kg. Cannulation was successful in all patients. No significant late complications occurred.

Catheters were well tolerated post-operatively, with no accidental dislodgement and no removal because of discomfort. The average duration of insertion was 6.3 (3-20±3.77) days. Nine catheters were placed for access during emergency surgery. 15 were placed in patients with difficult peripheral intravenous (PIV) access. The central lines remained in place until discharge in 79.6% of patients. In 40% of patients, the PIV catheter was removed, and the central line was retained because of preference. Total parenteral nutrition (TPN) was administered in 11 (22.4%) patients.

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CONCLUSION: Cannulation of BCV was well tolerated by children, with an average insertion duration of 6.3 days, which often lasted beyond the removal/failure of the PIV cannula. Catheters were useful for primary venous access during hospitalisation and for short TPN courses.

Reference:

Thompson, M.E. (2017) Ultrasound-Guided Cannulation of the Brachiocephalic Vein in Infants and Children is Useful and Stable. Turkish Journal of Anaesthesiology and Reanimation. 45(3), p.153-157.

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