Ultrasound-guided (USG) cannulation of the brachiocephalic vein (BCV) is gaining worldwide consensus for central venous access in children. This study reports a 20-month experience with this approach in children” Avanzini et al (2016).

Abstract:

Background: Ultrasound-guided (USG) cannulation of the brachiocephalic vein (BCV) is gaining worldwide consensus for central venous access in children. This study reports a 20-month experience with this approach in children.

Methods: All patients who underwent percutaneous USG central venous catheter (CVC) positioning in the BCV between August 2013 and March 2015 have been included. Devices inserted during this period were open-ended, either single or double-lumen tunneled CVC. Our series was divided into three consecutive study periods in order to determine the relative incidence of repositioning and complications.

Results: During the study period, a total of 95 patients underwent 109 CVC insertions in the BCV. The median length of CVC duration was 230 days for a total of 23,212 catheter days. No major intraoperative complications occurred. Overall rate of CVC-related postoperative complications requiring repositioning or precocious removal was 0.90 per 1,000 catheter days and involved 21 CVC (19%, 95% confidence interval 13–28). These included 18 dislodgments, two infections, and one malfunction. Double-lumen CVCs represented the only
significant risk factor for complications (52% complications—three per 1,000 catheter days).

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Conclusion: USG supraclavicular cannulation of the BCV represents a safe approach for central line placement in children. It proved to be versatile, as it can be used in premature infants as well as in adolescents. Provided it is adopted by operators experienced in USG cannulation, we strongly suggest to resort to this approach as a first-line choice in children undergoing tunnelled central line placement for long-lasting therapy.

Reference:


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