



We propose a novel ultrasound-guided puncture technique of axillary vein for centrally inserted central catheter placement, which consists in the oblique-axis view of the axillary vein coupled with the in-plane puncture. The main objectives of this study were feasibility and safety of this approach. The primary endpoints were the success rate and early complications; the secondary endpoints were late complications” Brescia et al (2019).

Abstract

INTRODUCTION: Ultrasound-guided cannulation of the axillary vein in the infraclavicular area has several potential advantages for both short-term and long-term venous access devices. Currently, there are two techniques to approach axillary vein for ultrasound-guided cannulation: out-of-plane puncture in the short-axis view and the in-plane puncture in the long-axis view. We propose a novel ultrasound-guided puncture technique of axillary vein for centrally inserted central catheter placement, which consists in the oblique-axis view of the axillary vein coupled with the in-plane puncture. The main objectives of this study were feasibility and safety of this approach. The primary endpoints were the success rate and early complications; the secondary endpoints were late complications.

METHODS: We analyzed data from a retrospective cohort of 80 ultrasound-guided cannulation of axillary vein performed with the oblique axis-in-plane technique in 80 cancer

patients requiring a totally implantable central venous access, at CRO Aviano National Cancer Institute, during the period from January 2016 up to October 2017. We focused on the percentage of successful venous cannulation at the first attempt and on the cumulative incidence of early and late complications.

RESULTS: Axillary vein cannulation was successful at the first attempt in 77 out of 80 patients (96%). We had no significant complications during placement or in the first 48 h. The total number of catheter days was 27,432. The cumulative incidence of catheter-related bloodstream infection was of 0.036 per 1000 catheter days (only one case). We had no infection of the pocket of the reservoir, no symptomatic venous thrombosis, and no catheter migration.

CONCLUSION: Our data show that the oblique axis-in-plane technique of the ultrasound approach to the axillary vein is feasible and safe.

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Brescia, F., Biasucci, D.G., Fabiani, F., Favarato, M., Costa, F., Longo, F., Martuscelli, M., Vitiello, M. and Pittiruti, (2019) A novel ultrasound-guided approach to the axillary vein: Oblique-axis view combined with in-plane puncture. *The Journal of Vascular Access*. January 31st. .

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