

In our experience, 8- to 10-cm-long polyurethane catheters may offer a fast and reliable peripheral venous access in the emergency department, if placed by ultrasound guidance and with the Seldinger technique” Scoppettuolo et al (2016).

Abstract:

BACKGROUND: Acutely ill patients admitted to the emergency department (ED) constantly require at least one fast and reliable peripheral intravenous (PIV) access. In many conditions (morbid obesity, underweight state, chronic diseases, intravenous drug abuse, adverse local conditions, etc.), PIV placement may be challenging.

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Ultrasound guidance is a useful tool for obtaining a peripheral intravenous access in the emergency department, particularly when superficial veins are difficult to identify by palpation and direct visualization, though standard peripheral intravenous cannulas are not ideal for this technique of insertion and may have limited duration. Long polyurethane catheters inserted with ultrasound guidance and direct Seldinger technique appear to have several advantages over short cannulas in terms of success of insertion and of duration.

METHODS: A retrospective analysis was conducted on all the ultrasound-guided peripheral venous accesses obtained by insertion of long polyurethane catheters in patients admitted to the emergency department of our university hospital during 1 year. The main indication to the procedure was the urgent need of a peripheral venous access in patients with superficial veins difficult to palpate and/or visualize. All relevant data concerning the insertion and the maintenance of these peripheral lines were collected from the chart.

RESULTS: Seventy-six patients were included in this review. The success rate of insertion was 100 %, with an average of 1.57 punctures per each successful cannulation. The mean time needed for the complete procedure was 9.5 min. In 73 % of patients, the catheter was used for more than 1 week; a minority of catheters were removed prematurely for end of

use. No major infective or thrombotic complication was reported.

CONCLUSIONS: In our experience, 8- to 10-cm-long polyurethane catheters may offer a fast and reliable peripheral venous access in the emergency department, if placed by ultrasound guidance and with the Seldinger technique. Further studies with prospective, randomized, and controlled design are warranted to confirm our results.

Full Text

Reference:

Scoppettuolo, G., Pittiruti, M., Pitoni, S., Dolcetti, L., Emoli, A., Mitidieri, A., Migliorini, I. and Annetta, M.G. (2016) Ultrasound-guided “short” midline catheters for difficult venous access in the emergency department: a retrospective analysis. *International Journal of Emergency Medicine*. 9(1), p.3.

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