

The US-PIVA method offers an effective alternative to Central Venous Access in patients requiring a-RCEx procedures who lack visual or palpable peripheral access, with minimal complications seen in this series” Putensen et al (2015).

Abstract:

BACKGROUND: Securing adequate vascular access is essential for a successful apheresis procedure. In most, peripheral access is preferred but it is not always technically possible. Ultrasound-Guided Peripheral Vascular Access (USG-PIVA) is a well-documented technique in the setting of Emergency departments. However, limited data exists reporting its use in the context of automated red cell exchanges (a-RCEx).

PURPOSE: To assess the effectiveness and feasibility of USG-PIVA to undertake successful a-RCEx.

METHODS: Data was collected prospectively from patients with sickle cell disease and difficult venous access, undergoing a-RCEx at a single centre. The USG-PIVA technique was attempted and data relating to each attempt was collected and analysed.

RESULTS: Between April 2014 and July 2015 84 USG-PIVA procedures were performed on 38 patients. 71 USG-PIVA (85%) were successful, 13 (15%) were unsuccessful. Veins successfully cannulated: in the upper arm, basilic (22), brachial (33) and cephalic (2) veins; in the antecubital fossa, basilic (3) and median cubital (7) and in the lower arm, cephalic (2) and radial (2). Cannulas used: Introcan Safety® Braun 22 g (1), 20 g (9) and 18 g (61). Inlet flow rates achieved: 30-60 ml/min (mean 45 ml/min). Depth of veins cannulated: 2-12 mm (mean 5 mm). two complications were observed-one cannula displacement and one nerve injury. No arterial punctures occurred. Central Venous Catheters avoided (49).

CONCLUSION: The US-PIVA method offers an effective alternative to Central Venous Access in patients requiring a-RCEx procedures who lack visual or palpable peripheral access, with minimal complications seen in this series.

Reference:

Putensen, D., Pilcher, L., Collier, D. and McInerney, K. (2015) Ultrasound-guided peripheral deep vein cannulation to perform automated red cell exchange-A pilot study in a single centre. Journal of Clinical Apheresis. November 26th. .

DOI: 10.1002/jca.21440.

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