

Patients with difficult intravenous access (DIVA) often experience discomfort because of failed attempts to place peripheral venous catheters (PVCs); however, ultrasound guidance may improve this problem with catheter placement” Partovi-Deilami et al (2016).

Abstract:

Patients with difficult intravenous access (DIVA) often experience discomfort because of failed attempts to place peripheral venous catheters (PVCs); however, ultrasound guidance may improve this problem with catheter placement. The aim of this study was to evaluate the use of ultrasound when operated by nurse anesthetists for these patients. This prospective observational study with a pre/post design focused on inpatients with DIVA referred for PVC placement, a service provided by nurse anesthetists in most Scandinavian hospitals. The rate of success, procedure time, number of skin punctures, discomfort, catheter size, location, and incidence of central venous catheter placement are reported before and after implementation of a training program and a mobile service using ultrasound to place difficult-to-place PVCs. The success rate increased from 0% (0 of 33 patients) to 83% (58 of 70 patients) with ultrasound. Procedure time was reduced from 20 to 10 minutes, discomfort was unchanged, and the median number of skin punctures decreased from 3 to 2. The incidence of central venous catheter placement dropped from 34% to 7%. Implementation of a training program and a mobile service in which nurse anesthetists performed ultrasound-guided PVC placement improved the success rate and quality of care in patients with DIVA.

Reference:

Partovi-Deilami, K., Nielsen, J.K., Moller, A.M., Nesheim, S.S. and Jorgensen, V.L. (2016) Effect of Ultrasound-Guided Placement of Difficult-to-Place Peripheral Venous Catheters: A Prospective Study of a Training Program for Nurse Anesthetists. AANA Journal. 84(2), p.86-92.
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