To investigate if ultrasound guidance for PVC could be implemented among apheresis nurses. Second, how implementation of ultrasound guidance affected the number of CVCs used for apheresis per patient” Gopalasingam et al (2017).

Abstract:

BACKGROUND: Apheresis treatments can be performed with peripheral venous catheters (PVC), although central venous catheters (CVC) are inserted when PVCs fail or patient with history of difficult vascular access prior to the apheresis. Ultrasound guidance for PVC has shown promising results in other settings.

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PURPOSE: To investigate if ultrasound guidance for PVC could be implemented among apheresis nurses. Second, how implementation of ultrasound guidance affected the number of CVCs used for apheresis per patient.

METHOD: Apheresis nurses completed a systematic training program for ultrasound-guided vascular access. All independent catheterizations were registered during the implementation stage. The number of CVCs in the pre- and postimplementation stages of the ultrasound guidance was compared.

RESULTS: Six nurses completed the training program within a median of 48 days (range 38-83 days). In 77 patients, 485 independent ultrasound-guided PVC placements were performed during the implementation stage. All apheresis treatments (485/485) were accomplished using PVCs without requiring CVC as rescue. During the preimplementation stage, 125 of 273 (45.8%) procedures required a CVC for completion of apheresis procedures; during the postimplementation stage only 30 of 227 (13.2%) procedures required a CVC (p < 0.001). In the postimplementation stage, no CVCs were placed as rescue caused by failed PVCs but were only placed for patients where the ultrasound machine was
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unavailable. It indicates an effective success rate of 100% for ultrasound-guided PVC use.

CONCLUSION: This study showed that ultrasound guidance could be implemented among apheresis nurses as a routine tool eliminating the need of CVC as a rescue.

Reference:


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