

## **We report the success rate of the placement of peripherally inserted central catheters with ultrasound guidance for tip positioning and describe the knacks and pitfalls” Nakamuta et al (2018).**

### Abstract:

**BACKGROUND AND AIM:** Malposition of peripherally inserted central catheters placed at the bedside is a well-recognized phenomenon. We report the success rate of the placement of peripherally inserted central catheters with ultrasound guidance for tip positioning and describe the knacks and pitfalls.

**MATERIALS AND METHODS:** We retrospectively reviewed the medical case charts of 954 patients who received peripherally inserted central catheter procedure. Patient clinical data included success rate of puncture, detection rate of tip malposition with ultrasonography, adjustment rate after X-ray, and success rate of peripherally inserted central catheter placement.

**RESULTS:** The success rate of puncture was 100% (954/954). Detection rate of tip malposition with ultrasonography was 82.1% (78/95). The success rate of ultrasound-guided tip navigation was 98.2% (937/954). The success rate of ultrasound-guided tip location was 98.0% (935/954). Adjustment rate after X-ray was 1.79% (17/952). The final success rate of peripherally inserted central catheter placement was 99.8% (952/954).

**CONCLUSION:** Ultrasound guidance for puncturing and tip positioning is a promising option for the placement of peripherally inserted central catheters. Ultrasound guidance could dispense with radiation exposure and the transfer of patients to the X-ray department.

### Reference:

Nakamuta, S., Nishizawa, T., Matsuhashi, S., Shimizu, A., Uraoka, T. and Yamamoto, M. (2018) Real-time ultrasound-guided placement of peripherally inserted central venous catheter without fluoroscopy. *The Journal of Vascular Access*. March 1st. .



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