

In the present study, we propose a novel technique named “stepwise flashing with triangulation”, and the efficacy of this technique is assessed” Horiuchi et al (2017).

Abstract

In ultrasound-guided central venous catheterization, there is no standard technique either for the needle tip visualization or for the adequate needle angle and entry to the skin with short-axis view under out-of-plane technique. In the present study, we propose a novel technique named “stepwise flashing with triangulation”, and the efficacy of this technique is assessed. Before and after a didactic session in which the technique was explained, 12 novice residents were asked to position the needle tip on or into the imitation vessels and to avoid deeper penetration by using an agar tissue phantom with ultrasound guidance.

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“Stepwise flashing” technique was for stepwise visualization of the needle tip, and “triangulation” technique was for adequate needle angle and entry to the skin. After the session, the success rate was increased and a deeper penetration rate was decreased. This technique will help us to facilitate vascular access and to avoid complications in clinical settings.

Reference:

Horiuchi, T., Okuda, C., Kurita, N., Yamaguchi, A., Kitagawa, K., Takeda, M., Sha, K. and Nagahata, T. (2017) A novel technique for ultrasound-guided central venous catheterization under short-axis out-of-plane approach: “stepwise flashing with triangulation”. *Journal of Anesthesia*. June 20th. .

doi: 10.1007/s00540-017-2381-8.

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