



In the simulated setting, the accelerated Seldinger technique using combination CVC devices is a faster and easier method for CVC placement compared to the modified Seldinger technique” Thaut et al 920180.

Abstract:

BACKGROUND: Central vein catheter (CVC) placement using the modified Seldinger technique is a common procedure in the emergency department, but can be time consuming due to the multiple pieces of equipment included in central line kits and the number of steps in the procedure. Preassembled devices combine a needle, guidewire, dilator, and sheath into one unit and potentially simplify the process and reduce time required for CVC placement using the accelerated Seldinger technique.

OBJECTIVE: Our aim was to evaluate whether the use of combination central line devices and the accelerated Seldinger technique will reduce the time required to place a CVC and increase the ease of the procedure.

METHODS: This two-arm randomized crossover study comparing the accelerated Seldinger technique to the modified Seldinger technique was performed in a simulation setting. Subjects were selected from among emergency physicians, emergency medicine residents, interns, physician assistants, and medical students. Subjects were timed using the modified and accelerated Seldinger techniques. Ease of use and satisfaction data were collected after

both procedures.

RESULTS: The use of the accelerated Seldinger technique with a combination CVC device was significantly faster compared to the modified Seldinger technique with a standard CVC kit. Procedure time was reduced by 35% ($p = 0.001$), and ease of use was increased by 7% ($p = 0.046$), without any increase in errors.

CONCLUSIONS: In the simulated setting, the accelerated Seldinger technique using combination CVC devices is a faster and easier method for CVC placement compared to the modified Seldinger technique.

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Reference:

Thaut, L., Weymouth, W., Hunsaker, B. and Reschke, D. (2018) Evaluation of Central Venous Access with Accelerated Seldinger Technique Versus Modified Seldinger Technique. *The Journal of Emergency Medicine*. November 29th. .

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