

To evaluate whether a single-operator ultrasound-guided, right-sided, central venous catheter insertion verifies proper placement and shortens time to catheter utilization” Galante et al (2017).

Abstract:

OBJECTIVES: To evaluate whether a single-operator ultrasound-guided, right-sided, central venous catheter insertion verifies proper placement and shortens time to catheter utilization.

DESIGN: Prospective observational study with historical controls.

SETTING: Adult ICUs.

PATIENTS: Sixty-four consecutive patients undergoing ultrasound-assisted right-sided central venous catheterization compared with 92 serial historic controls who had unassisted central catheter insertion at the same sites.

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INTERVENTIONS: Subcostal transthoracic echocardiography during catheter insertion.

MEASUREMENTS AND MAIN RESULTS: The primary outcome was the correct placement of the catheter tip determined by postprocedural chest radiography. The subclavian site was used in 41 patients (64%) (inserted without ultrasound guidance) in the ultrasound-assisted group and 62 (67%) in the control group, whereas the jugular vein was used in the remaining patients. The tip was accurately positioned in 59 of 68 patients (86.7%) in the ultrasound-assisted group compared with 51 of 94 (54.8%) in the control group ($p < 0.001$). The median time from end of the procedure to catheter utilization after chest radiography approval was 2.4 hours.

CONCLUSIONS: A single-operator ultrasound-guided central venous catheter insertion is effective in verifying proper tip placement and shortens time to catheter utilization.

Reference:

Galante, O., Slutsky, T., Fuchs, L., Smoliakov, A., Mizrakli, Y., Novack, V., Brotfein, E., Klein, M., Frenkel, A., Koifman, L. and Almog, Y. (2017) Single-Operator Ultrasound-Guided Central Venous Catheter Insertion Verifies Proper Tip Placement. *Critical Care Medicine*. May 22nd. .

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