

Our goal was to conduct a network meta-analysis of randomized controlled trials to compare the effects of the long-axis (LAX), short-axis (SAX), and oblique-axis (OAX) ultrasound guidance approaches for vascular access cannulation” Lv et al (2018).

Abstract:

BACKGROUND: Our goal was to conduct a network meta-analysis of randomized controlled trials to compare the effects of the long-axis (LAX), short-axis (SAX), and oblique-axis (OAX) ultrasound guidance approaches for vascular access cannulation.

METHODS: We searched 5 databases, including the Cochrane Central Register of Controlled Trials in the Cochrane Library, Embase, MEDLINE, CINAHL, and Web of Science. Seven randomized clinical trials assessing ultrasound guidance for vascular access cannulation via the LAX, SAX, or OAX approach were included. The primary end point was the first-pass success rate. Secondary end points included the mean time to success and average number of attempts until success. We used random-effects models to calculate weighted mean differences with 95% confidence intervals for continuous outcomes and relative risks with 95% confidence intervals for dichotomous outcomes.

RESULTS: There were no significant differences between the LAX, SAX, and OAX techniques with respect to the first-pass success rate, mean time to success, average number of attempts until success, or the incidence of hematoma.

CONCLUSION: There was insufficient evidence to definitively recommend the LAX, SAX, or OAX approach for patients undergoing ultrasound-guided vascular access cannulation.

Reference:

Lv, Y., Liu, H., Yu, P., Wang, G., Liu, M., Li, Y., Wang, H., Yu, K. and Wang, C. (2018) Evaluating the Long-, Short-, and Oblique-Axis Approaches for Ultrasound-Guided Vascular Access Cannulation. *Journal of Ultrasound in Medicine*. July 19th. .

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