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Efficacy of Simulation-Based Education for intravascular catheterization :protocol for a systematic review and meta-analysis

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ABSTRACT

Background

Intravascular catheterization procedures can cause lethal complication. An appropriate education should be needed for taking advantage of ultrasound guidance, which can realize successful catheterization and prevent mechanical complication. However, the previous review only analyzed central venous catheters, and multiple randomized controlled trials (RCTs) have been published since then. We will therefore conduct an update review of simulation education for all types of catheters.

Aim

The purpose of this systematic review is to assess whether simulation education for ultrasound-guided intravascular catheterization will improve the success rate of catheter insertion compared with no simulation education

Methods and analysis

We will conduct a systematic review of the relevant literature according to the Cochrane Handbook and the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines. We will include RCTs assessing the effect of simulation education for ultrasound-guided intravascular catheterization.

The primary outcomes are success rate and adverse events, and secondary outcomes are first-time puncture success rate in eligible patients and number of punctures to success. Two independent reviewers will extract the data and assess the risk of bias.

Ethics and dissemination

In this systematic review, only data from previously conducted studies will be analyzed. We will publish this systematic review in peer-reviewed journals.

ATTACHMENTS

Protocol□□□□□□7□22□.pdf

DOI

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