Jul 21, 2020

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

DOI
dx.doi.org/10.17504/protocols.io.biu6keze

Hiromu Okano[1], Takuya Mayumi[2], Yuki Kataoka[3], Masahiro Banno[4], Yasushi Tsujimoto[5], Akihiro Shiroshita[6], Shunsuke Taito[7], Joho Tokumine[8]

[1]Department of Critical and Emergency Medicine, National Hospital Organization Yokohama Medical Center,Harajyuku 3-60-2,Totuka-cho, Yokohama, 245-8575, Japan;
[2]Department of Cardiovascular Medicine, Graduate School of Medical Science, Kanazawa University, Takara-machi 13-1,Kanazawa 920-8640, Japan;
[3]Department of Internal Medicine, Kyoto Min-Iren Asukai Hospital;
[4]Department of Psychiatry, Seichiryo Hospital;
[5]Department of Nephrology and Dialysis, Kyoritsu Hospital, Chuo-cho 16-5, Kawanishi 666-0016, JAPAN;
[6]Department of respiratory medicine,Icinomiyanishi hospital, Ichinomiya,Kaimeihira 1,Ichinomiya-shi, 494-0001,Japan;
[7]Division of Rehabilitation, Department of Clinical Practice and Support, Hiroshima University Hospital, Kasumi 1-2-3, Minami-ku, Hiroshima, 734-8551, Japan;
[8]Department of Anesthesiology, Kyorin University School of Medicine, 6-20-2 Shinkawa, Mitaka-shi, Tokyo, 181-8611, Japan

Hiromu Okano
Department of Critical and Emergency Medicine, National Hosp...

OPEN ACCESS

DOI: https://dx.doi.org/10.17504/protocols.io.biu6keze

External link: https://doi.org/10.7759/cureus.17188

Protocol Citation: Hiromu Okano, Takuya Mayumi, Yuki Kataoka, Masahiro Banno, Yasushi Tsujimoto, Akihiro Shiroshita, Shunsuke Taito, Joho Tokumine 2020. Efficacy of Simulation-Based Education for intravascular catheterization :protocol for a systematic review and meta- analysis. **protocols.io** https://dx.doi.org/10.17504/protocols.io.biu6keze

Manuscript citation:
Muacevic A, Adler JR, Outcomes of Simulation-Based Education for Vascular Access: A Systematic Review and Meta-Analysis. Cureus 13(8). doi: 10.7759/cureus.17188

Protocol status: Working
We use this protocol and it's working

Created: July 21, 2020

Last Modified: July 21, 2020

Protocol Integer ID: 39550

Keywords: Simulation training, Simulation education, education for intravascular catheterization, guided intravascular catheterization, intravascular catheterization procedure, successful catheterization, intravascular catheterization, update review of simulation education, catheter insertion, simulation education for ultrasound, efficacy of simulation, central venous catheter, effect of simulation education, catheter, types of catheter, simulation education, dissemination in this systematic review, advantage of ultrasound guidance, time puncture success rate in eligible patient, systematic review, ultrasound guidance, efficacy, controlled trial, preferred reporting items for systematic review, systematic review of the relevant literature, cochrane handbook, primary outcome, secondary outcome, time puncture success rate, conducted study

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　サイト登録　7月22日...
357KB

Troubleshooting

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