Introduction

• Annually, 10-30% of surgical patients experience chronic pain postoperatively.¹
• Regional anesthesia has been shown to reduce the incidence of chronic pain postoperatively by 20-25%.²
• Novice anesthesia providers struggle to gain confidence and competence in ultrasound-guided regional anesthesia.

Purpose

Purpose: To create a workshop for novice anesthesia providers to increase their confidence and competence in ultrasound-guided regional anesthesia (UGRA).

Objectives:
1. Develop a regional anesthesia simulation using human cadavers.
2. Evaluate the simulation’s effects on SRNA’s confidence and competence, and patient satisfaction with regional anesthesia.
3. Develop plan for sustainability.

Methods

• This project was deemed not human subjects research.
• Setting: University of Iowa SRNA program clinical sites.
• Population: Novice UI SRNAs and patients deemed appropriate to receive UGRA.
• Develop a cadaveric UGRA simulation experience.
• Recruit UGRA experts to assist with instruction.
• Prepared educational plans for day long simulation seminar.
  • Classroom instruction and ultrasound machine practice.
  • Simulated cadaveric practice with injections using ultrasound.
• Assess SRNA skill and confidence gain, and patient satisfaction.
• Create instructional packets for future course directors.

Outcomes

• Regional anesthesia workshop and simulation held December, 2017.
  • Attended by 22 SRNAs.
  • Completed block simulations for: interscalene, supraclavicular, axillary, transverse abdominal plane, quadratus lumborum, femoral, adductor canal, and popliteal using 3 unembalmed human cadavers.
• Future workshops to be held annually in similar format.
  • Instructional materials, contacts, documentation, and resource list created.
  • Materials reviewed with and handed off to junior chief SRNA, who will direct/manage the 2018 workshop.

Evaluation

• SRNA participants and instructors gave extremely positive reviews of the workshop/simulation experience.
• The workshop had a positive short and long-term impact on student self-confidence scores with respect to UGRA.
• Although limited data is available, SRNA competency at placing UGRA blocks in the clinical arena shows improvement over previous years.
• Patient satisfaction data collection is ongoing but difficult to obtain due to clinical performance pressures in operating rooms.

Conclusions

• Simulation created a high-quality training environment for ultrasound-guided regional anesthesia.
• Simulation is an effective tool to help SRNAs gain confidence in current and emerging regional anesthesia techniques.
• Simulated block placement in human cadavers increased SRNA confidence without the risk of patient complications.
• This program can be replicated in other settings to provide high quality education and training for UGRA.
• Abstracts will be submitted to the Journal of Nursing Education and Nurse Educator.

References


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