The addition of dexmedetomidine to local anesthetic to increase the duration and effectiveness of spinal anesthesia: An evidenced based practice update for SRNAs

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Introduction

- Spinal anesthesia is used as the primary anesthetic for a variety of surgical procedures. To be feasible as a primary anesthetic, it is necessary that the block have sufficient duration to cover the length of the proposed surgery as well as adequate sensory impairment.
- A review of current literature indicated that the use of dexmedetomidine as an adjuvant to local anesthetic in spinal anesthesia increases the length and effectiveness of the block.
- This information was compiled into a presentation for second- and third-year nurse anesthesia students (n=20) currently participating in clinical training.

Methods

- An e-mail explaining the purpose of the study with an invitation to participate was sent to all current nurse anesthesia students in their second or third year of study at Union University.
- The study participants accessed a slide show presentation with the evidence-based findings from the literature review.
- At the conclusion of the presentation, study participants were given access to a survey with a 5-point Likert scale in order to assess the effectiveness of the presentation.
- The data from the post-presentation survey was used to evaluate the efficacy of the presentation and its potential impact on the current clinical practice of student nurse anesthetists. The results were also used to determine the bearing this project will have in shaping future practice as the participants graduate and begin working as licensed anesthesia providers.

Survey Findings

- I would like to incorporate spinal anesthesia with dexmedetomidine in my future practice as a CRNA.
- Following this presentation, I would like to increase my use of spinal anesthesia as a primary anesthetic (or suggest its use to my clinical preceptor).
- Following this presentation, I would like to start incorporating dexmedetomidine in conjunction with local anesthetic for spinal anesthesia (or suggest its use to my clinical preceptor).
- This presentation made me more aware of the potential benefits of improved spinal anesthesia through the addition of dexmedetomidine.
- Prior to this presentation, I was knowledgeable about the use of dexmedetomidine as an adjuvant to local anesthetic in spinal anesthesia.
- Prior to this presentation, I regularly used spinal anesthesia as a primary anesthetic.

Results

- The findings of the survey indicated an increase in knowledge and awareness of dexmedetomidine utilization in spinal anesthesia.
- The results also indicated that participants are more likely to incorporate dexmedetomidine in their anesthetic plans for patients receiving spinal anesthesia.
- It was also shown that the student registered nurse anesthetists are more likely to utilize spinal anesthesia with dexmedetomidine when practicing as licensed anesthesia providers following graduation.
- A smaller number of participants were found to be likely to increase their use of spinal anesthesia as a primary anesthetic.

Conclusions

- This information will allow students to have opportunities to implement new practices during clinical training.
- Having access to evidence-based information on this topic will allow for additional options when formulating anesthesia care plans for patients or procedures that merit spinal anesthesia.
- Study participants will be able to implement this information into their clinical training with a preceptor and in their future practice as licensed anesthesia providers.
- Increasing awareness and knowledge of this use of dexmedetomidine will equip future anesthesia providers with the tools to provide diverse anesthetic techniques to meet patient needs.