Abstract

A central role of anesthesia providers is to effectively manage a patient's pain response throughout the perioperative process. Historically, providers have utilized unimodal approaches to pain management through opioids. In 2017, the opioid crisis in the U.S. was declared a public health emergency (U.S. Department of Health and Human Services, 2019). In order to minimize contributions to this crisis, anesthesia providers began to increase the use of multimodal opioid-sparing techniques for perioperative pain management. The use of subanesthetic ketamine infusions is considered an effective opioid-sparing technique that avoids the unfavorable profile of opioids while still producing analgesia. Throughout the perioperative process, obese patients are at risk for increased morbidity and mortality in relation to ventilatory/respiratory complications. Unimodal approaches to managing pain in this population with opioids can exacerbate the occurrence of these complications in this at-risk population. Research demonstrates the efficacy of ketamine administered as a bolus dose and low dose subanesthetic infusion. Patients experiencing major surgery such as open abdominal, thoracic, or orthopedic surgery and patients with chronic opioids benefit most from this technique. While effective, the use of subanesthetic ketamine infusions widely varies among anesthesia providers.

The purpose of this project was to utilize and educational intervention to translate evidence into practice through Lewin's three step theoretical model of unfreezing, moving, and refreezing. This educational intervention applied evidence-based practice (EBP) to support the use of subanesthetic ketamine infusions for intraoperative pain management. Overall, the goal was for anesthesia providers to increase knowledge regarding risk reduction strategies for perioperative obese patients. Following education, patient safety and outcomes would be increased through participants expanding clinical knowledge and considering a personal practice change.

Implementation occurred over a three-week period with 22 anesthesia providers completing the per-test, educational module, and post-test. Data results showed 86.4% strongly agreed and the remaining 13.6% of participants agreed personal knowledge following the education increased regarding ketamine use. Furthermore, 100% of participants agreed the information provided encouraged the consideration of a personal practice change.

Key words: ketamine, subanesthetic infusion, multi-modal, opioid sparing, opioid crisis, intraoperative, postoperative, pain, educational module, evidence-based practice, perioperative obese patients, Lewin's 3-Step Model, anesthesia providers