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Editorial

Opioid Stewardship: Is there a "Better" Opioid

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An editorial based on the article "Reduced Opioid Use and Hospital Stay in Patients Undergoing Total Knee or Total Hip Arthroplasty when Treated with Sublingual Sufentanil Compared with Standard of Analgesic Care"

The opioid crisis remains the lost epidemic in the setting of a worldwide viral pandemic. Unfortunately, the operating room remains a potential inadvertent gateway to opioid addiction (Hah et al. 2017). Understanding the risks of opioids, while also recognizing that they remain one of the most powerful analgesic agents available in our pain management armamentarium, has led to the concept of Opioid Stewardship, which evolved from a strategy published by the National Quality Forum in 2017 (National Quality Forum 2017). Opioid Stewardship centers around ideal management of pain through the understanding of pharmacology and therapeutics of analgesics. With clinical knowledge, expertise, and focused efforts, we can reduce the overall need for opioid consumption in the perioperative setting.

Opioid reduction in the orthopedic perioperative setting has been advanced utilizing Enhanced Recovery After Surgery (ERAS) protocols with a focus on utilizing a multimodal approach to inhibiting pain pathways (Wainwright et al. 2020). The well-known opioid-related adverse drug events of nausea, vomiting, constipation, somnolence, confusion, decreased psychomotor coordination and respiratory depression have been demonstrated to lengthen hospital stay and decrease revenues in both hip and knee arthroplasty (Baker et al. 2020; Jones et al. 2020). Yet, despite advances in regional anesthetic blocks, long-acting local anesthetics and non-opioid analgesics, the administration of opioids during anesthesia and in the immediate postoperative period is still common as shown by the current study.

The question becomes, is there an opportunity within our current ERAS approach to further reduce perioperative opioid exposure by our selection of the opioid analgesic that we utilize?

Answering this question was the goal of the study by Wiesner and Tvetenstrand in this recent post in The Journal of Orthopaedic Experience & Innovation (www.journaloei.com). Their results demonstrated that within a multimodal analgesia framework, one perioperative dose of a sufentanil sublingual tablet (SST) 30 mcg (compared to historical standard IV opioid administration):

1. reduced perioperative opioid use by approximately 30%
2. reduced hospital length of stay by approximately 30%
3. reduced discharge to a skilled nursing facility from 16% of patients to 0% of patients

The authors point out the unique characteristics of SST that led them to trial this choice of opioid in their patients and which likely contributed to the findings from this study. Due to the sublingual uptake of sufentanil over time, compared to IV bolus dosing, the pharmacokinetic profile of SST is flattened and elongated, never reaching high peak plasma concentrations and providing an extended duration of action. Previous studies of SST have found a well-tolerated adverse event profile and an ability to decrease post-anesthesia care unit opioid requirements and recovery time

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He did his sports medicine fellowship at the prestigious Kerlan Jobe Clinic in Los Angeles. His Opioid Sparing leadership propelled him to become a Fellow of the Worlds Society on Sports and Exercise Medicine, and most recently has had the honor of becoming a Fellow of the Royal College of Surgeons in Ireland.
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across a wide variety of surgical procedures (Miner et al. 2019; Cassavaugh et al. 2020).

This study does not have the rigors of the gold standard, double-blind, placebo-controlled trial. While the limitations of this study are that it was open-label and the control group was a historical analysis, the findings remain intriguing. The fact that the patient selection was not stringent, and that multiple types of surgeries and anesthetic techniques were included, may in fact allow a better sense of the utility SST in a real-world clinical setting compared to a highly controlled trial.

Opioid Stewardship requires a team approach. Surgeons and anesthesiologists need to discuss and develop perioperative strategies to focus on the entirety of the patient's opioid exposure, including intraoperatively, postoperatively and at discharge. It is interesting that with the advent of new approaches to regional blocks, as well as a focus on opioid alternatives, little discussion of optimizing the selection of the type of opioid has occurred. Given the role that opioids still have in the treatment of acute moderate-to-severe pain, it is our responsibility to our patients to identify safe and effective Opioid Stewardship practices. The findings of this study identify SST as a viable option for the advancement of the ideals of Opioid Stewardship with the potential to reduce perioperative opioid usage and, in turn, potentially decreasing opioid-related adverse drug events, length of stay and hopefully overall postoperative opioid exposure, such that the risk of physical dependence and addiction may also be reduced.

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