

The Opioid Epidemic in the Age of the COVID-19 Pandemic

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Editorial Decision date: October 12, 2021; online publish-ahead-of-print October 15, 2021.

Aesthetic Surgery Journal
2022, Vol 42(3) 325–326

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<https://doi.org/10.1093/asj/sjab367>

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The novel coronavirus pandemic has resulted in morbidity and mortality for many otherwise healthy individuals. Alongside the deaths caused by the virus, opioid-related deaths have also skyrocketed. The Centers for Disease Control reported a 30% increase in opioid-related deaths in 2020, with more than 93,000 opioid-related deaths occurring. If trends continue, this number will likely cross the 100,000 mark in 2021.¹

The pandemic has contributed to increased rates of anxiety and mood disorders. The financial constraints, housing insecurity, and social isolation have been key triggers during the pandemic. The pandemic forced many outpatient healthcare facilities to shut their doors or initiate telemedicine protocols. Patients receiving treatment for opioid use disorder were cut off from their supplies of methadone, buprenorphine, or naltrexone and may have turned to illicit means of securing opioids to fight off withdrawal symptoms. Similarly, patients with chronic pain on stable pain regimens may have abruptly had their treatment disrupted when they lost employment and subsequently insurance coverage. As in years prior, the majority of opioid deaths have not been due to commonly prescribed medications but due to synthetic opioids such as fentanyl.²

To curtail the opioid epidemic, the number of patients with opioid dependence must be reduced. Surgeons will play a pivotal role and must continue to evaluate their practice patterns. Opioid-naïve patients frequently are first exposed following surgery. A review of new persistent opioid utilization following body contouring surgeries determined that 6% of patients will still be utilizing opioids up to 6 months after surgery.³ One review of prescribing practices in opioid patients found that from 2010 through 2016, there was an 18% increase in the number of surgery

patients being prescribed opioids. Over the same study period, the mean oral morphine equivalents of surgery patients' prescriptions nearly doubled.³ This rise in prescriptions does not correlate with surgeries becoming more painful over time. In a postoperative survey of outpatient plastic surgery patients, the number of opioid medications prescribed was double what the patients required. Additionally, the number of pills prescribed did not correlate with patient satisfaction.⁴ Plastic surgeons are uniquely positioned to impact the opioid epidemic because many surgeries are elective and postoperative pain control regimens can be planned in advance.

A core tenant of the enhanced recovery after surgery philosophy is the utilization of multimodal, non-narcotic pain medications to reduce the amount of opioids patients require while not compromising pain management and patient satisfaction. Consistently, plastic surgery enhanced recovery after surgery protocols have demonstrated that the goal of "opioid-free" surgery is attainable and does not result in increased patient pain levels. A review of outpatient breast surgery patients found that those receiving acetaminophen and gabapentin, with or without celecoxib (Pfizer, New York, NY), had reduced post-anesthesia care unit pain scores and narcotic use.⁵

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A randomized prospective study found premedication with oral acetaminophen and gabapentin, 2 relatively inexpensive medications, and continued scheduled utilization in the postoperative period reduced the number of narcotic pills taken by 35%.⁶ Parsa et al reported successes of an opioid-free approach in breast surgeries utilizing gabapentin and celecoxib preoperatively, intravenous sedation, and local anesthetic intraoperatively.⁷ An opioid-free postoperative period is detailed by Nguyen et al, where the utilization of celecoxib and gabapentin successfully replaced opioids in 187 patients who underwent major aesthetic surgery. A significant decrease in the total antiemetic requirements in the nonopioid group contributed to a decreased overall length of post-anesthesia care unit stay.⁸ The body of research demonstrating the ability to perform plastic surgery without the utilization of opioids is robust. Surgeons who have not already adapted opioid-sparing, multimodal analgesia protocols should reevaluate their prescribing habits to minimize their role in the ongoing opioid epidemic.

As innovators, plastic surgeons should continue to reassess their enhanced recovery protocols and implement new evidence-based techniques to complement their existing practice. Many surgeons infiltrate wounds and drain sites with local anesthetic at the conclusion of their procedure to help minimize pain. The ideal local anesthetic would not only facilitate immediate pain relief but can persist and aid patients over the first few days following surgery as they adjust to the discomforts. Liposomal bupivacaine (Pacira Pharmaceuticals, Parsippany, NJ) was developed to address this need. Over 72 to 96 hours, the local anesthetic is liberated into the infiltration site, improving patient-reported pain scores and opioid requirements. Liposomal bupivacaine is approved for local and tissue infiltration and specifically for transversus abdominis plane (TAP) blocks. Novel formulations and drug delivery systems have more recently been approved by the FDA or are in development. A combination of bupivacaine and meloxicam (Heron Therapeutics, San Diego, CA) in a viscous polymer was developed to normalize the pH in the environment around the instillation site and allow better penetration of bupivacaine across nerves over an extended period of time.⁹ This combination was approved by the FDA in 2021 and illustrates the ever-expanding array of multimodal analgesia options available to plastic surgeons.

Regional anesthesia or nerve blocks are another method of anesthetizing the surgical field to reduce opioid consumption and improve patient comfort. At their institution, Clary et al compared the efficacy of TAP blocks with liposomal bupivacaine to epidural anesthesia in deep inferior epigastric artery flap-based breast reconstructions. The TAP block group required fewer opioids on postoperative day 3, met discharge milestones such as the removal of Foley catheter significantly sooner, and were discharged quicker.¹⁰

The opioid epidemic continues and has only worsened with the stressors associated with the coronavirus pandemic. Plastic surgeons should continue to optimize postoperative recovery protocols and can play a large role in combating the opioid epidemic. Evidence-based prescribing practices and innovative multimodal approaches to pain will alleviate postoperative discomfort while eliminating the risks associated with opioid misuse.

Disclosures

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

Funding

The authors received no financial support for the research, authorship, and publication of this article.

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