Managing Opioid-Tolerant Patients in the Perioperative Surgical Home

John T. Wenzel, MD*, Eric S. Schwenk, MD,
Jaime L. Baratta, MD, Eugene R. Viscusi, MD

KEYWORDS

• Opioid tolerance • Multimodal analgesia • Perioperative surgical home
• Buprenorphine

KEY POINTS

- In the perioperative surgical home model, anesthesiologists are well positioned to manage complex patients, including those who are opioid-tolerant, because of their training and expertise in pharmacology.
- Opioid-tolerant patients present challenges for postoperative analgesia, posing dual risks of poor pain control and medication-related toxicity.
- Reduction of opioids through regional anesthesia techniques and multimodal nonopioid agents can improve analgesia and minimize opioid-related complications in the high-risk opioid-tolerant population.

INTRODUCTION

Acute pain is a major concern of many patients preparing to undergo surgery. The incidence of postoperative acute pain varies widely in the literature. It has been reported as high as 80% and is likely underreported.[1] Such data suggest that uncontrolled acute postoperative pain continues to be an unmet need and a target for improvement. This is further compounded in opioid-tolerant patients receiving chronic opioids at baseline. While preparing to manage opioid-tolerant patients, mechanisms underlying chronic postsurgical pain (CPSP), acute opioid tolerance, and opioid-induced hyperalgesia (OIH) are poorly understood but highly relevant. The emerging model of the perioperative surgical home (PSH) puts anesthesiologists in position to best

Disclosures: J.T. Wenzel, E.S. Schwenk and J.L. Baratta have no financial disclosures. E.R. Viscusi: research grants to author's institution, AcelRx, Cumberland, and Pacira; consulting/honoraria, AcelRx, Malinckrodt, The Medicines Company, Merck, Salix, Pacira, and Trevena.
Department of Anesthesiology, Sidney Kimmel Medical College, Thomas Jefferson University, Suite 8130, Gibbon Building, 111 South 11th Street, Philadelphia, PA 19107, USA
* Corresponding author.
E-mail address: John.Wenzel@jefferson.edu

Anesthesiology Clin 34 (2016) 287–301
http://dx.doi.org/10.1016/j.anclin.2016.01.005 **anesthesiology.theclinics.com**
1932-2275/16/$ – see front matter

address complicated patients, particularly those with preexisting chronic pain conditions and who are opioid tolerant as a result of chronic opioid therapy.

The Perioperative Surgical Home

The PSH has been supported by the American Society of Anesthesiologists (ASA) to improve outcomes while improving efficiency, broadening the role of the anesthesiologist in preoperative, intraoperative, and postoperative care. It is defined by the ASA as "a patient-centered and physician-led multidisciplinary and team-based system of coordinated care that guides the patient throughout the entire surgical experience."[2] The Triple Aim goals of the PSH as described by Berwick and colleagues[3] include

1. Improving the individual experience of care
2. Improving the health of populations
3. Reducing the per capita cost of care

The PSH for surgical patients has been compared with the patient-centered medical home (PCMH) for primary care. Recent data suggest that the PCMH improves outcomes and reduces costs.[4] Development of the PSH requires the support of hospital administration and collaboration of surgeons and anesthesiologists. Anesthesiologists are particularly well suited to staff the PSH[4] as the physician team leader. Because many institutions do not have an existing preoperative anesthesia clinic, development of a PSH can be financially challenging. If there is institutional support or desire for PSH development, the institution and anesthesia practice need to be financially aligned with an agreement to support funding.[4] Compensation for staffing also needs to be considered. Hospital administration may be willing to compensate anesthesiologists for this practice if a financial benefit can be demonstrated. Reimbursement for anesthesiologists may mirror that of internists in the PCMH, as the Centers for Medicare and Medicaid Services have recognized the value of the PCMH.[2] Future payment models that include bundled payments for services may make anesthesiologist compensation complicated.

Once the PSH is implemented, services begin with early patient engagement after the decision for surgery is made. The surgical experience is treated as a fluid continuum rather than discrete presurgical, intrasurgical, and postsurgical phases. It involves appropriate risk stratification and preoperative testing, decreased redundancy in testing, improved operating room efficiency, decreased variability through the use of evidence-based surgical care pathways, and postsurgical care initiatives.[5] The authors focus on management of opioid-tolerant patients within the PSH.

Opioids

Opioids remain a mainstay of analgesia regimens for surgical patients. Prescriptions for opioids as well as the increased incidence of prescription opioid abuse have been increasing in recent years, especially in the United States and Canada.[6] Opioid-related deaths and adverse events have seen a similar spike.[6] Yet, despite the increased use of opioid medications to manage pain and improve function, there remains a serious and significant mismatch between the number of prescriptions issued and positive end outcomes of pain care in the United States.[7] In some patients, chronic opioid exposure, especially at high doses, has been attributed to a progressive reduction in analgesia while increasing risks of opioid tolerance, opioid-induced hyperalgesia, and medication misuse.[8] These issues come into focus when patients on chronic opioid therapy have indications for surgery.