



The Prescription Opioid Abuse Crisis in America Current Prescribing Patterns, Impact on Public Health, and the Role of the Anesthesiologist

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Keywords

- Prescription opioid prescribing
- Prescription opioid abuse
- Acute pain
- Chronic pain

Key points

- More patients are arriving to the operating room for elective and emergent surgery with a previous history of opioid exposure. This can cause significant challenges in management of acute pain, which traditionally responds well to opioid-based therapy. However, when patients have significant tolerance, the risk of complication is increased as opioid doses are further increased in the perioperative period.
- The United States is in the midst of an opioid epidemic and many patients with chronic pain are being treated with analgesics primarily designed for the treatment of acute pain. Lack of familiarity with these medications can lead to significant difficulty in pain management in the perioperative period.
- The anesthesiologist has an opportunity to become part of the care team that develops a comprehensive care plan and is integral in the transition of care for opioid-exposed patients.

INTRODUCTION: NATURE OF THE PROBLEM

With increasing frequency, opioid-tolerant patients are presenting to the operating room for surgery [1,2]. This can present special challenges to the anesthesiologist and surgical team; many opioid-exposed patients have physiologic tolerance and their baseline needs must be satisfied in addition to meeting the acute pain needs with opioid therapy or other modalities, thus making

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acute pain management challenging and potentially dangerous. Patients may also present with psychological dependence or overt addiction, both of which introduce additional layers of complexity to their pain care.

Any discussion related to opioid prescribing and the current issues related to overprescribing of controlled substances is incomplete without a basic review of the indications for such medications. Pain is a difficult concept to define. Clinicians have struggled for decades with how to define it. In 1979, the International Association for the Study of Pain (IASP) published the definition that is still used widely today: “An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” [3]. It is important to understand the dual nature of pain and recognize that the emotional component of pain may be just as impactful to the patient as the sensory component.

This definition, however, does not distinguish acute from chronic pain. The anesthesiologist deals primarily with the former, but must be familiar with the latter as well. Patients who present for surgery with a history of chronic pain may be especially challenging for the anesthesia and surgical team to care for given the complex and additive relationship between the two types of pain.

Acute pain typically follows some sort of injury and includes an inflammatory component. It generally has a sudden onset and the cause is often obvious, such as in trauma, thermal or electrical injury, surgical insult, or inflammation of an organ or organ system caused by infection or mechanical obstruction. This type of pain may actually aid in facilitating accurate and timely diagnosis of treatable conditions. Acute pain generally dissipates when the injured tissue heals and the inflammation diminishes.

Acute pain may be further defined based on its temporal nature, and most clinicians agree that acute injury to tissue should be healed within 3 months. Because acute pain has an inflammatory component, the agents released as a consequence of the inflammatory cascade may sensitize the peripheral and even central tissues, setting the stage for chronic pain if the acute inflammatory process is not arrested.

It is important for the clinician to understand that acute pain has an inflammatory component. Appreciating what those elements are helps direct the clinician on best treatment options to help mitigate the effects of acute pain. Elements of the “inflammatory soup” include

- Hydrogen ions
- Histamine
- Purines
- Leukotrienes
- Noradrenaline
- Potassium ions
- Cytokines
- Nerve growth factor
- Bradykinin
- Prostaglandins

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