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Postoperative pain: Meeting new expectations

One of the most common questions patients ask when they hear that they need surgery is, "How much pain will I have, and how will you manage it?"

Pain is a common human experience that provokes both fear and anxiety, which in some cases can last a lifetime. The medical community has been slow to meet the challenge of managing it. The US National Institutes of Health states that more than 80% of patients suffer postoperative pain, with fewer than 50% receiving adequate relief.[1] Patients have spoken out loudly through the Hospital Consumer Assessment of Healthcare Providers and Systems scores, demonstrating that the issue of inadequate postoperative pain management is real.

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Clearly, as the push to tie reimbursement to patient satisfaction grows, clinicians have both a moral and a financial imperative to address postoperative pain.

The management of acute postoperative pain is evolving, and recognition of acute pain has progressed from considering it an afterthought or nuisance to realizing that improperly or inadequately treated postoperative pain can have a number of adverse effects, including debilitating chronic pain syndromes.[2] Inadequately treated pain is also contributing to the calamitous rise in addiction to illegal substances and prescription medications.[3] The time has come to take responsibility and meet the expectations of our patients.

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OPIOIDS HAVE MAJOR DRAWBACKS

Opioid derivatives are potent analgesics and have been the traditional first-line therapy for pain. "Judicious use of opium" for painful maladies has been a mainstay of Western medicine since the 16th century and was described in writings from Mesopotamia and China more than 2,000 years ago.

The ease of administration of these drugs coupled with their efficacy in managing a broad spectrum of pain syndromes has led to their frequent and widespread use, often, unfortunately, without consideration of the potential for negative short-term and long-term consequences. Headache, drowsiness, and pruritus are common adverse effects. Less common is a slowing of bowel motility, leading to constipation, bloating, or nausea. Additionally, in 5% to 10% of patients, narcotics may actually sensitize the nerves and make bowel-related pain worse. This narcotic bowel syndrome, as discussed by Agito and Rizk in this issue of the *Journal*, may make the patient uncomfortable and may lead to delays in recovery and hospital discharge.[4]

Problems of pain control do not end at 5 PM, or at a shift change

Opioid-related respiratory depression is especially devastating in the postoperative period, potentially causing respiratory arrest and death. The frequency of drug-induced respiratory depression and clinically significant adverse outcomes prompted the Anesthesia Patient Safety Foundation (APSF) to declare in 2011, "No patient shall be harmed by opioid-induced respiratory depression."[5] The APSF has recommended using new monitoring technology to enhance detection.

While many clinicians have been moving towards aggressive pain-management practice, hospital infrastructure has not kept pace. It is often ill-equipped to adequately monitor breathing patterns and to alert personnel to the need for

rapid intervention. In the 21st century, we need to respond to this challenge with a combination of tools and technology, including improved clinical assessment and monitoring equipment that has proven to save lives in the perioperative setting.

A MULTIMODAL APPROACH IS BEST

Pain management professionals have also been moving from a predominantly opioid-based regimen to a more balanced, multimodal approach. The goal is to effectively treat acute postoperative pain while reducing the use of opioids and increasing the use of nonopioid drugs and alternative therapies for both pain management and convalescence.

Studies have shown the benefits of nonopioid drugs such as nonsteroidal anti-inflammatory drugs, paracetamol (intravenous acetaminophen), antidepressants, antiepileptics, and regional or local anesthetics combined with nontraditional treatments such as Reiki, massage therapy, and deep breathing.[6]

Each patient's experience of pain is unique and responds to medications and alternative therapies in a distinctly different manner. We should not assume that one intervention is suitable for every patient. It is more beneficial to individualize treatment based on protocols that target different pain pathways. This may lead to better pain management and patient satisfaction while reducing the incidence of drug overdose and unwanted side effects.

Opioid-related respiratory depression is especially devastating in the postoperative period

WHAT WE NEED TO DO

Although many health care professionals have the authority to prescribe potent anesthetics and analgesics, we believe that there is a lack of adequate education, supervision, and experience, and this exposes patients to risks of prescription drug overdose.[7,8] All medical professionals who provide postoperative care need specific education and training to offer the best care to this vulnerable patient population. This includes specific and more extensive training in the appropriate use of controlled medications before receiving their controlled substance registration from the Drug Enforcement Agency. We must also extend education to patients and family members regarding the dangers of drug abuse and the safe use of prescription drugs.[8]

Finally, we need to engage and communicate more effectively with our patients, especially when they are in acute pain. How long should a patient expect to remain in pain while waiting for an assessment and intervention? The medical community must commit to rapid and consistent coverage throughout the day for all patients experiencing a new or changing pattern of pain not responding to current therapy. Problems do not end at 5 PM or at a shift change. We need to build a process of timely intervention, perhaps by using a model similar to that of the rapid response and resuscitation team, which has been effective in many institutions. When a patient is in pain, minutes spent waiting for relief seem like an eternity. The empathy we show patients by validating, not minimizing, their pain and by following a defined yet tailored therapeutic intervention may not only improve their physical discomfort, but improve their overall patient experience.

Margo McCaffery, RN, a pioneer in pain management nursing, defined pain as "whatever the experiencing person says it is, existing whenever the experiencing person says it does."[9] We have come a long way from the days when attending staff in the post-anesthesia care unit would routinely declare, "Pain never killed anyone." As caregivers, we need to become engaged, empathetic, and effective as we meet the challenges of managing acute postoperative pain and improving our patients' experience and outcomes.

REFERENCES

1. **Relieving Pain in America.** Institute of Medicine 2011. National Academies Press (US). 2011 ISBN-13: 978-0-309-21484-1.
2. **Lamacraft G.** The link between acute postoperative pain and chronic pain syndromes. South Afr J Anaesth Analg 2012; 18:45–50.
3. **Binyamin R, Trescot AM, Datta S, et al.** Opioid complications and side effects. Pain Physician 2008; 11:S105–S120.
4. **Grunkemeier DMS, Cassara JE, Dalton CB, Drossman DA.** The narcotic bowel syndrome: clinical features, pathophysiology, and management. Clin Gastroenterol Hepatol 2007; 5:1126–1139.
5. **Anesthesia Patient Safety Foundation.** Proceedings of "Essential Monitoring Strategies to Detect Clinically Significant Drug-Induced Respiratory Depression in the Postoperative Period" Conference, 2011. http://www.apsf.org/newsletters/pdf/fall_2011.pdf. Accessed May 13, 2013.
6. **So PS, Jiang JY, Qin Y.** Touch therapies for pain relief in adults. Cochrane Database of Systematic Reviews 2008, Issue 4. Art. No.: CD006535. DOI: 10.1002/14651858.CD006535.pub2.
7. **Polydorou S, Gunderson EW, Levin FR.** Training physicians to treat substance use disorders. Curr Psychiatry Rep 2008; 10:399–404.
8. **CDC Grand Rounds.** Prescription Drug Overdoses – a U.S. Epidemic MMWR January 13, 2012/61(01);10-13.
9. **McCaffery M, Pasero C.** Pain: Clinical Manual. 2nd ed. St. Louis: Mosby, 1999.

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