A Surgical Lesson in Managing Pain

By Chuck Dinerstein, MD, MBA — June 5, 2017

Surgery causes pain and discomfort despite our efforts to reduce its invasiveness. Surgeons, unlike other specialists or primary care physicians, have a continuous experience with managing acute pain, so it was of some interest that I looked for guidance as to the best management approaches in the JAMA Surgery article entitled, Postoperative Multimodal Analgesia Pain Management with Nonopioid Analgesics and Techniques [2] by Elizabeth Wick et. al. The educational article reviews what has been learned in ERAs, or enhanced recovery after surgery programs. These programs establish guidelines for post-operative care including pain management, when to begin eating or getting out of bed after common, but complex surgery with the goal of improving outcomes and reducing hospital stay. Here are the salient points from the article:

- The use of opioids by themselves for pain comes from a clinical experience that tells us that patients are not fully compliant with our prescribing instructions, taking too little or too much or too soon or too late; and that prescribing multiple medications (polypharmacy) is to be avoided because it makes those compliance issues worse. [1] But, as is often the case, this 'rule of thumb' overly simplifies the solution.
- ERAs have found that the concurrent use of nonopioid analgesics have additive, synergistic effects on pain while simultaneously reducing opioid side effects like nausea, vomiting, and constipation. Moreover, while not saying it explicitly, ERAs make nonopioid analgesics the principal agent and opioids are the adjunctive, assistant medication.
- Nonsteroidal anti-inflammatory drugs (NSAIDS e.g. ibuprofen, aspirin or naproxen) and acetaminophen are given on a schedule, irrespective of the patient’s current pain level – they are pre-emptive, providing the tempo, as it were, for this analgesic symphony. [2] And the NSAIDs lay down a potent baseline, 600mg of ibuprofen is as efficacious as 15mg of...
oxycodone.

- Opioids are not scheduled but given for breakthrough pain, the pain/discomfort not managed with the baseline measures. Opioids are ‘rescue’ analgesics; the notes sparingly added to the analgesic symphony to treat the moment.
- The use of a baseline medication with a breakthrough rescue agent mimics the management of patients with cancer pain and is very effective.

The opioid ‘crisis’ in medicine relates primarily to chronic pain, but all pain begins acutely. Perhaps we should take the lesson being learned by the acute pain specialists, surgeons, and anesthesiologists, and share them with our primarily care colleagues, who prescribed 50% of the opioids annually. A short course of polypharmacy may be more efficacious; acute management should mirror our practices with chronic pain management, a baseline drug, and a rescue agent. And most importantly, opioids are not the mainstay of management; they are the adjunct.

[1] In a representative study [3], adherence to a prescribed drug regimen was 26% greater when medications were combined into one pill rather than given as multiple tablets.

[2] These medications, like all drugs, have limitations and considerations. Acetaminophen dosages should be capped at 3grams/day in adults because of concerns regarding liver damage. The NSAIDs are associated with increased risk of cardiac events, GI upset, and kidney dysfunction; moreover they have an analgesic ceiling where increasing doses have no greater response.