SURGICAL PAIN CONSORTIUM

The Best Practices for the Management of Surgical Pain

VENTRAL HERNIA REPAIR

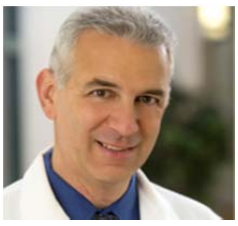
ADULT MULTIMODAL PAIN MANAGEMENT RECOMMENDATION

THE 2015 SPC HERNIA WORKING GROUP

Jeffrey E. Janis, MD, FACS
Executive Vice Chairman and Professor of Plastic Surgery, Neurosurgery, Neurology, and Surgery
Chief of Plastic Surgery, University Hospital, Ohio State University Medical Center
Columbus, OH 43212
Role: Surgical Group Co-Leader

Bruce Ramshaw, MD
Chair of the Department of Surgery
University of Tennessee Graduate School of Medicine
Knoxville, TN
Role: Surgical Group Co-Leader

Joseph Marino, MD
Chief Medical Officer
Chair Department of Anesthesiology, Franklin Hospital
North Shore / LIJ Health System
Valley Stream, NY 11580
Role: Surgical Pain Advisor



Jay A. Redan, MD, FACS
Medical Director Minimally Invasive General Surgery
Florida Hospital-Celebration Health
Celebration, FL 34747
Role: Surgical Pain Advisor

Girish P. Joshi, MBBS, MD, FFARCSI
Professor of Anesthesiology and Pain Management,
University of Texas Southwestern Medical Center,
Dallas, TX 75390
Role: Surgical Pain Advisor

Preoperative

- Patients who are on chronic opioid medications should be left on their medications, yet the exact dosing strategy is controversial.
- Gabapentin 600 mg, PO or pregabalin 50-75 mg, PO 2-3 hours preoperatively
  - o Consider giving 300mg, PO gabapentin the night prior to surgery in addition to 600mg. PO gabapentin day of surgery.
- Celecoxib 400 mg, PO 2-3 hours preoperatively (if on celecoxib regimen, continue same dose)
- For patients who are on non-specific NSAIDs, recommend changing patient to a COX-2 specific inhibitor prior to surgery.

Intraoperative

- Dexamethasone 8 mg IV after induction of anesthesia
- Acetaminophen 1 g IV
- Ondansetron 4 mg IV at the end of case
- Intravenous NSAID (only if an NSAID or celecoxib was not given preoperatively)
- TAP block by Anesthesiologist or wound infiltration by Surgeon at the end of surgery
  - o Wound infiltration: It is important to ensure that all layers of the surgical incision are infiltrated in a controlled and meticulous manner and that the medication is injected within the tissue planes under direct visualization. Abdominal wall infiltration consists of local anesthetic injection into the peritoneal, myofascial, and subdermal tissue planes. Just before closure of the surgical wound, the peritoneum is infiltrated with local anesthetic followed by peritoneal closure, which is followed by infiltration of the musculofascial plane, and finally, the subdermal tissue is infiltrated. The local anesthetic solutions that can be used for postoperative pain control include bupivacaine (maximum dose ~150 mg), ropivacaine (maximum dose ~300 mg), and liposomal bupivacaine (maximum dose = 266 mg). The needle is inserted approximately 0.5-1 cm into the tissue plane and local anesthetic solution is injected while slowly withdrawing the needle. The volume of local anesthetic would depend on the size of the incision. The typical volume for surgical site infiltration would be 1 mL every 1-1.5 cm of surgical incision per layer. Thus, the maximum local anesthetic dose is diluted to the required volume. The recommended injection solution for liposomal bupivacaine is 20 mL (266 mg) combined with 30 mL, 0.25% bupivacaine HCl (75 mg) with epinephrine and saline to achieve the total volume as described above.
- For abdominal wall reconstructions involving upper abdominal wall, thoracic epidural may be considered.

Postoperative

Immediate Postoperative:

- Acetaminophen 1 gm IV q 8 hours (until able to take PO), IV may be repeated after 4 h, if necessary
- Celecoxib 200 mg, PO BID OR a traditional NSAID (i.e., ibuprofen, naproxen or meloxicam)
- Gabapentin 300 mg PO TID / pregabalin 50-75 mg BID until discharge
  - o Doses should be modified according to creatinine clearance]
- IV PCA opioids or IV bolus opioids or oral opioids for breakthrough (rescue) pain relief

Postoperative in Hospital and Post-discharge (one-two weeks):

- Acetaminophen 1 gm, PO q 8 hours
- Celecoxib 200 mg, PO BID OR a traditional NSAID (i.e., ibuprofen, naproxen or meloxicam)
- Tramadol or Opioids (hydrocodone/acetaminophen) for rescue (caution acetaminophen dose should not exceed 4 gm/day

These recommendations should be utilized as a foundational resource for perioperative pain management. The attending physician should make appropriate modifications based on their expertise on a patient-to-patient basis.