Table S1 Components of ERATS Protocols at the University of Miami

Preoperative Consultation

Extensive counseling of patients and family members about operative plans

Realistic expectation of postoperative recovery & multimodal pain management, manifestation of neuropathic pain and its management Printed information booklet with instructions

Preoperative Clinic Visit

Complete review of medical & anesthesia history

Preoperative clearance

Routine preoperative instructions

Perioperative Care

Acetaminophen-1,000 mg (1 hour prior to surgery)

Gabapentin-100 mg (1 hour prior to surgery)

Prophylactic antibiotics (Cefazolin 2 g for <120 kg or 3 g >120 kg; Vancomycin 1,000 mg for penicillin allergy)

Anesthesia care: patient directed fluid management, prophylaxis for postoperative nausea-vomiting (PONV) Intercostal nerve blocks and infiltration of surgical wounds with local anesthetics (30 mL of injectable 0.9% NaCl saline solution admixed with 20 mL of liposomal bupivacaine); 30 mL is used for subpleural infiltration of 2nd-10th intercostal spaces (ERATS-V1)

Intercostal nerve blocks and infiltration of surgical wounds with local anesthetics (30 mL of 0.25% bupivacaine admixed with 20 mL of liposomal bupivacaine); 30 mL is used for subpleural infiltration of 2nd-10th intercostal spaces (ERATS-V2)

Postoperative Care

Analgesics

Acetaminophen 1,000 mg PO Q8h

Tramadol 50 mg PO Q6hrs PRN (pain scale <4) (ERATS-V2)

Ibuprofen 600 mg PO Q8h post-operatively or Toradol 15 mg Q6hrs IV PRN for 2 days (if no medical contra-indications); replaced by celecoxib 200 mg Q12h starting 2/1/2022; timing of first dose is at the discretion of the attending surgeon

Gabapentin 100 mg PO Q8h; titrating higher doses based on tolerance to achieve control of neuropathic pain

Oxycodone 5 mg PO Q6h PRN (pain scale: 4-6)

Oxycodone 10 mg PO Q6h PRN (pain scale: 7–10)

Morphine 2 to 4 mg IV Q6h PRN or Hydromorphone 0.5–1.0 mg IV or 2–4 mg p.o. Q6h PRN for breakthrough pain

Heparin 5,000 U subcutaneous Q8h

Metoprolol 12.5 mg Q 12 h (if not already on a beta-blocker following anatomic resection)

Tamsulosin 0.4 mg QD (>50 years old)

Bowel regimen (Colace & Dulcolax scheduled; Miralax & Milk of magnesia PRN)

Incentive spirometer & ambulation on POD 0

Regular diet as tolerated staring POD 0; ice cream to rule out chylothorax on POD0

Assessment for home oxygen requirement (to prevent discharge delays) by checking for oxygen saturation ≤ 90% on room air with ambulation

Chest tube removal (no airleak off -20 cm suction on postoperative day 1, drainage is not sanguineous, 0.1 to 0.3 mL/kg/h for 6 h on day of tube removal)

Foley catheter removal (POD 1)

Intravenous fluid 1 mL/kg until first voiding following removal of Foley catheter

Frequent pain assessment by nursing staff and APRN and appropriate administration of scheduled and PRN analgesics based on pain level; documentations of pain levels Q4h to Q6h using then visual analog pain scale

Discharge Plan

Verbal & printed discharge instructions regarding prescriptions, pain management especially signs and symptoms and therapy for neurogenic pain

APRN telephone follow-up POD3 and POD7

Contact ARNP or physician's office for advice and management of excessive neuropathic pain

Post-discharge analgesics

Acetaminophen 1,000 mg PO Q8hrs for 20 days

Tramadol 50 mg PO Q6h for 3 days (12 tablets; if used postoperatively in-hospital)

Gabapentin 100 mg PO Q8h for 60 days (30 days supply refill ×1); titrated up to address neurogenic pain

Ibuprofen 600 mg PO Q8h for 20 days

Oxycodone 5 mg PO Q6h PRN for 3 days (12 tablets; if used postoperatively in-hospital)

Pantoprazole 40 mg PO daily for 20 days

Lidocaine patch 4% applied to affected area twice daily PRN

LipoB, liposomal bupivacaine; P.O., per os; q: every; PRN, pro re nata; U, units; POD, post-operative day; APRN, advanced practice registered nurse.