



## Alternatives to Opioids (ALTO®)

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Acute Pain Protocols

### **Renal Colic**<sup>7,11,15,17-19</sup>

Intravenous lidocaine is indicated for the management of pain associated with suspected renal colic.

Contraindications-

Pregnancy

History of seizures, including isolated single seizure, and alcohol withdrawal seizure

History of severe cardiac disease- recent stent placement, severe structural or valvular heart disease, or significant arrhythmia

1. Ketorolac 15 mg IV x 1 if no prior NSAID use within 6 hours or other contraindications
2. Cardiac Lidocaine 1.5 mg/kg IV (MAX 200 mg) infused over 10 minutes via smart pump
3. Acetaminophen 1000 mg PO or IV if available
4. 1 L NS bolus if indicated as per physician

\*The above medications should be administered together. Cardiac monitoring is recommended during and for 30 minutes post administration.

### **Musculoskeletal Pain (sprains, strains, or opiate naïve lower back pain)**<sup>5,8,13,18,20-24</sup>

1. Acetaminophen 1000 mg PO
2. Ibuprofen 400 mg PO OR Ketorolac 15 mg IV/IM
  - a. -OR- Flector patch 1.3% 1 patch to affected area
3. Muscle Relaxant (choose one of the following)
  - a. Cyclobenzaprine 5 mg PO (patients >65 years old OR <70 kg OR concerns for somnolence)
  - b. Cyclobenzaprine 10 mg PO (patients >70 kg)
  - c. Diazepam 5 mg PO
4. Lidoderm patch to most painful area, MAX 3 patches instruct patient to remove after 12 hours
  - a. For discharge prescribe Lidocaine 5% cream or ointment, apply TID
5. Trigger Point Injection with 1-2 mL of Bupivacaine 0.5% or Lidocaine 1%

\*The above medications can be given together; trigger point injection is indicated for focal painful areas of muscle spasm.

**Acute on Chronic Radicular LBP (opiate tolerant)**<sup>1,5,13,18,20,21,25-29</sup>

1. Acetaminophen 1000 mg PO
2. Ibuprofen 400 mg PO OR Ketorolac 15 mg IV/IM
  - a. -OR- Flector patch 1.3% apply to affected area
3. Muscle Relaxant (choose one of the following)
  - a. Cyclobenzaprine 5 mg PO (patients >65 years old OR <70 kg OR concerns for somnolence)
  - b. Cyclobenzaprine 10 mg PO (patients >70 kg)
  - c. Diazepam 5 mg PO
4. Gabapentin (neuropathic component of pain)
  - a. 300 mg PO (patients >65 years old OR <70 kg OR concerns for somnolence/naïve to med)
  - b. 600 mg PO (patients >70 kg OR not naïve to med)
5. Dexamethasone 8 mg IV
6. Lidoderm patch to most painful area, MAX 3 patches instruct patient to remove after 12 hours
  - a. For discharge prescribe Lidocaine 5% cream or ointment, apply TID
7. Trigger Point Injection with Bupivacaine 0.5% or Lidocaine 1% 1-2 mL
8. Ketamine 0.3 mg/kg IV infusion over 10 minutes
  - a. Ketamine 0.1 mg/kg/hour IV drip

\*Medications can be given together, combining gabapentin and muscle relaxants may cause significant sedation, if combining use lowest dose of each, or choose one that most addresses pain.

**Headache/Migraine**<sup>3,4,6,9,12,1</sup>

**\*\*\*Start with-**

1. Metoclopramide 10 mg PO/IV
2. 1 L 0.9% NS bolus
3. Ibuprofen 400 mg PO Or Ketorolac 15 mg IM/IV
4. Acetaminophen 1000 mg PO
5. Cervical or Trapezius Trigger Point Injection with 1-2 mL Bupivacaine 0.5% or Lidocaine 1%

**\*\*\*If <50% pain relief then**

6. Magnesium 1 gm IV over 60 minutes
7. Valproic Acid 500 mg IV over 20 mins
8. Dexamethasone 4-8 mg IV

**\*\*\*If <50% pain relief then**

9. Haloperidol 2.5 -5 mg IV/IM

OR at any point you can perform **Sphenopalantine Ganglion Block**

1. Lidocaine 4% 0.5 mL per naris
2. Atomizing device

**Extremity Fracture or Joint Dislocation**<sup>2,10,30-33</sup>

1. Ketamine Intranasal 0.5 mg/kg (concentration 50 mg/mL)
  - a. MAX dose 50 mg; MAX volume per nare 1 mL
2. Nitrous Oxide titrate up to 70%
3. Acetaminophen 1000 mg PO
4. Ketorolac 15 mg IV x 1 if no prior NSAID use within 6 hours or other contraindications
5. Ultrasound Guided Regional Anesthesia
  - a. Joint Dislocation
    - i. Lidocaine 0.5 % peri-neural infiltration (MAX 5 mg/kg)
  - b. Extremity Fracture
    - i. Ropivacaine 0.5% peri-neural infiltration (MAX 3 mg/kg)

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