**ALTO CLINICAL APPLICATIONS**

**Renal Colic**

1. Toradol 30 mg IV
2. Cardiac Lidocaine 1.5 mg/kg IV in 100 mL NS over 10 minutes (MAX 200 mg)
3. Acetaminophen 975 mg PO
4. 1 L NS bolus

**Musculoskeletal Pain (sprains, strains, or opiate naïve lower back pain)**

1. Acetaminophen 975 mg PO
2. Motrin 600 mg PO OR Toradol 30 mg IV/IM
3. Muscle Relaxant (choose one of the following)
   1. Flexeril 5 mg PO (patients >65 years old OR <70 kg OR concerns for somnolence)
   2. Flexeril 10 mg PO (patients >70 kg)
   3. Valium 5 mg PO
4. Lidoderm patch to most painful area, MAX 3 patches instruct patient to remove after 12 hours
5. Gabapentin (neuropathic component of pain)
   1. 300 mg PO (patients >65 years old OR <70 kg OR concerns for somnolence/naïve to med)
   2. 600 mg PO (patients >70 kg OR not naïve to med)
6. Trigger Point Injection with 1-2 mL of Marcaine 0.5% or Lidocaine 1%

**Acute on Chronic Radicular LBP (opiate tolerant)**

1. Acetaminophen 975 mg PO
2. Motrin 600 mg PO OR Toradol 30 mg IV/IM
3. Muscle Relaxant (choose one of the following)
   1. Flexeril 5 mg PO (patients >65 years old OR <70 kg OR concerns for somnolence)
   2. Flexeril 10 mg PO (patients >70 kg)
   3. Valium 5 mg PO
4. Gabapentin (neuropathic component of pain)
   1. 300 mg PO
5. Dexamethasone 8 mg IV
6. Lidoderm patch to most painful area, MAX 3 patches instruct patient to remove after 12 hours
7. Trigger Point Injection with Marcaine 0.5% or Lidocaine 1% 1-2 mL
8. Ketamine 0.3 mg/kg over 10 minutes
   1. Ketamine 0.1 mg/kg/hour

**Headache**

1. Reglan 10 mg PO/IV
2. 1 L 0.9% NS bolus
3. Motrin 600 mg PO Or Toradol 30 mg IM/IV
4. Tylenol 1000 mg PO
5. Cervical or Trapezius Trigger Point Injection with Marcaine 0.5% or Lidocaine 1%

**If <50% pain relief then**

1. Magnesium 1 gm IV over 60 minutes
2. Valproic Acid 500 mg/50 cc NS over 20 mins
3. Dexamethasone 4-8 mg IV

**If <50% pain relief then**

1. Haldol 5 mg IV

**Extremity Fracture or Joint Dislocation**

1. Ketamine Intranasal 0.5 mg/kg (concentration 50 mg/mL)
   1. MAX dose 50 mg; MAX volume per nare 1 mL
2. Nitrous Oxide titrate up to 70%
3. Tylenol 975 mg PO
4. Ultrasound Guided Regional Anesthesia (PRINT A PICTURE w/ new machine and scan into chart)
   1. Joint Dislocation
      1. Lidocaine 0.5 % peri-neural infiltration (MAX 5 mg/kg)
   2. Extremity Fracture
      1. Ropivacaine 0.5% peri-neural infiltration (MAX 3 mg/kg)

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