SUBJECT: Acute Pain Management Guidelines – Inpatient & Discharge

SUPERSEDES: 8/9/18

RECOMMENDATION(S): Dr. Kyle Kalkwarf

APPROVAL: 08/09/2018

CONCURRENCE(S): All

Review/Revised: 08/19

EFFECTIVE: 08/15/2018

PURPOSE:
To provide guidelines for the management of acute pain via a multi-modal approach that improves outcomes while minimizing adverse events related to opioids

DEFINITIONS:
- **Acute Pain**: Any pain suffered as a direct result of soft tissue or bony damage sustained through a traumatic injury or operation.
- **Multimodal therapy**: Multiple drugs employed simultaneously to prevent some of the more serious adverse effects associated with extreme dosing, allowing each medication to portend its best characteristics and providing synergistic effects.

INITIAL SCREENING:
For all patients suffering from acute pain, one must consider age, weight, allergies, renal/hepatic function, and prior opioid use when determining a proper multimodal treatment plan. Based on patient response, dosing adjustments may be necessary. Multimodal pain management therapy should be initiated as early as possible.

- Discontinue previously prescribed analgesics but take them into consideration when initiating inpatient dosing
- Multimodal therapy should be initiated in the ED and continued throughout hospital stay
- Physician should be called for unrelieved pain
- Transition from IV pain regimen to oral regimen as soon as feasible
- All IV pain medications should be discontinued at least 24 hrs before discharge

PROTOCOL:

I. ALL Patients:
**Tylenol (caution in patients with hepatic dysfunction - Child’s Class B and C)**
- Acetaminophen 975 mg PO q6 hrs (preferred) or 1000 mg IV (Ofirmev) q6 hrs (do not exceed 4 grams/24 hrs)

**NSAID (hold if eGFR<30) (limit to 2 weeks in patients with long bone fractures)**
- Ibuprofen 400-600 mg PO q8 hrs (max dose 2400 mg/24 hrs)

**Gabapentinoid**
- Gabapentin 300 mg PO q8 hrs (max 1200 mg PO q8 hrs)
- If renal dysfunction (eGFR<30): Gabapentin 200 mg PO BID (max 400 mg PO BID)

**Lidocaine**
- Lidoderm 5% topical patch, apply 12 hrs on, 12 hrs off.
May apply 3 patches in 24 hrs. Must specify location for each patch

Weak opioids
- Tramadol 50-100 mg PO q6 hrs (max 400 mg/24 hrs)
  - If renal dysfunction (eGFR<30): Tramadol 50-100 mg PO q12 hrs (max 200 mg/24 hrs)
  - Do not use if history of seizures, TBI, or if patient on SSRI

II. Optional:
Muscle relaxer Choose 1:
- Methocarbamol (Robaxin) 750-1500mg q8 hrs
- Tizanidine (Zanaflex) 2 mg po q 8 hrs

Breakthrough pain (PRN)
- Oxycodone (immediate-release) 5 mg PO or 5 ml Elixir (1mg/ml) via NG/NJ q4-6 hrs PRN

III. How to Personalize Multimodal Therapy
- Always maintain a PRN pain medication.
- Each morning the number of prn medications given should be determined:
  - If ALL allowable PRN medications were given, schedule the medication and make another medication PRN Ex. Tramadol, Ibuprofen, Tylenol; gabapentin (not given PRN: muscle relaxers, & lidocaine patches).
  - If a few of the PRN medications were given, keep the same dosage.
  - If no PRN medications were given, remove that medication and make something else PRN.
- Enlist the assistance of the APRNs, chief residents, or attending with prescribing pain medications until you are comfortable with this protocol.

IV. For Severe Pain refractory to the above protocol, consider the following (at the discretion of the rounding attending)
- Ketamine infusion
  - Patient must be monitored in ICU or on progressive status in stepdown bed.
  - 0.1 to 0.25 mg/kg/hr continuous infusion (an initial bolus of 0.1-0.5 mg/kg can be provided at the discretion of the attending physician, if he or she is present)
  - Avoid if poorly controlled cardiovascular disease, significant psychiatric history, or severe hepatic disease (e.g. cirrhosis)
- Methadone 5-10mg q8hr
  - Avoid if respiratory issues (because of long half-life)
  - Avoid if elevated QTc (>500 msec)
  - Do not prescribe at discharge
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- Pain team consult for:
  - regional blocks
  - management of chronic pain patients

Patient with multiple rib fractures – refer to rib fracture management protocol

** Increasing levels of pain with dosing adjustments need to be reported to attending physician on daily rounds **

V. Discharge Medications and Follow-Up

- At discharge:
  - Acetaminophen 650-975 mg PO q6 hrs (do not exceed 4 grams/24 hrs)
  - Ibuprofen 400-800 mg PO q8 hrs (do not exceed 2.4 grams/24 hrs)
  - Gabapentin Rx for 15 days (do not prescribe if pt has not been using in hospital)
  - Tramadol Rx for 15 days (do not prescribe if pt has not been using in hospital)
  - Oxycodone 5 mg (Prescribe 5x the number used in the 24 hrs prior to discharge)

- At follow up:
  - No narcotic refills
  - May consider 1 time refill of gabapentin and tramadol until patient establishes with PCP
  - If unrelieved or becomes chronic patient will need referral to specialty pain clinic

References:


Adapted from the University of Texas Health Science Center “Acute Trauma Pain Guidelines”