Case 1

- A 4 year old has recently returned from having an abscess drained and has a JP drain in place. The nurse is asking for pain medication.
  - How would you assess the patient’s pain?
  - How would you treat his pain?
  - What if it is getting worse?
Case 2

- A 10 yo female with a fractured arm is complaining of pruritus with morphine.
  - How would you assess her pain?
  - What changes would you make to her pain regimen?
Objectives

- Understand the different types of pain
- Know how to initiate pain medications
- Learn to assess pain and modify treatment strategies
Types of Pain

- Nociceptive
  - Somatic
    - Well-localized
    - Pain receptors in soft tissue, skin, skeletal muscle, bone
  - Visceral
    - Vague
    - Visceral organs
- Neuropathic
  - Damaged sensory nerves
Pain Management

- Pediatricians often under-treat children’s pain
- When initiating pain medications, consider a standing regimen
  - Avoid combination products (i.e. Vicodin) at first
- Constantly re-assess your pain plan
  - Is it working?
  - Any side effects?
Assessing Pain

- Infants
  - Face, Legs, Activity, Cry, Consolability (FLACC)

- Verbal Children
  - Scale of 1-10 (may use faces and/or numbers)
  - Non-verbal clues
<table>
<thead>
<tr>
<th>FLACC</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACE</td>
<td>No particular expression or smile</td>
<td>Occasional grimace or frown, withdrawn, disinterested</td>
<td>Frequent to constant quivering chin, clenched jaw</td>
</tr>
<tr>
<td>LEGS</td>
<td>Normal position or relaxed</td>
<td>Uneasy, restless, tense</td>
<td>Kicking or legs drawn up</td>
</tr>
<tr>
<td>ACTIVITY</td>
<td>Lying quietly, normal position, moves easily</td>
<td>Squirming, shifting back and forth, tense</td>
<td>Arched, rigid, or jerking</td>
</tr>
<tr>
<td>CRY</td>
<td>No cry</td>
<td>Moans or whimper, occasional complaints</td>
<td>Crying steadily, screams or sobs</td>
</tr>
<tr>
<td>CONSOLABILITY</td>
<td>Content, relaxed</td>
<td>Reassured by touching, hugging, voice, distraction</td>
<td>Difficult to console or comfort</td>
</tr>
</tbody>
</table>
Non-pharmacologic Pain Management

- Physical
  - Massage
  - Heat and cold
  - Acupuncture

- Behavioral
  - Relaxation
  - Art and play therapy
  - Biofeedback

- Cognitive
  - Distraction
  - Imagery and Hypnosis
Pain Medications

- Acetaminophen
  - PO: 10-15 mg/kg every 4-6 hours
  - PR: Loading dose 35-50 mg/kg; Maintenance dose 20 mg/kg every 6 hours
  - NO MORE THAN 5 DOSES in 24 hours

- Ibuprofen
  - PO: 5-10 mg/kg every 6-8 hours
  - MAX 40 mg/kg/day
  - Contraindicated in active GI bleeding, hypersensitivity to NSAIDs
  - Caution in severe asthmatics
Pain Medications

- Ketorolac
  - NSAID
  - Available PO, IV, IM
  - Potential opioid sparing effect
  - Cannot be used for a long time
    - No more than 24-72 hours in children less than 2 years
    - No more than 5 days in children 2 and older
Pain Medications

- OPIATE – If one doesn’t work, try another
- Codeine
  - Weak opiate
- Morphine
  - PO: 0.2-0.5 mg/kg every 4-6 hours
  - IV: 0.05-0.2 mg/kg every 2-4 hours
  - PCA: 0.015 mg/kg/hr basal with 0.015 mg/kg PCA dose q10 min lockout
Pain Medications

- Oxycodone
  - 4-5 hour duration

- Fentanyl
  - Potent (100x morphine), short duration
  - Transdermal patch has long onset and long acting (2-3 days)

- Hydromorphone
  - 5x more potent than morphine
  - 4-6 hour duration
Take Home Points

- Assess pain using an age appropriate tool.
- Consider starting an around the clock regimen.
- Continually assess pain and modify medication regimen appropriately.
Take Home Points

- When to call the attending:
  - Patient has persistent or worsening pain despite appropriate analgesic regimen.

- When to transfer to a higher level of care:
  - Patient develops respiratory depression with opiates
    - Control airway and ventilation
    - Order opioid antagonist while calling for help
References


