Inpatient Management of Trauma Related Pain

STOMP Summit
September 9, 2016
Ann O’Rourke, MD, MPH
Our patient

• Small SDH
• Intubated
• Hemopneumothorax with multiple rib fx and chest tube
• Open abdomen, s/p splenectomy, bladder repair
• Pelvic fracture, ex fix
• Open femur, ex fix
• Compartment syndrome, calf
• Extensive soft tissue injury
Why do we treat acute pain?

• Reduce suffering
• Increase activity levels
• Prevent complications
  • Pneumonia
  • DVT
  • Cardiovascular
• Prevent chronic pain

• REMEMBER:
  pain is a sign of life!
<table>
<thead>
<tr>
<th>System</th>
<th>Effects</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>Heart Rate ↑, Blood Pressure ↑, Increased myocardial demand, Hypercoagulation</td>
<td>Unstable angina, Myocardial infarction, DVT, PE</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Lung Volumes ↓, Decreased cough, Splinting</td>
<td>Atelectasis, Pneumonia, Hypoxemia</td>
</tr>
<tr>
<td>GI</td>
<td>Gastric Emptying ↓, Bowel Motility ↓</td>
<td>Constipation, Anorexia, Ileus</td>
</tr>
</tbody>
</table>

## Adverse effects of unrelieved Pain

| Neuroendocrine | Altered release of multiple hormones | Hyperglycemia  
Wt loss/ muscle wasting  
Impaired wound healing  
Impaired immune function |
|----------------|------------------------------------|--------------------------|
| MSK  
Muscle spasm  
Impaired muscle mobility & function | Immobility  
Weakness  
Fatigue |
| Psychological  
Anxiety  
Fear | Sleep deprivation  
Impact on coping  
Post traumatic stress disorder |

Are rib fractures a big deal?
Are rib fractures a big deal?
Rib fractures

• Rib fractures are seen in 10-26% of trauma patients
• Account for 25% of deaths
• If there is enough force to break a rib, extrathoracic injury is found 85-90% of the time
• Mortality is DIRECTLY correlated with the number of rib fractures
Rib fracture correlation with mortality

Table. Total cases and mortality rates of NTDB cases with rib fractures classified by ICD-9 codes and/or AIS codes

<table>
<thead>
<tr>
<th>No. of rib fractures</th>
<th>No. of cases</th>
<th>Total</th>
<th>Mortality</th>
<th>No. of rib fractures (grouped)</th>
<th>No. of cases</th>
<th>Total</th>
<th>Mortality</th>
<th>No. of cases</th>
<th>Total</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15,613</td>
<td>24.15%</td>
<td>5.82%</td>
<td>1</td>
<td>10,651</td>
<td>22.35%</td>
<td>5.82%</td>
<td>16,001</td>
<td>23.80%</td>
<td>5.74%</td>
</tr>
<tr>
<td>2</td>
<td>9,784</td>
<td>15.13%</td>
<td>5.98%</td>
<td>2-3</td>
<td>18,484</td>
<td>38.78%</td>
<td>7.90%</td>
<td>23,980</td>
<td>35.67%</td>
<td>7.46%</td>
</tr>
<tr>
<td>3</td>
<td>7,482</td>
<td>11.57%</td>
<td>6.67%</td>
<td>4-6</td>
<td>8,709</td>
<td>13.54%</td>
<td></td>
<td>12,081</td>
<td>17.97%</td>
<td>11.73%</td>
</tr>
<tr>
<td>4</td>
<td>4,784</td>
<td>7.40%</td>
<td>8.10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2,824</td>
<td>4.37%</td>
<td>9.93%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1,771</td>
<td>2.74%</td>
<td>11.41%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1,114</td>
<td>1.72%</td>
<td>15.03%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥8</td>
<td>1,994</td>
<td>3.08%</td>
<td>34.42%</td>
<td>&gt;6</td>
<td>1,729</td>
<td>3.63%</td>
<td>42.36%</td>
<td>2,738</td>
<td>4.07%</td>
<td>32.96%</td>
</tr>
<tr>
<td>Unspecified</td>
<td>19,295</td>
<td>29.84%</td>
<td>14.65%</td>
<td>Unspecified</td>
<td>8,085</td>
<td>16.96%</td>
<td>19.24%</td>
<td>12,421</td>
<td>18.48%</td>
<td>18.03%</td>
</tr>
<tr>
<td>Totals</td>
<td>64,661</td>
<td>100.00%</td>
<td>10.12%</td>
<td>Totals</td>
<td>47,658</td>
<td>100.00%</td>
<td>11.64%</td>
<td>67,221</td>
<td>100.00%</td>
<td>10.79%</td>
</tr>
</tbody>
</table>

From the National Trauma Data Bank all ages

Rib fractures in the elderly

- Twice the morbidity and mortality of younger
- Patients with 3-4 fractures have 19% mortality and 31% pneumonia
- ≥6 fractures 33% mortality and 51% pneumonia
- For each additional fracture, mortality increases by 19% and 27% increase in risk of pneumonia

Does pain control in rib fx help?

Table 1: Demographics, injury characteristics, and mortality across samples matched for TEA candidacy

<table>
<thead>
<tr>
<th></th>
<th>Non-TEA</th>
<th>TEA</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>753</td>
<td>212</td>
<td></td>
</tr>
<tr>
<td>% male sex</td>
<td>65.7</td>
<td>67.9</td>
<td>0.552</td>
</tr>
<tr>
<td>Age (years)</td>
<td>54.5 ± 20.5</td>
<td>58.2 ± 18.0</td>
<td>0.011</td>
</tr>
<tr>
<td>Number of ribs fractured (mean ± SD)</td>
<td>3.1 ± 2.1</td>
<td>5.7 ± 2.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Injury severity score (mean ± SD)</td>
<td>12.8 ± 7.0</td>
<td>15.7 ± 7.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>% flail segment</td>
<td>2.0</td>
<td>16.5</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>% bilateral fracture</td>
<td>8.9</td>
<td>17.3</td>
<td>0.001</td>
</tr>
<tr>
<td>% pulmonary contusion</td>
<td>13.0</td>
<td>28.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>% pneumothorax</td>
<td>23.5</td>
<td>47.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>% hemothorax</td>
<td>5.5</td>
<td>18.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>% hemothorax</td>
<td>2.0</td>
<td>9.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>% urinary retention</td>
<td>3.8</td>
<td>6.7</td>
<td>0.102</td>
</tr>
<tr>
<td>% mortality</td>
<td>1.9</td>
<td>0.5</td>
<td>0.149</td>
</tr>
</tbody>
</table>

Table 2: Demographics, injury characteristics, and treatment outcomes of survivors and nonsurvivors who did and did not receive TEA across samples matched for TEA candidacy

<table>
<thead>
<tr>
<th></th>
<th>TEA Died</th>
<th>TEA Survived</th>
<th>No TEA Died</th>
<th>No TEA Survived</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>1</td>
<td>211</td>
<td>14</td>
<td>739</td>
<td>0.787</td>
</tr>
<tr>
<td>% male sex</td>
<td>Male</td>
<td>67.8</td>
<td>64.3</td>
<td>65.6</td>
<td>0.001*</td>
</tr>
<tr>
<td>Age (years) (mean ± SD)</td>
<td>86</td>
<td>58.0 ± 17.9</td>
<td>74.6 ± 21.3</td>
<td>54.1 ± 20.3</td>
<td>0.001*</td>
</tr>
<tr>
<td>N ribs fractured (mean ± SD)</td>
<td>7</td>
<td>5.7 ± 2.4</td>
<td>4.1 ± 2.3</td>
<td>3.1 ± 2.1</td>
<td>0.021*</td>
</tr>
<tr>
<td>Injury severity score (mean ± SD)</td>
<td>17</td>
<td>15.6 ± 7.4</td>
<td>14.4 ± 6.0</td>
<td>12.8 ± 7.0</td>
<td>0.549</td>
</tr>
<tr>
<td>% flail segment</td>
<td>No</td>
<td>16.6</td>
<td>0.0</td>
<td>2.0</td>
<td>0.007</td>
</tr>
<tr>
<td>% bilateral fracture</td>
<td>No</td>
<td>17.4</td>
<td>0.0</td>
<td>9.0</td>
<td>0.100</td>
</tr>
<tr>
<td>% pulmonary contusion</td>
<td>No</td>
<td>28.9</td>
<td>0.0</td>
<td>13.3</td>
<td>0.018*</td>
</tr>
<tr>
<td>% pneumothorax</td>
<td>No</td>
<td>47.9</td>
<td>21.4</td>
<td>23.6</td>
<td>0.055</td>
</tr>
<tr>
<td>% hemothorax</td>
<td>No</td>
<td>18.5</td>
<td>21.4</td>
<td>5.1</td>
<td>0.784</td>
</tr>
<tr>
<td>% hemothorax</td>
<td>No</td>
<td>10.0</td>
<td>0.0</td>
<td>2.0</td>
<td>0.145</td>
</tr>
<tr>
<td>% pneumonia</td>
<td>Yes</td>
<td>10.0</td>
<td>21.4</td>
<td>4.5</td>
<td>0.178</td>
</tr>
<tr>
<td>% needing ventilation</td>
<td>Yes</td>
<td>11.4</td>
<td>64.3</td>
<td>4.6</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Ventilation duration (days) (mean ± SD)</td>
<td>15</td>
<td>12.8 ± 9.6</td>
<td>7.4 ± 5.1</td>
<td>9.9 ± 12.3</td>
<td>0.125</td>
</tr>
<tr>
<td>LOS in hospital (days) (mean ± SD)</td>
<td>24</td>
<td>8.5 ± 5.9</td>
<td>8.1 ± 7.2</td>
<td>5.1 ± 5.8</td>
<td>0.839</td>
</tr>
<tr>
<td>% admitted to icu</td>
<td>Yes</td>
<td>59.7</td>
<td>92.9</td>
<td>33.6</td>
<td>0.013*</td>
</tr>
<tr>
<td>LOS in icu (days) (mean ± SD)</td>
<td>23</td>
<td>5.4 ± 6.7</td>
<td>7.0 ± 5.9</td>
<td>3.8 ± 5.7</td>
<td>0.395</td>
</tr>
<tr>
<td>% acute respiratory failure</td>
<td>Yes</td>
<td>2.4</td>
<td>14.3</td>
<td>0.5</td>
<td>0.013*</td>
</tr>
<tr>
<td>% respiratory distress syndrome</td>
<td>Yes</td>
<td>0.9</td>
<td>0.0</td>
<td>0.4</td>
<td>0.714</td>
</tr>
</tbody>
</table>

* = significant difference between subjects who received TEA and survived and those who did not receive TEA and died.

## Classification of pain

<table>
<thead>
<tr>
<th>Location</th>
<th>Nociceptive Pain</th>
<th>Neuropathic Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Somatic Pain</td>
<td>Visceral Pain</td>
</tr>
<tr>
<td>Location</td>
<td>Localized</td>
<td>Generalized</td>
</tr>
<tr>
<td>Patient Description</td>
<td>Pinprick, stabbing, or sharp</td>
<td>Ache, pressure, or sharp</td>
</tr>
<tr>
<td>Mechanism of Pain</td>
<td>A-delta fiber activity Located in the periphery</td>
<td>C Fiber activity Involved deeper innervation</td>
</tr>
<tr>
<td>Clinical Examples</td>
<td>• Periosteum, joints, muscles • Sickle cell • Superficial laceration • Superficial burns • Intramuscular injections, venous access • Otitis media • Stomatitis • Extensive abrasion</td>
<td>• Colic spasm pain • Appendicitis • Kidney stone • Chronic pancreatitis • IBS • Angina • Menstrual cramps</td>
</tr>
</tbody>
</table>
Nociceptive pain

Nociceptive system

Visceral pain classification

"Genuine" visceral pain
- diffuse, dull, poorly localisable
- autonomic nervous system symptoms
- arising from midline

Parietal visceral pain
- sharp, piercing, easier to localize
- arising from the parietal pleura
Neuropathic pain

Pathological nerve pain resulting from impaired processing of pain due to nerve damage

Autoimmune disease (e.g., rheumatism)  Mechanical pressure  Amputation  Other operation  Injuries  Diabetes, metabolism  Viruses  Alcohol, poisons
Perception of pain

**Development of the perception of pain**
- Perception of pain develops in the brain.
- Reactions (circulation, breathing, alertness).
- Ascending pain pathway.
- Transmission to the brain.
- Transmission to spinal cord.
- Synapse switching point.

**Inhibition of the perception of pain**
- Pain inhibition via the endogenous opioid system.
- Secretion of endogenous opioids.
- Descending pain inhibition by noradrenaline.
- Inhibiting nerve signals are conducted to the synapse in the spinal cord. Noradrenaline is secreted as an inhibitory chemical messenger.
Pain assessment

Pain qualities

How does pain feel and where does it come from?

- Somatic pain
  - Superficial pain
    - 1st pain
    - Skin
  - Deep pain
    - Muscles, connective tissue, bone, joints
  - Intestinal pain
    - Gallbladder colic, stomach ache, appendicitis pain

- Visceral pain
  - 2nd pain

PAIN AND FUNCTION ASSESSMENT TOOL

This tool is intended to help health care providers assess pain according to individual patient needs. Explain and use 0-10 Scale for patient self-assessment. Use the faces as behavioral observations to interpret expressed pain when patient cannot communicate his/her pain intensity.

- 0: No pain
- 1-3: Mild pain
- 4-6: Moderate pain
- 7-9: Severe pain
- 10: Worst possible pain

**VERBAL DESCRIPTIVE SCALE**

- 0: No pain
- 1-3: You feel some pain or discomfort but you can still complete most activities.
- 4-6: The pain makes it difficult to concentrate and may interfere with your ability to do certain normal activities such as reading, watching TV, having a phone conversation, etc.
- 7-9: The pain is quite intense and is causing you to avoid or limit physical activity. Cannot concentrate on anything except pain.
- 10: Worst pain imaginable

From the book “Pain.”
Sites of action

Site of action analgesics

- Pain
- Opioids, MOR-NRI
- Opioids, MDR-NRI, antidepressants, anticonvulsants (channel blockers), paracetamol, NSAID, COX-2
- Trauma
- Local anaesthetics, analgesics, NSAID, COX-2 inhibitors

A) Ascending pain pathways
B) Ascending spinothalamic tract
C) Descending pain modulation
D) Dorsal horn ganglion
E) Peripheral nerve
F) Peripheral nociceptors
Nonopioids: acetaminophen

- Example: tylenol, combo drugs (percocet, etc)
- Delivery: PO, PR, IV
- MOA:
  - Not entirely understood
  - Inhibits prostaglandin production in CNS; antipyretic
  - No effect on blocking peripheral prostaglandin; no anti-inflammatory
- Common adverse events:
  - Liver toxicity
Acetaminophen cont’d

• **Maximum daily dose:** 4000 mg.
  - 3200 mg in chronic users (healthy adults).
  - 2400 mg in elderly patients or those with liver, renal or cardiac impairment.

• **Good for**
  - Headaches associated with intracranial blood
  - Multimodal therapy
Nonopioids: NSAIDs

- **Examples:** ASA, ibuprofen, ketorolac, naproxen
- **Delivery:** IV, PR, PO
- **MOA:**
  - Peripheral and central anti-inflammatory and analgesia
  - Inhibit cyclooxygenase and prostaglandin production
  - Inhibit leukotriene B4 production
- **Adverse**
  - Platelet inhibition
  - GI bleeding
  - Renal toxicity
  - Inhibit bone healing?
NSAIDs cont’d

• Risk factors associated with GI bleed:
  • History of Peptic Ulcer Disease or Upper GI Bleed – risk ↑4–5x
  • Oral steroid – risk ↑4–5x
  • Age > 65 – risk ↑5–6x
  • High (>2x normal) dose – risk ↑10x
  • Anticoagulants – risk ↑10–15x

• Good for:
  • Inflammatory component of pain, esp early
  • Multimodal therapy
Nonopioids: antiepileptics

- Example: gabapentin, pregabalin
- Delivery: PO
- MOA: structural analog of GABA
  - suppress neuronal hyperexcitability
  - Reduced neuronal influx Ca\(^{2+}\), reducing excitatory neurotransmitter release
- Adverse effects: somnolence, dizziness, peripheral edema
Antiepileptic, cont.

• Good for
  • Neuropathic pain
  • Acute pain multimodal therapy
    • 2010 prospective randomized trial, which included pregabalin as part of a multimodal analgesia regimen, has shown a significant decrease in chronic pain at 6 months after Total Knee Arthroplasty.
  • Opioid sparing
  • Anxiolytic

Nonopioids: local anesthetics

- Examples: lidocaine, bupivacaine, Lidoderm patch, Capsaicin cream
- Delivery: topical, SC, IV, perineural, epidural
- MOA:
  - block Na channels, inhibit generation impulses by nerves
  - Deplete substance P in sensory nerve endings
- Adverse events: local allergic reactions, arrhythmia, seizure, masking of clinical signs
Local
Comparison of Opioid vs. CPNB
Mean Visual Analog Pain Scores

Nonopioids: NMDA receptor agonist

• Examples: ketamine
• Routes: IV, IM, PO
• MOA:
  • NMDA antagonist
  • Interacts with μ and κ opioid receptors
  • NE uptake blocker
  • Muscarinic cholinergic antagonist
• Adverse: “bad trip”, wide safety profile
Ketamine, cont.

• Anesthetic in doses >2mg/kg
• Analgesic at 1-10mcg/kg/min
• May decrease “wind up” at the spinal cord level and central sensitization
• Role in patients with opioid tolerance and opioid hypersensitivity
Opioids

• Examples: morphine, hydromorphone, fentanyl, oxycodone, codeine, hydrocodone, methadone, tramadol(?)
• Delivery: IV, IM, PO, mucosal, transdermal, intranasal, epidural
• MOA:
  • Bind to opioid receptor in CNS to inhibit nociceptive input from periphery to spinal cord
  • Activate descending pathways that modulate transmission in spinal cord
  • Alter limbic system; modify sensory and affective pain aspects
• Adverse events: sedation, confusion, respiratory depression, pruritus, nausea, constipation
Opioids, cont.

• Mainstay in trauma pain
• Better when used as part of multimodal therapy
• PCA when unable to take PO
  • Basal rate considered if opioid tolerant and in a monitored bed
• Add long extended release if maxed out on immediate release and multimodal therapies
Safety check for PCA

1. Is there a continuous rate? 
   - Yes: Review and verify order using normal process.
   - No: Patient has very high risk criteria?
     - Yes: Alert physician: Patient at risk for overmedication and/or respiratory depression. Contact nurse after discussing with physician.
     - No: Is order written to a palliative care physician? 
       - Yes: Review and verify order using normal process.
       - No: Is patient episode reviewed? 
         - Yes: Physician order: Hydromorphone PCA 0.2 mg every 10 min plus 0.1 mg continuous rate, PCA = continuous rate + 0.3 mg, which is less than the suggested 0.4 mg PCA dose in the table for most patients.
         - No: Alert physician: Patient at risk for overmedication and/or respiratory depression. Contact nurse after discussing with physician.
Multimodal therapy
Multimodal analgesia

- Additive or synergistic analgesia can provide better pain control
- Lower doses of individual agents may be used
  - Opioid-sparing

Acute pain in patient with chronic pain

<table>
<thead>
<tr>
<th>Pain-related assessment in opioid-tolerant patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information from all opioid-tolerant patients</td>
</tr>
<tr>
<td>Current treatment providers</td>
</tr>
<tr>
<td>Opioid and non-opioid medications</td>
</tr>
<tr>
<td>Dose verification of all relevant medications</td>
</tr>
<tr>
<td>Non-prescribed drugs (e.g. over-the-counter and illicit drugs, alcohol, nicotine)</td>
</tr>
<tr>
<td>Drug allergies and reactions</td>
</tr>
<tr>
<td>Experiences and expectations of acute pain management</td>
</tr>
<tr>
<td>Support systems after discharge</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

CNCP = chronic non-cancer pain.
Managing pain in patients with chronic pain

• If not opioid naïve, need to provide baseline opioid needs plus additional medication for new pain
• Multimodal therapy
• Work closely with outpatient prescriber of chronic regimen
• Set boundaries and expectations
Acute pain in patients on suboxone

- Determine last dose and temporarily stop
- Provide opioid agonist treatment
- Will need higher doses of opioid as these patients are not naïve, and they still have antagonist on board
- Monitor for over-sedation 72 hours after last dose of suboxone
- Allow patient to experience mild-moderate opioid withdrawal for safe reintroduction of suboxone
Prevalence of Pain after Major Trauma

- 3047 adults patients admitted with acute trauma
- 12 months post – 62.7% of patients reported injury-related pain
- Mean severity was 5.5/10
- Pain at 3 months was predictive of both the presence and higher severity of pain at 12 months
- More common in women and those who had untreated depression before injury
- Lower pain severity was reported by patients with a college education and those with no previous functional limitations

Factors associated with the development of persistent pain after Trauma

• Younger age
• Multiple surgeries
  • Length of sx
  • Type of sx
• Poorly managed pain
• Nerve injury
• Duration of disability (time to return to work)
• Psychological – anxiety, depression, stress, pain catastrophizing

Concerns about opioid addiction

• Cases where it does occur are usually in patients with previous substance abuse problems

• Dependence—withdrawal symptoms upon discontinuation

• Tolerance—physiologic response to fixed dose decreases over time

• Pseudoaddiction—pattern of behavior that superficially resembles some behaviors of addiction

• Addiction—neurobiological disease, inability to control use, compulsive use, continued use despite harm, craving
## Identify high risk patients

<table>
<thead>
<tr>
<th>Item</th>
<th>Mark each box that applies</th>
<th>Item score if female</th>
<th>Item score if male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Family history of substance abuse:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>[]</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Illegal drugs</td>
<td>[]</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Prescription drugs</td>
<td>[]</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2. Personal history of substance abuse:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>[]</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Illegal drugs</td>
<td>[]</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Prescription drugs</td>
<td>[]</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>3. Age (mark box if 16-45)</td>
<td>[]</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4. History of preadolescent sexual abuse</td>
<td>[]</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>5. Psychological disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attention-deficit disorder, obsessive-compulsive disorder, bipolar disorder, schizophrenia</td>
<td>[]</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Depression</td>
<td>[]</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Score Risk Category:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Risk: 0 to 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate Risk: 4 to 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Risk: 8 and above</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE.** Opioid Risk Tool.

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Tapering down post injury

• Set expectations:
  • You will not be pain free
  • The worst of the pain will be better in 2 weeks
  • Withdrawal symptoms

• Timing:
  • The longer they’ve been on the slower the taper
  • Patient centered when they need less (day vs night)

• Taper long acting first
• Use pain scores at home to dose immediate release-most will auto taper
Tapering protocols

A BETTER PAIN CHART

0: Hi. I am not experiencing any pain at all. I don't even know why I'm here.
1: I am completely unsure whether I am experiencing pain or itching, or maybe I just have a bad taste in my mouth.
2: I probably just need a Band Aid.
3: This is distressing. I don't want this to be happening to me at all.
4: My pain is not f*cking around.
5: Why is this happening to me??
6: Ow. Okay, my pain is super legit now.
7: I see Jesus coming for me and I'm scared.
8: I am experiencing a disturbing amount of pain. I might actually be dying. Please help.
9: I am almost definitely dying.
10: I am actively being mauled by a bear.
11: Blood is going to explode out of my face at any moment.

Too Serious For Numbers: You probably have ebola.
It appears that you may also be suffering from Stigmata and/or pinkeye.