H-A-L-D-O-L
Spells Relief
Opioid Sparing Pain Management Strategies

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• No Commercial Conflicts of Interest

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  – NIDA 5K08DA045933-02 Evaluate opioid prescribing regulations on patient level outcomes.
  – 1UM1DA049412-01MassHEAL Opioid Use Disorder Community Intervention
75% of heroin users started with prescription medication.
Controlling the Swing of the Opioid Pendulum

George Comerci, Jr., M.D., Joanna Katzman, M.D., M.S.P.H., and Daniel Duhigg, D.O., M.B.A.

[Graph showing deaths per 100,000 population over years for Opioid analgesics and Heroin]
Goals

• Develop our pain management algorithms for ED patients with common painful conditions using:
  – Effective
  – Evidence based therapies
  – Time and cost efficient
  – Limit the use of addiction forming medications
• 55 year old female with 1 week R upper dental pain.
• Worse with chewing
• Subjective fever, none currently
• Exam demonstrates multiple dental caries, no facial swelling or airway involvement

Dental Pain in the ED

• 2 million annual visits (1.5% ED visits).
• Historically, up to 43% have received opioid pain medications.
• On the other hand, 25% receive no outpatient prescription.
Dental Block

- Standard of Care
- Fast, safe, effective
- Anesthesia for 8-12 hours
- Incremental pain relief for 24 hours or more
Inferior Alveolar Nerve Block
Tricks of the Trade

- Topical Medication
- Appropriate Needle
- Slow injection
- Distraction
• “But I REALLY don’t like needles…I just want a strong pill”

Appropriate oral medications

<table>
<thead>
<tr>
<th>DRUG (DOSE, MILLIGRAMS)</th>
<th>NO. OF TRIALS</th>
<th>NO. OF PARTICIPANTS</th>
<th>NUMBER NEEDED TO TREAT (95% CONFIDENCE INTERVAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxycodone (10) With APAP (650)</td>
<td>6</td>
<td>673</td>
<td>2.3 (2.0-6.4)</td>
</tr>
<tr>
<td>Codeine (60) With APAP (1,000)</td>
<td>26</td>
<td>2,295</td>
<td>2.2 (1.8-2.9)</td>
</tr>
<tr>
<td>Naproxen (500 or 550)</td>
<td>5</td>
<td>402</td>
<td>1.8 (1.6-2.1)</td>
</tr>
<tr>
<td>Ibuprofen (200) With APAP (500)</td>
<td>2</td>
<td>280</td>
<td>1.6 (1.4-1.8)</td>
</tr>
</tbody>
</table>
• “But I really don’t like needles… and I am allergic to ibuprofen”

Steroids for NSAID allergy

• Can be used in isolation as anti-inflammatory medication
  – Decreases post-op pain when taken in pre-op setting
• Can be used to prolong the duration of dental blocks
• Given as single dose PO (dexamethasone) or 5 days burst.
## Summary – Dental Pain

- **Dental block**
  - Use topical anesthetic, distraction, appropriate needle, slow injection
- **APAP and NSAIDS**
  - +/- antibiotics
- **If unable to tolerate NSAIDS, consider steroids**
  - Single dose dexamethasone if block performed
  - 5 day prednisone burst if no block

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- 35 year old man, history of migraines, presents with headache
- Gradual onset, typical aura
- Unilateral, pounding headache with vomiting
- No fever, no neck stiffness.
- Normal Neurologic Exam
Headaches and Migraines

- 7% of men and up to 15% of women suffer from migraine headache
- Up to 50% receive parental opioids while in the ED
- One of the top 10 most common chief complaints to receive a discharge opioid prescription.

Dopamine Antagonist

**Efficacy**
- Prochlorperazine (Compazine) 10mg **is more effective than** Metoclopramide (Reglan) 10mg

**Safety**
- Prochlorperazine 10mg IV **has more side effects than** Metoclopramide 10mg IV
  - Guidelines recommend co-administration of diphenhydramine (Benadryl) with Prochlorperazine.
Dopamine Antagonist

Medication Administration Strategies to reduce side effects

- IM – Prochlorperazine, Ketorolac, Diphenhydramine
- IV – Prochlorperazine over 15 minutes
  - IV Ketorolac
  - PO or IM Diphenhydramine
- IV – Metoclopramide over 15 minutes

• “but I am allergic to Reglan, and I don’t like how Compazine makes me feel”

OR

• “The Compazine did not help!”
Haldol

- Strong Anti Dopaminergic medication
- 5mg IV or IM (2.5mg IV/IM if <70kg)
- Can be combined with NSAID / APAP
- Consider prolonged Qtc
  - Home medications
- Be aware of sedation and side effects

• “but doctor, I still have a headache, isn’t there anything else?”
Greater Occipital Nerve Block

Research Submission

A Randomized, Sham-Controlled Trial of Bilateral Greater Occipital Nerve Blocks With Bupivacaine for Acute Migraine Patients Refractory to Standard Emergency Department Treatment With Metoclopramide

Benjamin W. Friedman, MD; Sajid Mohamed, MS, PA-C; Matthew S. Robbins, MD; Eddie Irizarry, MD; Valerie Tarnia, PA; Scott Pearlman, MD; E. John Gallagher, MD
• “cant you give me something to just knock me out? ”

Propofol

• Propofol to achieve moderate sedation.
• “response to loud voice”
• 30-40mg bolus (0.3-0.5mg/kg) followed by 10-20mg titration to sedation or predefined max dose (120mg)
• Balancing needs of the ED with likely admission for intractable migraine
• Consider in young, healthy populations
Propofol

Table 2. Pain Intensity and Response to Therapy in the Patients

<table>
<thead>
<tr>
<th>Outcome Measurement</th>
<th>Sumatriptan</th>
<th>Propofol</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain intensity before treatment</td>
<td>8.71 ± 1.20</td>
<td>9.09 ± 1.02</td>
<td>0.111</td>
</tr>
<tr>
<td>Pain intensity 30 minutes after treatment</td>
<td>3.69 ± 2.55</td>
<td>2.62 ± 2.12</td>
<td>0.034</td>
</tr>
<tr>
<td>Pain intensity 1 hour after treatment</td>
<td>2.36 ± 2.31</td>
<td>2.69 ± 2.63</td>
<td>0.53</td>
</tr>
<tr>
<td>Pain intensity 2 hours after treatment</td>
<td>1.36 ± 1.96</td>
<td>1.62 ± 2.04</td>
<td>0.53</td>
</tr>
<tr>
<td>Recurrence within 24 hours of discharge</td>
<td>55.3%</td>
<td>17.1%</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Summary – Migraine

- 1 – Anti Dopamine Agents
  - Prochlorperazine or Metoclopramide
  - Augment with other medications (APAP, NSAID, Dexamethasone)
  - Haldol as 2nd line
- 2 Greater Occipital Nerve Block
- 3 Consider Propofol
  - Sedation goal, responds to commands, stimuli
Abdominal Pain

- 44 year old female, history of depression, fibromyalgia, gastroparesis with gastric stimulator, migraines, presents with epigastric abdominal pain and vomiting.
- She was taken off her home opioid medications by her PCP 1 week ago as they no longer prescribe opioids.

Abdominal Pain

- PMH: 5 normal CT A/P this year
- PSH: Diagnostic Ex-Lap unrevealing 2 years ago
- Allergies: many
- Exam: normal Vital Signs, abdomen soft all quadrants.
Chronic Abdominal Pain / Gastroparesis

- Abdominal pain is a top 5 chief complaint for ED patients.
- 10-15% receive ED based opioid prescriptions.
- Patients with chronic abdominal pain and gastroparesis experience over-testing, frequent hospital admissions and extreme differences in pain management.

Discuss pain management with the patient

- Reassuring the patient you believe their pain and are there to help them.
- Working together to find a combination that provides acceptable pain relief.
- Addressing the negative impact of chronic opioids and withdrawal.
- DO NOT – Make absolute statements.
## Max out “freebies”

### For Pain
- APAP / NSAIDS
- Topical medications (Carafate, Maalox, Simethicone)
- Metoclopramide

### For Withdrawal
- Clonidine
- Loperamide

## Treat the opioid induced hyperalgesia

### Haldol
- Studied in Gastroparesis and cannabinoid hyperemesis
- 2.5mg-5mg IV
- Beware over-sedation, Qtc, side effects

### Sub Dissociative Ketamine
- Comparable analgesia to opioids
- 0.25mg/kg IV over 10 minutes
- May cause mild dissociation, anxiety, vomiting
Haldol vs. Ketamine

**Give Haldol**
- Abdominal pain
- Gastroparesis
- Hyperemesis
- Abdominal Migraine
- Pt has significant anxiety
- Sedation desirable

**Give Ketamine**
- Low back pain
- Patient without anxiety
- Sedation not desired
- Concern patient is on home medications that may prohibit Haldol

“I still have PAIN !!!”
“Help me!”
“Help me!”
“Nobody is listening to me !!!”
“HELP !!”
“HELP !!”
“HELP !!”
Consider Opioid Use Disorder

• Do they meet DSM-5 criteria for opioid use disorder? (OUD)
  – Tolerance
  – Withdrawal
  – Significant impairment or distress to life obligations

• At what point does the need for opioids impair the patient’s life?
  – "If you don’t give me opioids, I am just going to go out and buy heroin”

Consider Opioid Use Disorder

• Referral to addiction resources
• If considering opioids, then consider Buprenorphine
  – Ceiling effect - Less euphoria compared with traditional full agonists (morphine, dilaudid)
  – Partial Agonist – Less risk of respiratory depression.
  – Can be given in ED without DEA-X
### Summary – Chronic AP / Gastroparesis

- **Discuss pain management**
- **Max out Freebies**
  - Pain: Reglan, IVF, APAP, NSAIDS.
  - Withdrawal: Clonidine, Loperamide
- **2 – Address opioid hyper analgesia**
  - Haldol vs Sub Dissociative Ketamine
- **3 – For patient with continued severe presentations, consider OUD**
  - Addiction services
  - Consider buprenorphine instead of IV dilaudid
Language I have used

- “Addicts”
- “Drug seeking behavior”
- “Starts with D”
- “Histrionic”
- “Dramatic”
- “Frequent fliers”
- “Terminal Fibromyalgia”
• 55 year old female with 1 week R upper dental pain.
• Worse with chewing
• Subjective fever, none currently
• Exam demonstrates multiple dental caries, no facial swelling or airway involvement

• Returned to the ED twice that week, continued pain R upper dental, worse with chewing, subjective fever, each time received appropriate therapy (APAP/NSAID, block) and discharged with a diagnosis of dental pain.
• I saw her 1 week later on her 3rd visit.
• She presented with continued dental pain.
• …and loss of vision in her right eye

Ddx: Temporal Arteritis
Pain as a Red Flag

- Few patients whose only goal is to divert opioid medications
- New, worse or very difficult to treat pain is a red flag
- Consider expanding the diagnosis.
- Be aware of the language you use and how it may bias your clinical decision making.

To Review

- Dental Pain, Migraine, Chronic Abdominal Pain / Gastroparesis / Opioid Withdrawal
- Some familiar methods
- A few new methods
- Present pain algorithms that can be used on the next ED shift
References


THANK YOU

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