Managing Pain in the Patient with Opioid Use Disorder: Inpatient Management

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At the conclusion of this activity participants should be able to:

- Distinguish substance use disorder as a chronic disease
- Identify ways to improve inpatient pain treatment in patients with opioid use disorders
- Describe how to safely use methadone for opioid withdrawal management in the hospital
- Recognize how to manage inpatient pain treatment in patients prescribed buprenorphine
Substance Use Disorder: A Disease of the Brain

- Outdated view:
  - moral failing, bad choice

- Modern, evidence-based view:
  - Genetic and Environmental factors predispose to chronic drug abuse
  - Leads to structural and functional disruption of motivation, reward, learning, inhibitory control centers
  - Turns drug abuse into an automatic, compulsive behavior (substance use disorder)
“Most of us that do it can't stand it. I hate the stuff… it is wretched….it's like damned if you do damned if you don’t... when I do it I don't even feel good anymore. Like it takes so much just to be ok, to be normal, it's like when I use it I just feel normal... So they don't understand that.”
Patients describe avoiding care due to:

- Fear of mistreatment
- Fear of being judged or labeled
- Fear of withdrawal

You become crippled and sick from the withdrawal of opiates and methamphetamines. Diarrhea, vomiting, sweats, chills - it's like the flu times ten. I would rather go through childbirth.
Case 1

- 34 yo female with severe opioid use disorder (uses approx. 1g of IV heroin per day) admitted 24 hours ago for a large abscess on her forearm who is complaining of severe pain and anxiety.

- Exam shows tachycardia, hypertension, diaphoresis, and anxiety. She is rubbing her joints and rocking back and forth.

- Pt is requesting IV opioids.

- Expected discharge in 48 hours.
Opiate Withdrawal Assessment: COWS

Clinical Opiate Withdrawal Scale (COWS):

<table>
<thead>
<tr>
<th>Item</th>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restless Pulse Rate</td>
<td>0-2</td>
<td>pulse rate 80 or below</td>
</tr>
<tr>
<td></td>
<td>3-4</td>
<td>pulse rate 81-100</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>pulse rate 101-120</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>pulse rate greater than 129</td>
</tr>
<tr>
<td>Sweating</td>
<td>0</td>
<td>no report of chills or flushing</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>subjective report of chills or flushing</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>flush or observable moistness on face</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>beads of sweat on brow or face</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>sweat streaming off face</td>
</tr>
<tr>
<td>Restlessness</td>
<td>0</td>
<td>able to sit still</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>reports difficulty sitting still, but able to do</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>frequent shifting or extraneous movements of legs</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Unable to sit still for more than a few seconds</td>
</tr>
<tr>
<td>Pupil size</td>
<td>0</td>
<td>pupils pinned or normal size for room light</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>pupils possibly larger than normal for room light</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>pupils moderately dilated</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>pupils so dilated that only the rim of the iris is visible</td>
</tr>
<tr>
<td>Bone or joint aches</td>
<td>0</td>
<td>not present</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>mild diffuse discomfort</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>patient reports severe diffuse aching of joints/muscles</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>patient is rubbing joints/muscles and is unable to sit still because of discomfort</td>
</tr>
<tr>
<td>Runny nose or tearing</td>
<td>0</td>
<td>not present</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>nasal stuffiness or unusually moist eyes</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>nose running or tearing</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>nose constantly running or tears streaming down cheeks</td>
</tr>
</tbody>
</table>

Total Score:_____

The total score is the sum of all 11 items

GI Upset over last 1/2 hour
0 no GI symptoms
1 stomach cramps
2 nausea or loose stool
3 vomiting or diarrhea
4 multiple episodes of diarrhea or vomiting

Tremor: observation of outstretched hands
0 no tremor
1 tremor can be felt, but not observed
2 slight tremor observable
3 gross tremor or muscle twitching

Yawning: observation during assessment
0 no yawning
1 yawning once or twice during assessment
2 yawning three or more times during assessment
3 yawning several times/minute

Anxiety or Irritability
0 none
1 patient reports increasing irritability or anxiousness
2 patient obviously irritable anxious
3 patient so irritable or anxious that participation in the assessment is difficult

Gooseflesh skin
0 skin is smooth
1 piloerection of skin can be felt or hairs standing up on arms
2 prominent piloerection

Initials of person completing Assessment: ___________

Wesson, Ling, J Psychoactive Drugs, 2003
General Principles

• Opioid withdrawal worsens other painful conditions
• Treating opioid withdrawal symptoms can improve pain management
• Giving opioids will not worsen a patient’s substance use disorder
• Patients who use heroin are highly tolerant to opioids
• Important to determine if the patient is currently receiving medication assisted treatment (methadone, buprenorphine or naltrexone)
General Approach

- Urine Drug Test
- Treat the opioid “debt”
  - Adjuvant treatments
  - Methadone
- Use known effective pain treatments
  - ketorolac, acetaminophen, opioids
- Recognize that you may need to prescribe higher doses of opioids
Inpatient Opioid Withdrawal Management

- **Methadone is the best choice!**
  * or buprenorphine (special training needed)

- Other
  + Clonidine 0.1mg TID PRN (hyperadrenergic state)
  + Hydroxyzine 25-50mg Q4-6H PRN (agitation/insomnia)
  + NSAIDS or Tylenol (muscle cramps and pain)
  + Dicyclomine or Hyocosamine (abdominal cramps)
  + Bismuth subsalicylate (diarrhea)
  + Zofran
  + FLUIDS

Avoid Benzodiazepines
Inpatient Methadone Dosing Guidelines
(Patient not on Methadone Maintenance)

• Start with 10-20 mg of methadone
  ▪ Consider a lower dose (5mg) in opioid pill users
• Reassess q 2-3 hours, give additional 5-10 mg until withdrawal signs abate
• Do not exceed 40 mg in first 24 hours
• Monitor for CNS and respiratory depression
• Monitor ECG for QTc prolongation
  ▪ Avoid for QTc >500ms
Inpatient Methadone Dosing Guidelines

- On following day, give total dose from day prior as one dose
- Goal is to alleviate acute opioid withdrawal
- Patient will continue to crave opioids
- Patient may continue to have pain, methadone is treating opioid withdrawal primarily
- Discuss taper vs. maintained dose w/ patient daily
- Referral for long-term substance abuse treatment
Inpatient Methadone Dosing Guidelines

• Maintained dose option
  ▪ Give same dose each day including day of discharge
  ▪ Allows 24-36 hour withdrawal-free period after discharge
  ▪ Provide naloxone kit at discharge and discuss reduced opioid tolerance

• Tapered dose option
  ▪ If patient requests a taper, decrease by 5 mg per day and stop taper if patient requests it
  ▪ Don’t prolong hospitalization to complete taper
  ▪ Provide naloxone kit at discharge and discuss reduced opioid tolerance

• Don’t give a prescription for methadone at discharge; refer or arrange for opioid use disorder treatment
Sample Pain Regimen for Case 1

- 40mg of methadone oral liquid (providing 4-6 hours of analgesia only)
  - This is primarily for treatment of opioid withdrawal
- Ketoralac 60mg IM
- Scheduled tylenol
- Oxycodone IR 15-20mg every 4 hours prn
- Ice and heat prn
- PCA is another option
• Patient goes on to develop severe sepsis from aortic valve endocarditis

• Ends up needing an emergent valve replacement

• Complains of severe pain post-op
Pre-op and Post-op Pain Options

- Ask for pre-op anesthesia consult
- Ask for nerve block, if possible
- Change methadone to BID or TID
  - Continues to primarily treat withdrawal and starts to stabilize opioid receptors for her opioid use disorder
- Ketamine infusion
- PCA
- Gabapentin 600mg TID
- Acetaminophen scheduled
Case 2

• 27 yo man with opioid use disorder and sarcoma of the left thigh. He will be undergoing resection of the tumor in the next week.

• He has been taking buprenorphine/naloxone 8/2mg once a day for 6 months and is afraid to go off of it.
Buprenorphine/Naloxone

- Partial opioid agonist (plateau effect)
- High $mu$ receptor binding affinity, slow dissociation
- Less euphoric effect than other opioids
- Provides 4-6 hours analgesia
- Paired with antagonist to prevent abuse through injection
- Office based prescribing (DEA waiver, training)
Sample Pain Regimen for Case 2*

- Pre-op gabapentin 600mg TID
- Acetaminophen 650mg QID
- Epidural
- Change Buprenorphine/naloxone to 4mg BID
  - Alternative buprenorphine/naloxone TID
  - Alternative increase buprenorphine/naloxone dose
- Possible adjunctive use of Hydromorphone 4-6mg every 4-6 hours prn
  - Alternative fentanyl
  - Close monitoring
    - *Both fentanyl and hydromorphone have binding affinities that will competitively compete with buprenorphine at the mu receptor*

*There is lack of evidence to know what is the most optimal management strategy in this situation.

Case 3

• 45 yo female with persistent neck pain who is prescribed high dose opioids for the last 10 years.

• Admitted for nausea, vomiting, and abdominal pain.
General Principles

- Existing opioid Rx will not cover acute pain
- Unlike the patient using heroin, they may have already tried many existing pain treatments
- Multimodal approach most successful
- Beware of secondary gain
  - Check prescription drug monitoring program to confirm dose and prescriber
  - Check urine drug test to confirm opioid adherence
  - Confirm patient has an opioid agreement with the PCP
  - Discuss with family, consider opioid withdrawal as a cause of her symptoms
General Approach

- Rule out medication harm
- Maintain existing opioid regimen
- Provide short acting opioid for acute pain
- Treat opioid side effects
  - Withdrawal mediated cyclic vomiting
  - Constipation
- Discuss pain regimen and discharge plan with PCP
- Discharge with naloxone
58 yo woman with COPD, opioid use disorder, diabetes and Hep C admitted for hypoxia (SpO2 85%). She states she is treated at a methadone program and takes 120mg of methadone daily with 3 take outs a week.

*What dose of methadone should you prescribe and why?*
Methadone Basics

- Always confirm dose with methadone program
- Reasons to reduce the methadone dose
  - Hypoxia
  - QTc >500ms
  - Benzodiazepine use
  - Somnolence
  - Severe constipation
- 10-20% reductions are usually well tolerated
- Do not split doses without discussing with OTP
- Do not prescribe methadone at discharge
- Prescribe naloxone overdose kit
Other General Principles

- If needed, only provide a short supply of IR opioids at discharge
- Avoid benzodiazepines during and after hospitalization
- Consider possible risks of your opioid prescription
- Communicate with PCP
- Communicate with Opioid Treatment Program
What if her urine drug test was positive for morphine?

• Suspect ongoing heroin use
• Discuss case with her opioid treatment program
• Continue to treatment pain as needed
  ▪ Recognize that she might have opioid withdrawal contributing to some of her pain
• Prescribe naloxone overdose kit at discharge
Summary

- Pain can be well treated in patients with substance use disorders
- Multimodal treatment is the most effective
- Treat opioid withdrawal effectively for improved pain outcomes
- Be mindful of opioid risks at discharge and prescribe naloxone
References


PCSS-O Colleague Support Program and Listserv

- PCSS-O Colleague Support Program is designed to offer general information to health professionals seeking guidance in their clinical practice in prescribing opioid medications.
- PCSS-O Mentors comprise a national network of trained providers with expertise in addiction medicine/psychiatry and pain management.
- Our mentoring approach allows every mentor/mentee relationship to be unique and catered to the specific needs of both parties.
- The mentoring program is available at no cost to providers.

For more information on requesting or becoming a mentor visit:  
www.pcss-o.org/colleague-support

- **Listserv**: A resource that provides an “Expert of the Month” who will answer questions about educational content that has been presented through PCSS-O project. To join email: pcss-o@aaap.org.
PCSS-O is a collaborative effort led by American Academy of Addiction Psychiatry (AAAP) in partnership with: Addiction Technology Transfer Center (ATTC), American Academy of Neurology (AAN), American Academy of Pain Medicine (AAPM), American Academy of Pediatrics (AAP), American College of Physicians (ACP), American Dental Association (ADA), American Medical Association (AMA), American Osteopathic Academy of Addiction Medicine (AOAAM), American Psychiatric Association (APA), American Society for Pain Management Nursing (ASPMN), International Nurses Society on Addictions (IntNSA), and Southeast Consortium for Substance Abuse Training (SECSAT).

For more information visit: www.pcss-o.org
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