Managing Pain in Patients with Substance Use Disorder

James Brehany, MD
Assistant Professor of Internal Medicine
Division of Palliative Medicine
The Ohio State University Wexner Medical Center

MedNet21
Center for Continuing Medical Education

The Ohio State University
Wexner Medical Center

1

Objectives

- Define terms relevant to treatment of patients with substance use disorder (SUD) and pain management
- Recognize presence of SUD in patients and perform a basic assessment
- Identify clinical approaches to symptom management in patients with SUD

2

Caveats

- This lecture will **not** explore the following:
  - A detailed approach to perioperative management of buprenorphine or methadone products for patients with opioid use disorder
  - How to manage withdrawal symptoms (EtOH, opioids, etc)
  - Treatment strategies for various substance use disorders
  - An in-depth guide to use of buprenorphine or methadone for pain management

3

Terminology and Definitions

- "Addiction"
  - "Addiction is a **treatable, chronic medical disease** involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. People with addiction use substances or engage in behaviors that become compulsive and often **continue despite harmful consequences.**"

-

American Society of Addiction Medicine

4

Terminology and Definitions

- "Substance Dependence"
- "Substance Abuse"
- "Substance Use Disorder"
  - All definitions are reliant on four main categories including:
    - Physical Dependence
    - Risky Use
    - Social Problems
    - Impaired Control

5

Terminology and Definitions

- "Substance Dependence" vs "Substance Abuse"
  - Both remnants from the DSM-IV that are no longer clinically relevant but remain in our general medical lexicon

6

Terminology and Definitions

- "Substance Dependence"
  - Three or more of the following criteria within a 12-month period:
    - Withdrawal syndrome or use to avoid withdrawal
    - Tolerance
    - Used in larger amounts or longer than expected
    - Persistent desire or repeated attempts to cut down
    - Great deal of time using the substance
    - Continued use despite physical or psychological problems
    - Important activities given up to use

7

Terminology and Definitions

- "Substance Abuse"
  - One or more of the following criteria, no time restriction:
    - Hazardous use
    - Social/interpersonal problems due to use
    - Neglected major roles to use
    - Legal problems to use

8

Terminology and Definitions

- "Substance Dependence" vs "Substance Abuse"
  - Reminder – neither of these are still valid diagnoses

9

Terminology and Definitions

- "Substance Use Disorder"
- Most up-to-date definition from the DSM-V
- Definition **based on a combination of the criteria from substance dependence and substance abuse** with the following changes:
  - Elimination of "legal problems due to use"
  - Addition of "craving" as a new criteria
  - Two or more of the total criteria within a 12-month period

10

Terminology and Definitions

- "Substance Use Disorder"
  - Two or more of the following criteria within a 12-month period:
    - Withdrawal syndrome or use to avoid withdrawal
    - Tolerance
    - Used in larger amounts or longer than expected
    - Persistent desire or repeated attempts to cut down
    - Great deal of time using the substance
    - Continued use despite physical or psychological problems
    - Important activities given up to use
    - Hazardous use
    - Social/interpersonal problems due to use
    - Neglected major roles to use
    - **Craving**

11

Terminology and Definitions

- "Substance Use Disorder"
  - Severity of SUD:
    - Mild (2-3 symptoms)
    - Moderate (4-5 symptoms)
    - Severe (6+ symptoms)

12

Terminology and Definitions

- "Mild Substance Use Disorder"
  - 2-3 of the following criteria within a 12-month period:
    - **Withdrawal syndrome or use to avoid withdrawal**
    - **Tolerance**
    - Used in larger amounts or longer than expected
    - Persistent desire or repeated attempts to cut down
    - Great deal of time using the substance
    - Continued use despite physical or psychological problems
    - Important activities given up to use
    - Hazardous use
    - Social/interpersonal problems due to use
    - Neglected major roles to use
    - Craving

13

Terminology and Definitions

- "Moderate Substance Use Disorder"
  - 4-5 of the following criteria within a 12-month period:
    - **Withdrawal syndrome or use to avoid withdrawal**
    - Tolerance
    - Used in larger amounts or longer than expected
    - **Persistent desire or repeated attempts to cut down**
    - **Great deal of time using the substance**
    - Continued use despite physical or psychological problems
    - Important activities given up to use
    - Hazardous use
    - **Social/interpersonal problems due to use**
    - Neglected major roles to use
    - **Craving**

14

Terminology and Definitions

- "Severe Substance Use Disorder"
  - 6+ of the following criteria within a 12-month period:
    - **Withdrawal syndrome or use to avoid withdrawal**
    - Tolerance
    - **Used in larger amounts or longer than expected**
    - Persistent desire or repeated attempts to cut down
    - Great deal of time using the substance
    - **Continued use despite physical or psychological problems**
    - **Important activities given up to use**
    - **Hazardous use**
    - Social/interpersonal problems due to use
    - **Neglected major roles to use**
    - **Craving**

15

Terminology and Definitions

- "Substance Use Disorder"
  - A word of caution about severity when it comes to SUD:
    - Mild / Moderate / Severe do **not** relate only to the type of substance
      - Possible to have a mild cocaine use disorder
      - Possible to have a severe tobacco use disorder

16

Terminology and Definitions

- "Substance Use Disorder"
  - Takeaway: not all substance use disorders are created equally
    - If you see "SUD" in someone's chart, important to understand the history, the context, and the details (specifically: **which substance**) to be able to provide the most appropriate care

17

Terminology and Definitions

- "Harm Reduction"
  - Numerous Definitions:
    - Simple: "Person-centered public health approach to reducing the harms of substance use to individuals and communities"

- Substance Abuse and Mental Health Services Administration

18

Terminology and Definitions

- "Harm Reduction"
  - Numerous Definitions:
    - Complex: "Framework involving six pillars, twelve principles and six core practice areas… involv[ing] services, approaches, and organization to care to reduce harmful impacts… [of] stigma, mistreatment, and discrimination of people with drug use"

- Substance Abuse and Mental Health Services Administration

19

Terminology and Definitions

- "Harm Reduction"
  - Numerous Definitions:
    - For the purposes of this lecture, an emphasis on safety:
      - "How can we take care of a vulnerable population who needs symptom management and focus on doing so in the safest way possible?"
      - "If a patient is actively using substances that can impair judgement or lead to disinhibition, how can we safely care for them outside of a controlled environment?"

20

Terminology and Definitions

- "Acute Pain" vs "Chronic Pain"
  - Acute Pain
    - Less than 3 months in duration
    - A symptom of a larger process (trauma, infection, etc)
  - Chronic Pain
    - Greater than 3 months in duration
    - A disease unto itself

21

Epidemiology

- What does a patient with SUD look like in the clinic or on the wards?
  - Stimulant pathology (cocaine/methamphetamine)
    - 42 y/o M in the cardiovascular ICU with cardiomyopathy from extended use of crack/cocaine, being worked up for LVAD vs heart transplant

22

Epidemiology

- What does a patient with SUD look like in the clinic or on the wards?
  - Opioid pathology (“percs” / “fentanyl”)
    - 58 y/o F in the MICU with recurrent endocarditis from IV drug use found to have new CVA from septic emboli

23

Epidemiology

- What does a patient with SUD look like in the clinic or on the wards?
  - Depressant pathology (EtOH / benzodiazepines)
    - 34 y/o M on the general medicine service with decompensated EtOH cirrhosis and chronic pancreatitis who is being worked up for liver transplant

24

Epidemiology

- What does a patient with SUD look like in the clinic or on the wards?
  - Nicotine pathology (Tobacco / Vape / Zyns)
    - 67 y/o F in clinic with baseline oxygen dependence and poorly controlled COPD who has been admitted four times in the last year for COPD exacerbations

25

Epidemiology

- What does a patient with SUD look like in the clinic or on the wards?
  - Takeaways:
    - SUD can be present in patients across a broad clinical spectrum and is liable to impact their care and treatment options
    - Each of these example patients may have sequelae from their underlying substance use disorders that can lead to acute pain syndromes

26

Assessment of SUD

- To provide the best care, we need to have a good understanding of what we're dealing with
- Start with a good history:
  - What is / was their drug of choice?
  - How often are/were they using it? For how long?
  - What benefits do/did they get from use?
  - Does/did it help with pain / nausea / anxiety / etc?

27

Assessment of SUD

- To provide the best care, we need to have a good understanding of what we're dealing with
- Do a deep chart dive and see what comes up:
  - Previous urine drug screens
  - Key words ("addiction," "substance use disorder," "fentanyl," etc.)
  - Check your local prescription drug monitoring program (PDMP)

28

Assessment of SUD

- Urine Drug Screens
  - Don't jump to conclusions without confirmatory testing!
  - If ordering new test during admission, do it as close to admit as possible

29

Assessment of SUD

- Urine Drug Screens
  - May need to have frank conversations about positive results:
    - "Would you expect a urine drug screen to show anything?"
    - If no: "unfortunately it showed x in your system, do you have any idea how it may have gotten there?"
    - If still no: "Well somehow you are being exposed, we likely need to be even more careful with your prescriptions if you don't know how x is getting into your system"

30

Assessment of SUD

- "Red flag" behavior / comments
  - Strongly preferring one opioid over another despite drastically different doses
  - Endorsing benefit outside the accepted use pattern
    - "The dilaudid really helps with my anxiety"
    - "The oxycodone gives me energy"
  - "I don't want the pill, IV works better"

31

Assessment of SUD

- "Red flag" behavior / comments
  - "IV works better than the pill" – context matters
    - Are the PO / IV options equianalgesic?
      - 5mg PO oxy and 1mg IV dilaudid are **not** equivalent
    - Acuity of pain
      - Is it reasonable to expect the patient to wait an hour for a PO opioid to reach full effect?
    - Use case for analgesic
      - Is worsening pain predictable enough to allow for use of PO or is it significantly incidental?

32

How to Approach Pain Management

- Common misconceptions
  - Someone taking methadone or buprenorphine products must have a history of opioid use disorder
  - You cannot give a full agonist opioid to someone taking buprenorphine products
  - I can't prescribe buprenorphine or methadone because I'm not an addiction specialist
  - Buprenorphine isn't an analgesic medication

33

How to Approach Pain Management

- Expectation setting
  - Anticipate optimization of non-opioid adjuvants
  - Prescription agreements – no early fills, need for regular urine drug screens
  - Interdisciplinary approach including MAT team
  - Emphasis on what we **can/will** do rather than what we are unwilling to prescribe

34

How to Approach Pain Management

- Patients on Medication Assisted Treatment (MAT) / Medication for Opioid Use Disorder (MOUD)
  - Most common medications:
    - Buprenorphine
    - Methadone

35

How to Approach Pain Management

- Patients on MAT / MOUD (Buprenorphine / Methadone)
  - 53-year-old patient with history of opioid use disorder (w/ IV fentanyl / "perc 30's"), admitted with abdominal pain and found to have large pancreatic mass with suspected liver metastases. They have been taking 4mg/1mg suboxone films twice daily for the last 7 years, deny any recent cravings. Labs show normal creatinine, hemoglobin, and platelets, but elevated AST/ALT and total bilirubin. Imaging with concern for biliary dilatation. GI team planning on ERCP in AM for placement of stents. When you're evaluating the patient on arrival to the floor, they ask for pain medication, stating that this is the worst pain they've ever had to deal with and the 4mg IV morphine in the ED "didn't touch it."
    - **What do you do?**

36

How to Approach Pain Management

- Important questions:
  - What is the pain trajectory?
    - Is there a reversible etiology to the pain that we just need to bridge the patient through for a short time?
  - How does organ dysfunction impact our plan?
    - Are certain adjuvants unsafe for use?
  - Are there procedures we could utilize to spare the patient from additional medications / polypharmacy?

37

How to Approach Pain Management

- Important questions:
  - Can we safely give this patient full-agonist opioids for breakthrough pain?
  - What is the patient's baseline opioid tolerance?
  - Are full agonist opioid PRNs appropriate? Would the patient be better served by adjuvant medications?
  - What the heck do we do with the buprenorphine?

38

How to Approach Pain Management

- Patients on MAT / MOUD (Buprenorphine / Methadone)
  - 53-year-old patient with history of opioid use disorder (w/ IV fentanyl / "perc 30's"), admitted with abdominal pain and found to have large pancreatic mass with suspected liver metastases. They have been taking **4mg/1mg suboxone films twice daily** for the last 7 years, deny any recent cravings. Labs show normal creatinine, hemoglobin, and platelets, but **elevated AST/ALT and total bilirubin**. Imaging with concern for **biliary dilatation**. GI team planning on ERCP in AM for placement of stents. When you're evaluating the patient on arrival to the floor, they ask for pain medication, stating that this is the worst pain they've ever had to deal with and the **4mg IV morphine in the ED "didn't touch it."**

39

How to Approach Pain Management

- Important questions:
  - What is the pain trajectory?
    - *Depends on the results of the ERCP*
  - How does the organ dysfunction impact our plan?
    - *Will need to make sure medications are safe in hepatic dysfunction*
  - Are there procedures we could utilize to spare the patient from additional medications / polypharmacy?
    - *Consider discussing with interventionalists in the hospital about possibility of celiac plexus neurolysis*

40

How to Approach Pain Management

- Important questions:
  - Can we safely give this patient full-agonist opioids for breakthrough pain?
    - *Yes!*
  - What is the patient's baseline opioid tolerance?
    - *High!*
      - *4mg/1mg buprenorphine/naloxone twice daily is equivalent to roughly ~240 oral morphine equivalents (aka ~160mg oxycodone)*
      - *4mg IV morphine is equivalent to roughly ~12 Oral morphine equivalents (roughly 8mg oxycodone)*

41

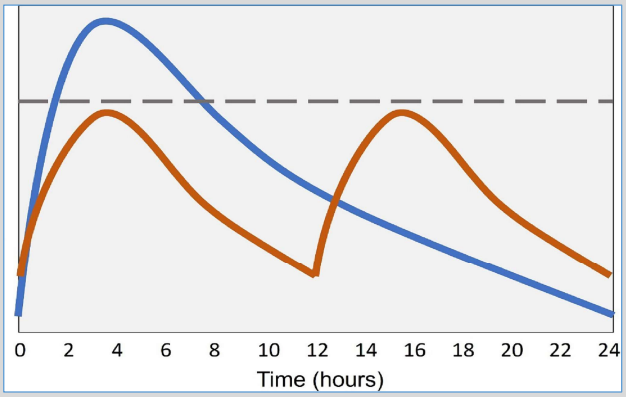
How to Approach Pain Management

- Important questions:
  - Would the patient best be better served by adjuvant medications than full agonist opioids?
    - *Based on description of pain, may be able to assess if we think anti-inflammatories, neuropathic agents could be helpful as well*
  - What the heck do we do with the buprenorphine?
    - *Don't stop it!*

42

General Strategies for Pain Management

- Patients on MAT/MOUD (Buprenorphine / Methadone)
  - Split dosing



43

General Strategies for Pain Management

- Harm Reduction Approaches
  - Dose PRN opioids appropriately
    - Find the minimally effective dose
  - Maximization of adjuvant medications
    - Neuropathic agents
    - Anti-inflammatories
    - Topical agents
  - Avoid triggering medications

44

General Strategies for Pain Management

- Harm Reduction Approaches
  - If it seems like something isn't working, question whether it's providing benefit
    - Example: If a patient who is opioid naïve at baseline is admitted for uncontrolled pain and a week later is taking hundreds of oral morphine equivalents worth of opioids and still endorsing uncontrolled pain, I would strongly question whether it is an opioid-responsive pain syndrome. Further escalation is likely not the answer, in fact, de-escalation is likely the more clinically appropriate approach. If opioids haven't improved the pain, why are we still giving them?

45

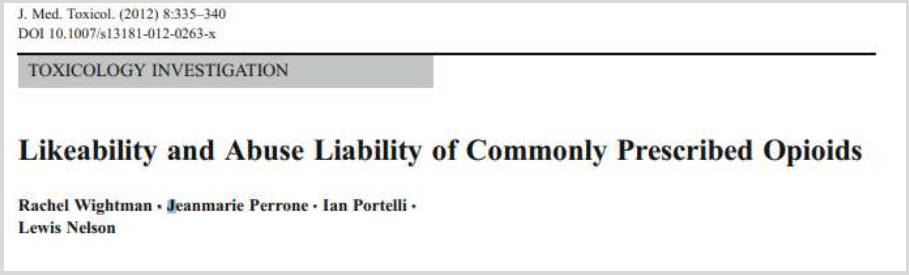
General Strategies for Pain Management

- Harm Reduction Approaches
  - Emphasize PO >>> IV
  - Ensure Narcan Rx at home, educate on how/when to use
  - Avoid oxycodone if possible

46

General Strategies for Pain Management

- Harm Reduction Approaches
  - Why the avoidance of oxycodone?
    - Opioid "likeability" risks


J. Med. Toxicol. (2012) 8:335–340
DOI 10.1007/s13181-012-0263-x

TOXICOLOGY INVESTIGATION

Likeability and Abuse Liability of Commonly Prescribed Opioids

Rachel Wightman · Jeanmarie Perrone · Ian Portelli · Lewis Nelson

  - Conclusion: "Oral oxycodone has an elevated abuse liability profile compared to oral morphine and hydrocodone"

47

General Strategies for Pain Management

- Harm Reduction Approaches
  - Use of buprenorphine as an analgesic (see my other MedNet 21 presentation with Dr. Jennica Johns for much more detail)

48

General Strategies for Pain Management

- Long-term Opioid Strategies
  - Have more of an opioid regimen in long-acting form to avoid euphoria associated with short-acting opioids
    - Consider "monotherapy" with long-acting agents (aka no PRNs)
  - Minimize PRN frequency
  - Send short, frequent prescriptions to decrease risk of over-taking

49

How to Approach Pain Management

- Patients on MAT / MOUD (Buprenorphine / Methadone)
  - 53-year-old patient with history of opioid use disorder (w/ IV fentanyl / "perc 30's"), admitted with abdominal pain and found to have large pancreatic mass with suspected liver metastases. They have been taking 4mg/1mg suboxone films twice daily for the last 7 years, deny any recent cravings. Labs show normal creatinine, hemoglobin, and platelets, but elevated AST/ALT and total bilirubin. Imaging with concern for biliary dilatation. GI team planning on ERCP in AM for placement of stents. When you're evaluating the patient on arrival to the floor, they ask for pain medication, stating that this is the worst pain they've ever had to deal with and the 4mg IV morphine in the ED "didn't touch it."
    - **What do you do?**

50

How to Approach Pain Management

- My approach to this case:
  - Rotate SL buprenorphine / naloxone to just SL buprenorphine to avoid potential hepatotoxicity of naloxone
  - Split dose the buprenorphine to to 2mg q6h
  - Start PO morphine 22.5 - 30mg (~10-15% total daily oral morphine equivalents per dose) q4h PRN
  - Start IV buprenorphine 0.3mg q4h PRN as backup if available. OK to use ~8-10mg IV morphine if not.
  - Discuss anti-inflammatories with oncology team (NSAID vs Steroid)
  - Touch base with GI, can they do a celiac plexus neurolysis during the ERCP?
  - Wait for the dust to settle before titrating the long-acting

51

Conclusions

- Use of appropriate terminology helps avoid stigma and build rapport with patients
- Recognition of patients with SUD is the first step in being able to manage symptoms appropriately
- While no approach to pain management is perfectly safe, utilizing harm reduction can help provide appropriate care while minimizing risk

52