Pain Management in Patients with substance use disorder.

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Objectives

- Describe the prevalence of substance use disorders, acute and chronic pain.
- Define a systematic approach in the management of acute and chronic pain in individuals with substance use disorders.
- Discuss the importance of cultural competence and the simultaneous management of both disorders in providing health care to this population.
Outline

- Summary of pain management approach in patients with substance use disorder
- Definition and prevalence of pain
- Definition and prevalence of substance use disorder
- Management of substance use disorder
- Management of acute pain and chronic pain
- Conclusions.
Approach to pain management in patients with substance use disorder

- Evaluate pain as in non dependent patients.
- Screen and evaluate severity of substance use disorder
- Treat pain with multi-modal and multi-disciplinary approach
- Use appropriate opioids and other medications as indicated & monitor closely.
- Treat addiction & other psychopathology simultaneously.
Pain - Definition

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage. (IASP definition)

My definition:

Pain is an unpleasant physical, psychological, social and spiritual experience associated with actual or potential tissue damage or described in terms of such damage.
Total pain

Co-morbid causes:
- Fear of suffering
- Depression
- Past experience of illness

Caused by treatment:
- Anxiety

Caused by cancer:
- Physical
  - Loss of role and social status
  - Loss of job
  - Financial concerns
  - Concerns about future of family
  - Dependency
- Psychological
  - Anger at fate/anger with God
  - Loss of faith
- Spiritual
  - Finding meaning
  - Fear of the unknown

Total Pain
Challenging prevalence of acute pain

- 40 million surgeries annually
  - only 1 in 4 receive adequate pain relief
- 65 million traumatic injuries
  - including 2 million burns

- Many diseases produce acute pain
  - M. I. - 1.2 m; Acute resp dis. - 4m
  - Headaches - 5 m; Dental dis. - 3 m
  - Digestive dis. - 10 m; MS dis. - 6m
Challenging prevalence of chronic pain.

- 116 million cases of chronic pain in the US.
- $635 billion direct and indirect cost in the US.
- 26 m between 20 and 64 yr have back pain
- 18 % of women and 6.5% of men have migraine in the US; 50% are undiagnosed
- 80% of patients with cancer experience pain.
- Common reason for litigation and Sanctions.
- Increased depression and suicide.
- Significant impact on patient satisfaction.
Systematic approach to pain management

- Take appropriate **history**
- Perform relevant **examination**
- Order indicated **investigations**
- Outline **diagnosis**
  - Pain types
  - Clinico-pathologic
- Develop & discuss **management plan**
Outline of important categories of a pain management plan

- **Medications**
  - Non - opioids, Opioids, and Adjuvants.
- **Non-medications**
  - PT, OT, Surgical, Psycho-Social, Spiritual techniques.
- **Treat Underlying Cause**
- **Treat associated psychiatry comorbidity including substance use disorders.**
- **Identify agreed management goals**
- **Monitor pain, function, goals & medications effects.**
- **Provide continuity of care.**
Pain Management

**WHO Analgesic Ladder**

- **Strong Opioid ± Non-Opioid ± Adjuvant** (for severe pain)

- **Mild Opioid ± Non-Opioid ± Adjuvant** (for moderate pain)

- **Non-Opioid ± Adjuvant** (for mild pain)
Substance Use Continuum

TRADITIONAL

Dependence
Abuse
At-Risk Use
Non–Problem Use
Abstinence

DSM-5

Substance Use Disorders
0–1 criteria: No diagnosis
2-3 criteria: Mild
4-5 criteria: Moderate
6 or 11 criteria: Severe
Definitions of one (1) Drink
12 oz (0.35 liter) of Beer
5 oz (0.15 liter) of wine
1.5 oz (0.04) of liquor
Dependence - Definition

A primary, chronic disease of the brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and or relief by substance use and other behaviors (ASAM August 2011).

Characterized by:
- **Inability to consistently Abstain**
- **Impairment in Behavior control.**
- **Craving;** or increased hunger for drugs or rewarding experiences.
- **Diminished recognition of significant problems** with one’s behavior and interpersonal relationships.
- **A dysfunctional Emotional response.**
Extent of the Addiction Problem

- Experienced by most of us directly or indirectly
- #1 preventable cause of illness and death
- Over 600,000 deaths attributed to alcohol, tobacco and other drugs.
- Economic cost of substance use disorder $700 billion
- Life -time prevalence; M/F
  - Nicotine 20.5/15.3; Alcohol 17.8/12.5 %; Illicit drugs 7.7/2.6
In 2011

41,340 Americans
DIED FROM DRUG POISONINGS

Nearly 17,000 deaths involved prescription opioids

For every 1 death there are:

- 10 treatment admissions for abuse
- 32 ED visits for misuse or abuse
- 130 people who abuse or are addicted
- 825 nonmedical users
Extent of opioid use disorder and overdose

- 10 fold increase in opioid use for pain in past 20yrs
- US is 5% of world population but consumes about 80% of world’s opioids.
- 17,000/y deaths from prescription opioid overdose
- Leading cause of injury deaths
- Risk of overdose increases with long term dose
- Most common cause of adolescent drug abuse
- 4% of Americans use opioids long term (excluding patients with cancer and at end of life).
- 4 to 26% on chronic opioids develop use disorder.
- Complications from long-term use (CVS, Endocrine, Neurological, GI, Skeletal and Immunologic)
Opioid Pharmacology; Classification

- **Full opioid agonist**
  - weak agonist (codeine, hydrocodone, oxycodone)
  - strong agonist (morphine, fentanyl, hydromorphone)

- **Partial opioid agonist**
  - Buprenorphine; subetex, suboxone, butrans

- **Agonist-Antagonist**
  - butorphanol (stadol); pentazocine.

- **Mixed opioid agonist and SNRI agents**
  - Tramadol; Tapentadol (Nucynta)
Balance Risks Against Potential Benefits

Conduct thorough H&P and appropriate testing

Benefits Include
- Analgesia (adequate pain control)
- Improved Function

Comprehensive benefit-to-harm evaluation

Risks Include
- Overdose
- Abuse by patient or household contacts
- Misuse & addiction
- Physical dependence & tolerance
- Interactions w/ other medications & substances
- Inadvertent exposure by household contacts, especially children

Management of challenges of chronic opioid therapy.

- Evaluate if chronic opioid indicated.
- Clinical risk evaluation of patient and pain types.
- Opioid prescription by a single physician.
- Treatment agreements and consent.
- Urine drug screening.
- Use state prescription monitoring services.
- Avoid concomitant use of other addictive agents.
- Regular monitoring. Stop if no longer indicated.
- **Documentation** of treatment plan in the chart.
Elueze’s 7 A’s for monitoring Patients on chronic opioids

1. Analgesia
2. Activities
3. Attitude
4. Adverse effects
5. Aberrant behavior
6. Assessment
7. Action plan
Steps to Screen for addiction

- Have you ever had a substance abuse problem
- Have you been concerned about use of alcohol, etc
- If history of current or prior addiction, ever abused opioids?
- Perform CAGE - AID: each (+) = 40% chance of illness
- or use the shorter Two-item screen
- If CAGE + ask about Quantity and Frequency
- Ask family or sig. other the f-CAGE, and to assess functional status re: pain.
- Perform one or more toxicology tests.
  - Two – Item conjoint Screen
    In the last year, have you ever drank or used drugs more than you meant to?
    Have you ever felt you needed to cut down on your drinking or drug use in the last year?
    If 1 yes = 45%; 2 yes =75% chance of SUD; Sens: 81% and Spec: 81%
# Time Course Urine Toxicological Screen

<table>
<thead>
<tr>
<th>Agent</th>
<th>Light Use</th>
<th>Moderate to Heavy Use</th>
<th>Chronic Heavy Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>8h</td>
<td>12h</td>
<td>24h</td>
</tr>
<tr>
<td>Opiates</td>
<td>12h</td>
<td>24h</td>
<td>36h</td>
</tr>
<tr>
<td>Methadone</td>
<td>48h</td>
<td>72h</td>
<td>96h</td>
</tr>
<tr>
<td>Cocaine</td>
<td>24h</td>
<td>48h</td>
<td>72h</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>24h</td>
<td>48h</td>
<td>72h</td>
</tr>
<tr>
<td>PCP</td>
<td>36h</td>
<td>48h</td>
<td>96h</td>
</tr>
<tr>
<td>Benzodiazepines (short)</td>
<td>12h</td>
<td>18h</td>
<td>36h</td>
</tr>
<tr>
<td>Benzodiazepines (long)</td>
<td>5d</td>
<td>10d</td>
<td>21d</td>
</tr>
<tr>
<td>Marijuana</td>
<td>4d</td>
<td>9d</td>
<td>18d or more</td>
</tr>
</tbody>
</table>
Aberrant Drug-Taking Behaviors

**Illegal or Criminal Behavior**
- Diversion (sale or provision of opioids to others)
- Prescription forgery

**Dangerous Behavior**
- Motor vehicle crash/arrest related to drug/alcohol effects
- Intentional overdose or suicide attempt
- Aggressive/threatening/belligerent behavior in clinic

**Behavior that suggests addiction**
- Use of prescription medications in an unapproved manner
- Concurrent abuse of alcohol or illicit drugs
- Multiple episodes of prescription “loss”
- Positive urine drug screen – other substance use

**Aberrant behavior that requires attention**
- Requesting specific drugs
- Openly acquiring similar drugs from other medical sources
- Reporting psychic effects not intended by the clinician
- Not following other components of the treatment plan
## Risk Factors for Aberrant Behavior/Harm

<table>
<thead>
<tr>
<th><strong>Biological</strong></th>
<th><strong>Psychiatric</strong></th>
<th><strong>Social</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age ≤ 45 years</td>
<td>Substance use disorder</td>
<td>Prior legal problems</td>
</tr>
<tr>
<td>Female gender</td>
<td>Preadolescent sexual abuse (in women)</td>
<td>History of motor vehicle accidents</td>
</tr>
<tr>
<td>Family history of prescription drug or alcohol abuse</td>
<td>Major psychiatric disorder (e.g., personality disorder, anxiety or depressive disorder, bipolar disorder)</td>
<td>Poor family support</td>
</tr>
<tr>
<td>Cigarette smoking</td>
<td></td>
<td>Involvement in a problematic subculture</td>
</tr>
</tbody>
</table>

- **Biological**: factors related to age, gender, or genetics.
- **Psychiatric**: factors related to mental health disorders.
- **Social**: factors related to environment or lifestyle.
Risk factors for overdose

- People obtaining multiple controlled substances
- People obtaining from multiple doctors
- People taking high daily doses of opioids
- Low income individuals
- Those living in rural areas
- History of substance use disorder
- History of mental illness
- Recent decrease in opioids or loss of tolerance

CDC, Policy Impact, Prescription Painkiller Overdoses, Nov. 2011
Management of Chemical Dependence -
Treat as just another chronic illness!

- Primary disorder
- Has Specific Dx criteria
- History is paramount
- Psycho – social function is first impaired
- Physical and lab abnormalities may come late
- It responds to treatment
- Requires long term follow –up.
Screen Result and Actions in the office

- Abstinence (ask why) = *Prevention message*

- Low risk use = *Prevention message*

- At risk drug user = *Brief Intervention*

- Abuse or dependence = *Brief Assessment Treatment and Referral*
Addiction management algorithm

Screening
Presentation of Diagnosis
Assess readiness to change
Bio-psycho – social Assessment
Negotiate treatment plans

Possible levels of care (with or without pharmacotherapy)
Brief Intervention
Detox (In or Out patient) & inpatient rehab.
Residential rehab treatment (short or long term)
Outpatient rehabilitation
12 Steps programs
Treatment modalities for management of substance use disorder

- Brief Intervention
- Detoxification (inpatient and ambulatory)
- Pharmacotherapy
- Group and individual cognitive behavioral therapy
  - Hospital based
    - Inpatient / Residential/outpatient
  - Community based
    - Residential/ outpatient
- Self help/12 step programs
  - AA, NA, CA, GA
  - Family Anonymous, etc
- Management of Co morbidities
  - Medical/ psychiatric/ chronic pain
- Co –ordination/ monitoring by Clinician
## Presenting the diagnosis and negotiating management plans

### SOAPE

<table>
<thead>
<tr>
<th>S</th>
<th>support</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>optimism</td>
</tr>
<tr>
<td>A</td>
<td>absolution</td>
</tr>
<tr>
<td>P</td>
<td>plan</td>
</tr>
<tr>
<td>E</td>
<td>explanatory mode</td>
</tr>
</tbody>
</table>

### Motivational Counseling

<table>
<thead>
<tr>
<th>EE</th>
<th>Express Empathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD</td>
<td>Develop Discrepancy</td>
</tr>
<tr>
<td>AA</td>
<td>Avoid Augmentation</td>
</tr>
<tr>
<td>RR</td>
<td>Roll with Resistance</td>
</tr>
<tr>
<td>SS</td>
<td>Support Self Efficacy</td>
</tr>
</tbody>
</table>
Detoxification from Opioid

- Parental buprenorphine protocol
- Tramadol protocol
- Clonidine protocol
- Suboxone protocol or Subetex
- Methadone protocol
- Slow taper (about 10% per week)
Pharmacotherapy in substance use disorder

- Alcohol dependence
  - Naltrexone, Acamprosate, Disulfiram, Topiramate

- Opioid dependence
  - Naltrexone, Methadone, Suboxone

- Nicotine dependence
  - Nicotine replacement therapy; Patch, gum, inhalers
  - Bupropion, Clonidine, Nortriptyline, Chantix

*develop comfort using these*
Biopsychosocial Treatment Modalities
5 Ms by ASAM

- Motivate
- Manage
- Medication
- Meetings
- Monitor
Addiction and Pain

- Addiction is a primary disease
- Patients with psychopathology take drugs (a chemically dependent patient’s pain is unlikely to get better on only chronic opioid therapy)
- Addictive disease in population with chronic pain – 4 to 24%
- De Novo iatrogenic addiction; 0 – 50 %
- Aberrant problematic behavior common; 20%
- Pain management disparity in patients with substance use disorder.
Pain and Addiction Relapse mnemonic
Traditional “HALT” and possible “PHALT” (Elueze’s)

H – Hunger
A – Anger
L - Loneliness
T – Tiredness
P – Pain (study by Rosenbaum et al JAMA 2003 .289)

37% of patients in MMTP and 24% in RTF experience chronic severe pain

48.8% in MMTP and 41.8% in RTF report pain as the reason for first using drugs & alcohol
Differences in the approach of management of Acute and Chronic pain

<table>
<thead>
<tr>
<th></th>
<th>ACUTE</th>
<th>CHRONIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etiology</td>
<td>Often specific</td>
<td>May be unclear</td>
</tr>
<tr>
<td>Goals</td>
<td>Pain relieve</td>
<td>Improve function</td>
</tr>
<tr>
<td>Role of analgesics</td>
<td>Paramount</td>
<td>Useful</td>
</tr>
<tr>
<td>Role of adjuvants</td>
<td>May be useful</td>
<td>Useful</td>
</tr>
<tr>
<td>Non – drug measures</td>
<td>Useful</td>
<td>Paramount</td>
</tr>
<tr>
<td>Addiction screening</td>
<td>Useful</td>
<td>Paramount</td>
</tr>
<tr>
<td>Others</td>
<td>Treat early and well</td>
<td>Good monitoring</td>
</tr>
</tbody>
</table>
Acute pain management outline in chemically dependent

- Culturally competent care.
- Pharmacologic
  - Non opioids, opioids and adjuvants
- Non-pharmacologic
  - PT, OT, psycho-social-spiritual techniques, surgery
- Treat underlying cause.
- Patient education and engagement.
- Initiate addiction treatment.
Opioids of choice in acute pain management of chemically dependent

- Chemically dependent (non-opioid)
  - Can use any opioid, avoid demerol
  - Buprenorphine if high risk or becomes opioid seeking.

- Chemically dependent (Opioid)
  - Buprenorphine preferable
  - Can also use other opioids, avoid demerol
Acute pain mx in chemically dependent pts on opioid maintenance; choice of opioids.

- **If on methadone**
  - Add another short acting opioid

- **If on suboxone**
  - If short acting opioid is required, stop suboxone except if tramadol or buprenorphine.
Acute pain mx in opioid dependent. Dose and duration of opioid use

General rule of $1/3^{rd}$

- Give $1/3^{rd}$ more than the dose for non dependent
- Give $1/3^{rd}$ longer than for non dependent
Chronic malignant pain management in chemically dependent patients

Treat essentially as non-opioid dependent particularly if prognosis is limited.
Chronic non-malignant pain management outline in chemically dependent

- Culturally competent care.
- Pharmacologic
  - Non – opioid, opioid, adjuvant
- Non- pharmacologic
  - PT, OT, Psycho-social-spiritual techniques, surgery
- Treat underlying cause
- Treat addiction
- Treat psychiatry comorbidity
- Monitor closely
Opioids of choice in chronic non-malignant pain management in chemically dependent patients

Non- opioid dependent

- Methadone, Fentanyl patch, Ms contin and other long acting morphine, Oxycontin, Tramadol.

Opioid dependent

- Prefable to use opioid only within an opioid maintenance program – methadone, suboxone.
Methadone

**Advantages**
- Nociceptive and neuropathic pain
- In cases of opioid induced hyperalgesia and allodynia
- Opioid rotation
- Less euphoria
- Cheap

**Disadvantages**
- Increased fatality
- Dichotomy between elimination half-life and analgesia
- Interpatient variability in equianalgesic dose
- Drug – drug interactions
- QT prolongation (consider recent guidelines on monitoring)
Cultural competency

- Respect everyone and expect respect in return.
- Do not stereotype persons.
- Treat others the way you will like to be treated.
- Do not be paternalistic.
- Be aware of your bias and how they may affect your actions.
- Err on the side of helping individuals rather than the system.
- See the divine in everyone.
Take home message

- Addiction is a primary disease
- Treat addiction and pain at the same time
- Use appropriate multimodal and multidisciplinary approach
- Identify locally available addiction treatment resources and develop comfort with office management
- Develop and build on universal skills to provide culturally competent care.
Thank you