

Chronic Pain and OUD

Carolyn Warner-Greer MD

BOWEN
CENTER

Impact

- Chronic Pain- >3-6 months
- 50.2 million (21%) of all adult's report CP
 - 10% report moderate to severe functional limitations
 - As high as 40% in older adults
 - 6% of children report CP

Impact

- 2010-\$560 lost due to CP (wages, medical care)
- Psychosocial impacts
- Addiction impacts

Impact

- 2.5 million patients with OUD
- 66% report significant chronic pain
 - Most report development of CPP AFTER SUD developed
 - MMT>BUP for severe chronic pain
- We tend to emphasize addiction recovery and not pain

Combined Approach

- Addiction treatment and biopsychosocial approach to chronic pain complement each other.
- Body
- Spirit
- Mind
- Social

Myths of Treating CP and OUD

- Report of pain=drug seeking
- OAT treats pain
- Co-occurring mental illness vs. CP

Types of Chronic Pain

- Lower EXT-44%
- Back-41%
- Upper EXT-31%
- HA-11%

Goal of Treatment

- Minimize suffering
- Optimize function
- Reach recovery goals (abstinence is not the only goal)

THREE MAIN TYPES OF PATHOPHYSIOLOGY can be considered to result in chronic pain¹

Pain related to
*damage of somatic or
visceral tissue*, due to
trauma or inflammation

NOCICEPTIVE PAIN

Examples:
Rheumatoid arthritis,
osteoarthritis,
gout

Pain related to
*damage of peripheral
or central nerves*

NEUROPATHIC PAIN

Examples:
Painful diabetic peripheral
neuropathy, postherpetic
neuralgia

Pain *without
identifiable nerve or
tissue damage*, hypothesized
to result from persistent neuronal
dysregulation—may be called

SENSORY HYPERSENSITIVITY

Example:
Fibromyalgia

More than 1 type of pain may be present in a given patient

Nociceptive Pain

- Somatic or visceral tissue
- Trauma (structural) or inflammation
- EX:
 - Arthritis
 - Gout
 - Inflammatory Bowel Disease
 - Back Pain with identified structure pathology
 - Sickle Cell Disease

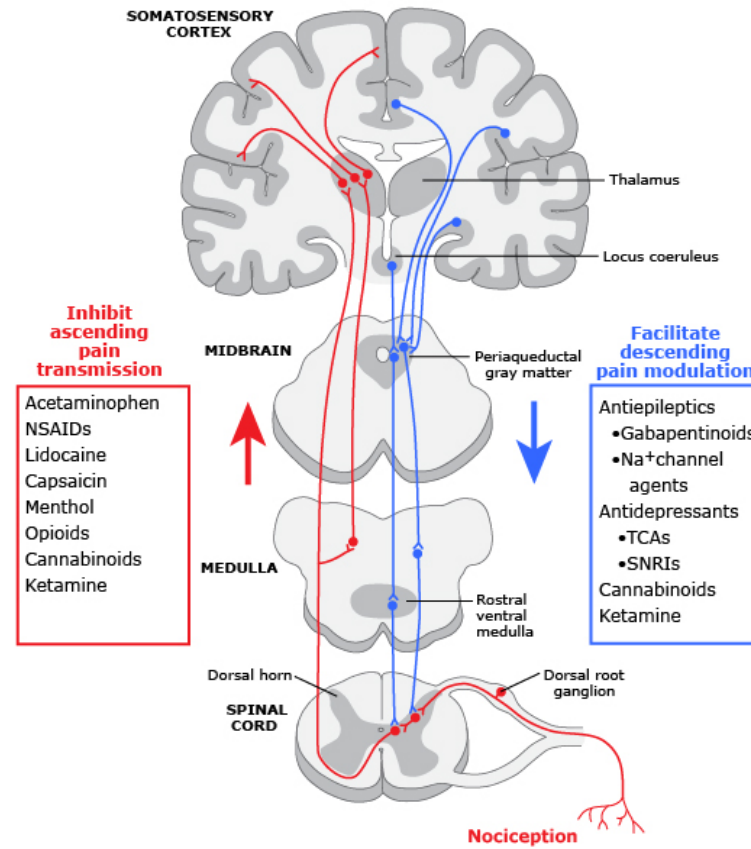
Neuropathic Pain

- Damage to peripheral or central nerves
- EX
 - Neuropathies (PHN, DPN)
 - Lumbar or cervical radiculopathy
 - Stenosis
 - MS
 - CVA

Central Sensitization

- Sensory hypersensitivity
- No identifiable tissue or nerve injury
- Result of persistent neuronal dysregulation
- EX:
 - FM
 - IBS
 - Tension HA
 - Back and neck pain without structural abnormalities

Pain pathways^[1-3]



NSAIDs: nonsteroidal antiinflammatory drugs; TCAs: tricyclic antidepressants; SNRIs: serotonin-norepinephrine reuptake inhibitors.

References:

1. Martyn J, Mao J, Bittner EA. Opioid Tolerance in Critical Illness. *N Engl J Med* 2019; 380:365.
2. Chen L, Michalsen A. Management of chronic pain using complementary and integrative medicine. *BMJ* 2017; 357:j1284.
3. Al-Hasani R, Bruchas MR. Molecular mechanisms of opioid receptor-dependent signaling and behavior. *Anesthesiology* 2011; 115:1363.

Risk Factors for CP

- Biologic
- Psychological
- Social
- SUD
- Preexisting widespread pain (FM)
- Multiple failed interventions
- Prolonged exposure to opioids

Evaluation

- Past medical history
- Past surgical history

- Review Of Systems
- Family History
- Social History

- Psychiatric Co-Morbidity

Pain Scales

- NRS-most common
- PEG-3
 - Pain
 - Enjoyment
 - General Activity

Imaging

Interventional Pain Referral

These patients often have these characteristics:

- •Localized pain with anatomic correlates (imaging, physical exam)
- •Pain not responsive to initial conservative care (ie, treatment that is potentially of equal or more benefit and less risk)
- •Distress and mood reasonably well controlled
- •Desire to avoid surgery
- •Appropriate expectations

Complex Pain

- Persistent pain that significantly impacts function, quality of life, anxiety, and/or depression that has not responded to management by the treating primary or specialty care provider.
- • Persistent pain that cannot be explained and requires treatment.
- • Pain that may be appropriate for interventional treatment.
- • High-risk or complex pain-related pharmacology or polypharmacy (high dose opioids, sedatives, multiple agents).
- • Persistent neuropathic pain that has not responded to first-line treatments.
- • Need for multidimensional care (medical management, rehabilitation, mental health treatment).

Treatment

- Set Patient Expectations
 - Typical reduction in pain is 30%, not 100%
 - Empathy
 - Affirmation
 - Nocebo effect
- Patient education

Resources for Patients

- [American Chronic Pain Association resource guide and tools](#)
- • [University of Michigan Fibro Guide self care modules](#)
- • [US Department of Veterans Affairs Chronic Pain resources](#)
- • [TED-Ed Talks: "How does your brain respond to pain?", "Understanding pain in less than five minutes and what to do about it!"](#)
- • [UK Patient-author guidebook for pain self-management and resources](#)
- • [US Pain Foundation Patient Resources](#)
- • [Australian Pain Association Resources](#)
- • [University of Washington Education Resources for Patients with Chronic Pain](#)

Sleep

- Nonpharmacological
 - Sleep hygiene
 - Stimulus control
 - CBT-I Coach
- Pharmacological
 - Melatonin
 - TCA

Nonpharmacological

- Physical Therapy
 - Fear avoidance
 - Deconditioning
- Therapeutic Exercise
- Stretching

Top Ten Physical Activities for CP

- Walking Outdoors (sun+exercise)
- Stretching (reduce pain due to muscle tension)
- Swim (low impact)
- Yoga (mindfulness and stretching)
- Tai Chi
- Strength Training (low weight, isometrics)
- Dance (reduce fear of movement)

Top Ten Physical Activities for CP

- Stationary Bike
- Walking on Treadmill/in Pool
- Sex (endorphins, cardiovascular)

CBT for OUD and CP

- Barry, et al. Drug and Alcohol Dependence, Jan 2019
 - CBT group for OUD and CP in OTP
 - Excellent attendance (>90% attended >80% sessions)
 - Reduction in non-prescribed opioid use
 - Improved retention in treatment
 - PEG-3 scores slightly reduced

Psychological

- CBT
- Mind-Body Therapy

Complementary and integrative health therapies

- Spinal manipulation
- Acupuncture
- Dietary Interventions

Physical Modalities

- TENS
- Transcranial neurostimulation
- Occipital nerve stimulation

Pharmological

- Nociceptive
 - NSAIDs
 - Oral
 - Topical
 - Not helpful if no inflammation
 - Acetaminophen
 - Limited evidence for chronic pain
 - Hepatotoxicity

Pharmacological

- Neuropathic Pain
 - First Line-AED, antidepressants
 - Second Line-topical
- Specific Conditions
 - Trigeminal Neuralgia-Carbamazepine , Oxcarbazepine
 - Postherpetic Neuralgia-Gabapentinoids, TCA
 - Fibromyalgia-Duloxetine, Milnacipran

Central Sensitization

- Antidepressants
- Antiseizure medication

Non-Opioid Analgesics

- Diclofenac (Voltaren)
- Etodolac (Lodine)
- Idomethacin
- Meloxicam (Mobic)
- Ibuprofen
- Naproxen
- Aspirin
- Celecoxib (Celebrex)

Antidepressants

- Not indicated as first line treatment for any chronic pain
- No evidence for SSRI in musculoskeletal pain
- Neuropathic pain NNT 3.6-6.4 (50% relief)
- “Failure” usually associated with too low dose/too short duration
 - TCA-6-12 weeks with 2 weeks at highest dose
- No FDA indications but widely used

Co-occurring depression and CP

- Pain and depression frequently co exist: 30 to 50% Co-Occur
- Pain is a strong predictor of onset and persistence of depression
- Depression is a strong predictor of pain, esp. chronic pain
- Relative to people with no pain, odds ratio for depression 1.8 with single site pain, and 3.7 with multisite pain [Kroenke et al., 2009]
- Baseline depression also the strongest independent predictor of subsequent pain at 3 months

Co-occurring anxiety and CP

- 35% of those with chronic arthritic pain have an anxiety disorder [vs 17% in general population] [NCS, 2013]
- Similar prevalence in patients with migraine and chronic back pain
- People w back or neck pain 2 - 3x more likely to have had Panic Disorder, Social Anxiety or Agoraphobia in past year
- People with back or neck pain 3- 4x more likely to have had past year PTSD and GAD
- Patients with anxiety disorders 2-3x more likely to have a painful condition of any kind [Sareen et al., 2005]

TCA

- Amitriptyline-most sedating
- Nortriptyline-less sedating, less anticholinergic effects

SNRI

- Venlafaxine (Effexor)
- Duloxetine (Cymbalta)

Antiepileptics

- Gabapentin
- Pregabalin (Lyrica)
- Carbamazepine (Tegretol)
- Others

Other Adjunctive Medications

- Topical Agents
 - Transdermal NSAID
 - Topical lidocaine
 - Capsaicin Cream
- Cannabis/Cannabinoids

Not Recommended

- Muscle relaxants
 - Methocarbamol (Robaxin)
 - Carisprodol (Soma)

Opioids

- Stay tuned-June 1, 2022
- Tramadol
 - Weak mu receptor activity and SNRI/SSRI activity
 - “I like to think of tramadol as what would happen if codeine and Prozac had a baby, and that baby grew into a sullen, unpredictable teenager who wore only black and kicked puppies and set fires...”
 - Theoretical precipitated withdrawal with methadone

CDC MMWR Nov 2022

- Follow up to CDC MMWR 2016 re: Prescribing OPI for CNCP
- Emphasis:
 - Guidelines not meant to replace patient centered care
 - Intended to improve communication between clinicians and patients about the benefits and risks of pain treatments, including opioid therapy
 - Improve the effectiveness and safety of pain treatment
 - Mitigate pain; improve function and quality of life for patients with pain
 - Reduce risks associated with opioid pain therapy, including opioid use disorder, overdose, and death.

CDC Revised Guidelines

- Data reviewed showing racial and socioeconomic disparities for treatment of all pain.

- Although not the intent of the 2016 CDC Opioid Prescribing Guideline, design and implementation of new laws, regulations, and policies also appeared to reflect its recommendations.
- Some state Medicaid programs have used the guideline and other resources to promote nonopioid options for chronic pain management.
- Approximately half of all states have passed legislation limiting initial opioid prescriptions for acute pain to a ≤ 7 -day supply
- At least 17 states have passed laws requiring or recommending the coprescription of naloxone in the presence of overdose risk factors, such as high dosages of opioids or concomitant opioid pain medications and benzodiazepines (65).

- Overall rate of prescription opioid misuse has dropped since 2016.
- However: reasons given for misuse of prescription opioids
 - 64%-to relieve physical pain
 - 11.1%-to feel good
 - 2.3%-to address opioid withdrawal SX

Patients and Caregivers

- Significant part of recommendations reflect public comment period
- Emphasis on shared decision making
- Reduction in absolute dosage suggestions and instead, ongoing evaluation of risks vs. benefits

Recommendations

- <https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm>
- 12 Recommendations addressing:
 - Determining whether or not to introduce opioids for chronic pain
 - Selecting opioids and determining opioid doses
 - Determining whether, when and how to taper opioids
 - Deciding duration of initial opioid prescription and conducting follow up
 - Assessing risk and addressing potential harms of opioid use

OUD Treatment with MTD/BUP

- Split dose
 - Bimodal effect of methadone/buprenorphine
- Improvement in Pain with MMT/OBOT is associated with retention in treatment
- NIH HEAL (Help End Addiction Long Term)
 - Multiple research initiatives
 - IMPOWR (Innovative Management for chronic Pain and Whole Recovery)
 - Stigma in Pain Management and OUD

- DiMeola, et al. 4/2022 JAM
 - **Coping with Pain**, an intervention based on cognitive-behavioral therapy
 - **Wii-Covery**, an exergame intervention to facilitate exercise
 - **Juggling Group**, an intervention to promote social inclusion and reduce stress. We examined pre-post session changes in pain and mood associated with group attendance.
- Acute reductions in current **pain** intensity, anxiety, depression, and stress, and acute increases in current energy and happiness. Attendance at Coping with **Pain** and Juggling Group was also associated with acute increases in compassion.

End Points

- Complex patients
- Empathy and Compassion