Minimizing Pills and Maximizing Skills: Achieving Successful Opioid Cessation in Chronic Pain

Ravi Prasad, PhD

Disclosures

- Nothing to disclose
Learning Objectives

- Review current evidence based approaches to opioid tapering in chronic noncancer pain
- Discuss the benefits of opioid tapering in terms of improvements in pain, function, and mood
- Identify the difference between the terms addiction, abuse, dependence, and tolerance
- Explain the role of behavioral interventions in the management of pain and the data supporting their use

Does pain serve any function or purpose?
Is all pain the same?

**Acute Pain**
- **Hurt = Harm**
  - Avoidance decreases damage
- **Etiology:**
  - Clear pathway
  - Often single cause
- **Treatment Course**
  - Fixed end point
  - Immobilization often essential for recovery
  - Medications

**Chronic Pain**
- **Hurt ≠ Harm**
  - Fear-avoidance cycle
- **Etiology:**
  - Many unknowns
  - Multifactorial
- **Treatment Course**
  - No fixed end point
  - Immobilization can worsen condition
  - Medications: Caution
Management Approach to Pain

- Similar to other chronic health conditions lacking a cure
- Focus on quality of life & functioning

Example: Diabetes

- Regulate diet
- Check blood sugars
- Exercise regularly
- Take insulin/medications
- Monitor wounds
### Chronic Pain Management

- **Medical optimization**
  - Physician, NP, PA

- **Physical reconditioning**
  - Rehabilitation provider (PT, OT)

- **Behavioral/lifestyle modification**
  - Pain psychologist

### Interdisciplinary Management

<table>
<thead>
<tr>
<th>Diabetes</th>
<th>Chronic Pain</th>
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<td>Regulate diet</td>
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Biomedical vs Biopsychosocial

Biomedical vs Biopsychosocial (cont’d)
Interdisciplinary Management

Primary goal:
Help patients learn to live with pain

Learn to Live with Pain?

LIFE
Family Friends Work School
Sports Leisure Self-care Music
Vacations Hobbies Dining
Entertainment Socializing
Cooking Cleaning Errands
Learn to Live with Pain? (cont’d)

LIFE
Family Friends Work School
Sports Leisure Self-care Music
Vacations Hobbies Dining
Entertainment Socializing
Cooking Cleaning Errands

Learn to Live with Pain? (cont’d)

LIFE
Decreased activity levels
Physical deconditioning
Increased emotional distress
Interpersonal problems
Sleep disturbances
Increased number of doctor office visits
Pain
Yes, Learn to Live with Pain!

LIFE
Family Friends Work School
Sports Leisure Self-care Music
Vacations Hobbies Dining
Entertainment Socializing
Cooking Cleaning Errands

Chronic Pain Management Dilemma

- Medical optimization
  - Physician, NP, PA

- Physical reconditioning
  - Rehabilitation provider (PT, OT)

- Behavioral/lifestyle modification
  - Pain Psychologist
**Medications**

- Physical dependence
- Psychological dependence
- Tolerance
- Abuse
- Addiction

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**Prescription Opioids**

- Approximately 3 million Americans meet criteria for opioid abuse or dependence (4x increase since 1999)
- 60% of overdose deaths in the US (2014) were attributed to opioids
- 80% of new heroin users initiated SUD by misusing prescribed medications
- US Department of Health and Human Services (2016). HHS research on pain treatment and opioid misuse and overdose: translating science into action
### Prescription Opioids: A Day in the US

- 5,753 individuals misused rx opioids for the first time
- 116 opioid-related fatalities
- $1.38 billion in economic costs

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### Prescription Opioids

- Opioid crisis declared a public health emergency
- HHS 5-point strategy
  - Better addiction prevention, treatment, and recovery
  - Better data
  - Better pain management (crisis = opportunity)
  - Better targeting of overdose reversing drugs
  - Better research

- US Department of Health and Human Services

Common Pain Psychology Curriculum Components

- Overview of pain
- Pacing of activities
- Pain & stress physiology
- Relaxation training
- Sleep hygiene

Common Pain Psychology Curriculum Components (cont’d)

- Identifying environmental stressors (work & home)
- Development of stress management techniques (eg, cognitive restructuring)
- Assertiveness/communication skills development
- Flare contingency planning
Deconstructing Pain Psychology

- Relaxation training
- The role of cognitive processes

Stress, the Nervous System, and Pain

- Nervous System
  - Central Nervous System
    - Brain
    - Spinal Cord
  - Peripheral Nervous System
  - Somatic Nervous System
  - Autonomic Nervous System
    - Sympathetic Nervous System: Activates the body to deal with stressful situations
    - Parasympathetic Nervous System: Helps the body return to a calmer state
Stress, the Nervous System, and Pain (cont’d)

**Sympathetic activation**
- Increased heart rate
- Increased blood pressure
- Increased muscle tension
- Constriction of blood vessels
- Release of stress hormones
- Pupil dilation
- Change in breathing patterns
- Additional systemic changes

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Stress, the Nervous System, and Pain (cont’d)

**Parasympathetic activation**
- Decreased heart rate
- Decreased blood pressure
- Decreased muscle tension
- Expansion of blood vessels
- Discontinuation of stress hormone release
- Pupil constriction
- Change in breathing patterns
- Additional systemic changes
Stress, the Nervous System, and Pain (cont’d)

Pain

Nervous System Activation

Stress, the Nervous System, and Pain (cont’d)

Pain

Nervous System Activation
Stress, the Nervous System, and Pain (cont’d)

Nervous System Activation

Pain

Stress, the Nervous System, and Pain (cont’d)

Nervous System Activation

Pain

Anxiety
Stress, the Nervous System, and Pain (cont’d)

Nervous System Activation

Pain → Anger → Anxiety

Stress, the Nervous System, and Pain (cont’d)

Nervous System Activation

Pain → Guilt → Anger → Anxiety
Stress, the Nervous System, and Pain (cont’d)

Pain

Sadness  Guilt  Anger  Anxiety

Nervous System Activation

Stress, the Nervous System, and Pain (cont’d)

Diet  Sleep  Financial Strain  Relationship Issues

Pain

Sadness  Guilt  Anger  Anxiety

Nervous System Activation
Relaxation Training

- Breathing exercises
  - Parasympathetic activity
  - Distraction

Stress, the Nervous System, and Pain
Stress, the Nervous System, and Pain

- Diet
- Sleep
- Financial Strain
- Pain
- Cognitive Processes
- Sadness
- Guilt
- Anger
- Anxiety
- Nervous System Activation
- Relationship Issues

The Role of Cognitions

Situation ➔ Consequences
- Emotional
- Behavioral
- Physical
The Role of Cognitions (cont’d)

- Thought processes are often rooted in our core perception of ourselves and our roles in this world
- Usually shaped by early experiences
- Much of our maladaptive behaviors are rooted in dysfunctional thought patterns
- Can take a significant amount of time and work to alter our automatic thought processes
Catastrophization

- Exaggerated perception of a situation being worse than it actually is
  - Magnification
  - Rumination
  - Helplessness

Catastrophization (cont’d)

- Implications
  - Pain expectations → affective distress
  - Somatic hypervigilance/attention → increased pain perception
  - Activity reduction coping strategy → fear-avoidance cycle
  - Persistent symptoms
  - Disability
The Role of Cognitions

Cognitive Restructuring

• Is this helpful?

• Is this accurate?
### Cognitive Restructuring (cont’d)

<table>
<thead>
<tr>
<th>Previous Thoughts</th>
<th>Modify Thoughts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• There is nothing I can do to control this</td>
<td>• Are these statements helpful?</td>
</tr>
<tr>
<td>• Life is terrible</td>
<td>• Are these statements accurate?</td>
</tr>
<tr>
<td>• Nothing will get done today</td>
<td></td>
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**Modified Thoughts**

<table>
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<th>Modified Thoughts</th>
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<tbody>
<tr>
<td>• There is nothing I can do to control this</td>
<td>• I can practice self-management skills</td>
</tr>
<tr>
<td>• Life is terrible</td>
<td>• Life may feel terrible now, but I know this flare will end</td>
</tr>
<tr>
<td>• Nothing will get done today</td>
<td>• I don’t know what the rest of the day will be like, but I will make</td>
</tr>
<tr>
<td></td>
<td>the most of it by pacing</td>
</tr>
</tbody>
</table>
The Role of Cognitions

Pain

- I can practice self mgmt
- This moment will pass
- The day is not set

• ↓ Sadness
• ↓ Anxiety
• ↓ Anger
• Pace
• Engage
• ↓ NS activation

Empirically Validated Treatment: Self-Management Education

- Lambeek, Van Mechelen, Knol, Loisel, Anema (2010)
- Linton & Ryberg (2001)
- Flor, Fydrich, Turk (1992)
Empirically Validated Treatment

  - Randomized control trial (n=213)
  - All patients received regular primary care tx + minimal treatment (information pack, pamphlet) or 6-session CBT treatment
  - Assessments administered at pretest and 12-month follow-up
  - Risk for developing long-term sick absence decreased 9x in CBT group
  - CBT participants had decreased medical utilization compared to increase in other groups

Empirically Validated Treatment (cont’d)

- Linton & Nordin (2006)
  - 5-year follow-up of Linton & Andersson (2000) study, also used supplemental records from the National Insurance Authority
  - 97% completed follow-up questionnaire
  - CBT group had significantly less pain, higher activity, better quality of life, and better general health compared to minimal treatment group
  - Risk of long-term sick leave 3x higher in the non-CBT group
  - CBT group had significantly less lost productivity costs
Empirically Validated Treatment (cont’d)


  Patients deemed HR for development of chronic disability were randomly assigned to an early intervention FR group (n=22) or a nonintervention group (n=48). Low risk nonintervention subjects also evaluated (n=54)

  Patients tracked at 3 month intervals over the course of a year

  HR patients in the early intervention group had significantly lower rates of healthcare utilization, medication use, and self-report pain variables

Empirically Validated Treatment (cont’d)


  - HR nonintervention group displayed more symptoms of chronic pain disability compared to low risk subjects

  - Greater cost savings associated with early intervention ($12,721) vs no intervention group ($21,843). Cost variables included healthcare visits, medication, lost wages, early intervention program cost
Cochrane Review of Multidisciplinary Programs for Pain

- 41 studies, 6858 participants
- LBP > 3 months with some prior treatment
- MDP vs unimodal care focused on physical factors, standard care with GP
- Moderate quality evidence for improvements in pain and daily functioning
- Increased likelihood of RTW in 6-12 months


Stanford Comprehensive Interdisciplinary Pain Program (SCIPP)

- Typical patient
- Pain conditions accepted
- Admission criteria
Interdisciplinary Treatment

- Physical therapy
- Occupational therapy
- Medication optimization (cocktail)
- Lifestyle/behavioral modification

Scheduled Activities

- AM rounds
- Physical therapy
- Occupational therapy
- Pain coping skills class
- Individual provider visits
Unscheduled Activities

- Independent practice
- Walking
- Activity tracking log

Behaviors Reinforced

- Consistent across all team members, including nursing
- Application of self-management skills
- Increased activity levels
- Focus on functioning
Behaviors not Reinforced

- Pain behavior
- Medication focus
- Somatic complaints
- Inactivity

SCIPP Outcomes

- n = 44 (19 male, 25 female)
- Minimum of 1 pain diagnosis
- Assessments:
  - Center for Epidemiologic Study of Diseases—Depression Scale (CESD)
  - McGill Pain Questionnaire (MPQ)
  - McGill Pain Questionnaire-Visual-Analog Scale (MPQ-VAS)
  - Profile of Mood States (POMS)
- Administered within 24 hours of admission and discharge
Total CESD score was significantly lower at discharge than at admission (p<.001).

Significant reductions were detected on the MPQ sum score (p=.005) and each of the MPQ subscales – PRI (single item pain rating index; p=.007) and Affective (p=.01).
Average pain as assessed by the MPQ-VAS was also significantly lower upon discharge than at admission (p<.001).
SCIIPP Outcomes

- Significant changes on
  - CESD (p<.001)
  - MPQ-VAS average pain (p<.001)
  - MPQ summary score (p=.005)
  - MPQ pain rating index (p=.007)
  - MPQ affective score (p=.01)
  - POMS Tension-Anxiety (p=.005)
  - POMS Depression-Dejection (p=.001)
  - POMS Vigor-Activity (p=.005)
  - POMS Fatigue-Inertia (p=.002)
  - POMS Confusion-Bewilderment (p=.003)
  - POMS Total Mood Disturbance (p=.01)

- No significant difference on
  - POMS Anger-Hostility

Other Literature Findings

- 373 CPRP participants (3 week)

- ~57% on opioids at admission

- Assessments at admission, discharge, and 6-month (70% return rate; pain severity, depression, psychosocial functioning, health status, pain catastrophizing)

- Pain severity and depression higher in opioid users at admission

- Significant improvement on all variables at discharge, 6-month follow-up regardless of opioid status

Other Literature Findings (cont’d)

- 705 (600 completed) outpatient interdisciplinary program participants

- Opioid group tapered with cocktail

- Opioid group improved same as more than non-opioid group (pain severity, catastrophizing, sleep, treatment satisfaction, pain-related functioning domains)


Beyond CBT

- Acceptance and commitment therapy (ACT)

- Biofeedback training

- Mindfulness-based interventions

- Emotional awareness and expression therapy
Outpatient Application

- Participation in CBT-based coping skills class
- Concurrent medication reduction
- Consider joint psych-MD appointments

Addressing Chronic Pain in the Context of Substance Use Disorders

- Medication reduction can improve functional outcomes
- Interdisciplinary care enhances results and can lead to decreased medical utilization

Lambeek, Van Mechelen, Knol, Loisel, Anema (2010); Flor, Fydrich, Turk (1992)
Buchner, Zaligned-Hinguranage, Schilttenwolf, Neubauer (2006); Linton & Ryberg (2001)
Risk Evaluation and Mitigation Strategy (REMS)

- Safety education for prescribers & patients

- Multiple possibilities
  - Prescription Drug Monitoring Programs (PDMPs)
  - UDS
  - Risk assessment tools (ORT, SOAPP, etc)
  - Individual evaluation(s)
  - Visit frequency
  - Treatment plan components

Psychology in REMS

- Guidance re: creation

- Service delivery
Addressing Chronic Pain in the Context of Substance Use Disorders

- Medication Assisted Treatment (MAT): combination of pharmacologic treatment AND behavioral interventions

- Employ use of a biopsychosocial formulation of the patient’s predicament vs focusing solely on a biomedical model

- Emphasize focus on function vs pain elimination: Set functional goals (resumption of normal activities, RTW) and use activity tracking sheets

Questions?

rprasad@stanford.edu