Non-Opioid Pain Management

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Conflict of Interest Disclosure

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Topic Summary

• Overview
• The Pain Puzzle
• What does successful pain treatment look like?
• Treatment Approaches
Overview


  • Acute & Chronic Pain Crisis in obtaining adequate care.
  • Resulting in profound physical, emotional and societal costs.
According to the CDC

- Prevalence of Chronic Pain and High-Impact Chronic Pain Among Adults – U.S. 2016
  - 50 million adults have chronic daily pain.
  - 19.6 million adults experiencing high-impact chronic pain that interferes with ADLs.
  - U.S. cost of pain $560 - $635 billion yearly.
  - Opioid crisis resulted in high overdose deaths.
Pain Puzzle

• Chronic pain is:
• Rarely purely physical or solely psychological
• Pain is always a personal experience
• Responded to differently depending on the person’s biological, psychological, social, educational and cultural factors (life experiences)
• Not measurable by any objective test
Revised IASP Definition of Pain (2020)

• OLD (1979): An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

• NEW (2020): An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage.
What Does Successful Pain Treatment Look Like?

• Individualized patient-centered care
• Treatment based on outcomes
• Multimodal and multidisciplinary
• Establishing a therapeutic alliance
• Goal = Educated, self-directed patient (locus of control patient centered)
• Manageable pain; return to function
• Return to daily life and work activities
Evidence-based strategies for Non-opioid Pain Care

- Opioids are of questionable benefit in acute and chronic pain management.\textsuperscript{2, 6}

- Consensus: Time for pain medicine to shift away from reliance on opioids, ineffective procedures and surgeries toward comprehensive pain management.\textsuperscript{2}
Biopsychosocial Model of Pain Management
Psychosocial & Delayed Recovery Factors are the “Elephant in the Room”

Psychosocial Factors of Disability
Psychosocial & Delayed Recovery Factors

- IW ignorance of WC system, false beliefs and unrealistic expectations of medical care
- Fear of return to work after injury
- Fear Avoidance behavior
- Inability to cope & catastrophic thinking
- Low recovery motivation
- Financial: distressed due to loss of income
- Residual effects of childhood abuse (ACE)
- Psychiatric comorbidity
Pain Management Toolbox

Acute and Chronic Pain Management: Individualized, Multimodal, Multidisciplinary

- Medication
- Restorative Therapies
- Interventional Procedures
- Behavioral Health Approaches
- Complementary & Integrative Health
Medications

- (Opioids)
- Non-opioid analgesics
  - acetaminophen & NSAIDs
- Antidepressants
- Sedatives & tranquilizers
- Anticonvulsants
Opioid Analgesics

• When is an opioid appropriate?
  • Acute, catastrophic injury/trauma
  • Post-surgery
  • When non-opioid analgesics unsafe
  • When there is efficacy
    • Increased function
    • Reduced pain
    • Manageable/No untoward effects
Example: Failed Back Surgery Syndrome

- John Smith
  - 75-year-old retired injured worker
  - Status post 4 remote low back surgeries with residual arachnoiditis and chronic pain
  - Negative history for delayed recovery factors.
  - Tends to his small farm
  - Oxycodone 15 mg qid (90 MED)
  - UR denial
  - Dysfunction and depression
Medications: General Comments

- Patient specific individualized care
- Past medication history is critical
  - Including Rx, OTC & herbals
  - Don’t assume prior drug “failure” necessarily means a non-useful drug
- When to use a drug?
  - Risk v. Benefit
- Start Low & Go Slow
- Watch out for prescribing drug cascade
- Know when to reduce or discontinue
Non-Opioid Analgesics

- acetaminophen & NSAIDs (including ASA)
  - Effective but not benign
  - Available OTC & >1000 combination drug Rx
Acetaminophen

• Effective in mild-moderate pain

• Risks:
  • Dose dependent liver toxicity
  • In many prescribed and OTC drugs

• Mitigating risks:
  • Avoid in certain patients
  • Use lowest effective dose; DC appropriately
  • Laboratory screening for liver function
  • Patient education
  • Consider alternatives
NSAIDs

• Effective in mild-moderate pain especially for inflammatory pain conditions.

• Risks:
  • Can be associated with gastritis, gastric ulcers, and GI bleeding (without symptomatic warning, renal insufficiency, hypertension and cardiac-related events.
  • In many prescribed and OTC drugs.

• Mitigating risks:
  • Avoid in certain patients
  • Use lowest effective dose; DC when appropriate
  • Laboratory screening for renal function
  • Patient education
  • Consider alternatives
Anticonvulsants

- Carbamazepine (Tegretol®)
- Gabapentin (Neurontin®)
- Pregabalin (Lyrica®)
- Topiramate (Topamax®)

• Commonly used to treat pain syndromes including postherpetic neuralgia, peripheral neuropathy, migraine and neuropathic pain.
• Also used for perioperative pain.
• Risks:
  • Sedation
  • Misuse
  • Taper to discontinue
Antidepressants

- Tricyclic antidepressants (TCAs)
  - (i.e., amitriptyline)

- Serotonin norepinephrine reuptake inhibitors (SNRIs)
  - (i.e., duloxetine)

- Selective serotonin reuptake inhibitors (SSRIs)
  - (i.e., fluoxetine, sertraline, citalopram, and paroxetine)
Musculoskeletal Agents

- Muscle Relaxants
  - baclofen (Lioresal)
  - tizanidine (Zanaflex)
  - cyclobenzaprine (Flexeril)
  - Carisoprodol (Soma) - not recommended

- Risks:
  - Sedation
  - Baclofen should not be withdrawn abruptly
Anti-Anxiety Medications

• Anxiety related to acute or fluctuating pain
• Comorbid anxiety disorders
• Benzodiazepines
  • May be useful short term in acute setting
  • Avoid for regular or long-term use
• SSRIs and SNRIs may also help manage the anxiety associated with co-morbid depression
Topical & Transdermal Treatments

- Topical agents work locally and must be applied directly over the painful area.
  - diclofenac and lidocaine.
- Transdermal drugs have effects throughout the body and work when applied away from the area of pain.
  - fentanyl, buprenorphine, and clonidine
Other Treatments

• NMDA Inhibitors (Including Ketamine)
• Low-Dose Naltrexone (LDN)
• Alpha Adrenergic Antagonists
  • Clonidine (Catapres®, Catapres-TTS® patch)
Individualized, Multimodal, Multidisciplinary Pain Management

- Medications (Opioid and Non-opioid)
- Restorative Therapies
- Interventional Procedures
- Behavioral Health Approaches
- Complementary & Integrative Health
• Passive approaches
  • Modalities
    • Heat (thermotherapy)
    • Hot packs
    • Ultrasound
    • Paraffin (wax)
    • Cold (cryotherapy)
  • Traction
  • Acupuncture
  • Manipulation
  • Massage
  • Myofascial release
  • Electrical stimulation
  • TENS

Acute to Subacute Physical Pain Treatment Approaches
Acute to Subacute to Chronic Physical Pain Treatment Approaches

- Active & Functional
  - Body part specific treatment
  - Therapeutic exercise
    - Movement better than rest
  - Improved body mechanics
  - Spine stabilization, stretching & strengthening
  - Work conditioning
  - Self-directed HEP (home exercise program)
Interventional

Individualized, Multimodal, Multidisciplinary Pain Management

- Medications (Opioid and Non-opioid)
- Restorative Therapies
- Interventional Procedures
- Behavioral Health Approaches
- Complementary & Integrative Health
Interventional: Acute to Chronic

• Trigger point injections
• Intra-articular steroid joint injections
• Peripheral nerve injections
• Viscosupplementation for joint pain
• Biologic therapies for tendon and muscle injury
  • Plasma rich protein (PRP)
  • Stem cell therapies
Interventional: Chronic

- Nerve blocks & epidurals
- Facet blocks & radiofrequency ablation
- Implantable devices
  - Neuromodulation
    - Peripheral nerve stimulation (PNS)
    - Spinal cord stimulation (SCS)
    - Dorsal root stimulation (DRG)
  - Implanted drug delivery system
- Surgery
Behavioral Health Approaches

Individualized, Multimodal, Multidisciplinary Pain Management

- Medications (Opioid and Non-opioid)
- Restorative Therapies
- Interventional Procedures
- Behavioral Health Approaches
- Complementary & Integrative Health
Psychological Chronic Pain Treatment Approaches

- Cognitive behavioral therapy (CBT)
- Anger management
- Anxiety and depression reduction
- Coping strategies
- Resilience training
- Biofeedback
- Relaxation training
- Teaching stress reduction skills
- Mindfulness meditation
- Exposure to feared activities
- Hypnosis

Complementary and Integrative Health

Individualized, Multimodal, Multidisciplinary Pain Management

- Medications (Opioid and Non-opioid)
- Restorative Therapies
- Interventional Procedures
- Behavioral Health Approaches
- Complementary & Integrative Health
Complementary and Integrative Health Approaches

- Complementary approaches
- Alternative approaches
- Integrative healthcare
Complementary and Integrative Health Approaches

- Acupuncture
- Massage & Manipulative Therapies
- Mindfulness-Based Stress Reduction
- Spirituality
- Yoga
- Tai Chi

This list is not exhaustive
Functional Restoration Approaches

- Physical Restorative Therapies
- Cognitive Behavioral Therapy (CBT)
- Education and Psychosocial Focus

Medication/opioid Optimization

Occupied opiate receptors/dose

MED Dose/day
Example

- Joan Nichols is a 39-year-old RN
- Work-related CRPS of her dominant RUE
- Spends most of her day in a recliner
- ADL dependent
- QME describes her as 100% disabled
- Opt to participates in FRP
Example

- Tom Jackson is a 35-year-old police officer
- Work-related low back injury
- MRI: minor DJD
- Meds: opioid; benzodiazepine, gabapentin
- Listless, depressed, denies restorative sleep
- Opt to participates in FRP
# ACOEM Chronic Pain Guideline

## Summary of Recommendations

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<thead>
<tr>
<th>Recommended Treatment</th>
<th>Recommendation</th>
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</thead>
<tbody>
<tr>
<td>Laboratory Tests for Chronic Persistent Pain</td>
<td>Recommended</td>
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<tr>
<td>Needle EMG and Nerve Conduction Study to Diagnose</td>
<td>Recommended</td>
</tr>
<tr>
<td>FCEs For Chronic Persistent Pain</td>
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<td>Yoga for Other Chronic Persistent Pain</td>
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<td>Muscle Relaxants for Acute Exacerbations of Chronic Persistent Pain</td>
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<td>Topical NSAIDs for CPP When Target Tissue Superficial</td>
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Pearls

• First, do no harm (primum non nocere)
• Chronic pain
  • Rarely purely physical or solely psychological
  • Identify risk factors for delayed recovery
• Medications
  • Start low and go slow
  • Weigh risk benefit ratio
  • Taper and discontinue
  • Avoid opioids but don’t ignore
• The patient
  • Form a therapeutic alliance
  • Treat the whole person
  • Locus of control within patient
  • Treatment based on function/outcomes

It is available for free at


5. Growing Pains: The Shift from Opioids to Other Pain Therapies. *RxInformer Spring/Summer 2020*


Questions?

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