Chronic Pain Management: Best Science and Practice

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Disclosure Statement of Financial Interest

I have reported no relevant conflict of interests

And I do report that I am pleased to be here😊
Learning Objectives

By the end of the class – the learner will be able to:

1. Describe current issues and strategies related to the use of opiates in chronic pain management.

2. Identify and discuss examples of multimodal therapies that are effective in chronic pain management.

3. Discuss the role of each interdisciplinary team member and their applications to pain management.
Angela: my most memorable teacher
The Issues in 2015

“Divine is the task to relieve pain.”
-Hippocrates
100 Million in U.S. with Chronic Pain

- 42% with pain lasting over one year
- 33% report pain as disabling
- 63% have seen primary care physician for help

$600 Billion Annual Costs

- Healthcare expenses
- Lost income
- Lost productivity

From Scope of Pain Course – Boston University

American Academy of Pain Medicine www.painmed.org
Institute of Medicine. 2011 Relieving Pain in America. Washington DC
Opioid Sales, Deaths and Addiction
Treatment Admissions

Recent Overdose Trends

Annual drug poisoning deaths from heroin, opioids, and all other drugs

Definition of Pain (IASP and APS)

“Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”

- pain has multiple components
- impacts psychological and physical functioning
- complex experience
- not predictable
Methadone is Different

From Scope of Pain Course – Boston University

Barriers

- Lack of Accountability
- Lack of Education and Knowledge
- Lack of Assessment
- Fears of Addiction
- Fears of Respiratory Depression
- Regulatory Issues
- Healthcare Provider Attitudes
- Layman attitudes
In order to adequately manage pain, we must understand the definitions and distinctions of:

- Addiction
- Tolerance
- Physical Dependence
Addiction:

- Psychological Dependence. It is a pattern of compulsive drug use characterized by continued craving for an opioid and the need to use the opioid for effects other than pain relief.
Who is the addict?

56% opiate abusers
white males 15-45 year old

56% benzo/barbituate abusers
white women 15-50
Psychological drive (desire) to take drug (opioid) for euphoric effects

Less than 0.1% of patients using opioids of medical purposes become addicted to them

Research findings show only 4 out of nearly 12,000 patients treated with opioids for medically indicated purposes developed a problem with addiction
Tolerance Definition

**Tolerance:** increased dose required to produce the same effects when pain stimulus remains unchanged
Physical Dependence

- The occurrence of withdrawal symptoms when the opioid is suddenly stopped or an antagonist such as naloxone is given. (The withdrawal sx are usually easily suppressed with gradual withdrawal of the opioid.)
Before Assessment – there is trust and relationship

Each person is sacred
Building Trust

**Patient Issues**

Patients will assume that you don’t believe their pain complaints

Often demonstrated by exaggerating pain scores

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Building Trust

Patient Issues

Some patients with adequate pain relief believe it is not in their best interest to report pain relief.

- Fear that medication will be reduced
- Fear that physician/clinician may decrease efforts to diagnose or treat problem

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Building Trust

Clinician Strategies

- Assume patient fears you think pain is not real or not very severe
- After you take a thorough pain history…

Show empathy for patient experience

Educate patient about need for accurate pain scores to monitor therapy

Validate that you believe pain is real

Discuss factors which worsen pain and limit treatment

Believing patient’s pain complaint does not mean opioids are indicated

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Assessment and Engagement

It’s not just “what’s your number?”
Its connecting, accepting, understanding and caring and building trust ...
Words that Engage, Assess, set reasonable expectations and Care

- “I am so sorry you are so miserable”
- “Please help me understand…”
- “We are going to do everything we can to make the pain tolerable and make sure you are safe”
- “What helps you the most?”
- “Is what we are doing helping at all?”
- “We aren’t likely going to make it perfect – but we are going to keep trying to make it tolerable”
- “The best pain management happens over time and we will keep working at it and do everything we can to safely and effectively manage it.”
- “The goal today is: ___________”
- “I am going to be with you – we are connected”
Pain Assessment

- **Unidimensional pain scales**
  - Numeric rating
  - Visual analog
  - Faces scale

- **Multidimensional instruments**
  - McGill Pain Questionnaire
  - Brief Pain Inventory (BPI)
  - Pain, Enjoyment, General activity (PEG 😊) scale

**PEG Scale Assessment**

In the past week:

**Pain on average?**
- 0: No pain
- 8: As bad as you can imagine

**Pain interfered with Enjoyment of life?**
- 0: Does not interfere
- 8: Completely interferes

**Pain interfered with General activity?**
- 0: Does not interfere
- 8: Completely interferes
Multidimensional Care
It’s more than medications!

Physical
- Exercise
- Integrative Modalities
- Manual therapies
- Orthotics

Psycho-behavioral
- Cognitive behavioral/ACT
- Tx mood/trauma issues
- Address substances
- Mediation

Medication
- NSAIDS
- Anticonvulsants
- Antidepressants
- Topical agents
- Opioids
- Others

Procedural
- Nerve blocks
- Steroid injections
- TPIs
- Stimulators
- Pumps

Restore Function

Cultivate Well-being

Improve Quality of Life

Reduce Pain

From Scope of Pain Course – Boston University
The Safe and Effective Use of Opiates

- Appropriate Screening
- Informed Consent
- Formal Plan
- Provider Balance 😊
- Thoughtful Ongoing Monitoring
- Sane approach to possible addiction or diversion or other challenges to successful pain management
PPA Informed Consent

Realistic Goals

- Reduce pain, not eliminate
- Increase function (individualized and SMART goals)
  - Specific
  - Measureable
  - Action-oriented
  - Realistic
  - Time-sensitive

Potential Risks

- Side effects, physical dependence
- Drug interactions/over-sedation
- Potential for impairment e.g., driving
- Addiction, overdose
- Pregnancy and risk of Neonatal Opioid Withdrawal Syndrome
- Possible hyperalgesia (increased pain)
- Victimization by others seeking opioids

PPA Plan of Care

- Engagement in other recommended treatments
- Polices – monitoring, refills
- Permission to communicate with key others
- No illegal drug use, avoid sedative use
- Notifying provider of all other medications and drugs
- Discuss birth control, periodic monitoring for pregnancy
- Use as directed *(dose, no adulteration of pills or patches, schedule, guidance on missed doses)*
- Safe storage *(away from family, visitors, pets)*
- Safe disposal *(read product specific information for guidance)*
- No diversion, sharing or selling, protect from theft

What is your role?

Not

Implementing Universal Precautions in Pain Medicine

Use a Health-Oriented, Risk Benefit Framework

NOT...

- Is the patient good or bad?
- Does the patient deserve opioids?
- Should this patient be punished or rewarded?
- Should I trust the patient?

RATHER...

Do the benefits of opioid treatment outweigh the untoward effects and risks for this patient (or society)?

Judge the opioid treatment

NOT the patient
Office Visits

Monitoring

Six A’s

- Analgesia
- Activities
- Adverse effects
- Adherence
- Aberrant behaviors
- Affect

Also:

- Review opioid use
  - How is patient actually using prescribed opioids?
    - 24-hour inventory
- Objective information
  - Signs of medication misuse
  - PDMP
  - Urine drug tests
  - Pill counts
- Revise treatment as indicated
Patients with Past Addiction History

- Frame addiction as a challenging health issue
- Express admiration for patient’s recovery
- Acknowledge patient’s desire to “never go there” again

Increase Structure of Care

- Increase Structure of Care (care coordination and expertise)
- Intensity (frequency of visits, UDT, pill counts, other monitoring and support)
- SUPPLY of MEDICATIONS
- Supports
- Setting
- Selection
- Supervision
- TREATMENTS (less rewarding) for SUBSTANCE/MENTAL HEALTH RECOVERY
Opioids and Unrealistic Expectations

Patients often have unrealistic expectations that...

Opioids always equal chronic pain relief *therefore* more opioids equal more pain relief

Which often results in unsanctioned dose escalation or continued requests for higher doses

Need to re-educate:
- Realistic goals
- Potential severe risks and harm with opioids

Monitoring for Opioid Misuse

- **Patient questionnaire**
  - Current Opioid Misuse Measure (COMM)
    - Self-administered 17 items

- **Other strategies**
  - Pill counts (scheduled vs random)
  - Urine drug tests (scheduled vs random)
  - PDMP data

- **History from “reliable” family members**
  - Beware of family members with secondary gain for giving inaccurate information
Aberrant Medication-Taking Behaviors

Differential Diagnosis (DDx)

**Pain Relief Seeking**
- Disease progression
- Poorly opioid responsive pain
- Withdrawal mediated pain
- Opioid analgesic tolerance
- Opioid-induced hyperalgesia

**Drug Seeking**
- Addiction
- Other psychiatric diagnosis
- Criminal intent (diversion)

**Pain Relief and Drug Seeking**
- Likely most common scenario
- e.g. pain with co-morbid addiction, patient taking some for pain and diverting some for income

DDx: Pain Relief Seeking

Opioid Analgesia Tolerance

- Right shift of the dose-response curve
  - Analgesic tolerance demonstrated in animal models
  - Human studies find opioid doses stabilize long-term
  - Therefore, assume opioid analgesic tolerance is not common but may happen

- Increased dose overcomes decreased analgesia

**DDx: Pain Relief Seeking**

**Opioid-Induced Hyperalgesia**

- Enhanced pain sensitivity to same opioid dose
- Paradoxically more opioid will worsen pain
- Central and peripheral sensitization of *pronociceptive* process
- Increased dose may improve analgesia but only temporarily

Lee M et al. *Pain Physician* 2011;14:145-161
Eisenberg E et al. *J Pain Symptom Manage.* 2014
**DDx: Drug Seeking**

**Addiction**

Clinical syndrome presenting as...

- **Loss of Control**
- **Compulsive use**
- **Continued use despite harm**

Aberrant Medication Taking Behaviors (pattern and severity)

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Addiction is **NOT** the same as Physical Dependence

Concerning Behaviors for Addiction

Spectrum: **Yellow** to **Red** Flags

- Requests for increase opioid dose
- Requests for specific opioid by name, “brand name only”
- Non-adherence w/other recommended therapies (e.g., PT)
- Running out early (i.e., unsanctioned dose escalation)
- Resistance to change therapy despite AE (e.g. over-sedation)
- Deterioration in function at home and work
- Non-adherence w/monitoring (e.g. pill counts, UDT)
- Multiple “lost” or “stolen” opioid prescriptions
- Illegal activities – forging scripts, selling opioid prescription

Managing Lack or Loss of Benefit
Lack or Loss of Benefit

What are the next steps?

- Reassess factors affecting pain
- Re-attempt to treat underlying disease and co-morbidities
- Consider escalating dose as a “test”
- Consider adding or increasing adjuvant medications for synergy
- Consider adding breakthrough medications
- Consider opioid rotation
Consider Breakthrough Medication

1st CHOICE: Non-Opioid
- NSAIDS
- Acetaminophen
- Adjuvant meds

IR/SA Opioid
- Same molecule
- Different molecule

IR/SA Opioid (dual mechanism)
- Tapentadol
- Tramadol

Consider Opioid Rotation

- Switch to another opioid as means of restoring analgesic efficacy or limiting adverse effects
- Based on large intra-individual variation in response to different opioids
- Different variants of mu-opioid receptors
- Based on surveys and anecdotal evidence
- Promising but needs validation

Opioid Conversion Tables

- Derived from relative potency ratios using single-dose analgesic studies in opioid naïve pts
- Based on limited doses or range of doses
- Does not reflect clinical realities of chronic opioid administration
- Are not reliable due to individual pharmaco-genetic differences
- Most tables do NOT adjust for incomplete cross-tolerance

**Alternative Approach:**
Assume no or minimal cross tolerance and start every new opioid at a dose used for opioid naïve patients

Opioids in Perspective

- The efficacy and safety of chronic opioid therapy for chronic pain has been *inadequately studied*

- Opioids for chronic pain...
  - help *some* patients
  - harm *some* patients
  - are only one tool for managing severe chronic pain
  - are indicated when alternative safer treatment options are inadequate
Visualizing

Ice/Heat

Exercise

Distraction

Guided Imagery

Physical Modalities, Cognitive Behavioral Modalities and/or Complementary Alternative

Non pharmacological
Nonpharmacologic pain management

• Psychological approaches
  • cognitive therapies (relaxation, imagery, hypnosis)
  • biofeedback
  • behavior therapy, psychotherapy

• Complementary therapies
  • massage
  • art, music, aroma therapy
Integrative Healing at SJMO

- HEALING TOUCH
- AROMATHERAPY
- THERAPEUTIC TOUCH
- MUSIC THERAPY
- MASSAGE THERAPY
- PET THERAPY
- ACCUPUNCTURE/ACCUPRESSURE
- YOGA, MEDITATION etc etc etc!
Other Co-Analgesics/Adjuvants
Commonly Used For Pain

• Local Anesthetics
• Calcitonin
• Capsaicin
• Calcium Channel Blockers
• Baclofen
• Antidepressants
• Anticonvulsants
• Corticosteroids
Local Anesthetics

• **Lidocaine Infusion**
  - More effective in neuropathic pain but can be used for all pain syndromes. Starting dose 0.5mg-2 mg/kg per hr IV or SC. Some studies demonstrate long-lasting pain relief even after drug has been stopped. Need to decrease opioids when starting. (Ferrini, Paice, 2004)
  - Can try Mexiletine 150mg TID for po option
  - Side effects: lightheadedness, dysrhythmias

• **Lidocaine Patch (Lidoderm®)**
  For neuropathic pain, discrete pain syndromes (post-herpetic neuralgia, proximal radicular pain, post-traumatic neuropathy)
  - Applied on 12hrs off 12 hours, Max 3 patches per affected area
  - Expensive
**Calcitonin and Caipsaicin**

**Calcitonin** – 100-200 IU/day via SC or nasal for bone pain and or neuropathy

**Capsaicin** – Topical cream believed to relieve pain by inhibiting the release of substance P. Useful with pain associated with postmastectomy syndrome, postherpetic neuralgia, and postsurgical neuropathy within cancer. Also found helpful for musculoskeletal pain.

Dose: 0.025% applied 3 to 5 times daily (Max is 0.075% applied 3 to 5 times daily.)

Initial burning causes many to stop therapy.
Calcium Channel Blockers and Baclofen

Calcium Channel Blockers – Nifedipine 10mg TID – for ischemic pain, neuropathic pain and smooth muscle spasms.

Baclofen – 10mg QD up to QID, may be helpful for spasm associated pain. Side effects can commonly occur after 60mg/day include weakness, confusion and/or hallucinations. Also used in intrathecal pumps for spasticity from multiple sclerosis and spinal cord injury.
Antidepressants

Tricyclic antidepressants (TCAs) – inhibit norepinephrine and serotonin. Therapy for chronic neuropathic pain – especially burning pain.

Anticholinergic effects are the chief problems: (sedation, orthostatic hypotension, glaucoma worsening, urinary retention, cardiac dysrhythmias)

• Nortriptyline (Pamelor), Desipramine (Norpramin), Doxepin (Sinequan): 10-25mg/day (increase by 10-25 q 2-3 days) max <150mg/day.
• Amitryptyline (Elavil) losing favor due to higher side effect profile than new TCAs and Elavil should not be used in the elderly and
• Doxepin (Sinequan) should not be dosed higher than 60mg in elderly.

All TCA’s are sleep enhancing, mood elevating; but days to weeks to pain effect for some.
Antidepressants

Newer Atypical Antidepressant drugs for neuropathies

- **Venlafaxine (Effexor)** less effective than TCAs but also less side effects. Start 37.5 to 75mg BID, Max 225mg/daily (common is 150mg daily)
- **Duloxetine (Cymbalta)** – also used for fibromyalgia. Start 20-30mg in AM and Max is 60mg BID (Side effects: nausea, sedation, dry mouth and dizziness)

(Both Effexor and Cymbalta may not be covered by insurance and/or need prior authorization)

SSRI’s not generally been proven helpful for peripheral neuropathic pain
(except Fluoxetine (Prozac) for fibromyalgia)
Anticonvulsants
Often called membrane stabilizers

1. Carbamazapine (Tegretal) 100mg q day or tid (trigeminal neuralgia) May cause diplopia/dizziness or nausea. Need to periodically check CBC for aplastic anemia.

2. Gabapentin (Neurontin) start 100mg Q 8hrs or 300mg at bedtime with effective doses up to 3600mg/day

3. Pregabalin (Lyrica) similar to Gabapentin. Except can escalate dose much more quickly, start at 75mg daily with max doses 150-300mg and is much more expensive.

   For Gabapentin and Pregabalin: Most common medication used as adjuvant pain medication for neuropathy - Common adverse effect – sedation – usually become tolerant to effect, also may cause weight gain, fatigue and nausea - dosing decreased or stopped if renal failure.

   Indications: Neuropathic pain – especially shooting pains although many neuropathic syndromes have been documented to have relief with gabapentin/pregabalin (i.e. thalamic pain, SC injury, cancer pain, restless leg syndrome and back pain)
Anticonvulsants

- Lamotrigine (Lamictal), starting dose 25-50mg daily, usually effective, 200-400mg daily.
- Toprimate (Topamax), starting dose 25mg daily, usually effective 100-200mg q 12 hours, start at bedtime.
- Oxcarbazepine (Trileptal), metabolite of carbamazepine (Tegretal) with similar effects. Starting dose 75mg to 150mg q 12 hours, usually effective 150-800mg q 12 hours.
- Tiagabine (Gabitril). GABA agonist, starting does 4mg q bed, usually effective 4mg q 8 hours.
Corticosteroids

- Steroid hormones produced in the adrenal cortex
- Synthetic steroids are used in joint pain, bone pain and pain from inflammation and pain from malignant intestinal obstruction.
- Decadron has the least potential for Cushing’s syndrome – starting dose is 2-10mg q day (long half life makes it possible to daily dose) may go up to 16-24mg/day and can go up to 100mg/day with severe pain crisis. Prednisone starting dose is 15-30mg tid, qid.
- Side effects – steroid psychosis, dyspepsia.ulcer, mask infection, long term – Cushing’s syndrome
- Cannot be stopped abruptly my cause adrenal crisis.
Updates and Topics to Ponder

• Schedule changes for hydrocodone (2) and tramadol (4)
• Genetic Testing for opiate effectiveness
• Marijuana
• Botox (Botulinum Toxin)
• Spinal Corticosteroids (epidural) FDA came out that it does not approve corticosteroids epidural injections for pain. (April 2014)
• Ketorolac inhaled
• Diclofenac Gel (efficacy sim to celecoxib 200BID)
• Methyl salicylate/menthol (OTC) “ICY heat”
• Abuse deterrent opiate products
• Tapentadol (mu receptor agonist combined with Norepinephrine reuptake inhibitor)
Importance of Team Members and Integration

- Case Manager
- Social Work and Counselors
- Psychiatric Clinicians
- Nursing
- Physicians
- Rehabilitation
- Integrative Healers
- Pharmacy

Patient – Family – Friends - Community
Your Questions?
“If we know that pain and suffering can be alleviated, and we do nothing about it, then we ourselves become the tormentor.”

Primo Levi
References

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• Scope of Pain Course – Boston University – REMS training for clinicians 2013.