Managing the Chronic Pain Patient.
(and some stuff about opioids)

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Chronic pain is very weird

• Often no discernible pathology
• Clinical/pathologic correlation can be poor
• Massive inter-individual variation in pain processing
• Conditions defined by pain with few/no other findings
Most get better, but some really don’t . . .

- STOP-Pain waitlist
  - Pain duration >2 years in 90%
  - >10 in over 25%
  - Usual pain >7/10 in ~60%
  - Very high levels of interference
  - ~50% with moderate to very severe Beck Depression Inventory scores
  - 2/3 with moderate-severe anxiety
  - 50% on short-acting opioids, 25% on long-acting
  - Anxiety, depression, and anger all increased during the wait time
Who is it that's hurting?

- Multiple comorbidities (often other painful conditions)
- Highly comorbid with major depression and anxiety
  - Likely mutually causative
  - When found together, really must be treated together
- Comorbidities explain a lot of the disability
- High utilizers of medical services (but highly skewed)
Pathology and Pain

- In knee OA, very modest concordance between radiologic severity and pain in multiple studies.
  - There may be more consistency within individuals
  - However, those with pain and no radiologic OA are very likely to develop OA on long-term followup

- In low back pain, scans are mostly useless.
  - (unless there's clear neurological threat or signs of a specific condition)
  - Odds ratios ~ 1.2 to 3.3 for low back pain : disc degeneration
  - No association with spondylosis or spondylolisthesis. (26)

- In some cases, complete lack of (detectable) pathology is expected.
  - Phantom Limb Pain
  - Fibromyalgia
The 2\textsuperscript{nd} or 3\textsuperscript{rd} Slide

Coghill, et al. PNAS
July 8, 2003 vol. 100 no. 14
Diagnosis based treatment for long-term (particularly refractory) chronic pain doesn’t work very well.
The Approach

- Assess the patient before you assess the pain
  - What is his/her prior level of function?
  - What is his/her current level of function?
  - How can you explain the difference?
  - Screen for depression, anxiety, and substance use disorders.
  - What is the patient's attitude toward his symptoms?
  - What are his expectations about treatment?
The Approach

- Divide the pain symptoms into logical categories that guide (and are also guided by) intervention
  - Especially helpful if there is a pathophysiologic/syndromic intervention
- If there is a syndromic treatment, do not neglect it.
- Use symptomatic treatments strategically.
- Ignore comorbidities, particularly psychiatric ones, at your peril.
- Common things are always common.
The Approach

- Think strategically
  - Think ahead
    - Define failure criteria
    - Define success criteria
    - Remember Osler's Rules
  - Be realistic about your tools
    - For chronic pain, treatment effects tend to be modest and optimal management requires use of multiple techniques.
  - Don't do too many things at once.
    - You will never know what worked and what didn't.
The Pharmacological Tool Kit

- Pharmacology
  - NSAIDs
  - SNRIs/TCAs (and maybe some other antidepressants)
  - Gabapentinoid Anticonvulsants
  - Opioids
- Topicals
  - Capsaicin
  - Lidocaine
- “Anesthesia Stuff”
  - Ketamine
  - Intrathecals
  - Steroids
Antidepressants

- All the antidepressants that work for pain seem to work on both serotonin and norepinephrine
  - Venlafaxine
  - Desvenlafaxine
  - Milnacipran
  - Duloxetine

- Special Case: Tricyclic Antidepressants may also stabilize peripheral nerve cells.
Anticonvulsants

- Pregabalin (Lyrica) and Gabapentin (Neurontin) have the best safety and efficacy balance so far.
- Carbamazepine (Tegretol), Topiramate (Topamax), lamotrigine (Lamictal), and several others also work.
- At least partly work by changing how neurotransmitters work in the spinal cord.
- Effects are additive with SNRIs
This is where the slides that shows Pat isn’t lying would be.
Cage Match: TCA vs. Opioid

- Postherpetic Neuralgia
  - NRTP vs. Morphine vs. PBO
  - Crossover design
  - High dropout (>40%)
  - Morphine 1.9 points, TCA 1.4 points
  - More cognitive problems in TCAs
    - (avg age >70)

Raja et al, Neurology 2002
Central Analgesics

- Not “Fast on, fast off” drugs
- Tend to change the “slope of the pain line.”
- Can take several days to weeks to really “kick in,” and this can be dose-dependent.
- Need to be used for long times at adequate doses before declaring failure.
Nonpharmacologic Treatments

- Physical Therapy
  - Disuse
  - Imbalances
  - Abnormal Gait and Posture
- Acupuncture
- Biofeedback
- Relaxation Training
- CBT
Other interventions

- Operant Behavioral therapies
- Cognitive Behavioral therapies
  - E.g. Acceptance based
- Physical Therapy
Nonpharmacologic Treatments  (Linton review)

- **Behavioral treatments for nonheadache pain**
  - Poor evidence in general
  - Behavioral treatments improve function and reduce drug consumption
  - Cognitive treatments are “unproven”
  - Multimodal systems seem to work, but there is no consistent “multimodal” model.
Nonpharmacologic Treatments

- **Fibromyalgia**
  - “The operant method leads to increased activity levels and decreased pain and drug intake,”
  - “The relaxation approach results in decreased EMG levels and some pain reductions,”
  - “Cognitive techniques are speculative at this time,”
  - “The multimodal method regularly produces a variety of improvements, but the diversity of the treatments makes general statements about utility impossible.”
Interventional

- Generally best used for
  - Diagnosis
  - Temporary relief to facilitate another therapy or goal
  - Cure
Summing Up

- Assessing the patient is priority one, assessing the pain is priority two.
- When assessing the pain, don't be surprised to find more than one.
  - Divide into useful categories (not necessarily fine-grained diagnoses).
- Treat syndromically if you can.
Summing Up

- When treating symptomatically:
  - Don't do too many things at once
  - Use enough for long enough
  - Have success and failure criteria set in advance
    - Include function
  - Be realistic (including with the patient)
Opioids

• Do they work?
• Do they make people worse?
• Are the behavioral effects relevant?
• Is there anything better?
Do they work?

Yes.

( . . . for what we test for.)
What we test them for

- Six weeks or less
- Often in patients already exposed/tolerant
  - High dropout rate
  - Lots of adverse events
  - Fairly high treatment failure
- Pain intensity as the major outcome
  - Overall evidence about function, QOL inconclusive
- Outcomes
  - Absolute reduction
  - Percent reduction
- (Pain tends to get better)
Over the long run (10 years) (Jensen et al)

- Opioid users look worse:
  - Lower HRQOL
  - More depressive symptoms
  - More negative and passive coping
- But dose increases were about as frequent as decreases
- “Adjuvants” discontinued often.
- Hospitalizations decreased.
Do they make people worse?

- Opioid-induced Hyperalgesia
  - The idea that opioids can worsen pain
  - Typically seen in case reports
    - High doses
    - Fast titrations
    - Reverses with rotation, reduction, or NMDA antagonists
  - In migraine, opioids are associated with conversion to chronic daily headache
  - People on opioids don’t generally have insensitivity to pain on testing.
Simplified schematic model illustrating the putative neuroadaptative continuum model linking sensitization, apparent tolerance, and hyperalgesic withdrawal symptom.

Initial equilibrium (homeostasis)  Disequilibrium (hyperalgesic state)  New equilibrium (allostasis)

Heroin treatment

Opioid-dependent analgesic systems counteradaptation

Pronociceptive systems sensitization

Withdrawal

Time


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Addiction and Pain

• Fishbain et al 1992 (review):
  • “. . . only seven studies utilized acceptable diagnostic criteria . . .
  • “. . . the prevalence percentages for the diagnoses . . . were in the range of 3.2-18.9%.

• Reid et al 2002:
  • “Prescription opioid abusive behaviors were recorded for 24% of VA and 31% of PCC patients.” [emphasis mine]
Addiction and “Pseudoaddiction”

Behavior → Reward

Positive → Behavior

Negative → Pain
Addiction and “Pseudoaddiction”

- Behavior
  - Positive
  - Negative
- Opioid
Who gets addicted?

- Younger exposure
- Male
- Psychiatric illness
- Antisocial personality/Traits
- Family history of addictions
- Prior personal history of addictions

- Screening Instruments for aberrant opioid use behaviors read like a screen for these conditions
  - E.g. SOAPP-R
What do you do about it?

• There is no real evidence base for dealing with patients with pain and aberrant drug use behaviors
• “Opioid contracts” often are used as an exit strategy, but seldom address treating the patient
• Patient engagement and participation is a major barrier
• Probably the best management strategy right now is engagement in an intensive, comprehensive, multimodal pain management program.
• Finding such a place with the philosophical orientation needed to manage such patients is a challenge.