Confronting Chronic Pain

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A Pain Doctor's Guide to Relief
CONFRONTING CHRONIC PAIN

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with KATHY STELIGO
What if … ?

• Two 737 Boeing jetliners dropped out of the sky every single week?

Drug Deaths Outnumber Traffic Fatalities

– Los Angeles Times, Sept 17, 2011

• 37,485 deaths in 2009
• Death toll doubled in last decade
• Most commonly abused: Oxycontin, Vicodin, Xanax, and Soma.
• Fentanyl is an increasing problem.
• Numbers and doses of anti-anxiety and analgesic medications are up 43 & 50% since 2007.
• Hydrocodone is the most prescribed drug, and the most widely abused.
The Narrow Bridge

Prescribing too freely
► abuse & addiction

Inadequate prescribing
► pain & suffering
CDC Guidelines

• Use non-opioids for chronic pain
  » Equivalent relief
  » Better tolerated
  » Better function

• Check CURES

• Treat opioid use disorder

• Low and slow
  » 50 & 90 MME/day guidelines
  » ≥100 MME/day vs ≤20 MME/day assoc with 2-9x overdose risk
CDC Guidelines

• Limit opioids for acute pain to 3-7 days
• Avoid opioids and benzodiazepines
  » Combo assoc with 4x risk of overdose death
• Monitor ≤ every 3 months
• Considering offering naloxone
  » history of overdose,
  » history of substance use disorder,
  » higher opioid dosages (≥50 MME/day),
  » concurrent benzodiazepine use
ASSESSING PAIN & FUNCTION USING PEG SCALE

PEG score = average 3 individual question scores
(30% improvement from baseline is clinically meaningful)

Q1: What number from 0 – 10 best describes your pain in the past week?
• 0 = “no pain”, 10 = “worst you can imagine”

Q2: What number from 0 – 10 describes how, during the past week, pain has interfered with your enjoyment of life?
• 0 = “not at all”, 10 = “complete interference”

Q3: What number from 0 – 10 describes how, during the past week, pain has interfered with your general activity?
• 0 = “not at all”, 10 = “complete interference”
Nociceptive Pain Model
Neuropathic Pain Model
Pharmacology & Neuropathic Pain

Antidepressants

Anticonvulsants

Other Possibilities:
- Sympatholytics
- Calcitonin
- Ketamine
- NMDA receptor antagonists
- Bisphosphonates
- Immune Modulation: IVIG
Common Neuropathic Medications

- **Gapapentin (Neurontin)**
  - “Sensitive” patients: 100 mg qhs x5 days, increase by 100-200 mg q 5 days.
  - “Non-sensitive” patients: 300 mg qhs x5 days, increase by 300 mg q 5 days.
  - Target: 300 tid – 800 qid.

- **Pregabalin (Lyrica)**
  - 75 mg qhs x 7 days, increase by 75 mg q 7 days.
  - Target: 150 mg bid, may go to 300 bid.

- **Duloxetine (Cymbalta)**
  - 20 mg qd x 10-14 days, increase by 20 mg q 10-14 days.
  - Target: 60 mg QD, may go to 60 mg bid.
Complex Regional Pain Syndrome –
Type 1
Complex Regional Pain Syndrome (CRPS-I)
Allodynia

- Careful! Touch can hurt.
Herpes Zoster (Shingles)
Behavioral Approaches

• Biofeedback
• Hypnosis
• Relaxation Therapy
• Cognitive restructuring
Physical Therapy

- stretching
- **GRADED** exercise program
- to enable exercise: massage, TENS, ultrasound, blocks
- desensitization
Spinal & Peripheral Stimulators
Spinal Pump
Feeding Sequence of Predatory Cone Snail
Opioids
Pain Transmission in the Dorsal Horn
Activating the “Engine”

Addiction
Addiction

- tolerance = escalating dose requirement
- dependence = withdrawal
- *versus* addiction = inappropriate drug seeking and use
## Relative Addictiveness

<table>
<thead>
<tr>
<th>Rank</th>
<th>Substance</th>
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</thead>
<tbody>
<tr>
<td>100</td>
<td>Nicotine</td>
</tr>
<tr>
<td>99</td>
<td>Ice, Glass (Methamphetamine smoked)</td>
</tr>
<tr>
<td>98</td>
<td>Crack (Cocaine smoked)</td>
</tr>
<tr>
<td>93</td>
<td>Crystal Meth (Methamphetamine injected)</td>
</tr>
<tr>
<td>85</td>
<td>Valium (Diazepam)</td>
</tr>
<tr>
<td>83</td>
<td>Quaalude (Methaqualone)</td>
</tr>
<tr>
<td>82</td>
<td>Seconal (Secobarbital)</td>
</tr>
<tr>
<td>81</td>
<td>Alcohol</td>
</tr>
<tr>
<td>80</td>
<td>Heroin</td>
</tr>
<tr>
<td>78</td>
<td>Crank (Amphetamine taken nasally)</td>
</tr>
<tr>
<td>72</td>
<td>Cocaine</td>
</tr>
<tr>
<td>68</td>
<td>Caffeine</td>
</tr>
<tr>
<td>57</td>
<td>PCP (Phencyclidine)</td>
</tr>
<tr>
<td>21</td>
<td>Marijuana</td>
</tr>
<tr>
<td>20</td>
<td>Ecstasy (MDMA)</td>
</tr>
<tr>
<td>18</td>
<td>Psilocybin Mushrooms</td>
</tr>
<tr>
<td>18</td>
<td>LSD18 Mescaline</td>
</tr>
</tbody>
</table>

Health, Nov/Dec 1990
Spectrum of Risk of Addiction or Aberrant Behavior

LOW
Short-term exposure to opioids in non-addicts\(^1\)

\(<1\%

HIGH
Long-term exposure to opioids in addicts\(^2\)

\(~45\%

Where is your patient?

1. Porter and Jick; Perry
2. Dunbar and Katz
The Four “A’s” of Pain Treatment
Outcomes

- Analgesia (pain relief)
- Activities of Daily Living (psychosocial functioning)
- Adverse effects (side effects)
- Aberrant drug taking (addiction-related outcomes)

Passik & Weinreb, 1998
Urine Drug Testing (UDT)

• Consider UDT in all patients
  – Especially those starting opioid therapy
  – When making changes in therapy
  – When pain persists despite reasonable opioid therapy
  – In response to aberrant behavior

• Cheap, effective, and well-tolerated by patients
  – Those “philosophically opposed” are often patients with problems who don’t want help

• Note: Parent compound and metabolites should be present
Urine Drug Testing

- Affected by drug metabolism
  - Codeine $\rightarrow$ morphine
  - Hydrocodone $\rightarrow$ Hydromorphone
  - Morphine (>100 mg/d) $\rightarrow$ hydromorphone

- Possible false positives for cannabinoids
  - Naproxen, ibuprofen, Protonix, Marinol, promethazine, riboflavin, Sustiva

- Possible false positives for opioids
  - Poppy seeds, chlorpromazine, rifampin, dextromethorphan, quinine
CA Prescription Drug Monitoring Program (PDMP)

- Controlled Substance Utilization and Evaluation System (CURES)
- Pharmacies transmit data electronically on a weekly basis
- Schedules II-IV (?)
- Supposed to be “real-time” but there is some lag
- All providers that prescribe or dispense controlled substances may (should) register for online access.
Chronic Opioid Use

• Possible exacerbation of pain
• Get an expert opinion
• If risk of addiction is high, consult with an expert psychologist or addictionologist
• Determine dose according to functional improvement
• Monitor carefully for appropriate use
• Set up treatment agreements with delineated expectations
• Document regularly
<table>
<thead>
<tr>
<th>Date</th>
<th>Medication</th>
<th>Sig</th>
<th>Amount</th>
<th>Refills</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1-11</td>
<td>Hydrocodone 5 mg</td>
<td>1 tid</td>
<td>90</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1-15-11</td>
<td>Hydrocodone 5 mg</td>
<td>1 tid</td>
<td>90</td>
<td>0</td>
<td>Problem</td>
</tr>
</tbody>
</table>

Medication Flow Sheet
# Opioid Risk Tool (ORT)
## Physician Form
With Item Values to Determine Risk Score

<table>
<thead>
<tr>
<th>Mark each box that applies</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Family history of substance abuse</td>
<td>[ ] 1</td>
<td>[ ] 3</td>
</tr>
<tr>
<td>- Alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Illegal drugs</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
</tr>
<tr>
<td>- Prescription drugs</td>
<td>[ ] 4</td>
<td>[ ] 4</td>
</tr>
<tr>
<td>2. Personal history of substance abuse</td>
<td>[ ] 3</td>
<td>[ ] 3</td>
</tr>
<tr>
<td>- Alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Illegal drugs</td>
<td>[ ] 4</td>
<td>[ ] 4</td>
</tr>
<tr>
<td>- Prescription drugs</td>
<td>[ ] 5</td>
<td>[ ] 5</td>
</tr>
<tr>
<td><strong>Smoking not included</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Age (mark box if 16-45 years)</td>
<td>[ ] 1</td>
<td>[ ] 1</td>
</tr>
<tr>
<td>4. History of preadolescent sexual abuse</td>
<td>[ ] 3</td>
<td>[ ] 0</td>
</tr>
<tr>
<td>5. Psychological disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Attention-deficit/hyperactivity disorder, obsessive-compulsive disorder, bipolar disorder, schizophrenia</td>
<td>[ ] 2</td>
<td>[ ] 2</td>
</tr>
<tr>
<td>- Depression</td>
<td>[ ] 1</td>
<td>[ ] 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low (0-3)</th>
<th>Moderate (4-7)</th>
<th>High (≥8)</th>
<th>Scoring totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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The Addict in Pain

• Weighing two medical disorders with opposing treatments
• Don’t give opioids to the “active” addict
• Get help
• Maintain tight control—e.g. 1 week supplies
• Frequently reassess outcomes
Predictors of Addiction: Behavioral Signs

1. Rx from > 1 MD, or calling after hours to MD on call
2. Rx lost or stolen
3. Visits without an appointment
4. Frequent telephone call to clinic
5. Multiple medication intolerances
6. Frequent & Rapid Dose ↑

Dunbar and Katz
Activities of Daily Living

FUNCTIONAL LIMITATIONS

• During the past month, indicate the activities that have improved with pain medication:
  – Going to work
  – Performing household chores
  – Doing yard work or shopping
  – Socializing with friends
  – Sleep
  – Having sexual relations
  – Physically exercising
  – Overall Functioning
Detoxification vs. Weaning

• FDA does not consider physical dependence in pain patients to constitute addiction

• Gradual tapering and discontinuation of opioids in pain patients is not detoxification
  – Do not refer to weaning as detoxification or treating addiction

• FDA approved drug information forms recommend tapering opioids in patients being treated for pain
Opioid Contracts

• Can help clarify expectations, rules, and consequences
  • Participation in other treatment modalities
  • Compliant use of the medication
  • A single prescribing physician
  • Sporadic drug testing
• May be more binding on the physician than the patient
Methadone

- Naturally long acting
- Bioavailability 80%
- Metabolized by cytochrome P450 system
- No active metabolites
- L-isomer is an opioid agonist
- D-isomer antagonizes the NMDA receptor and inhibits re-uptake of 5HT and norepinephrine
- Does have unique risks
Methadone Dangers

- Non-linear dose equivalence
  - varies with degree of tolerance
  - Morphine:methadone dose equivalence varies from 2:1 to 20:1.
    » Patient on morphine 30 mg/d -> methadone 15 mg/day
    » Patient on morphine 600 mg/d -> methadone 30-40 mg/d
    » Do the conversion in stages, converting 1/3 of the daily dose

- Can prolong Q-T interval -- ? check EKG
  - at doses > 30 mg / day,
  - if patient is on other QT prolonging medications,
  - any patient > 45 years old or with cardiac risk factors
  - consider repeat EKG to establish that the methadone has not changed the QT interval

- Long half-life
  - avoid rapid dose adjustments
  - avoid use in elderly patients

- Interacts with many medications
Methadone Drug Interactions

- Decreases serum methadone levels
  - Phenytoin
  - Phenobarbital
  - Carbamazepine

- Increases serum methadone levels
  - Fluvoxamine
  - Fluoxetine
  - Paroxetine
  - Sertraline
  - Tricyclics
    - May increase tricyclic levels
    - Both can prolong QT interval

Legal Medicine Oral Boards

• Question #1
  – A 44 year old male presents with a history of ankylosing spondylitis. His pain has been well controlled for the last year with Vicodin ES, 8 tablets per day, plus NSAIDs. He has just moved across town, and is looking for an MD closer to home.

How would you proceed?
Legal Medicine Oral Boards

• Question #2
  – You are treating a 38 year old male with persistent post-laminectomy pain. For the last 2 months, you have prescribed Oxycontin 10mg q8h, 90 tablets per month. You receive a phone call from the pharmacy, “Doctor, were you aware that in addition to your last prescription for 190 Oxycontin tablets, the patient is also receiving Dilaudid 4 mg, 100 tablets per month from Dr. Grey.”
  What would you do?
Legal Medicine Oral Boards

• Question #3
  – 2 months ago, your patient dislocated his shoulder and tore his rotator cuff.
  – Now he says, “I’ve been in terrible pain, and last time you only gives me a few codeine a day. So I started shooting heroin again. It works real good, but I’m afraid of this street stuff. Can’t you help me?”
Legal Medicine Oral Boards

• Question #4
  – A 33 year old woman with severe back pain of unknown etiology has been under your care for 3 months. While you have been evaluating her, you have also been prescribing MS Contin 15mg, q8h, #90 per month. Your last prescription was 2 weeks ago, and now the patient is calling and stating, “The pain has been terrible, I had to double up on the medicine, so I’m almost out.” What would you do?
Legal Risks: Under-treating Pain

• In North Carolina, $15 million in damages was awarded to the family of a patient whose dying days were made intolerable because of pain mismanagement.

• The Georgia Supreme Court affirmed a patient's right to have unwanted medical treatment discontinued and to receive medication to manage terminal pain.
Legal Risks: 
Under-treating Pain

• *Bergman et al v. Eden Medical Center, Alameda County*

• Alameda County (Calif.) Superior Court

• **At issue:** A jury found a physician guilty of elder abuse for under-treating a patient's pain, even though he had prescribed pain medication.

• $1.5 award; reduced to $250,000.
Medical & Interventional Therapies

Functional & Occupational Rehabilitation

Physical Rehabilitation

Psychological Rehabilitation