

Opioid Analgesics for Pain Management

Presented by:

Progressive Medical
Clinical Services



March 9, 2011

Objectives

- Review how opioid analgesics work in the body
- Review the different classifications of opioid analgesics
- Obtain general information regarding when chronic opioid use may be appropriate
 - Safety measures prior to prescribing
 - Patient information
 - Type of pain
 - Monitoring parameters

Narcotic Use in Workers' Compensation

- Narcotics account for 25% of all workers' compensation prescription drug costs
- Most narcotic costs are for the active ingredient oxycodone, followed by hydrocodone then fentanyl
- Narcotic use early in the life of a claim is increasing and share of drug costs increase as claims age

Narcotic Use in Workers' Compensation

- Narcotic use can persist for years
- Narcotics are used mostly for back injuries
 - California workers' compensation study found doctors prescribed narcotics in 25% of all back injury cases without spinal cord involvement – typically sprains/strains
- Heavy narcotic use for workers' compensation injuries is related to substance-abuse treatments

How Opioids Work in the Body

- Bind to various types of opioid receptors in the body (mu, kappa, delta)
- Receptor binding results in blocking pain signals between the peripheral nervous system and central nervous system
- Opioid receptors primarily in the central nervous system and GI tract

Classification of Opioids

- Natural opioids are derived from the opium poppy (morphine, codeine)
- Semi-synthetic opioids are created from the natural opiates (hydromorphone, hydrocodone, oxycodone, oxymorphone; also includes heroin)
- Fully synthetic (methadone, fentanyl)
- Other – tramadol and tapentadol (Nucynta®)

Classification of Opioids

- Rapid-acting
 - Actiq®, Fentora®, Onsolis®
 - **Approved only for breakthrough pain in cancer patients**
- Short-acting
 - Hydrocodone, hydromorphone, oxycodone, morphine, codeine, tramadol, tapentadol
- Long-acting
 - Methadone, OxyContin®, MS Contin®, Duragesic®, Exalgo®

Safety Issues with Specific Opioids

- Avinza® (morphine controlled release)
 - Alcohol may cause release of fatal dose of morphine
- Embeda® (morphine extended release + naltrexone)
 - Not an abuse-resistant drug if taken orally
- Methadone
 - Accumulation may result in sudden respiratory/cardiac death
 - Multiple drug-drug interactions
- Demerol® (meperidine)
 - Metabolite toxic to central nervous system
 - Poor medication absorption and pain relief

Safety Issues with Specific Opioids

- Acetaminophen or ibuprofen-containing opioids (Vicodin®, Lortab®, Norco®, Tylenol #3®, Percocet®, Vicoprofen®)
 - Chronic and excessive use of acetaminophen may lead to liver toxicity; monitor liver function
 - Ibuprofen-containing opioids not recommended for use longer than 7-10 days
- Propoxyphene (Darvocet N-100®, Darvon®)
 - Toxic metabolite accumulates (cardiotoxic, CNS toxic, proarrhythmic)
 - Used alone or with other CNS/respiratory depressants has led to drug-related deaths
 - No more effective than codeine, acetaminophen or ibuprofen

Dosing

- Lowest possible dose prescribed to improve pain and function
- Dose is individualized
- PRN (as needed) dosing for breakthrough pain or for acute pain
 - Use short-acting opioids
- Around-the-clock dosing (ATC) for chronic pain
 - Sustained-release: 8, 12, 24 hours

“High Dose” Opioids

- No true ceiling dose
- Generally, patients should be re-assessed if total opioid doses reach $\geq 200\text{mg/day}$ of morphine equivalent
- Official Disability Guidelines define a high opioid dose as 120mg/day of morphine equivalent
- Measures to minimize opioid doses
 - Opioid rotation – change to different opioid
 - Maximize non-opioid medications and non-drug therapy

“High Dose” Opioids

- Potential problems with high dose opioids
 - Endocrine effects, immune effects, neurotoxicity, problematic patient behavior
 - Opioid-induced hyperalgesia (OIH)
 - Increasing opioid doses may worsen pain rather than improve pain relief
 - Patient may be best treated by tapering and even discontinuing opioid therapy altogether

Side Effect Profile

- Constipation
- Nausea/vomiting
- Sedation
- Dizziness/drowsiness
- Urinary retention
- Mood changes/
euphoria
- Respiratory
depression
- Hypotension
- Orthostatic
hypotension
- Flushing (histamine
release)
- Itching
- Vertigo
- Myoclonus

When can opioids be appropriate?

Assessment

- Type of pain – is it receptive to opioid therapy?
- Treatment failure – has patient tried and failed other medications prior to initiation of opioid therapy?
- Psychological evaluation – does the patient have any psychological conditions that may complicate opioid therapy?
- Goals – what are the treatment goals that would indicate a successful trial of opioids?
- Baseline assessment – using a numerical rating scale:
 - Function
 - Pain

Type of Pain

- Duration of pain
 - Acute – generally use short-acting opioids if opioid therapy is indicated
 - Chronic – generally use long-acting opioids if opioid therapy is indicated
- Type of pain
 - Nociceptive (cuts, scrapes, bruises, burns, broken bones, pain from infection, pain from internal organs)
 - Described as dull, aching
 - Opioids are effective in the treatment of this type of pain

Type of Pain

- Type of pain
 - Neuropathic (phantom limb, stroke, spinal cord injury, complex regional pain syndrome)
 - Described as stabbing, burning, numbing, tingling, electrical, pins and needles
 - Opioids can be effective in the treatment of this type of pain, but are NOT generally considered appropriate first line therapy

Treatment Failure with Other Modalities

- Non-opioid analgesic
 - Non-steroidal anti-inflammatory drugs
 - Acetaminophen
- Non-drug therapy
 - Physical therapy
 - Exercise program
- Other interventions
 - Behavioral
 - Mechanical

Screening Tools

- Screener and Opioid Assessment for Patients with Pain – SOAPP
- Revised Screener and Opioid Assessment for Patients with Pain – SOAPP-R
- Opioid Risk Tool – ORT
- Diagnosis, Intractability, Risk, Efficacy Instrument - DIRE
 - Also assesses potential efficacy as well as harms

Absolute Contraindications

- True drug allergy to opioid agents (may be resolved by switching agents)
- Co-administration of drug that can cause life-limiting drug-drug interaction
- Active diversion of controlled substances



Relative Contraindications

- Acute psychiatric instability or high suicide risk
- Meets criteria for *current* substance use disorder
- History of intolerance, serious adverse events or lack of efficacy of opioid therapy
- Inability to manage therapy responsibly
- Unwillingness or inability to comply with treatment plan
- Unwillingness to adjust at-risk activities resulting in serious re-injury
- Social instability
- Elderly patients
- Sleep apnea not using CPAP
- COPD patients

Trial Phase of Opioid Therapy

- Usually trial short-acting opioids prior to initiation of therapy with long-acting opioids
- Assessment of efficacy
 - Pain scores: before and after opioid therapy
 - Functionality scores: before and after opioid therapy
 - Ability to perform activities of daily living (ADLs)
 - Adherence monitoring
 - Adherence to drug therapy – both opioid AND non-opioid
 - Adherence to non-drug therapy

During Trial Phase

- Frequency of visits (first 6 months)
 - Usually every two weeks for first 2-4 months
 - Then at every 1-2 month intervals
- Titration
 - Adjust the dose to achieve pain relief while minimizing adverse events
 - Provide therapy for breakthrough pain if using a long-acting narcotic (i.e., intermittent doses of short-acting narcotics may be needed)
- Manage side effects (constipation, nausea, etc.)

When to Discontinue Opioids

- Discontinue opioids if:
 - No appreciable improvement in function
 - Decreased functioning
 - Continued pain with intolerable side effects or if there is a lack of benefit despite high doses (>120mg/day of morphine)
 - Resolution of pain
 - Serious non-adherence to therapy
 - IMMEDIATE DISCONTINUATION – evidence of illegal activity
 - Do not abandon patient – appropriate weaning schedule is needed

When to Continue Opioids

- If the patient has improved functioning, decreased pain, improved quality of life
- No evidence of aberrant drug-related behavior
- If patient has returned to work

Monitoring Parameters – Is chronic opioid use appropriate?

Monitoring Parameters

- Adequate documentation – **AT EACH VISIT!!!!**
 - The Four A's
 - Analgesia – is the patient's pain decreased compared to prior to opioid use? Is the decrease in pain being sustained with current dosing regimen?
 - Activities of Daily Living (ADL) – What is the patient's functional ability?
 - Adverse Events – What are the adverse events and are they managed appropriately?
 - Aberrant drug-related behavior – Is the patient using the medications as prescribed?
 - Pill counts
 - Urine drug screening

} If appropriate

Aberrant Drug-Related Behavior

- How can you determine whether there is evidence for aberrant behavior?
- What can be signs of aberrant behavior?
- Tools for physicians to monitor for aberrant behavior – make sure these are being used where appropriate

Abuse/Addiction Definitions

- **Dependence** – a state of withdrawal that can occur with abrupt discontinuation and/or rapid dose reduction of a medication.
- **Tolerance** – develops over time and occurs when the body requires larger doses of medication to achieve the same effect as previously experienced.

Abuse/Addiction Definitions

- **Abuse** - the use of illegal, prescription or over-the-counter drugs or alcohol for purposes other than those for which they are meant to be used, or in excessive amounts. Substance abuse may lead to social, physical, emotional and job-related problems.

Abuse/Addiction Definitions

- **Addiction** – repeated, irrational use of a substance despite adverse social, psychological and physical consequences
 - Characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, craving
- **Pseudoaddiction** - describes patient behaviors that may occur when pain is undertreated.

Aberrant Drug-Related Behavior

- Forging prescriptions
- Stealing/borrowing medications
- Multiple episodes of lost/stolen medications
- Multiple unauthorized dose increases
- Injecting/snorting oral and transdermal drugs
- Concurrent use of illicit drugs
- Not compliant with pill counts and UDS
- Obtaining meds from non-medical sources
- Frequent ER/Urgent Care visits
- Requests for early refills
- Claims of miscounted pills
- Multiple physician and/or pharmacy use

Aberrant Drug-Related Behavior

- Consider undertreatment of chronic pain
- Violations of opioid contract
 - Counsel patients; some physicians allow one slip
- Dangerous/illegal behaviors may require immediate cessation of opioid therapy
 - Notify law enforcement
- Demonstrate suicidal behavior - refer to psyche
- Evidence of illicit drug use/alcohol abuse – refer to substance abuse disorder/addiction services

Pill/Patch Counts

- Patients should be asked to bring in all medication bottles to each visit for pill counts before renewal prescription are given
- Patch counts also for fentanyl patches; both used and unused patches
 - Used patches may still contain some active medication and may be source of opioid diversion

Urine Drug Screens

- Should be random and not scheduled
- Metabolites
 - Codeine → morphine
 - Hydrocodone → hydromorphone
 - Oxycodone → oxymorphone
 - Positive morphine result may be indicative of heroin use; confirmatory test for heroin metabolite
- Relationship between the amount of drug taken and urine drug concentration cannot be determined at this time

State Monitoring Programs

- Controlled substance databases
- Programs available in approximately 32 states
- Limitations:
 - Limited funding in some states
 - Patients may attempt to fill prescriptions in states without databases
 - States vary in their reporting of Scheduled II – V
 - Can only be accessed by health care providers actively involved in the patient's care
- Federal goal may be to tie all states together in one database

Opioids – Place in Therapy

- Accepted for treatment of:
 - Acute, moderate-severe pain
 - Chronic malignant pain (i.e. cancer)
- Debate continues for use in non-malignant chronic pain
- Chronic opioid use may be appropriate if there is decreased pain, increased level of function, improved quality of life, patient has returned to work and no evidence of aberrant drug-related behavior

Questions



About Progressive Medical

- Progressive Medical has provided innovative Pharmacy Benefit Management and ancillary solutions to the workers' compensation and auto no-fault industries for more than 20 years
- Our pharmacy products and services include:
 - First Fill® prescription program
 - Instant Activation™
 - Retail Drug Card
 - Home Delivery



Progressive Medical Clinical Services

- To learn more from our Clinical Services team sign up for our weekly clinical e-mail alerts, the Friday Fast Facts, at

www.progressive-medical.com

References

1. *Narcotics in Workers Compensation. 2009, NCCI Holdings, Inc. p. 1-24.*
2. Chou, R., et al., *Clinical guidelines for the use of chronic opioid therapy in chronic noncancer pain.* J Pain, 2009. **10**(2): p. 113-30.
3. *Official Disability Guidelines (ODG), 14th edition, Pain Chapter 2010, Work Loss Data Institute 'The Evidence Based Guideline Company'. 2010.*
4. Ballantyne, J.C., *Opioids for chronic nonterminal pain.* South Med J, 2006. **99**(11): p. 1245-55.
5. Chang, G., L. Chen, and J. Mao, *Opioid tolerance and hyperalgesia.* Med Clin North Am, 2007. **91**(2): p. 199-211.
6. Sjogren, P., N.H. Jensen, and T.S. Jensen, *Disappearance of morphine-induced hyperalgesia after discontinuing or substituting morphine with other opioid agonists.* Pain, 1994. **59**(2): p. 313-6.
7. DuPen, A., D. Shen, and M. Ersek, *Mechanisms of opioid-induced tolerance and hyperalgesia.* Pain Manag Nurs, 2007. **8**(3): p. 113-21.
8. Baron, M.J. and P.W. McDonald, *Significant pain reduction in chronic pain patients after detoxification from high-dose opioids.* J Opioid Manag, 2006. **2**(5): p. 277-82.
9. *VA/DoD Clinical Practice Guideline Working Group. Management of Opioid Therapy for Chronic Pain., D.o.V. Administration, Editor. 2003, Office of Quality and Performance.*
10. Chou, R., et al., *Clinical guidelines for the use of chronic opioid therapy in chronic noncancer pain.* J Pain, 2009. **10**(2): p. 113-30.
11. Nicholson, B. and S.D. Passik, *Management of chronic noncancer pain in the primary care setting.* South Med J, 2007. **100**(10): p. 1028-36..
12. Naliboff, B.D., S.M. Wu, and Q. Pham, *Clinical considerations in the treatment of chronic pain with opiates.* J Clin Psychol, 2006. **62**(11): p. 1397-408.
13. *Passik, S.D., et al., A new tool to assess and document pain outcomes in chronic pain patients receiving opioid therapy. Clin Ther, 2004. 26(4): p. 552-61.*
14. *Savage, S., et al., Definitions related to the use of opioids for the treatment of pain. A consensus document from the American Academy of Pain Medicine, the American Pain Society, and the American Society of Addiction Medicine. 2001.*