PREScribing oPiods for Acute Pain
Musculoskeletal FOCUS

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Disclosures

- None
Existing guidelines
Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain. A Clinical Practice Guideline From the ACP

- Evidence was insufficient to determine effectiveness of opioids versus placebo in patients with acute or subacute low back pain (LBP)

- Given that most patients with acute or subacute LBP improve over time regardless of treatment, clinicians and patients should select nonpharmacologic treatment with superficial heat (moderate-quality evidence), massage, acupuncture, or spinal manipulation (low-quality evidence). If pharmacologic treatment is desired, clinicians and patients should select NSAIDs or skeletal muscle relaxants (moderate-quality evidence)

- Moderate quality evidence showed that short-term use of opioids increased nausea, dizziness, constipation, vomiting, somnolence and dry mouth compared with placebo

Existing guidelines: Critical Issues in the Prescribing of Opioids for Adult Patients in the ED

In the adult ED patient with acute LBP, are prescriptions for opioids more effective during the acute phase than other medications?

Level A. None specified
Level B None specified
Level C 1) For the patient being discharged from the ED with acute LBP, the emergency physician should ascertain whether nonopioid analgesics and nonpharmacologic therapies will be adequate for initial pain management
2) Opioids should be reserved for more severe pain or pain refractory to other analgesics rather than routinely prescribed
3) Lowest practical dose, limited duration (eg <1 week), prescriber should consider the patient’s risk for opioid misuse, abuse, or diversion

In the adult ED patient for whom opioid prescription is considered appropriate for treatment of new-onset acute pain, are short-acting schedule II opioids more effective than short-acting schedule III opioids? (2012)

- Level A recommendations. None specified
- Level B recommendations. For the short-term relief of acute musculoskeletal pain, emergency physicians may prescribe short-acting opioids such as oxycodone or hydrocodone products while considering the benefits and risks for the individual patients

Existing guidelines.

Choosing Wisely

- North American Spine Society. Don’t prescribe opioids for acute…LBP before a thorough evaluation, consideration of a trial of alternative medications and treatments, and discussion of the risks of opioid therapy
- American Academy of Physical Medicine and Rehabilitation. Don’t prescribe opiates in acute disabling LBP before evaluation and a trial of other alternatives is considered

www.choosingwisely.org
Opioids for acute LBP. RCT data

Naproxen With Cyclobenzaprine, Oxycodone Acetaminophen or Placebo for Treating Acute Low Back Pain. A Randomized Clinical Trial.

Patients. ED patients with acute, non-radicular, functionally impairing LBP (n=215)

Intervention. Naproxen 500mg BID + Oxycodone 5/ Acetaminophen 325mg, 1 or 2 tabs TID. Dispensed 10 day supply

Control. Naproxen + placebo

Outcome. Functional and pain scores at 7 days and 3 months: No difference between the groups.

Adverse medication events: NNH=5

Sub-groups that might benefit: Among those who used oxycodone/acetaminophen more than once, no functional benefit but pain benefit at 7 days. NNT=6

3 month outcomes: No benefit to opioids. Also, opioids were not associated with higher rates of functional impairment, more frequent visits to the ED, or an increased propensity for continued opioid use.

Friedman BW, Dym AA, Davitt M, et.al. JAMA. 2015
Opioids for acute LBP. RCT data

Ketorolac versus acetaminophen-codeine in the ED treatment of acute LBP

- Patients. ED patients with acute MSK LBP, moderate or severe in intensity, ≤ 72 hours. (n=120)
- Intervention. Acetaminophen 600mg – codeine 60mg orally. Up to 6 doses in 24 hours
- Control. Ketorolac 10mg orally. Up to 4 doses in 24 hours.
- Outcome. No difference in either pain or functional scores in the first six hours. Pain and functionality also comparable at 4 days. Substantially more adverse events in codeine arm (NNH=3)

Opioids for acute MSK pain

Comparison of valdecoxib and an oxycodone-acetaminophen combination for acute MSK pain in the ED: a RCT.

• Patients. Back, neck, or extremity pain. Pain $\geq 5/10$, $< 24$ hours (n=50)

• Intervention. Oxycodone 60mg + acetaminophen 650mg

• Control. Valdecoxib 40mg

• Outcome. Comparable rescue medication use at 60 minutes. Slight VAS benefit for Valdecoxib. Sedation/ dizziness worse in oxycodone (NNH= 3)

Opioids for acute extremity pain

Effect of a Single Dose of Oral Opioid and Nonopioid Analgesics on Acute Extremity Pain in the ED. A RCT

- Patients. Extremity pain. Require imaging. (n=400)
- Intervention/ Controls.
  - 1) Ibuprofen 400mg + acetaminophen 1000mg
  - 2) oxycodone 5mg + acetaminophen 325mg
  - 3) hydrocodone 5mg + acetaminophen 300mg
  - 4) codeine 30mg + acetaminophen 300mg

- Outcomes. ? Hydrocodone group inferior. Ibuprofen as efficacious as others.

Chang AK, Bijur PE, Esses D. JAMA 2017
My synthesis

• Among a general population of adults with acute musculoskeletal pain including low back pain, oral opioids are not associated with improved short or longer term pain or functional outcomes, but are associated with more adverse medication effects.

• It is unknown whether oral opioids improve short or longer-term outcomes among patients with severe or functionally impairing low back pain, who have failed to improve with non-pharmacologic therapies and non-opioid medications.

• It is unknown whether patients with acute musculoskeletal pain who are at higher risk of adverse outcomes with NSAIDS or skeletal muscle relaxants may benefit from opioids.
My synthesis

• Among patients with acute musculoskeletal pain, some data suggest that there is no clinically important difference in efficacy among different opioids. It is unclear whether different opioids have greater risk of progression to opioid use disorder.
Illustrative vignette

What should I do with this guy?

47 year male, no medical history, presents with new onset, worsening functionally impairing low back pain for four days. Has been to the chiropractor and taken appropriate doses of an NSAID. Has tried to remain active and has been applying heat. States he can’t bear the pain.

How should he be treated?
--Reassurance that it will improve
--Stretching techniques
--Skeletal muscle relaxant
--Opioid
--Nothing
Research priorities

• Treatment of acute back pain (mitigate pain, restore functionality, prevent chronic pain) among patients with pain refractory to first and second line therapies
  -- Should opioids play a role
  -- Are opioids associated with worse outcomes than non-opioid pharmacologic alternatives (SMRs) or rapid access to PT
  -- Is there a substantial difference among opioids in risk of progression to persistent use/ opioid use disorder.
Could the draft framework be used to develop a clinical practice guideline for prescribing opioid for acute pain for your medical indication? What improvements would you suggest?

- Yes!
- Pain goals are twofold: Treat acute pain; prevent progression to chronic pain
What evidence would be necessary to make the links in the framework or what additional information would bring existing clinical guidelines up to the standards indicated in the draft framework? How might the evidence be generated and what tradeoffs might be necessary in conducting various types of studies (e.g., time, cost, practicality, resources)?

• Paucity of data given prevalence and societal costs
• RCTs to identify subgroups that may benefit from opioids
• Cohort studies to quantify risk associated with specific opioids
  • --Role of opioid-induced euphoria
How would you conduct studies for conditions where RCTs might be impractical or where resources (e.g., patients) are scarce?

--These are highly prevalent conditions. Standard of care management does not require advanced diagnostic testing; treatment does not require surgery/interventions. RCTs are very feasible!

--Rare adverse opioid outcomes can be captured with multicenter cohort studies.
How can the practicality, dissemination, and use of these clinical practice guidelines be improved for the clinical setting or where clinical trials differ from real-world clinical practice, and if so, how might this be addressed?

--Opioid dosing should reflect practice (variable dosing and combination therapy)
--Limited access to care for non-pharmacologic therapies
Are there prescribing nuances for opioids that should be captured in a clinical practice guideline for this medical indication?

-Opioids should not be used generally. Clinical practice guidelines need to identify patients who are more likely to benefit