

PAIN, ANXIETY & MEDICATION USE

Todd Lang, MD
 WEMS Medical Director
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PAIN

- ◉ Acute pain: fairly easy to see and believe and understand and treat
- ◉ Chronic pain: much more difficult to measure, no physiological markers, or other ways to objectively measure
 - We can't tell how much there is
 - Differs from patient to patient
 - More narcotic maintenance patients

CHRONIC PAIN

- ◉ A nationwide problem
- ◉ Poorly treated by physicians
- ◉ Probably not ideally treated in the ED/EMS system
- ◉ We are stuck with it all the time, as no one else wants it either
- ◉ Increasingly treated with narcotics

THE FUTURE OF NARCOTICS?

- Evidence arising that narcotics upregulate pain receptors
- Pain begets pain, nervous system remodeling
- More and more prescriptions
- More and more abuse
- JCAHO pushes
- Pain as a "vital sign"
- Patient satisfaction/empowerment

PSEUDOADDICTION

- ◉ Chronic pain patient learns that he/she must be demanding and assertive in order to get relief from pain and the medical people get the impression that they are addicted or "drug seekers" though this behavior
- ◉ Hard to tell from a recreational drug abuser or addict

GOALS OF PAIN TREATMENT

- ◉ Safety
- ◉ Relief of Suffering
- ◉ Help manage patient behavior
- ◉ Facilitate care and transport

MORPHINE-AN OPIOID

- Onset 5-10 min, peak 20 min
- Lasts about 4 hrs
- Dangerous effects: resp depression, hypotension, allergy (rare),
- Irritating effects: confusion, itching, nausea/vomit, constipation
- Has an antidote!!

DOSING

- Higher dose for pain
- No ceiling dose, start with at least 0.1 mg/kg for severe pain in adults.
- Pt 55 years and older, dosed at 0.05 mg/kg
- Peds 0.05 mg/kg.
- More for "experienced" patient—talk to the medical command team
- Assess patient's chronic narcotic dose

CASE 1

- Healthy Man with closed Tib/Fib fracture only and no distal pulse.
- Pain is 10/10 and vitals show tachy at 130.
- IV is started
- Estimated 195 lbs
- You are 25 min from VVMC

CHOOSE

- A. Drive to hospital safely
- B. Choice A, plus IV morphine 9 mg over 2 minutes, not repeating dose until after 10 minutes have elapsed.
- C. Choice A & B plus gentle longitudinal traction once with recheck for pulse after
- D. Choice A, B, C, and apply a splint.
- E. 5mg IV morphine every 5 minutes till pain is 4 or less out of 10.

FENTANYL

- Synthetic narcotic agonist
- Shorter acting 30-60 min
- Less side efx (GI, itching, BP)
- Generic
- Easy to titrate
- Not currently in the AZ EMS box, but is used in some areas of US
- Best choice for EMS use IMHO

NARCOTICS ALL WORK

- They pretty much all work fine if you give enough.
- Side effects vary.
- "Equianalgesic dose" refers to the amount of one that does the same as another
- Usually referred to in "Morphine equivalents"
- Cross tolerance is not complete

DOSE EQUIVALENTS

| Name | IM Dose (mg) | PO dose (mg) |
|---------------|--------------|--------------|
| Morphine | 10 | 30 |
| Hydromorphone | 1.5 | 7.5 |
| Methadone | 10 | 20 |
| Fentanyl | 0.1 (100mcg) | --- |
| Oxycodone | | 30 |
| Meperidine | 75 | --- |

OPIOIDS: ADVERSE EFFECTS

- ⊙ Constipation
- ⊙ Sedation
- ⊙ Itching/redness
- ⊙ Confusion
- ⊙ Nausea / Vomiting
- ⊙ Respiratory Depression

NALOXONE

- ⊙ Short acting 30-60 minutes narcotic antagonist
- ⊙ Works for all narcotics
- ⊙ Can cause withdrawals acutely if used too aggressively
- ⊙ Use whole dose in life threat situation, otherwise, titrate by 0.2-0.4 mg increments q 2 minutes
- ⊙ A little bit (0.1mg) of naloxone will often improve the itching side effects of morphine

MORPHINE USE BESIDES PAIN

- ⊙ Low dose or NO DOSE for dyspnea: 1-2 mg for CHF, asthma, COPD
- ⊙ Low dose for anxiety 1-2 mg—but benzodiazepines work better
- ⊙ They will go to sleep before stopping breathing!
- ⊙ If they did not stop in 15 minutes, they won't stop breathing, so watch closer at first
- ⊙ You have an antidote.

MORPHINE IN MI

- ⊙ No evidence to suggest a beneficial effect on outcome, some evidence suggest detriment
- ⊙ Drag your feet a little till NG has a chance to work in the prehospital setting
- ⊙ It IS part of the guidelines
- ⊙ I use fentanyl in the ED
- ⊙ No clear consensus on use

COCAINE CHEST PAIN

- ⊙ Treat this with diazepam/Valium and aspirin in conjunction with a patch.

NARCOTIC-TOLERANT PATIENTS

- Ask patient what they take
- How many times a day
- For how long
- Then patch and ask for dose recommendations
- Generally for acute pain that has occurred in the setting of chronic pain medicine use

MIDAZOLAM

- Shorter acting than others
- Still reversible with flumazenil
- Cheap
- Safe, for the most part
- Stops seizures quickly
- Creates anterograde amnesia
- Some older patients go deeply asleep with just a couple of mg

SEDATION

- Calms patients
- Safe, has antidote
- Rarely affects bp or resps as monotherapy
- Meets def of sedation and requires cardiopulm monitoring
- May make care safer for providers
- Probably better for dyspnea than morphine which is possibly harmful

MUSCLE SPASM/BACK PAIN

- *Clinical Evidence: Benzodiazepines compared with placebo* Benzodiazepines may be more effective at reducing pain (very low-quality evidence).
- Benzodiazepines versus placebo:
- We found one systematic review (search date 2001) [11] that identified one poor-quality RCT (68 people). [12] The RCT found that intramuscular diazepam followed by oral diazepam for 5 days significantly reduced pain and increased the rate of overall improvement (rating scales used to assess overall improvement not reported) compared with placebo (overall effect rated good or very good: 21/33 [64%] with diazepam v 6/35 [17%] with placebo; P value and pain results not reported in the review). However, treatment groups were not comparable at baseline.

COCHRANE REVIEWS

- **Authors' conclusions:** Muscle relaxants are effective in the management of non-specific low back pain, but the adverse effects require that they be used with caution. Trials are needed that evaluate if muscle relaxants are more effective than analgesics or non-steroidal anti-inflammatory drugs.

COCHRANE

- **Harms:** The review found that muscle relaxants (both benzodiazepines and non-benzodiazepines) significantly increased adverse effects, particularly central nervous system effects, compared with placebo (all adverse effects, 8 RCTs, 724 people: RR 1.50, 95% CI 1.14 to 1.98; nervous system effects, 8 RCTs, 724 people: RR 2.04, 95% CI 1.23 to 3.37). [11] The most common adverse effects were drowsiness, dizziness, and nausea. The subsequent RCT gave no information on adverse effects. [13]

WHICH DRUG TO USE?

- Benzos are not the only muscle relaxants
- Most of the others are NOT controlled substances or habit forming
- cyclobenzaprine/Flexeril
- carisoprodol/Soma—can be abused
- methocarbamol/Robaxin
- tizanidine/Zanaflex

SEDATION: NOT AN OFFLINE THING

- May impair history taking
- May require further time in ER as a result
- May impair consent
- Are we treating emotions as medical problems?
- Are we reinforcing ambulance abuse?
- Don't sedate when you must incarcerate
- Don't complicate medical clearance for jail by oversedation

CASE 2

- 20 year old mother was in MVA and her child was ejected and killed. She has no evidence of multisystem trauma, but is flailing and has some blood from her ear. Vital are normal except HR is 140. She has GCS 14-15. You have an IV started.
- What is the next move?

REASONABLE OPTIONS

- Pain medicine, though it does not seem that she really has clear evidence of pain
- Sedate/anxiolytic with benzo to facilitate transport
- You patch and ask for a midazolam order and are told to give 1 mg every 3 minutes till she is calmer, up to 3mg
- You call and ask for a diazepam order and are told to give 2.5-10 mg in 2.5 mg doses q5 minutes

CASE 3

- 68 yo woman with severe dyspnea for 1 day. Hx of COPD and CHF. She has resp rate 40, retractions, wheezes, crackles, JVD and peripheral edema on exam. SaO2 is 84% RA.
- You correctly recognize that she needs CPAP and apply it at 5cm H2O of pressure. She feels like she is drowning and says she cant stand the feeling.
- You choose to:

PICK ONE:

- A. Begin RSI
- B. Tell her to "cowboy up" a little
- C. Remove CPAP
- D. Cheerlead & give 0.5 mg of midazolam IV.

CPAP--EXCEPTION

- The use of midazolam is specifically permitted in conjunction with CPAP treatment.
- Start with 0.5 mg IVP and dose every 5 minutes

W LINES

al personnel are probably not
accepted as performers of
sedation: no midaz+narcotic use
if diazepam improves the
back pain
s for acute pain if needed
probably not great for SOB or
of cases when sedation is
they require a patch.

have helpful and

or to giving any drug
helping patients.
adequate time to
imize safety
useful advice in
e protocol

OUR EXCELLENCE