ED Pain Management
Beyond Opiate Use

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Goals:
- Achieve effective analgesia
- Prevent side effects
- Avoid abuse and addiction

Outline:
- Pain Syndromes
- Ketamine
- Regional Anesthesia
- Other Therapies
- Critical Illness

Pain Syndromes
Common ED Complaints

Migraine  Abdominal Pain  Sickle Cell Disease  Chronic Arthritis
Migraine

1. Start:
   - **IV fluid** bolus 1-2 L
   - metoclopramide or prochlorperazine 10 mg IV with diphenhydramine 25 mg IV

2. Consider adding:
   - ketorolac 15-30 mg IV and dexamethasone 10-15 mg IV

3. Other options:
   - sumatriptan 6 mg SC
   - indomethacin 50 mg PO
   - propofol 50-100 mg IV

Abdominal Pain

Abdominal pain syndromes:
- cyclic vomiting
- gastroparesis
- cannabis hyperemesis
- abdominal migraines
- chronic pancreatitis

Abdominal Pain (+ Vomiting)

1. Start with **morphine** or **hydromorphone** ASAP (use doses known to work for patient)

2. Re-assess and re-dose every 10-20 mins (consider PCA, if available)

3. Don’t forget **IV fluids, oxygen, +/- NSAIDs**

4. Search for vaso-occlusive trigger

5. Set a limit and admit to hospital if pain not controlled

Sickle Cell Disease

1. Start:
   - **IV fluid** bolus 1-2 L (+/- dextrose)
   - ondansetron 4 mg IV
   - metoclopramide 10 mg IV
   - morphine or hydromorphone

2. Add:
   - droperidol 1.25 mg IV (watch QTc)
   - lorazepam 0.5-2 mg IV
# Chronic Arthritis

Patients with chronic arthritis are often already on opioids and NSAIDs.

For acute exacerbations of pain in the following joints, consider intraarticular steroid injections:

- knees
- shoulders
- elbows
- wrists
- ankles
- hips

use 1:9 mixture of:

- **triamcinolone** 40 mg/ml to
- **bupivacaine** 0.25%

5 ml for wrists, elbows, ankles
10 ml for shoulders, knees, hips

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# Ketamine

NMDA antagonist with some opioid mu receptor binding

So what does ketamine do?

- dissociative
- anesthetic
- sedative
- antidepressant
- analgesic

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# Ketamine Analgesia

Common adjunct analgesic in cancer and palliative care.

So, how can we use it in the ED?

**ketamine 0.1-0.2 mg/kg IV** (usually 10-15 mg)

provides peak effect in 30 seconds, lasting 5-10 mins

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Useful for:
1. quick, painful procedures (abscess I&D)
2. avoiding use of opioids
3. intractable, breakthrough pain (consider infusion)

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# Ketamine Tips

Watch out for:

- **mild hallucinations**
- **dysphoria**
- **nausea**
- **hypertension**

Create calm environment, administer slowly, and coach patient on the “rush.”

Caution: ketamine may mask serious pain (i.e., surgical abdomen)
Regional Anesthesia

Rationale for use:
1. avoid procedural sedation
2. decrease opioid use
3. longer-lasting analgesia
4. better cooperation and satisfaction
5. decrease long term pain

Regional Anesthesia (Ultrasound-Guided)

Example: interscalene brachial plexus block

<table>
<thead>
<tr>
<th>BLOCK</th>
<th>REGION</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>brachial plexus</td>
<td>shoulder, upper arm</td>
<td>humerus or forearm fractures, deltoid abscess</td>
</tr>
<tr>
<td>forearm (ulnar,</td>
<td>hand</td>
<td>complex hand lacerations</td>
</tr>
<tr>
<td>median, radial)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>femoral</td>
<td>anterior thigh, knee, femur</td>
<td>femur or hip fractures</td>
</tr>
<tr>
<td>popliteal</td>
<td>distal lower leg</td>
<td>ankle and foot fractures</td>
</tr>
<tr>
<td>intercostal</td>
<td>ribs, chest wall</td>
<td>rib fractures, chest tube placement</td>
</tr>
<tr>
<td>intraarticular shoulder</td>
<td>glenohumeral joint</td>
<td>shoulder dislocations</td>
</tr>
</tbody>
</table>
Advice from an ER doctor to drug seekers

Date: 2003-03-27, 9:54 AM PST

OK, I am not going to lecture you about the dangers of narcotic pain medications. We both know how addictive they are; you know because you know how it feels when you don’t have your vicodin, me because I’ve seen many many many people just like you. However, there are a few things I can tell you that would make both of us happier. By following a few simple rules our little clinical transaction can go more smoothly and it will both be happier because you get out of the ER quicker.

The first rule is to be nice to the nurses. They are underpaid, overworked, and have a lot more influence over your stay in the ED than you think. When you are ungrateful to them like they are because they are merely people who write the rules, I might write for you to get a shot of Oxycontin, but your behavior toward the nurses determines what portion of that Oxycontin is injected onto the floor before you get your shot.

The second rule is pick a simple, non-dangerous (non-pharamacy) condition which doesn’t require me to do a thousand dollar workup in order to give you out of the ER. If you tell me that you handle money constantly and it’s tender unless you stop and stare at it, I will take you up with a seizure or give you amphetamine without even asking a question. The pain of the way that you drug me may send you yelling and worry of how amphetamine may make you worry that you’re having a heart attack. And while I am 99% sure in my conclusion, I am not willing to buy my insurance and the families of doctors on the floor for your are. I also don’t want to mess you up. Which really has a blood, no one wants to mess you up. Which really has a chance that you may break a bone, no one wants to mess you up. And I really go to the hospital because you want to have a bone.

The third rule is I reserve your pain a 10/10 and I reserve your pain a 7/10. It means that you could possibly manage it. I’ve seen people on 10/10 pain and you strolling them playing into your pain scale and not even 10/10 pain. 10/10 pain is an easier question to be asked and a 7/10 body surface deep partial thickness burn, or the pain of a real control answer. Even when I push a clonazepam, the worst pain I had probably was 7. And that was when I was properly venting and crying for my mother. So stick with a 7/10 and even an 8. That means you are having by you might not be lying. (See below.)

The fourth rule is never ever ever lie to me about who you are or your history. If you come into the ER and give me a fake name so we can get your old records I will assume you are a woman-douchate than you really are. Most importantly though it will really really really mess up the back. Posing all the guy who works on you doing not work to your advantage.

The fifth rule is don’t assume I am an idiot. I went to medical school. That is certainly no guarantee that a rocket scientist knows me. I went to school with a few people who were a couple of medical interns short of a happy meal. However, I am an ER resident which means I was in the upper quarter of my class. This means to a 1st grade I have a surprisingly sharp eye. So if I listed to your vague and 1) you list allergies to every non narcotic pain medication ever 2) your history of vaginitis, amenorrhea, and hypermucoid stools and 3) your doctor is on vacation, stay out of emergency.

Tuesday, at a death, I have enough stuff that is or you are scanning for some vitamins. That is and itself isn’t necessarily more you don’t get any pain medication. Still, the backboard who list and liability who can take vitamins (which contain crane) are at least good for a few laughs at the nurses station. However, if you give that history every time in the ER that I will just go to the guy who empties the floor will know you are being immoral who is scanning for vitamins. (See rule 4 about lying.)

The sixth and final rule is wait your fucking turn. If the name tags you in the waiting room but brings patients who arrived after you back to be treated first, this is because this is an EMERGENCY room and they are sicker than you are. You getting a list of vitamins is not more important than the 6-year-old with a severe allergic attack. Telling the name tag that new your migraine is giving you that pain since you have been sitting a half hour in the waiting area to note that your friend is a extreme formidable of all our hate. Even if you end up coming back immediately, I will watch my menses that sight to connect you. You will not get the pain medicine you want under any circumstances. And finally believe that you manipulate your way to the back and make a 10-year-old young woman with an acute pregnancy that might kill her in a few hours was ever a moment longer to be seen, I would be able to put as a glass and make you drink before you leave the ER.

So if you keep these few simple rules in mind, your interactions will go much more smoothly. I don’t really give a shit if I give 20 vitamins to a drug seeker. Before I was bust out in the ER I was happy and I would honestly offer that mine on top of you to mess pain just before it will be really suffer. However, if you insist on wearing a fluoresence orange flag that says I am a drug seeker and picking me and the name tags with your behavior, I am less likely to give you the ox. You don’t want that. I don’t want that. So lets keep this simple, easy, and well will both be much happier.

Sincerely,
Your friendly neighborhood ER doctor
Other Therapies

Avoiding pills:
- **lidocaine** 5% transdermal patches
- **trigger point** injections
- **physical therapy, acupuncture**
- **massage, stretching**, relaxation, yoga

the basics! - splint, **rest, ice, compression, elevation**

Analgesia in Critically Ill

Pain is worse in critical illness:
- **Inflammatory modulators** (bradykinin, substance P, prostaglandins, histamines, etc) increase the sensitivity to pain to even minimal stimuli.

In addition to pain, be sure to address **anxiety** and **fear** which may modulate painful stimuli.

Analgesia in Critically Ill

1. **Start**:
   short-acting, rapid-onset opioids such as **fentanyl**
   (especially when hemodynamically unstable)

2. **Next**:
   longer-acting opioids (**morphine, hydromorphone**)
   continuous infusions and PCAs if appropriate

3. **Consider**:
   - **ketamine** infusion (helps support hemodynamics)

4. In trauma:
   - **regional nerve blocks** or **epidural anesthesia**

Summary

Review pain syndromes and optimal, targeted therapy

Consider adding ketamine to armamentarium

Learn and apply ultrasound-guided regional analgesia

Don’t forget non-opioid pharmacologic and physical therapies for outpatients

Be aggressive in treating pain in critically ill or injured