Pain in the ED

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PAIN

General considerations

What we do well

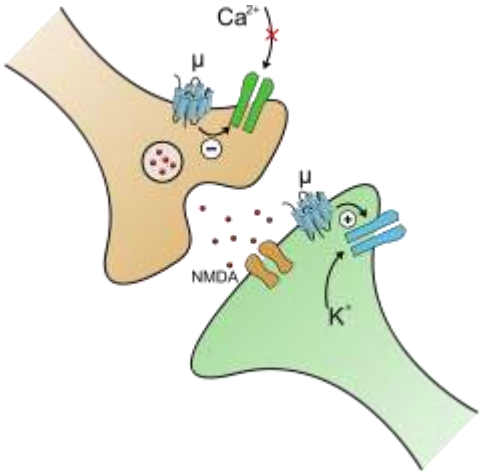
- Use pain scales
- Reassess frequently

What we could always do better

- Give pain relief rapidly

Opiates

- Act on mu, kappa and delta receptors
- Decrease pre-neurotransmitter release.
- Decrease pain transmission and increase pain



Adverse effects

- Histamine release – itch, rash – can be significant - morphine
- Respiratory depression
- Neurological depression
- Hypotension + bradycardia
- Nausea and vomiting

MYTH BUSTER 1 – Maxolon with morphine please.

Maxolon does not prevent opiate induced nausea and vomiting when given prophylactically.

- Talbot-Stern J, Paoloni R. Prophylactic metoclopramide is unnecessary with intravenous analgesia in the ED. Am J Emerg Med. 2000 Oct;18(6):653-7.
- Paoloni R, Talbot-Stern J. Low incidence of nausea and vomiting with intravenous opiate analgesia in the ED. Am J Emerg Med. 2002 Nov;20(7):604-8.
- Bradshaw M, Sen A. Use of a prophylactic antiemetic with morphine in acute pain: randomised controlled trial. Emerg Med J. 2006 Mar; 23(3):210-3.
- Yeoh BS, Taylor DM, Taylor SE. Education initiative improves the evidence based use of metoclopramide following morphine administration in the emergency department. Emerg Med Australas. 2009 Jun; 21(3):178-83.

Morphine

- Half life 2 hours iv – perfect for ED use.
- 0.1mg/kg for kids
- The biggest determinant for dosing is age
- Little old lady – try 2 mg and be patient.
- Young footy bloke – rapidly titrate doses – paramedics do this group better than ED.
- ED nurses are generally fantastic at titrating morphine to pain levels

Myth Buster 2 – Fentanyl is amazing

There is nothing amazing about fentanyl apart from its short half life (2.5minutes iv)

It is great for procedures in ED because it wears off quickly.

It is no good for acute pain relief in ED except for one golden opportunity....

INTRANASAL FENTANYL

- Incredible
- Is the ED equivalent of the paramedics green stick for kids.
- Non invasive. Rapid. Wears off.
- Allows you to get a kid settled, get a drip and in give the some morphine
- 1.5mcg/kg

Intranasal fentanyl

Tramadol

- Half life about 6 hours
- Weak Mu agonist
- Enhances serotonin and noradrenergic inhibition along nociceptive pathways.
- Fantastic as second line agent when morphine is causing dysphoria or inadequate pain relief.

Tramadol

- Can cause seizures
- Can cause serotonin syndrome
- Can make people nauseated (my practical tip is to put in 500mls or a litre of saline and run it in as fast as it will go)

Myth Buster 3 – I didn't give pain relief because I didn't want to mask the signs

Giving excellent analgesia will mask signs and diagnostic process.

Other opiates

- Alfentanyl, remifentanyl again are nothing special except for the short half lives and will remain in anaesthetic practice.

- Pethidine – Bad, bad, bad. NHS did use to give heroin so we won't look that bad in history.

- Dexrapropoxefene – Bad, bad, bad. Prolonged QT. TGA fighting drug companies to get it removed. Should be formally gone in the next 12 months.


NIL BY
MOUTH

NSAIDS

COX inhibitors

Cox 1 and Cox 2 – No real difference!! They all get ulcers and they certainly all get renal toxicity

Adverse effects

- Renal toxicity
- Upper GI bleeding – especially if you have H.Pylori
- Asthma/COPD (but overstated in kids with viral wheeze)
- Heart attacks

NSAIDS

- Give with caution over age 60
- Do not give at all over 70 (prednisolone or colchicine for gout)
- Do not give to patient on warafarin/clopidogrel.
- Give with caution to anyone with chronic medical problems
- Do not give to patients with significant asthma.

Myth Buster 4 – Give the renal colic PR indocid – its better

Per rectal NSAIDS do not have any less gastrointestinal or other side effects.

PR route only if there is vomiting and you don't want to give IV.

Myth buster 5 – Ketorolac is amazing

- There is nothing special about ketorolac.
- It is just another NSAID but comes in IM form.
- May help in giving perception of getting parenteral analgesia and quicker onset.
- Routinely given IV as off label use.

Pregnancy

- Use any opiates
- Use paracetamol
- Do not use NSAIDs

Codeine vs Endone vs Tramadol

Which oral opiates do you use?

Back Pain

Back Pain

Red flags

Simple advice

Referral for physiotherapy

Paracetamol

Ibuprofen

Endone

Myth buster 6 – Diazepam is amazing

Diazepam does not have any analgesic or muscle relaxant properties.

It may help pain through other mechanism but is highly addictive.

Panadol osteo 2 tablets morning afternoon and night.

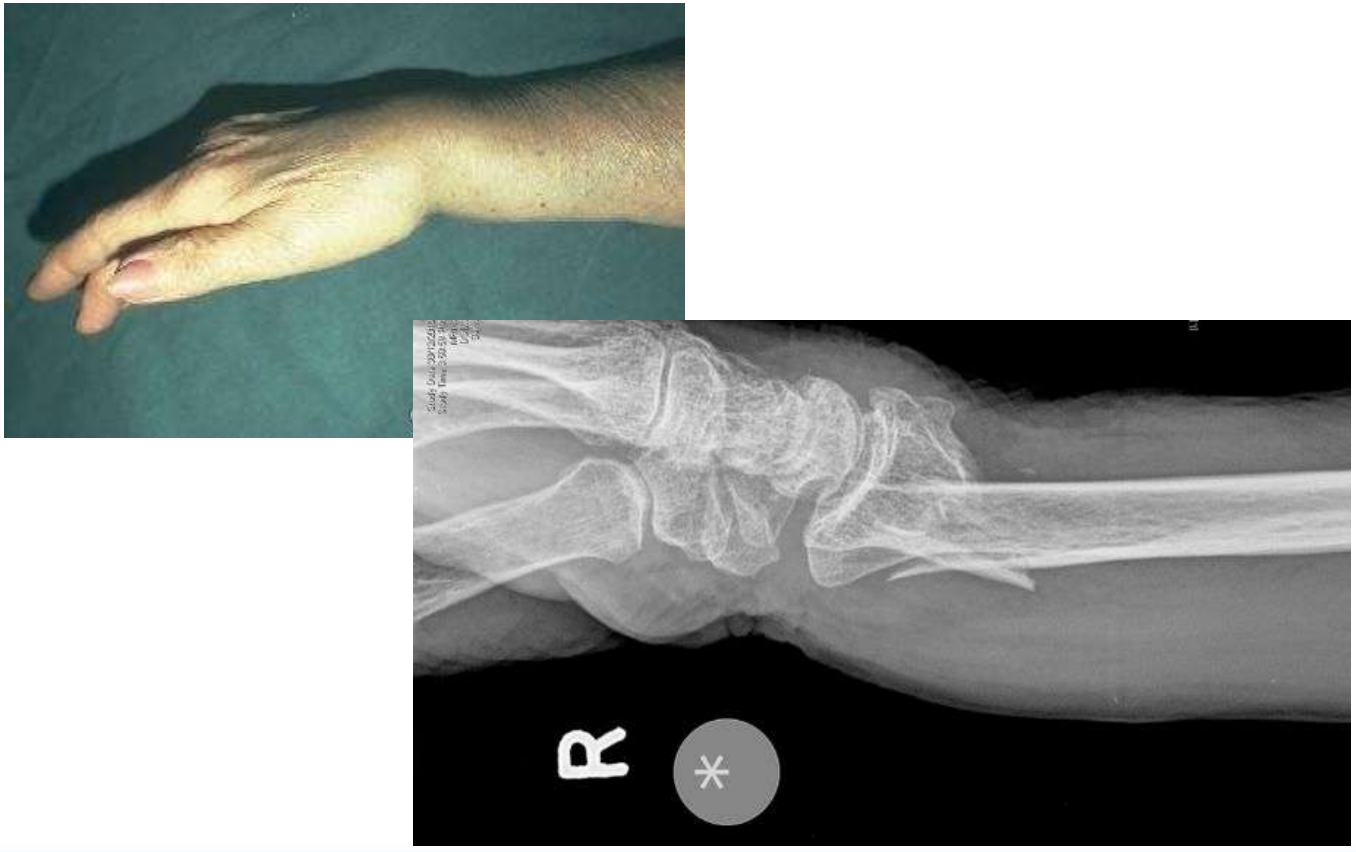
+

Nurofen 2 tablets morning afternoon and night.

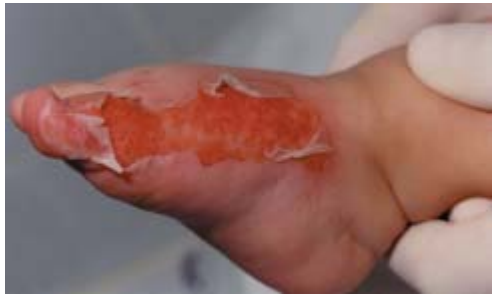
+

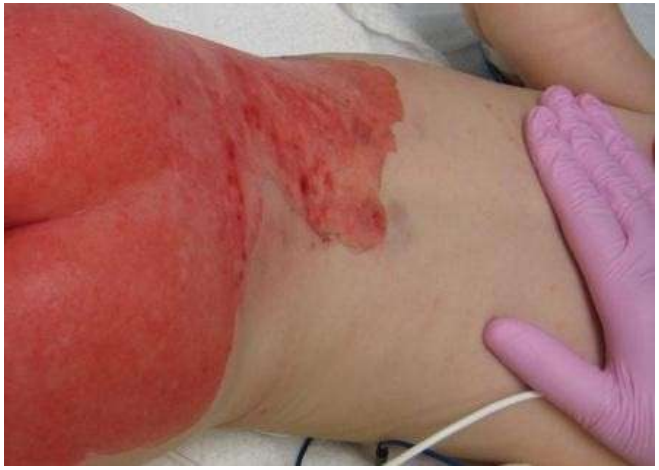
Endone 5mg tablets. 1 or 2 every 4 hours for breakthrough pain

Non pharmacological methods



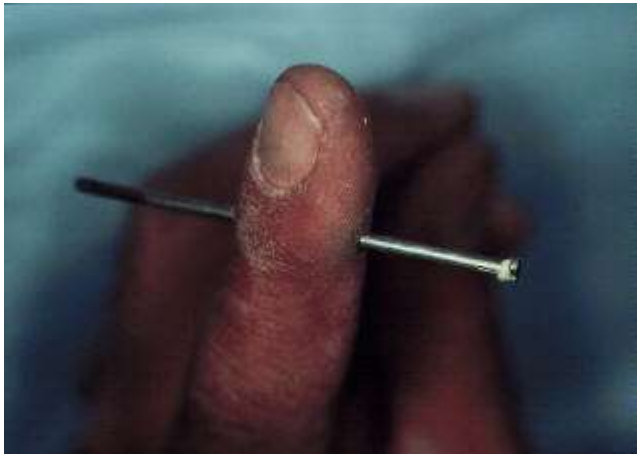
Non pharmacological methods





Non pharmacological methods

Treat the underlying cause



Non pharmacological methods

- Rest
- Ice
- Compression
- Elevation

Non pharmacological methods

- Reassurance, education, explanation,
- Relaxation, acupuncture
- Distraction

Myth 7 – opiates for headaches

Opiates are terrible for headaches – often cause rebound worsening or just don't help.

NSAIDS the best with paracetamol

Real migraines

Tryptans

Largactil (chlorpromazine)

Don’t forget paracetamol and don’t let the patient talk you out of it (unless a really good reason)

Ketamine

NMDA receptor antagonist

Produces dissociative state at anaesthetic doses

- 1-2mg iv or 3-4mg IM
- Must be credentialed for procedural sedation

But fantastic pain killer at sub anaesthetic doses.

Myth 8 – You need to be credentialed to use ketamine at pain relief doses

You don't. 0.1mg/kg/dose iv. Safer than opiates in a small regional hospital with limited anaesthetic back up.

Ketamine

- 0.1mg/kg doses
- Works in 1 minute
- Wears off in 15-20 minutes
- Can give mutiple doses
- SAFE
- Brilliant for painful procedures where you are not credentialled for procedural sedation.

- Increased secretions
- Increased HR and BP
- Hallucinations (often worse in older people)
- Increased intraoccular pressure and increased ICP overstated.

Local anaesthetics

- ALA instead of needle for wounds in kids
- EMLA
- Nerve blocks


PAIN