
Pain and pain medication at the extremes of age

Dr Chris Jones, FANZCA
Pain Fellow, CCDHB

Outline

The Young

- pain assessment
- specific drugs

The Old

- pain assessment
 - alterations in pharmacology
 - specific drugs
-

Sources

Pharmacology of Pain

Ed: Beaulieu et al

IASP Press, 2010

Acute Pain Management: Scientific Evidence

Ed: Macintyre et al

Australian and New Zealand College of Anaesthetists

Third Edition, 2010

Pain 2012 Refresher Courses

Ed: Irene Tracey

IASP Press, 2012

What do you prescribe?



Issues with pain in infants and children

Pain Assessment (nonverbal/ behavioural/
physiological vs verbal)

Types of pain

Drug choice/ formulation

Drug dosing

Pain assessment in paediatrics

Observation and behavioural measures

Self-reporting (age 4+)

Cognitive impairment

Behavioural/ observational

CHEOPS: cry/ facial expression/ verbal expression/ torso position/ touch/ leg position (0-3 per item, final 0-18)

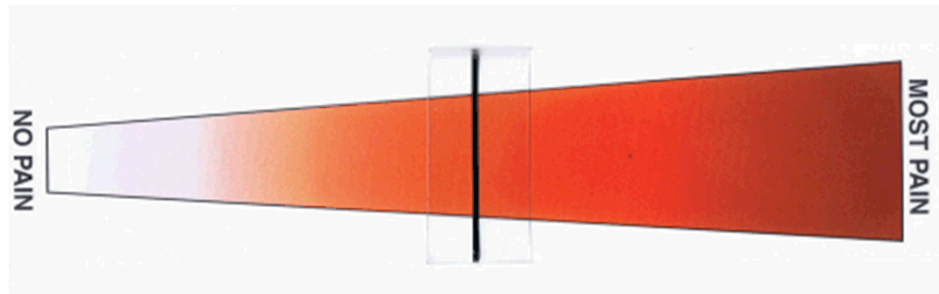
Faces Legs Activity Cry and Consolability (FLACC): 0-2 for each point, total 0-10 score

Self-report tools for children

Faces Pain Scale



Coloured Analogue Scale



Cognitive Impairment

Assessment difficulties may lead to this group receiving less analgesia.

Non-communicating Children's Pain Checklist
Paediatric Pain Profile
Revised FLACC scale

Usual carer assessment very important

Types of pain

Procedural pain

Acute pain

Cancer pain

Chronic non-cancer pain

Drug Choice

Paracetamol

NSAIDS

Opioids

Anti-neuropathic agents

Paracetamol

Often dosed by age, but weight more accurate.
PO/PR/IV

PO:

age <6/12: 60mg/kg/day (15mg/kg QDS)

Age >6/12: 90mg/kg/day for 48hrs then 60
mg/kg/day (probably safest to stick with
60mg/kg/day)

NSAIDS

Diclofenac: 1mg/kg PO TDS
(tabs/ suppositories)

Ibuprofen: 5-10 mg/kg PO QID
(tabs, suspension)

Opioids: Tramadol, Codeine

Codeine: 1mg/kg PO QID (tabs, ?liquid)

-Non-metabolisers/ ultra-metabolisers

Tramadol: 0.5-1 mg/kg PO/IV QID (caps, oral drops)

Opioids: Strong

Morphine

0.15mg/kg q4h

A path to be wary of embarking on in chronic non-cancer pain, in patients of any age...

Anti-neuropathic agents

TCAAs (amitriptyline, nortriptyline):

0.05-0.1mg/kg nocte, slowly increasing up to
0.5-1mg/kg nocte (liquid?)

Gabapentin: 10mg/kg/day, increasing to max
50mg/kg/day (liquid?)

Emergency room

Intranasal fentanyl

PO/ IM ketamine

Distraction therapy - the hypnotic power of the iPad!

Pain in the elderly



Issues

Pain Assessment

Altered pharmacokinetics

Drug choice

Interactions and Side effects

Pain assessment in the elderly

Verbal Descriptor Scale or Numerical Rating Scale both effective

Cognitive impairment likely to lead to undertreatment of pain.

VDS best for cognitive impairment

Pain Assessment in Advanced Dementia (PAINAD) and others for non-verbal patients

Pharmacokinetic issues

-reduced cardiac output

-increased body fat

-reduced muscle mass

-reduced TBW

Liver: reduced mass and blood flow

Kidney: reduced mass/ blood flow/ GFR

CNS: reduced blood flow, reduced efflux of drugs

Drug choice

Paracetamol

NSAIDS

Opioids

Anti-neuropathic agents

Paracetamol

Up to 4g/day, though consider adjusting dose down in smaller/ frail patients

Funded tablets not coated, tend to stick to tongue, ?consider suspension instead

NSAIDS

ibuprofen/ diclofenac/ coxibs

GI side effects

Renal side effects

CVS/ CNS side effects

Opioids (weak)

Tramadol

up to 400mg/day

IR or SR

accumulates in renal impairment

Codeine (“mystery dose morphine”)

-non-metabolisers/ ultra-metabolisers

-morphine accumulates in renal impairment

-constipation++

Opioids (strong) - 1

Morphine

IR and SR, caps and liquid

Accumulation in renal impairment

Opioids (strong) - 2

Fentanyl (patch or sublingual)

Breakthrough pain an issue: practicalities

Rapid dose escalation

Doses seem so innocuous...

Ok in renal impairment

Opioids (strong) - 3

Methadone. Opioid plus anti-NMDA receptor action

Dosing frequency different for pain than for opioid substitution

Ok in renal impairment

Tiger country?

Anti-neuropathic agents - TCAs

Nortriptyline / (Amitriptyline)

Start at 5mg nocte for one week, then increase by 5mg/dose every week, up to max of ?20mg nocte

Anticholinergic issues: postural hypotension, dry mouth, urinary retention, constipation, blurred vision, drowsiness, falls (x2), confusion, gait disturbance (amitrip > nortrip)

Anti-neuropathic agents - SNRIs

Venlafaxine/ (Duloxetine)

Used at lower dose than for depression

Better SE profile than TCAs

Anti-neuropathic agents - Gaba

Gabapentin/Pregabalin

Problems: drowsiness, memory impairment, weight gain, depression.

Perhaps “less worse” than the TCAs?

Accumulate in renal impairment

SE and interactions

Anticholinergic - falls

Cognitive Impairment - no longer able to cope at home

But: Untreated pain increases risk of depression

Alternatives to systemic medications

Local treatments

- TENS
- Capsaicin
- Topical lignocaine

Blocks

- epidural steroids
 - facet joint injections/ RF ablations
 - sympathectomy
-

Key messages

Doses: Start low, go slow

Beware of SE, even at low doses

Don't be afraid to admit that a drug isn't working

Opioids for chronic non-cancer pain

Dependence

Dose escalation

Death

Points to consider:

-clear, attainable objective?

-have all other options been exhausted?

-is there a plausible exit strategy?
