Post operative Pain

Dr Rob Stephens

Thank you to Dr Maya Nagaratnam
Learning Objectives

• 6 important reasons for post operative pain control
• Pain in context
• What and how should I prescribe
• Chronic Pain
• Regional Blocks
Acute Pain

• Unpleasant sensation
• From a noxious stimulus
• Generally from a tissue injury
Why is it important to control pain?

- *Divinum sedare dolorem*
  - ‘It is divine (or praiseworthy) to alleviate pain’
- Reduce Sympathetic activity (ACS)
- Reduce respiratory complications
- Reduced chronic pain syndromes
- Improved mobilisation
- Improved patient satisfaction and happiness
# Pain- in Context

<table>
<thead>
<tr>
<th>Psychological</th>
<th>Talk, explain, listen, reassure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>Fix Fracture, warm/cold, raise injury</td>
</tr>
<tr>
<td>Drugs –</td>
<td>WHO ladder</td>
</tr>
<tr>
<td></td>
<td>Adjuvants</td>
</tr>
<tr>
<td></td>
<td>Nerve blocks</td>
</tr>
</tbody>
</table>
WHO analgesic ladder....1, 2, 3, ?4
### Analgesia 1 way of thinking...

<table>
<thead>
<tr>
<th>Mild</th>
<th>Moderate</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paracetamol</td>
<td>Codeine</td>
<td>Fentanyl</td>
</tr>
<tr>
<td>NSAIDs</td>
<td>Tramadol</td>
<td>Morphine</td>
</tr>
</tbody>
</table>

Adjuvants: ketamine, gabapentin
**Analgesia** Another way of thinking...

<table>
<thead>
<tr>
<th>Level</th>
<th>Category</th>
<th>Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>General</td>
<td>Assess, kindness, reassure, physical</td>
</tr>
<tr>
<td>1</td>
<td>Simple</td>
<td>Paracetamol</td>
</tr>
<tr>
<td>2</td>
<td>NSAID</td>
<td>Ibuprofen</td>
</tr>
<tr>
<td>3</td>
<td>Weak Opioid</td>
<td>DihydroCodeine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tramadol</td>
</tr>
<tr>
<td>4</td>
<td>Strong Opioid</td>
<td>Morphine, Fentanyl, Oxycodone</td>
</tr>
<tr>
<td></td>
<td>Adjuvants</td>
<td>Ketamine, Gabapentin</td>
</tr>
<tr>
<td></td>
<td>Blocks</td>
<td>Local, Nerve, Regional</td>
</tr>
</tbody>
</table>
Paracetamol

Over the counter
1g 4x day = QDS Oral IV
Never less than 4 hours apart

Beware some combinations eg co-dydramol
Liver Impairment
Non Steroidal Inflammatory Drugs
eg Ibuprofen

Cyclo-oxygenase Inhibitors
Platelets
Asthma 10%
GI Irritation- common
Renal

Not in elderly/renal dysfunction/1 kidney
Opioids

Morphine
Diamorphine
Fentanyl
Alfentanil
Remifentanil
Tramadol
DiHydroCodeine
Weak Opioids
e.g. Dihydrocodeine

Commonly used
Resp Depression in Overdose
Nausia Vomiting Constipation
Dysphoria- feels ‘out of it’
Strong Opioid
e.g. Morphine

Commonly used
Resp Depression
Nausea Vomiting Constipation
Sedation & Dysphoria - feels ‘out of it’
Itching

Oral + IV commonest,
May be in Patient Controlled Analgesia ‘PCA’
**Strong Opioid**

eg Morphine, Fentanyl, Oxycodone

Only use IV as PCA on ward

ie never IV Fentanyl

Prescribe $O_2$ and Naloxone

PRN

Chlorpheniramine for itch- antihistamine

Naloxone

Antiemetic
Case 1

It is your first on call as an FY1 person.
• Bleeped about Mrs Patel
• ‘Day Surgery’ laparoscopic cholesystectomy
• Admitted overnight for uncontrolled pain

• What are you going to prescribe?
Case 1 answer
General points

• ‘step up the ladder’- then down
• Is here any contra-indication?
• Assess and reassure
• Reality Check- is the pain expected?

• Oral -Regular oral analgesia
• Breakthrough pain – something strong and quick
• Others -Treat co existing symptoms; fluids, antiemetic, laxatives , oxygen
Pain Assessment

Numeric Rating Scale - NRS

- 0: No Pain
- 1 to 5: Moderate Pain
- 6 to 10: Worse Possible Pain

Wong-Baker FACES Pain Rating Scale

- 0: Happy
- 1 to 5: Sadness and Pain...
You’re the surgical FY1 on call and are called to the ward by a nurse. He explains that Mrs Wilkinson is in moderate pain. You see from her operation notes that she has had an elective total right hip arthroplasty earlier today. She has been prescribed paracetamol (1g 4x) and ibruprofen (400mg TDS) but is still in pain.
It is important to use an altered WHO analgesic ladder:

- **Step 1:** Simple analgesia eg. paracetamol
- **Step 2:** Non steroidal Anti Inflammatory eg Ibuprofen
- **Step 3a:** weak opioids eg. codeine, dihydrocodeine or tramadol
- **Step 3b:** strong opioids eg. Morphine, diamorphine, oxycodone

Step 4 can be considered to be call the pain team or anaesthetics for specialist management which may include patient controlled anesthesia or even nerve blocks.

Here is patient has had step 1-2 analgesia. This means that co-codamol is contraindicated (this contains paracetamol, so prescribing it here would result in overdose)- no more than 4 x1g a day, or nearer than 4 hours

Of the remaining options option A is better as a major side effect of opioids is constipation, prescribing the osmotic laxative lactulose negates this to a degree.
Regional analgesia

Na Channel Blockers- stop sensory, motor, and autonomic nerves.

• Local Field block- eg suturing an injury
• Peripheral nerve block
  – Mainly extremities, particularly orthopaedics
  – Eg Femoral Nerve
• Epidural
  – Used as both analgesia and anaesthesia
  – Lasts 1 hour – 4 days
• Spinal
  – Lasts 2-6 hours
  – Lumbar puncture
# Peripheral Nerve Block

## Nerve blocks at the elbow

<table>
<thead>
<tr>
<th>Block Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Ulnar nerve block</td>
<td>a Medial humeral epicondyle, b ulnar nerve, c sulcus, d olecranon.</td>
</tr>
<tr>
<td>b Median nerve block</td>
<td>a Median nerve, b biceps tendon, c brachial artery.</td>
</tr>
<tr>
<td>c Radial nerve block</td>
<td>a Finger palpating lateral humeral epicondyle, b biceps tendon.</td>
</tr>
</tbody>
</table>
Spinal v Epidural

Both
Local Anaesthetic + Opioid

Spinal = Lumbar Puncture

Hypotension
Can’t move legs
Can’t feel full bladder
Chronic or non-acute pain

Pain persisting after the injury has healed
Different mechanism to acute pain
Serious and life changing/disabling/suffering
Onus on us to believe patients
Causes include not treating acute pain properly!

Acute pain harder to treat

Treatment – multi modal
Summary – control of POP
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