Pain Management

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St Luke’s Hospice
Learning Outcomes

- Define the different types of pain
- Describe the process of pain assessment
- Discuss pharmacological management of pain
- Identify non pharmacological approaches for pain management.
What is pain?

- Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage.
- ‘Pain is whatever the patient says it is and exists whenever he says it does’
- Pain assessment is essential in the management of pain.
Total Pain

- Physical - pain of the disease process
- Psychological/Social – financial/body image/family
- Emotional - loss of independence/fear of death
- Spiritual – low self esteem / dignity
Types of Pain

- **Soft Tissue** Throbbing/tender/ache
- **Oedema** Heavy/tight
- **Nerve** Throbbing/burning/toothache
- **Raised intracranial pressure** Thumping restricting
- **Bone** Gnawing/aching
- **Colic** Cramping/exhausting/gripping
Pain Assessment

- Location
- Duration
- Description
- What decreases pain
- What increases pain
- Intensity
- How does the patient respond
- Pain Tools
Pain Assessment Tools

- Visual analogue scale
- Numerical Scale
- Verbal rating scale
- McGill pain questionnaire
- Faces Pain Scale
- Body Picture
- Distat Tool
Principles in Managing Pain

- Right Drug by the Ladder
- Right dose by mouth/patch/injection
- Right Time by clock
# WHO Analgesic Ladder

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Paracetamol</th>
<th>1 g. 6 hourly oral +/- other non-opiate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Adjuvant analgesic depending on the mechanism of the pain</td>
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<tr>
<td></td>
<td></td>
<td>Specific measures to moderate the cause of the pain – surgery, RT, physiotherapy, nerve blocks, TEN’s, stenting, chemotherapy, hormonal therapy, antibiotics, etc. Emotional, social and spiritual supportive care should be in place.</td>
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<tr>
<td></td>
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<tr>
<td>Step 2</td>
<td>Add codeine</td>
<td>30-60 mg 6 hourly oral or other weak opioid</td>
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<tr>
<td>Step 3</td>
<td>Morphiine</td>
<td>2.5-10 mg 4 hourly oral or other strong opiate (instead of codeine)</td>
</tr>
</tbody>
</table>
Step 1 Non Opiates +/-% Adjuvant

- Paracetamol
- Aspirin (rarely used in end of life)
Step 2 Weak opiates +/- Adjuvant

- Co Codamol
- Codeine
- Dihydrocodeine
- Kapake
- Tramodol
- Nefopam
- Buprenorphine patch
Step 3 Strong Opiates +/- Adjuvant

- Morphine I/R or S/R
- Diamorphine I/R
- Oxycodone I/R or S/R
- Fentanyl Patch S/R
- Buprenorphine patch
- SL or Buccal IR fentanyl
- Methadone I/R but long half life
Nociceptive Pain

- Soft tissue, bone or joint disease, pelvic disease or originating in renal tract or retroperitoneal – NSAIDs with PPI cover
- Metastatic bone pain – NSAIDs or COX2 + adjuvant-seek specialist advice
- Muscle spasm – Diazepam 2mg PO tds or Baclofen 5mg PO tds
- Intestinal colic – Antispasmodics e.g. Mebeverine 135mg PO tds or Hyoscine butylbromide 20mg sc qds or CSCI – see specialist advice
- Liver capsule pain – NSAIDS or Dexamethazone 4mg PO od for 5 day trial (if continued monitor blood sugars weekly)
Neuropathic Pain

- Infiltration by tumour, zoster, scar tissue or compression unrelieved by steroid or specific therapies
- Amitriptyline/Nortriptyline 10-75mg
- Gabapentin 300-3600mg/day (divided twice daily)
- Pregabalin 25-600mg/day (twice daily dosing)
- Capsaicin 0.075% cream applied sparingly up to qds
- Clonazepam 125mcg – 4mg /day PO/SC in divided doses
- Methadone*/Ketamine* for complex pain not responsive to other regimes

*Both require specialist intervention/monitoring due to complexities of these drugs
Neuropathic pain

- Compression by tumour – Dexamethasone 4mg PO od (monitor blood sugars weekly)

- Diabetic neuropathy – Duloxetine 30mg PO OD titrating to 60mg bd
## Adjuvant Analgesics

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Type of Pain</th>
<th>Drug names</th>
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</thead>
<tbody>
<tr>
<td>Anticonvulsant/Antidepressant</td>
<td>Neuropathic – Injury peripheral or CNS e.g. Nerve infiltration</td>
<td>pregabalin, gabapentin, Carbamazepine, amitriptyline, nortriptyline, duloxetine</td>
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<tr>
<td>Muscle relaxants</td>
<td>Muscle spasm</td>
<td>diazepam, baclofen</td>
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<tr>
<td>Steroids</td>
<td>Nerve compression, swelling, raised ICP</td>
<td>dexamethasone</td>
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<tr>
<td>NSAIDs</td>
<td>Somatic e.g. bone pain or visceral e.g. Liver pain</td>
<td>Ibuprofen, Naproxen, Diclofenac</td>
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<tr>
<td>Antispasmodics</td>
<td>Intestinal Colic</td>
<td>Mebeverine 135mg po tds, Hyoscine butylbromide sc,</td>
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<tr>
<td>Monoclonal antibody</td>
<td>Bone Pain</td>
<td>Denosumab</td>
</tr>
<tr>
<td>Bisphosphonates</td>
<td>Bone Pain</td>
<td>zolendronic acid</td>
</tr>
<tr>
<td>Anaesthetics</td>
<td>Cancer pain, neuropathic pain</td>
<td>Nerve blocks, ketamine, intrathecal, lidocaine patches</td>
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<tr>
<td>Antibiotics</td>
<td>Infection</td>
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</table>
Non Drug Pain Relief

- Heat
- Cold
- Relaxation
- Divisional Therapy
- Tens
- Acupuncture
- Radiotherapy
- Immobilisation/aids
- Surgical intervention
What factors increase or decrease pain?

<table>
<thead>
<tr>
<th>Increase Pain</th>
<th>Decrease Pain</th>
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<tbody>
<tr>
<td>Insomnia, fatigue</td>
<td>Sleep</td>
</tr>
<tr>
<td>Anxiety, fear</td>
<td>Relaxation</td>
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<tr>
<td>Depression</td>
<td>Elevation of mood</td>
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<tr>
<td>Social isolation</td>
<td>Companionship, understanding</td>
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<tr>
<td>Discomfort</td>
<td>Relief of other symptoms</td>
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Breakthrough Cancer Pain (BTcP)

- Predictable pain e.g. dressing change, movement (walking, coughing)
- Unpredictable (spontaneous) pain e.g. idiopathic no known cause
Treatment of BTcP

- Correct the correctable
- Non-drug
- Drug Treatment
Fentanyl

- Fentanyl patches (brands: Durogesic D – Trans, Matrifen, Mezolar) matrix or reservoir
- Tablets: Sub lingual Abstral, Buccal Effentora
- Lozenges: Actiq
- Nasal spray: Instanyl, PecFent
- Alfentanyl parenteral injections
Fentanyl Patches

- When patch is initiated it will take 12-18 hours for full absorption.
- If converting from SR alternative opiate, commence patch at the same time as last 12 hourly SR tablet is given.
- When patch strength is increased it will again need 12-18 hours for the medication to reach absorption.
- Patient may still require rescue doses of immediate release opiates.
- Levels peak at 24-72 hours
Risks associated with fentanyl

- Fentanyl is a strong opioid and should not be commenced on opioid naïve patients.
- It is a slow releasing opioid so there is risk of respiratory depression if not administered correctly.
- Direct heat can increase the absorption (heat pads, hot water bottle etc)
- Risk of abuse.
- If administered by nurses record on a green card
- Report incidents to Locality Manager
Conversion with Fentanyl Patches*

When converting patients from an opioid onto Fentanyl Patches, the regular opioid needs to be continued for the first 12 hours after the patch is administered to allow plasma fentanyl to increase to a therapeutic level.

For patients using fentanyl patches that are entering the terminal phase of their illness and are requiring further opioid analgesia and for those with rapidly escalating pain, it is best to continue transdermal fentanyl and give rescue doses of subcutaneous diamorphine or add a continuous subcutaneous infusion of diamorphine as set out below.

Rescue doses of diamorphine for breakthrough pain for patients using fentanyl patches:

Give rescue doses of subcutaneous diamorphine based on ‘the rule of 5’ (divide the patch strength by 5 and give as mg of diamorphine).

**e.g. fentanyl 50mcg/hr patch = 10mg diamorphine when required**

  - Maintain the current patch strength
  - Continue to change the patch every 72 hours

Rapidly escalating pain requiring the addition of a syringe driver:

- Infuse the equivalent of 2 or 3 ‘when required’ doses of diamorphine (calculated by ‘the rule of 5’) over the next 24 hours
- This represents a total increase in dose of 30-50%
  - E.g. fentanyl 50mcg/hr patch = 10mg ‘when required’ dose
  - 10mg x 2 = 20mg diamorphine infused over next 24 hours
  - 10mg x 3 = 30mg diamorphine infused over next 24 hours
Side effects of opioids

- Nausea &/or vomiting warn pt and prescribe prn antiemetic
- Constipation – prophylactic laxatives
- Cognitive impairment, drowsiness, myoclonic jerks, dysphoria, respiratory depression dose related side effects indicating need to reduce opioid dose, review adjuvants and substitute opioid
- Acute respiratory depression/bradypnoea. Give Naloxone 100mcg - 2mg by slow IV injection titrated against resps avoiding complete reversal of analgesia if possible.
- Refractory pain – pts with unresponsive pain or opioid toxicity may need to be referred to the Palliative Care Service.
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<tr>
<td><strong>Present</strong></td>
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<tr>
<td>On regular opioid</td>
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<tr>
<td>Not on regular opioid</td>
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<tr>
<td>If oral opioid, convert to syringe driver*. Continue usual opioid if in patch form.</td>
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<tr>
<td>Give appropriate dose of same opioid** sc prn hourly (maximum 4 doses in 24 hours)</td>
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<tr>
<td>Review after 24 hours</td>
</tr>
<tr>
<td>If <strong>effective</strong> and 3 or more doses required in 24 hours consider increasing the syringe driver. Continue prn doses as required</td>
</tr>
<tr>
<td>If <strong>effective</strong> and 3 or more doses required consider syringe driver. Continue prn doses as required</td>
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* Contact Medicines Information or the Palliative Care Team for advice on dose calculations/conversions to s.c.
** Fentanyl patch - prn opioid may be different e.g. morphine or oxycodone. Check patient's drug history or see above.
Conclusion

- Pain affects quality of life
- Patients have the right to be pain free
- Continual and effective assessment is essential for successful pain management
- Pharmacological and non pharmacological methods should be used in treatment.
- Correct medication for pain type
- Be aware of contraindications/ renal impairment
Further information

- NICE guidance on opioids for pain in palliative care (May 2012 – reviewed May 2014)
- NICE guidance on neuropathic pain (2010)
- Clinical Knowledge Summaries http://www.cks.nhs.uk/palliative_cancer_care_pain/management
- Sheffield palliative care formulary version 4