CHAPTER 26
PAIN

26.1 PAIN, CHRONIC

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. The relationship between pain (a subjective experience) and tissue damage (which may be assessed directly by others) is moderated by socio-cultural context as well as the nervous system.

The goals of pain management include pain reduction and improved function, sleep, and well-being. Family members play an important part in the patient's treatment and should be included where possible.

Measure care outcomes by evaluating pain severity, quality of life, and functionality, e.g. Pain, Enjoyment and General Activity (PEG) scale, http://www.med.umich.edu/1info/FHP/practiceguides/pain/PEG.Scale.12.2016.pdf

26.1.1 ANALGESIA FOR CHRONIC NON-CANCER PAIN

ASSESSEMENT OF CHRONIC NON-CANCER PAIN

A biopsychosocial assessment is necessary to inform effective pain management.

Ascertain the aetiology and perpetuating factors and manage accordingly. Note that there may be overlap between different aetiologies, and condition-specific pain management may be required.

» Nociceptive pain, e.g. osteoarthritis (see section 13.3); rheumatoid arthritis (see section 13.1); gout (see section 13.4); spondylarthritis (see section 13.5); chronic post-surgical or injury pain; visceral pain, e.g. chronic pancreatitis; chronic cancer pain (see section 26.1.2); endometriosis (see section 5.4).
» Neuropathic pain (see section 26.1.4).
» Fibromyalgia and irritable bowel syndrome (see PHC STGs and EML, section 2.12).
» Mental illness, e.g. mood disorders (depression and bipolar disorder), anxiety, post-traumatic stress disorder (see chapter 15: Mental health conditions), somatic symptoms, and related disorders.
» Substance use disorders, including over the counter analgesics, opioids, benzodiazepines, and alcohol.

Ascertain the patient's beliefs about their pain and hopes of care. Common issues to address are:

» Idealised nature of reality, e.g. that life must be pain-free.
» That pain means exercise and physical activity must be avoided.

» Catastrophic thinking regarding the pain.
» A need to be unwell to be cared for by others.
» Fear of work and responsibility, for various reasons.
» Stigma, with denial of mental illness or interpersonal conflict.

Social stressors, trauma, interpersonal conflict or violence may predispose to and perpetuate chronic pain.

GENERAL AND SUPPORTIVE MEASURES

Patients with chronic pain should be treated with a biopsychosocial approach, according to findings of a comprehensive assessment. Note that those with greater subjective pain complaints may also be at higher risk of an opioid use disorder.

» Validate the pain experienced and manage with empathy.
» Educate regarding the cause of pain, prognosis (including that pain may not be fully relieved), and realistic expectations regarding pain reduction.
» Establish goals of care with the patient and select a measure of effectiveness e.g. Pain, Enjoyment and General Activity (PEG) scale, http://www.med.umich.edu/1info/FHP/practiceguides/pain/PEG.Scale.12.2016.pdf
» Treat the underlying physical cause of pain. Refer for specialist care (e.g. rheumatologist, orthopaedic surgeon) where necessary.
» Treat underlying or comorbid mental illness.
» Manage substance use, refer to SANCA/ rehabilitative services.
» Encourage physical activity; refer to Physiotherapy and Occupational Therapy (OT).
» Address self-esteem, motivation, daily function, and social skills; refer to OT.
» Address social stressors and interpersonal conflicts; refer to social worker, counselling services, psychologist, social welfare organisations, NGOs (e.g. FAMSA, http://famsa.org.za, or if there is domestic violence, POWA, https://www.powa.co.za)

LoE:III[i]

MEDICINE TREATMENT

Paracetamol, ibuprofen and tramadol may be used alone or in combination according to the severity of the pain.

Mild/moderate pain:

- Paracetamol, oral, 1 g 4–6 hourly when required.
  - Maximum dose: 15 mg/kg/dose.
  - Maximum daily dose: 4 g in 24 hours.

- NSAID, e.g.: *LoE:I*[ii]
- Ibuprofen, oral, 400 mg 8 hourly with meals.
  - May be used in combination with paracetamol or opioids.

CAUTION

Avoid long-term use of NSAIDs (e.g. ibuprofen) as they are associated with an increased risk of arterial thrombosis, renal impairment and gastrointestinal bleeding.

Concomitant use of more than one oral NSAID has no additional clinical benefit and only increases toxicity.

Use of all NSAIDs is associated with increased risks of gastrointestinal bleeding, renal dysfunction, and cardiovascular events (stroke and myocardial infarction).

NSAIDs should be used judiciously at the lowest effective dose for the shortest duration. Explore and manage exacerbating factors for pain. See section 26.1: Chronic pain.

Do not use NSAID in pregnancy or while breastfeeding.

In high-risk patients: i.e. patients > 65 years of age, or with a history of peptic ulcer disease, or on concomitant warfarin, aspirin or corticosteroids:

ADD *LoE:III*[iii]

- PPI, e.g.:
- Lansoprazole, oral, 30 mg daily.

Severe pain:

- Tramadol, oral, 50–100 mg 4–6 hourly.
  - Warn patient of adverse effects and addiction potential. Advise not to operate machinery/drive initially and after dosage increases.
  - Evaluate response to treatment using a rating scale at 2 weeks, and every following 4 weeks: **taper and stop tramadol if not reducing pain.**
  - In patients with uncontrolled pain the dose can be increased to a maximum of 100 mg (2 x 50 mg) 6 hourly.
  - Improved effect when given with paracetamol. *LoE:III*[iv]

CAUTION

» Tramadol causes respiratory depression and may be fatal in overdose.
» Avoid concurrent prescribing of opioid pain medication, benzodiazepines or other respiratory depressants.
» After a period of no treatment, re-initiate at 25 mg. Treat overdose as in section 19.5.3. Opioid poisoning.
» Avoid use in those at high risk of opioid addiction (a personal or family history of any substance use disorder, comorbid mental illness, high levels of subjective pain and younger people).
» Inhibits reuptake of noradrenaline and serotonin – increases risk of seizures, of serotonin syndrome, and mania or hypomania. Avoid use in at-risk groups (e.g. epilepsy, head injury, if taking antidepressants, bipolar disorder). Educate the patient, optimise treatment of primary condition, avoid polypharmacy and monitor closely.
» Other adverse effects include constipation, dry mouth, drowsiness, confusion.

LoE:III[v]

OR

- Morphine syrup (Mist morphine), oral.
  - Starting dose: 10–15 mg (maximum 0.2 mg/kg) 4 hourly.
  - Elderly or frail patients: 2.5–5 mg oral (maximum 0.1 mg/kg) 4 hourly.
  - Increase dose by 50% every 24 hours if pain control is inadequate.
  - Reduce the dosing interval if there is regular breakthrough pain.
  - **Increase the dosing interval in patients with renal or liver impairment.**

When stable on morphine syrup, the morphine syrup can be changed to an equivalent dose of long- acting, slow release morphine:

- Morphine, long-acting, oral, 12 hourly.
  - Available in tablets of 10 mg, 30 mg and 60 mg
  - Duration of action 12 hours.
  - Dose according to previous morphine syrup requirement: e.g. a patient whose pain is controlled by 6 doses of morphine syrup 10 mg per 24 hours (i.e. 60 mg morphine per day) can be converted to slow release morphine tablets, 30 mg 12 hourly, oral.
  - Maximum dose for non-cancer pain is usually 60 mg 12 hourly.

Note:

» When morphine is used for chronic non-cancer pain, discuss potential side-effects with the patient, the maximum dose of opioids that will be prescribed and anticipated duration of treatment.
» Avoid in patients with history of alcohol or other drug addiction, where possible.

26.1.2 ANALGESIA FOR CHRONIC CANCER PAIN

The term “cancer pain” also includes pain due to terminal illness.
The same steps as given in section 26.1.1: Analgesia for chronic non-cancer pain should be followed with the following exceptions:

- Morphine:
» There is no maximum dose of morphine that may be needed.
» Concerns regarding addiction should not compromise adequate pain control with opioids when used to treat terminal illnesses.
» For terminally ill patients on slow release morphine, it is advisable to still prescribe morphine syrup for breakthrough pain or for painful procedures.

Note:
» Opioid–induced hyperalgesia is defined as increasing pain sensitivity in patients chronically exposed to opioids without any new causes for pain. Increasing doses of morphine paradoxically result in increased pain, often with features of neuropathic pain such as hyperalgesia or allodynia.
» It can be managed by switching to methadone, in consultation with a specialist familiar with the use of this agent. *LoE:III*[vi]

Bisphosphonates may be considered for metastatic bone pain – refer to the Tertiary and Quaternary EML (specialist management/consultation).

26.1.3 TREATMENT OF ADVERSE EFFECTS OF CHRONIC OPIOID USE

Y45.0

Constipation:
Patients on chronic opioids should routinely be prescribed a laxative.

- Sennosides A and B, oral, 13.5 mg, 1–2 tablets at night.
  - Contraindicated in patients with potentially obstructive lesions.

LoE:III[vii]

In patients with potentially obstructive lesions:

- Lactulose, oral, 10–20 mL 12 hourly.

LoE:III[viii]

Nausea and vomiting:

- Metoclopramide, oral/IM/slow IV, 10 mg 8 hourly (See section 12.7.5.2 treatment of PONV).

OR

Promethazine, oral, 10 mg 8 hourly. *LoE:III*

OR

- Ondansetron, oral, 8 mg 12 hourly.

26.1.4 NEUROPATHIC PAIN

G62.9/G50.0

DESCRIPTION

Defective functioning of nerves, which may involve both peripheral nerves (peripheral neuropathy) and cranial nerves. Different patterns are noted, i.e. polyneuropathy, mononeuritis multiplex, and mononeuropathy, each of which may be caused by axonal degeneration or demyelination or a combination of the above. Clinical features may be predominantly of a sensory, sensorimotor or motor nature.

Important causes of a predominantly sensory neuropathy include:

» alcohol,
» diabetes,
» HIV infection,
» thiamine deficiency, vitamin B12 deficiency, (although the latter more commonly presents as subacute combined degeneration of the cord),
» medicines (e.g. isoniazid, stavudine, metronidazole, amiodarone)

Important causes of a predominantly motor neuropathy include:

» Acute Inflammatory Demyelinating Polyradiculoneuropathy (AIDP – also known as Guillain-Barrè syndrome),
» Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP),
» acute porphyrias

GENERAL MEASURES

If there is a history of rapid progression, particularly in patients with features suggestive of AIDP, (e.g. rapid progression with stabilisation within 4 weeks) admit the patient and monitor vital capacity carefully with spirometry, as intubation and ventilatory support may be required.

Manage the cause where possible.

Specialised nursing care and dedicated physiotherapy may be indicated. If not managed appropriately, chronic cases may develop contractures, weakness affecting gait, and chronic bedsores, and they may become wheel chair-bound.

Encourage activity, with referral to OT and physiotherapy.

Address psychosocial stressors and enhance perceived social support, and refer to social worker as required.

Treat comorbid mental illness (see chapter 15: Mental health conditions).

Assess outcome of treatment with objective measures of function, e.g. Pain, Enjoyment and General Activity (PEG) scale.
http://www.med.umich.edu/1info/FHP/practiceguides/pain/PEG.Scale.12.2016.pdf

MEDICINE TREATMENT

Most cases respond to management of the underlying disease process or removal of the aetiological agent.

In addition to the analgesics for chronic nociceptive pain (see section 12.13.1 Analgesia for chronic non-cancer pain), anti-neuropathic pain medicines to stabilise affected sensory nerves can be used.

- Amitriptyline, oral, 10 mg, two hours before usual sleep time.
  - Titrate up to 75 mg (to a maximum of 200 mg) at night if needed. *LoE:II*[ix]
  - In the elderly: 10–25 mg daily, increasing gradually up to 50–100 mg daily, if required and tolerated. A single bedtime dose is optimal for most patients. *LoE:III*[x]
  - Use regularly, as takes 2–6 weeks for maximal effect. *LoE:III*[xi]

Post-herpetic neuralgia

Initiate treatment with adjuvant amitriptyline therapy early. *LoE:II*[xii]

<u>If no response after 2-4 weeks or amitriptyline is contraindicated:</u>

ADD/REPLACE WITH

- Carbamazepine, oral, 100–200 mg 12 hourly for 2 weeks.
  - If response is inadequate, increase the dose every 2 weeks to a maximum dose of 600 mg 12 hourly.
  - Monitor for possible drug interactions in patients on ART. *LoE:II*[xiii]

Note: Aciclovir is not beneficial in treating post-herpes zoster neuropathy.

Isoniazid–induced polyneuropathy

- Pyridoxine, oral 75 mg daily for 3 weeks.
  - Follow with 25–50 mg daily.

Trigeminal neuralgia (G50.0)

Sudden, usually unilateral, severe, brief, stabbing, recurrent episodes of pain in the distribution of one or more branches of the trigeminal nerve.

- Carbamazepine, oral 100 mg 12 hourly, initial dose.
  - Increase dose slowly. Doses of up to 1 200 mg daily may be required.
  - After exacerbation, reduce to maintenance dose of 400–800 mg daily. *LoE:III*[xiv]

REFERRAL

For neuropathic pain unresponsive to these medicines, refer patient to an experienced pain clinician.

26.2 ANALGESIA FOR ACUTE NON-SURGICAL PAIN

26.2.1 MEDICAL CONDITIONS ASSOCIATED WITH SEVERE PAIN

R52.9

There are numerous medical conditions associated with severe acute pain e.g. myocardial infarction, renal colic, sickle-cell crisis and intra-articular haemorrhage due to haemophilia.
The analgesic treatment for these conditions is as for patients with acute post-operative pain (see section 12.4.2: Postoperative pain in the recovery room).
Patients should be monitored for respiratory and cardiovascular depression when IV opioids are administered.
Patients already on opioids for chronic pain, who experience an acutely painful event, may be opioid tolerant and require higher IV opioid boluses in order to control their pain.

26.2.2 ACUTE PAIN DUE TO GASTROINTESTINAL COLIC

R10.84

- Hyoscine butylbromide, IV/oral, 10 mg 8 hourly.

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