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PALLIATIVE CARE
GUIDELINES
FOR A HOME SETTING IN INDIA

Neuropathic Pain

INTRODUCTION

Neuropathic pain as defined by IASP is "pain caused by a lesion or disease of the somatosensory nervous system".

Common causes in palliative care patients

- Disease - cancer infiltration or compression of the nerves, spinal cord compression, multiple sclerosis.
- Treatment - chemotherapy-induced peripheral neuropathy, radiation or surgical injury, phantom pain.
- Concomitant diseases - post-herpetic neuralgia, diabetic neuropathy.

Specialist intervention is advised early as neuropathic pain is distressing and difficult to manage and does not respond well to standard analgesics. Neuropathic pain usually coexists with other types of pain.

ASSESSMENT

It is important to look out for clinical symptoms and signs that suggest neuropathic pain; which include:

- Pain involving single or a few dermatomal regions or glove and stocking distribution
- Quality of pain - aching, burning, shooting, stabbing, lancinating, tingling, pins and needles, shooting, numbness and radiation of pain.
- Altered sensation in the area of pain – compare responses with the non-painful contralateral or adjacent area of the body:
    - Allodynia - Light touch with cotton wool or artist's brush evokes a painful response.
    - Hypoaesthesia - an area of reduced sensation to non-painful or painful stimuli.
    - Hyperalgesia - an abnormally heightened sensitivity to pain e.g. a pain response to a blunt needle.
    - Altered thermal threshold to cold or hot - decreased or heightened pain response to hot or cold stimulus.

RECOMMENDATIONS

- Identify the aetiology of neuropathic pain with history and relevant investigations.
- Manage the cause of pain, with appropriate anti-cancer treatment whenever possible.

- A combination of non-opioids, opioids and adjuvants should be considered for the management of neuropathic pain as this decreases the dosages of both medications necessary for the control of pain compared to treatment with a single medication. However, titration of each medication should be done gradually and carefully keeping in mind that side effects, such as sedation and dizziness.
- Corticosteroids can be considered in case of nerve compression/associated neurological deficits
- First line adjuvant analgesics for neuropathic pain include tricyclic antidepressants (amitriptyline) or anti-convulsants (gabapentin, pregabalin) (See Table: 1)
- The second line adjuvants include venlafaxine, nortriptyline and duloxetine (See Table: 2)
- Patient and care giver should be instructed on the administration of medications.
- Start with a lower dose especially in the elderly and frail and continue with the lowest dose that provides maximal analgesia.
- Inform patient and caregiver that:
  - Adjuvant analgesics are medications that can be used for indications other than their primary indication.
  - It takes a longer time to achieve analgesia in neuropathic pain.
- Topical agents including lidocaine, capsaicin and lidocaine patches of 5% strength can be considered, as an add-on treatment of localized neuropathic pain, secondary to cancer, especially when associated with allodynia
- In difficult settings, N-methyl D-aspartate (NMDA) antagonists in the form of oral or parenteral ketamine could be tried, however the evidence for benefit is limited.
- In refractory pain, other interventions like nerve blocks and spinal analgesia can be considered.
- Concurrent use of non-pharmacological interventions like TENS, physiotherapy, acupuncture and relaxation therapy can be tried.
- Consider the following interventions in conjunction with pharmacological treatment:
  - Cancer treatment - radiotherapy, chemotherapy.
  - Psychological interventions.

Table 1: Adjuvant analgesics for neuropathic pain – first line

Medication	Dose	Adverse effects
Amitriptyline	• Start with 10mg PO hsod. • If tolerated, increase to 25mg after 3 - 7 days, and, thereafter, by 25mg every 1 - 2 weeks. • Max 150mg/24 hours (rarely required)	Sedation, delirium, postural hypotension
Gabapentin	• Start with 300mg PO hsod • If necessary, increase by 300mg/24 hours every 2 - 3 days	Drowsiness, dizziness, ataxia, amnesia, confusion, visual

	• Max 3600mg/24 hours • In elderly patients, start with 100mg PO hsod; increase by 100 mg/24 hours every 2 - 3 days • Dose reduction is necessary in patients with renal impairment	disturbances, dysarthria, tremor, arthralgia, myalgia, peripheral oedema, dry mouth, constipation
Pregabalin	• Start with 75mg PO hsod • If necessary, increase by 150mg/24 hours every 3 - 7 days • In debilitated patients, start with 25-50mg PO bd; increase by 25-50mg/24 hours every 3 - 7 days • Max 600mg/day • Dose reduction is necessary in patients with renal impairment	Drowsiness, dizziness, ataxia, amnesia, confusion, visual disturbances, dysarthria, tremor, myalgia, peripheral oedema, dry mouth, constipation, cardiac conduction disturbances, QT prolongation, exacerbation of CHF

Table 2: Adjuvant analgesics for neuropathic pain – second line

Medication	Dose	Adverse effects
Nortriptyline	• Start with 10-25mg PO hsod • Increase to 10-25mg/24 hours every 3 - 5 days up to 50mg, or double dose from 25mg-50mg after 2 weeks • Max 150mg/day (rarely required)	Anorexia, nausea, drowsiness, fatigue, weight gain
Venlafaxine	• Start with 37.5mg m/r PO OD • Increase to 37.5mg bd after 7 days • Increase to 75mg bd after 14 days • Max 225 mg/24 hours	Drowsiness, dizziness, insomnia, dry mouth, nervousness, constipation, nausea, asthenia, headache, sweating, abnormal ejaculation/orgasm
Duloxetine	• Start with 60mg PO hsod • If necessary, increase to 60mg bd • Max 120mg/24 hours • No dose reduction is necessary in patients with mild to moderate renal impairment; contraindicated in severe renal	Sexual dysfunction, nausea, insomnia, drowsiness, dry mouth, constipation, sweating

	impairment (creatinine clearance <30 ml/minute)	

References

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