NEUROPATHIC PAIN

Top tips for MURs

- Check that the patient understands why medication has been prescribed and check if still indicated
- Counsel patient on treatment goals; medications are not curative but help reduce pain to manageable levels
- Counsel the patient on the need to take medication in a time contingent manner i.e. by the clock and not according to pain to maintain adequate pain control
- For a new diagnosis check that the patient understands the titration process. The patient should be started on the lowest dose then titrated upwards to an effective dose or to the maximum tolerated dose[1]. A trial of 2-3 months at the maximum tolerated dose should be used to assess benefit[1]. Medication should be used for a minimum of 6 months, before reducing very slowly, at intervals of around two weeks for a reduction in dose[1]
- If taking tramadol, ensure that this is only being used for acute rescue therapy; refer if tramadol is being used for chronic pain
- Consider referral if the patient feels their pain is not controlled. Specialist pain clinics, acupuncture, physiotherapy, TENS machines, counselling and pain management programmes may help
- If using capsaicin cream, advise patients to avoid taking a hot bath or shower just before or after applying capsaicin cream, to gently rub cream in, leaving no residue on the skin, to wash hands after use, to avoid inhalation of vapours from the cream and to avoid wearing tight bandages on top[2]
- Signpost patients to 'the pain tool kit' for coping strategies[3] www.paintoolkit.org and other relevant sources of information for pain, e.g. Chronic Pain Policy Coalition, Pain Concern and Action On Pain[4,5,6]
- Counsel patient on signs / symptoms that need referral and common side effects (**see overleaf**)
- Report any relevant adverse drug reactions to the Yellow Card Scheme

Pathophysiology of neuropathic pain

Neuropathic pain occurs as a result of damage or dysfunction of neural tissue in the central somatosensory nervous system or the peripheral somatosensory nervous system and includes diabetic neuropathy, phantom limb pain, trigeminal neuralgia and post-herpetic neuralgia[7,8]. Typically the pain may be described as shooting, stabbing, burning, tingling, pins and needles, electric-shock sensation, prickling and itching[2,7]. Sufferers can experience allodynia, where pain is produced by a stimulus which does not normally cause pain, for example in response to light or touch or hyperalgesia, where there is an increased response to a stimulus known to cause pain[2].

How do drugs used to treat neuropathic pain work?

Tricyclic antidepressants and duloxetine	Monoamine reuptake inhibitors with varied specificity for noradrenaline and serotonin (amitriptyline and nortriptyline) or selective serotonin and noradrenaline reuptake inhibitors (duloxetine).
Anticonvulsants (gabapentin and pregabalin)	Increases the synthesis of GABA by modulating the enzyme glutamic acid decarboxylase. Gabapentinoids inhibit transmission via voltage-gated calcium channels, slowing transmission of neural signalling and thus reducing pain transmission.
Opioids	Opioids act as opioid receptor agonist to three opioid receptors. Most opioids bind to one type of receptor preferentially primarily the mu receptor.
Capsaicin	Acts in the skin to attenuate cutaneous hypersensitivity and reduce pain by defunctionalisation of nociceptor fibres and reduction of substance P.
Lidocaine	Reduces aberrant firing of sodium channels on damaged fibres under the patch. Suitable only for focal neuropathic pain symptoms. Licensed only for post-herpetic neuralgia so consult local formularies to confirm position.

Lifestyle issues

- Counsel patient on reducing alcohol intake to within safe limits (up to 14 units a week, spread evenly over 3 or more days with several alcohol free days)
- Counsel patient on healthy eating, exercise & weight loss (if BMI > 25kg/m^2) – reduce saturated fat and salt intake, avoid salt substitutes, increase oily fish intake, reduce caffeine intake to no more than 5 cups a day and recommend 5 portions of fruit and vegetables a day. Advise patient to exercise and stretch regularly – to start slowly and build up gradually (ideally 30 minutes of aerobic exercise three to five times a week)
- Advise patients who smoke of the benefits of stopping smoking and how to access pharmacy smoking cessation services or Stop Smoking Wales
- Promote relaxation skills, for example meditation, yoga, reading a book, gardening

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What are the common side effects to look out for?

Gastro-intestinal disturbances including discomfort, nausea, vomiting, diarrhoea, occasionally bleeding and ulceration – more commonly seen with duloxetine and tramadol	Avoid concurrent NSAIDs or anticoagulants with duloxetine (gastroprotection may be required). Refer to prescriber for change of formulation or medication if persistent.
Anticholinergic side effects (especially dry mouth, constipation, blurred vision, and sedation)	Advise newly prescribed patient that side effects usually only last 3 weeks, if not tolerated refer to prescriber.
	Advise patient to drink plenty of water and chew sugar free chewing gum if dry mouth persists.
	Advise patient to increase fibre, water intake and exercise or recommend an osmotic and stimulant laxative if constipation persists.
	Advise patient that close up vision can be affected and to see an optician if a problem.
Drowsiness, somnolence, dizziness	Advise that medication may affect the performance of skilled tasks such driving or operating machinery.
Convulsions – may be seen with tramadol	Avoid if epileptic or on other medications which reduce seizure threshold.
Suicidal thoughts or suicide attempts – may be seen with all	Tell patient to seek medical advice if they develop suicidal or distressing thoughts or thoughts about self-harm.
Insomnia, sleep disturbances and increased blood pressure – more commonly seen with duloxetine	Give sleep hygiene advice and if persistent refer to prescriber for medication review, check blood pressure is being monitored.
Cardiovascular events – more commonly seen with tricyclic antidepressants	Refer to prescriber for review of therapy.
Weight gain, anorexia, increased appetite – commonly seen with gabapentin and pregabalin	Give patients lifestyle advice and refer to prescriber if not tolerated.

Red flags that need urgent referral

- Patient has severe pain, their pain significantly limits their daily activities or if their underlying health condition has deteriorated[7].
- Suicidal thoughts or ideation
- Signs of respiratory depression
- Any changes in sleep pattern including snoring, vivid dreams, nightmares
- Worsening of pain symptoms in spite of increasing medication doses
- Increased agitation, confusion or hallucinations, pinpoint pupils, sedation
- Any symptoms suggestive of gastrointestinal bleeding (anaemia, black stools or dark, coffee ground vomiting)
- Any cardiovascular symptoms (bradycardia, tachycardia, palpitations, postural hypotension)
- Any loss of libido, erectile dysfunction in men or amenorrhoea in women
- Pregnancy, as risk of teratogenicity & breastfeeding, as risk of toxicity to infant – especially tramadol

Potential serious drug interactions?

Drugs used to treat neuropathic pain can interact with a range of other medications such as: alcohol, antibacterials, anticoagulants, antidepressants, antiepileptics, antifungals, antihistamines, antipsychotics, antivirals, aspirin, beta-blockers, cytotoxics, ciclosporin, dopaminergics, diuretics, lithium, memantine, methotrexate and sympathomimetics - **see BNF Appendix 1: Interactions for more information**

Where can you find more information? (references)

1. Health and Social Care Board 'Implementation Support Tool for Non-Malignant Neuropathic Pain Conditions in Non-Specialist Settings' March 2014
2. NICE Clinical Knowledge Summaries 'Neuropathic Pain – drug treatment' June 2015
3. The Paintool kit: **www.paintoolkit.org**
4. Chronic Pain Policy Coalition: **www.paincoalition.org.uk**
5. Pain Concern: **www.painconcern.org.uk**
6. Action On Pain: **www.action-on-pain.co.uk**
7. NICE guidance (CG173) 'Neuropathic pain in adults: pharmacological management in non-specialist settings' December 2014
8. BNF section 4.6.2
9. **www.patient.info/health/neuropathic-pain**

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