WHAT IS NEUROPATHIC PAIN?

It is different from nociceptive/inflammatory pain and hence why it responds poorly to traditional analgesics. Neuropathic pain is due to abnormal stimuli of nerves. Pain does not always arise from the local area but from the nerves supplying that area somewhere along the course of the nerve. It is common – 2 to 4% population which means the average GP has between 35 to 70 patients with this problem.

CAUSES

- Metabolic – diabetes, renal failure, thyroid disease
- Infective – Herpes Zoster, HIV
- Trauma – surgery leading to painful scars, Complex Regional Pain Syndromes, phantom limb pain
- Toxic - alcohol, cytotoxic drugs, drugs such as statins
- Inflammatory/autoimmune – demyelination, rheumatoid arthritis
- Vascular – trigeminal neuralgia, central post stroke pain
- Malignancy – tumour infiltration
- Musculoskeletal – myofascial pain squeezing a nerve, radiculopathy

SIGNS AND SYMPTOMS

- Can be spontaneous, continuous, intermittent, superficial or evoked
- Pain will often be described as burning, sharp, shooting, lanciating, itching, pins and needles, indescribable in terms of normal reference (patients often get distressed as they are not voice their pain in a way that they think is normal and are therefore worried they will not be believed).
- Can be made worse by temperature, or touch

USE OF LANSS SCORING TOOL TO ASSIST DIAGNOSIS

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes (Score)</th>
<th>No (Score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you have pins and needles / numbness / tingling?</td>
<td>Yes (5)</td>
<td>No (0)</td>
</tr>
<tr>
<td>2. Does painful area change colour?</td>
<td>Yes (5)</td>
<td>No (0)</td>
</tr>
<tr>
<td>3. Does skin in painful area feel sensitive to touch?</td>
<td>Yes (3)</td>
<td>No (0)</td>
</tr>
<tr>
<td>4. Do you get feelings like an electric shock?</td>
<td>Yes (2)</td>
<td>No (0)</td>
</tr>
<tr>
<td>5. Do you get a feeling of burning where the pain is?</td>
<td>Yes (1)</td>
<td>No (0)</td>
</tr>
<tr>
<td>1. Test with cotton wool for allodynia</td>
<td>Yes (5)</td>
<td>No (0)</td>
</tr>
<tr>
<td>2. Is there an altered sensation to a needle prick?</td>
<td>Yes (3)</td>
<td>No (0)</td>
</tr>
</tbody>
</table>

Total score

Less than 12 = neuropathic pain unlikely.
Greater than 12 = likely neuropathic pain.
INVESTIGATIONS

- If there is doubt as to the underlying disease process the following investigations should be considered.
- Urine – glucose and protein
- ESR/c-reactive protein
- Folate
- Fasting glucose
- U & E
- FBC
- B12
- LFT
- TFT
- HbA1c
- Radiology

TREATMENT OF NEUROPATHIC PAIN

- Ensure basic medications are being taken regularly as per the WHO ladder

<table>
<thead>
<tr>
<th>MILD PAIN</th>
<th>MODERATE PAIN</th>
<th>SEVERE PAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARACETAMOL 1g QDS</td>
<td>STOP weak opioid</td>
<td>PARACETAMOL 1g QDS</td>
</tr>
<tr>
<td>WEAK OPIATE – codeine/tramadol</td>
<td>ADD STRONG OPIOID as per GPMTC guidance</td>
<td>STOP weak opioid</td>
</tr>
<tr>
<td>+/- NSAID if no contra-indication</td>
<td>+/- NSAID if no contra-indication</td>
<td>+/- NSAID if no contra-indication</td>
</tr>
</tbody>
</table>

- Ensure general pain advice is given – planning and pacing activities, self management skills
- Ensure that gentle exercise is continued including formal physiotherapy where appropriate
- Consider non-pharmalogical treatment modalities – TENs, acupuncture, relaxation techniques
- See Pathway on Page 3 for specific treatment – patients are unlikely to get 100% pain relief so they need to be realistic in their expectations
- Expert Patient Programmes may be useful to provide these patients with better coping strategies

POSSIBLE REASONS FOR REFERRAL TO PAIN SERVICE

- Unable to tolerate medication
- Inadequate coping strategies BUT the patient will be expected to learn self management techniques and so needs to be willing to be a partner in their treatment
- Diagnosis is unclear (referral may not always be to pain clinic – neurology/general medicine may need to be considered depending on potential diagnosis)
- Patients have tolerated medications but not achieved any pain relief
**FOCAL NEUROPATHIC PAIN**

**DIABETIC PERIPHERAL NEUROPATHIC PAIN (DPNP)**

*Every year, formally ask about neuropathic symptoms*

- If DPNP present:
  - Discuss cause and prognosis
  - Agree appropriate therapeutic options and review understanding at each clinical contact
  - Be alert to psychological consequences and offer support appropriate to need

**DPNP UNCONTROLLED† and adversely affecting individual’s lifestyle and/or sleep**

- Offer trial of DULOXETINE for DPNP
  - Dose: start at 60mg per day (a lower starting dose may be appropriate for some people), with upward titration to an effective dose or the person’s maximum tolerated dose of no higher than 120mg per day (http://guidance.nice.org.uk/CG177)
  - Side effects: suicide ideation, hypertension, somnolence, dizziness, reduced appetite
  - Quick onset of action – end of week 1
  - BNF advises discontinue if inadequate response after 2 months; review treatment at least every 3 months

- Pain CONTROLLED† If pain controlled consider REDUCING DOSAGE/STOPPING THERAPY following discussion and agreement with person concerned

**POST-HERPETIC NEURALGIA**

**CAPSAICIN cream 0.075% (Axsain®)**

- Used 12 hours on and 12 hours off
- Can be cut to cover area (possibly allowing more economic use)
- No more than 3 patches should be applied an any one time
- Do not use on broken skin
- One month trial required before assessing efficacy

**LIDOCAINE 5% PLASTER (Versatis®)**

- NB: Consider CARBAMAZEPINE for trigeminal neuralgia

**PAIN UNCONTROLLED† and adversely affecting individuals lifestyle and/or sleep**

**NON-FOCAL NEUROPATHIC PAIN**

**Offer trial of AMITRIPTYLINE**

- Start at 10mg once daily and titrate by 10mg a week as tolerated until a maximum of 200mg daily is reached.
- Maximum tolerated dose should be used for 4 weeks before benefits can be judged.
- Care with drug interactions and use in the elderly
- Do not exceed 50mg of AMITRIPTYLINE DAILY IF CO-ADMINISTERED WITH AN SSRI
- Discuss timing for most benefit
- Advise that it is a trial of therapy
- Increased likelihood of orthostatic hypotension in a person with autonomic neuropathy.
- If amitriptyline* gives satisfactory pain reduction but adverse effects not tolerated – consider oral IMIPOOLINE* (UNLICENSED use)

**Gradually discontinue amitriptyline/imipramine & offer trial of GABAPENTIN capsules†**

- Start at 300mg nocte (400mg if patient very frail or very susceptible to sedative medications)
- Titrate up according to side effects to a maximum of 1,800mg per day.
- Once on maximum tolerated dose wait for 2 weeks to assess effect – 30 to 40% pain relief would be considered as a significant decrease.

**PAIN UNCONTROLLED† OR side effects limit dose titration**

**Offer trial of PREGABALIN**

- Start at 75mg nocte. If tolerated increase to 75mg BD.
- This can then be titrated according to side effects to a maximum of 600mg daily in 2 divided doses.
- Once on maximum tolerated dose wait for 2 to 4 weeks to assess effect* – 30 to 40% pain relief would be considered significant.

**PAIN UNCONTROLLED† OR side effects limit dose titration**

- Consider trial of OPIATE

SEE Gwent Guidance on Use of Strong Opiates in Chronic Non-Malignant Pain (Jan 2010)

**REFER TO PAIN CLINIC**

* See brief Pain Inventory (Short Form) at: [http://www.npcrc.org/files/news/briefpain_short.pdf](http://www.npcrc.org/files/news/briefpain_short.pdf) to assess pain. Note improvement in function (question 9) may be more marked than improvement in the pain questions.

† Cost of tablets is significantly greater than capsules.

**Note:** amitriptyline does not have a UK marketing authorisation for neuropathic pain, duloxetine is licensed for diabetic peripheral neuropathic pain only, lidocaine plasters are licensed for post-herpetic neuralgia only and gabapentin is licensed for peripheral neuropathic pain only, so use for other conditions would be off-label. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the GMC’s Good practice in prescribing and managing medicines and devices (2013) for further information.