

Neuralgia is the term used to describe pain arising from a nerve. There are many different neuralgias which have been described in the medical literature, but I will only touch upon a few more common ones.

Neuralgias tend to be sudden, brief, intermittent severe, stabbing or lightning pains or electric shock sensations.

They are known to occur in conditions such as MS, as well as after shingles (Post-herpetic neuralgia :PHN)

- **Trigeminal neuralgia** (TGN): pain in the face: from the mouth round to the ear; right sided in 60% of patients, both sides in only 3%. Women are affected more than men. Attacks (clusters) may last for days or months; triggers include: touch, cold wind, speaking or eating. After an attack, there may be a period in which the area is hypersensitive to touch etc. and this may in turn be followed by a dull ache. Intervals between attacks range from weeks to years.

TGN may be associated with difficulty in eating (thus weight loss) and depression.

- **Atypical TGN** (also termed trigeminal neuropathy) is described as a deep burning pain in the face. The pain is constant, with a deep aching quality; trigger zones on the skin of the face or inside the mouth can often be detected.

- **Geniculate** neuralgia: pain deep in the ear ("an ice pick in the ear"), triggered by chewing, swallowing or talking. Always only on one side. May be accompanied by increased salivation, bitter taste, tinnitus and vertigo. (rare)

- **Glossopharyngeal** neuralgia: pain in the ear, base of tongue, or beneath the angle of the jaw; may be triggered by swallowing, talking, coughing. (rare)

- **Superior laryngeal neuralgia** : pain in throat, under the jaw or ear; triggered by swallowing, straining the voice or head turning. (rare)

- **Occipital neuralgia**: describes a cycle of pain starting at the back of the head and moving to various other areas on the head, including the temples and the face. Symptoms include: headache, facial pain, neck pain, pain/pressure behind the eyes, pain in the temporomandibular joints (where your jaw articulates near your ear) dizziness, ringing in the

ears, sinus pain (forehead), hypersensitive skin, pseudo-angina, shoulder pain, intolerance of bright light. Occipital neuralgia is more common in women.

- **Pudendal neuralgia:** this affects the area around the anus, the rectum and the vulva /vagina or penis/testicles. Differential diagnosis (alternative possibilities): Acute testicular pain requires medical assessment to exclude hernia, orchitis or testicular torsion. Chronic testicular pain may be due to chronic epididymitis (usually there is a history of bouts of acute epididymitis, or scrotal/groin surgery) :pain may be on one or both sides. This condition is chronic inflammation of the epididymis, which is part of the testicle. In women, vulvodynia, pain in the vulva, and dyspareunia (pain in the vagina on intercourse) may be due to a variety of problems including infection.

Rectal pain in both sexes should be checked out to exclude local pathology such as an anal fissure.

The pudendal nerve (union of spinal nerves S2-S4) supplies the sensory nerves to the perineum, skin of the scrotum, the penis, the labia and clitoris, lower part of the vagina and the vulva and the skin around the anus. It also supplies the perineal muscles (pelvic floor), some of the muscles involved with erection of the penis, and the external anal sphincter. The pudendal nerve may be affected by arachnoiditis in the cauda equina at the lower end of the spinal cord. If pudendal neuralgia occurs, it is likely that there will be other associated symptoms such as pins and needles or numbness in the saddle area and/or reduced rectal/bladder sensation, difficulties with bladder, bowel and sexual function. As with occipital neuralgia, this type is not necessarily brief severe pain, but can be a prolonged, even unremitting deep burning pain which is highly distressing.

Treatment of neuralgia:

Looking at the typical treatment of TGN:

The usual therapy is with an anticonvulsant such as carbamazepine or gabapentin.

Occasionally, sodium valproate may be used.

Low starting doses and gradual increases are needed to avoid adverse effects.

If using carbamazepine, 100mg twice daily is the starting dose, increasing by 100mg each week until pain control is achieved. Maximum dose is 1.6g daily; usually 300-600mg is effective therapeutically.

Once pain control has been achieved, in cases where there has not been sustained pain (i.e. if there is an intermittent pattern of symptoms), the dose should be maintained for a month and then reduced by 100mg every 2 days.

If the pain should recur, then the dose should be increased again. Doses should be taken 30 minutes before food and a double dose can be given at night to ensure adequate levels. Around 70% of patients have relief within 24 hours. (95% within 48 hours).

Liver function tests, blood count and blood biochemistry may be monitored (baseline before treatment, then every month for 3 months, then every 6 months)

Side effects include: dizziness, drowsiness. These are more common in the elderly.

HEADACHES: I have written a separate article which deals with the general topic of headaches.

I am only including migraine headaches in this neurology-based article.

MIGRAINES:

Migraine is an episodic condition.

There are 2 main forms:

1. Migraine without aura ('common' migraine): 75% of sufferers have this type. 5 or more attacks are needed to make a diagnosis. Attacks involve: classical one-sided headache, severe, pulsating, with associated nausea/vomiting, intolerance of bright light and loud noises.

2. Migraine with aura: 25% of sufferers: aura includes visual disturbance (shimmering, stars, blurred vision) abnormal smells, localised numbness or tingling.

About 6% of men and 15-18% of women are affected.

Trigger factors include:

- Emotional
- Alcohol
- Bright lights
- Menstrual cycle
- Hunger
- Certain foods e.g. cheese, chocolate

Alternative diagnoses might include:

- Tension headache
- Sinusitis
- Neck problems e.g. cervical spondylosis
- Temporal arteritis (an inflammatory condition)
- Trigeminal neuralgia
- Atypical facial pain
- Serious causes include: stroke, meningitis, tumour.

Treatment:

1. start acute treatments of an attack as early as possible: pre-emptive measures such as aspirin, paracetamol, brufen, may stave off a full blown attack.

2. Use of anti-emetic, to reduce sickness; a combination of aspirin 900mg and metoclopramide 10mg (as separate tablets) is effective in up to 50% of patients. Ondansetron

has recently been found to be a safe and effective treatment of migraine-related nausea. Effervescent products have a more rapid effect. Opiates (which you might be taking for other types of pain) should not be used to treat migraines. (particularly as chronic use can actually lead to rebound headaches).

3. A second line acute treatment might include sumatriptan: however, a recurrence of headache within 24 hours occurs in 30-40% of patients taking sumatriptan. Prophylaxis (prevention):

This is indicated if there are more than 2 attacks a month or if they are severe/prolonged. Usually, severity and frequency of attacks can be reduced, although there may still be need for acute treatment.

B-blockers such as propranolol are the treatment of choice; other options include pizotifen.

Note that drugs such as amitriptyline and gabapentin, which you may have had prescribed for treatment of nerve-related pain, have been found to be quite effective in reducing the frequency and severity of migraine attacks.

Naratriptan (related to sumatriptan) has been found to be effective prophylaxis against menstrually-associated migraine.

It is also interesting to note that use of high dose riboflavin (400mg) has been suggested as an effective prophylactic agent, but can take 2-3 months to take effect.

It should not be obtained from multivitamins as there is a risk of overdosing on other more toxic vitamins.

**ATYPICAL FACIAL PAIN:**

Note that dental problems are common in chronically ill people for a variety of reasons (this will be covered in a separate article).

However, often dentists cannot find a source for a patient's persistent facial pain.

The area around the mouth and the face (orofacial area) is highly innervated so extremely sensitive.

One of the commonest causes of non-dental facial pain is temporal tendinitis.

The temporomandibular joint (TMJ) is where the mandible (jaw) articulates on the temporal bone of the skull, hence the name of the joint. It is the joint which moves as you open and close your mouth or chew. It is a common site of problems.

TMJ problems cause the following symptoms:

TMJ pain (just in front of the ear): worse on chewing

- Ear pain and pressure
- Pain in the back teeth
- Pain radiating across the face towards the eye
- Headache in the temple radiating to behind the ear, to the back of the head and neck

Looking at the typical treatment of TGN:

The usual therapy is with an anticonvulsant such as carbamazepine or gabapentin. Occasionally, sodium valproate may be used.

Low starting doses and gradual increases are needed to avoid adverse effects.

If using carbamazepine, 100mg twice daily is the starting dose, increasing by

100mg each week until pain control is achieved. Maximum dose is 1.6g daily; usually 300-600mg is effective therapeutically. Once pain control has been achieved, in cases where there has not been sustained pain (i.e. if there is an intermittent pattern of symptoms), the dose should be maintained for a month and then reduced by 100mg every 2 days. If the pain should recur, then the dose should be increased again. Doses should be taken 30 minutes before food and a double dose can be given at night to ensure adequate levels. Around 70% of patients have relief within 24 hours. (95% within 48 hours).

Liver function tests, blood count and blood biochemistry may be monitored (baseline before treatment, then every month for 3 months, then every 6 months)

Side effects include: dizziness, drowsiness. These are more common in the elderly.