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Trigeminal Neuralgia Update

As this condition can usually only be identified through a very thorough patient history, it can often present a diagnostic challenge to the doctor concerned. Trigeminal Neuralgia, also called Tic Douloureux, is indicated by lancinating (pain reminiscent of stabbing or cutting) or electric-shock-like pain, lasting for several seconds, on one side of the face. This pain occurs within one or more divisions of the trigeminal nerve (the fifth cranial nerve). This extreme pain sometimes occurs in multiple bursts leading to a temporal summation, but is characterised by complete relief between attacks. A similar condition, referred to as Trigeminal Neuropathy, presents with a background ache between exacerbations (flare-ups), which is absent in patients with Trigeminal Neuralgia.

Pathology

The underlying pathology of this condition may be due to vascular compression of the trigeminal nerve, by either an artery or vein. This accounts for the fact that the prevalence of Trigeminal Neuralgia increases with age, with most sufferers developing the condition after reaching the age of 50. The condition can also be caused by a plaque of multiple sclerosis along the trigeminal nerve tract in the brain, which is the presenting feature in 1% of multiple sclerosis cases. The rarest cases of Trigeminal Neuralgia may be caused by a tumour in the posterior fossa or along the length of the nerve. For these reasons every new presentation of Trigeminal Neuralgia should be assessed with an MRI or CT scan of the brain.

The triggers for exacerbations of Trigeminal Neuralgia are varied, and typically very slight or subtle. Flare-ups of pain are often

triggered by talking, washing your face, brushing your teeth and chewing, or by a cold draught or flexing at the hips such as when picking something off the floor. Some patients may find that the pain comes on without

any perceptible triggers. Over time, exacerbations may become more frequent, as well as more severe.

In some cases the pain is so intense and debilitating that the affected individual becomes housebound, malnourished and in extreme cases dehydrated.

Treatment

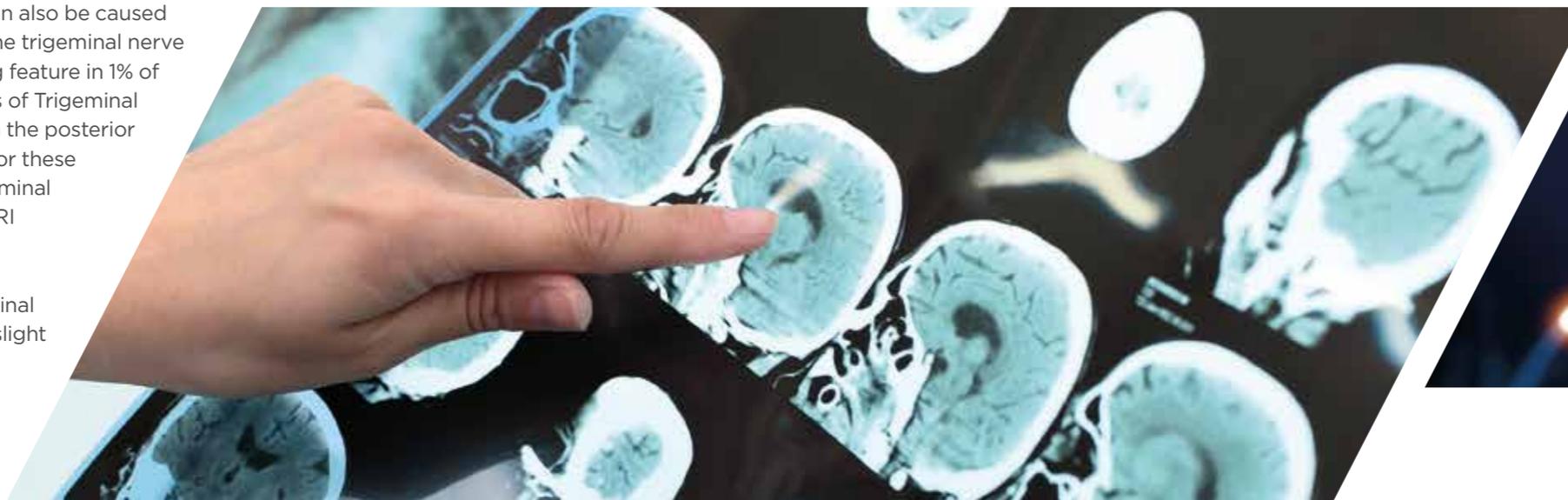
Trigeminal Neuralgia comes with a variety of therapeutic options, ranging from medications to surgical and non-surgical interventions.

A variety of anti-neuropathic medications are available to help control the pain of Trigeminal Neuralgia exacerbations, including Carbamazepine, Oxcarbazepine, Lamotrigine, Pregabalin and Gabapentin, and in severe cases, Baclofen and intravenous Phenytoin may also be effective. However, these medications tend to have notable side effects, such as drowsiness and unsteadiness when walking, and some patients may find these

detrimental to quality of life. As such, these medications are often used to help control acute episodes of the condition, until a more definitive course of treatment can begin.



The rarest cases of Trigeminal Neuralgia may be caused by a tumour



There are three main avenues of definitive intervention in cases of Trigeminal Neuralgia; surgery, injection and radiotherapy.

1 A surgical procedure known as a Microvascular Decompression is undertaken by neurosurgeons to treat Trigeminal Neuralgia. This operation involves the decompression and wrapping of the nerve in the case of vascular compression, via a craniotomy.

2 A handful of medical specialists with a specific interest in the treatment of Trigeminal Neuralgia, including myself, advocate for the use of a procedure called a Gasserian Gangliosis, which avoids the hazards of neurosurgery. This procedure is carried out under general anaesthetic, and involves intentionally damaging the nerve via a thermal radiofrequency lesion, a glycerol injection or balloon compression. This can fully abolish the pain for up to five years, enabling Trigeminal Neuralgia sufferers to stop their medication and lead a full and healthy lifestyle. If symptoms reoccur after a number of years, the procedure may be repeated to reinstate relief from pain.

3 A third alternative in the treatment of Trigeminal Neuralgia is stereotactic radiotherapy know as Gamma Knife Therapy.

This is done in a specialised gamma knife unit and involves subjecting the trigeminal nerve to a short burst of radiation, designed to relieve vascular compression. In some cases, Gamma Knife Therapy can also be used to remove tumours causing Trigeminal Neuralgia by pressing on the nerve.

While this procedure avoids the need for surgery and anaesthetic, and is therefore suitable for patients with significant co-morbidities, it is slightly less efficient than the other definitive therapies, and does expose the patient to a shot burst of high dose radiation to the head.

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