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THE CLINICAL PHENOTYPE OF IDIOPATHIC, SPONTANEOUS FACIAL PAIN DISEASE.

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ABSTRACT

The fifth and greatest cranial nerve, the trigeminal nerve (V), is in charge of detecting sensory inputs that come from the craniofacial region. The trigeminal ganglia house the cell bodies of the three branches of the nerve: the ophthalmic (V1), maxillary (V2), and mandibular (V3). These branches connect to second-order neurons in the trigeminal brainstem sensory nuclear complex. Trigeminal neuralgia is one of the most prevalent types of facial and cranial discomfort. Trigeminal neuralgia is characterized by abrupt, fleeting, and painful facial pain episodes in one or more of the V branches. As a result, the quality of life for those who suffer from the condition is drastically reduced.

KEYWORDS

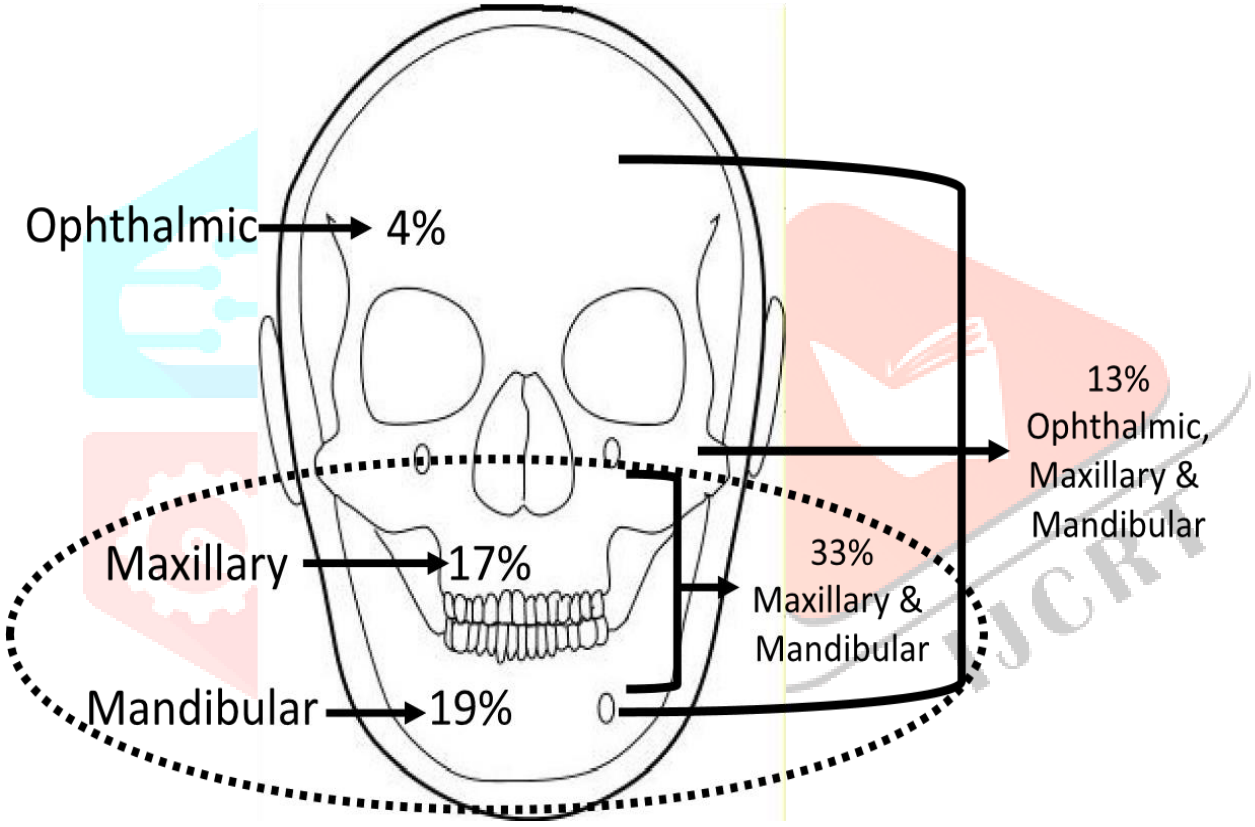
Facial pain, trigeminal neuralgia, treatment, triggered.

INTRODUCTION

The clinical phenotype of trigeminal neuralgia (TN), a unilateral face pain, is characterized by strong physical indications and symptoms.

Intense, fleeting pain that is typically described as electrical or acute is "triggered" by a light contact to the place that is being painful.

- **The ophthalmology branch**. your forehead and the upper part of your face.
- **maxillary limb.** Your cheeks, nostrils, and upper lip are all in the middle of your face.
- **The branch of the mandible.** your lower face, which includes your lower lip and jaw areas.
- The presence of pain that is triggered by light, unthreatening stimuli in trigger sites is one of the diagnostic criteria for TN. Some patients (68–98%) report experiencing sudden discomfort, although it's not apparent if this is due to subconscious daily motions like swallowing and lip movement that may go unreported. When attacks are described as spontaneous, it may be challenging to clinically pinpoint the exact position of the trigger locations. Latency is the phrase used to describe a brief interval between stimulating a trigger location and the start of pain. Trigger areas in TN are typically found in the distribution of the afflicted trigeminal branch, notably around the lips, but they can also be extratrigeminal. They frequently occur in several locations and even shift.



CLASSIFICATION

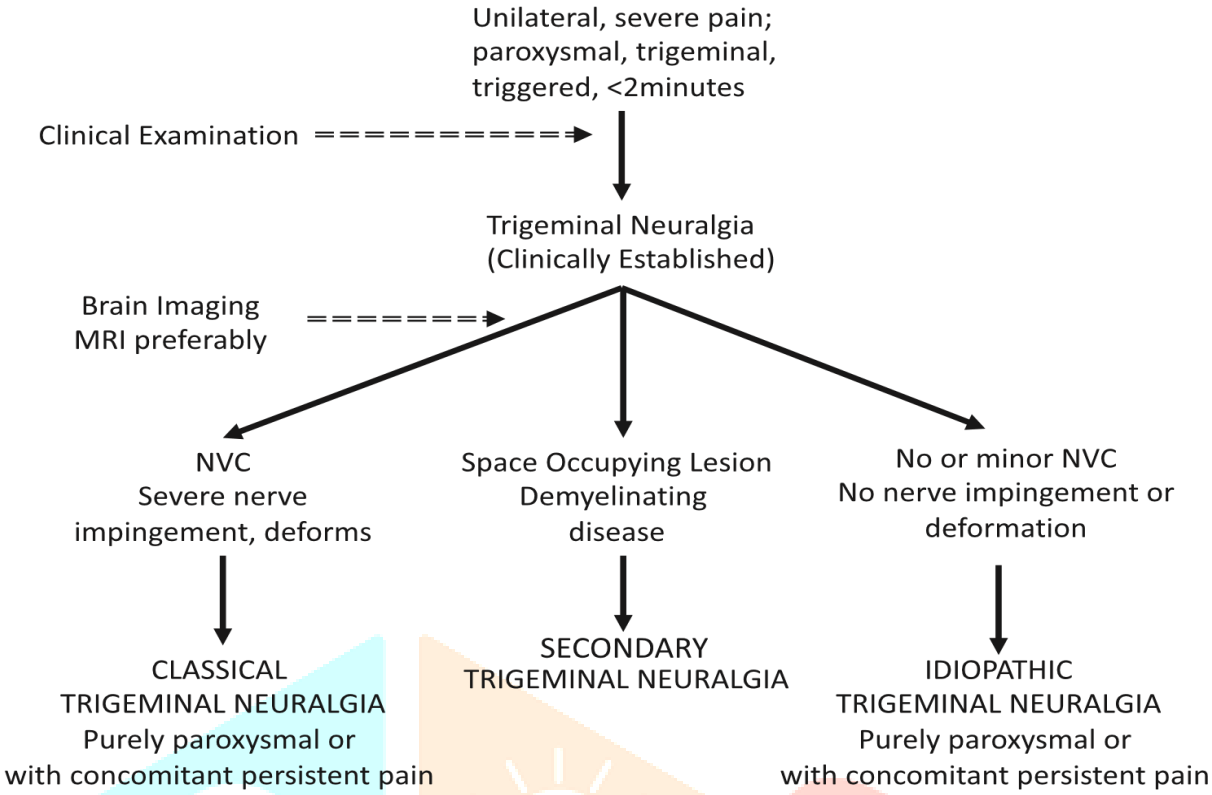


FIGURE 1 Flow diagram for the diagnosis of trigeminal neuralgia into subtypes.

TN is classified into three types according to its etiology: idiopathic TN, classic TN, and secondary TN. The etiology of TN and the underlying processes of this ailment are currently poorly known. The first is distinguished by unidentified etiology, and in 10% of patients, the disease continues to be undiagnosed even after surgery or magnetic resonance imaging. Neurovascular compression (NVC) at the trigeminal root entry zone, which results in nerve root atrophy or displacement, is linked to classic TN. Secondary TN has been linked to multiple sclerosis and may be brought on by an underlying condition such as tumors or arterial abnormalities (multiple sclerosis patients show a 20-fold high prevalence of TN). Traditional TN has unique characteristics in terms of pathogenesis and therapy strategies.

SYMPTOMS

• Periods of intense pain, shooting or stabbing, possibly resembling an electric shock.

• Pain that comes on suddenly or that is brought on by actions like touching the face, chewing, speaking, or brushing teeth.

• Pain attacks can last anywhere between a few seconds and several minutes.

• Multiple attacks occurring in bursts that last for days, weeks, months, or longer – some people experience pain-free intervals.

• Aches in the face, jaw, teeth, gums, or lips that are supplied by the trigeminal nerve, or less frequently in the eye and forehead.

• One side of the face is constantly in pain.

TREATMENT

The first line of trigeminal neuralgia treatment is typically medication, while some patients may not require it. However, some sufferers with the illness may eventually cease responding to treatment or have unfavourable side effects. Injections or surgery are additional trigeminal neuralgia treatments available for those patients.

If your condition is due to another cause, such as multiple sclerosis, your doctor will treat the underlying condition.

SURGICAL

Surgery is selected based on the patient's response to and side effects from medicinal treatment, their age, the available surgical resources, and their surgical experience. The individual must be in physical shape to undergo neurosurgery and general anaesthesia effectively. The potential surgical risks and other neurosurgical alternatives should be explained to patients in plain language.

GAMMA KNIFE

A minimally invasive procedure called GAMMA KNIFE GKS radiosurgery precisely delivers radio surgical doses of 70 to 90 Gray units to the trigeminal nerve root at the site of vascular compression. The method depends on precise MRI mapping and sequencing. If no compressing vessels are found, the trigeminal nerve's departure point from the pons or another predetermined location on the trigeminal nerve is treated.

At four to eleven years after GKS, 30% to 66% of patients report being pain-free, according to a recent pooled review. Comparing GKS with glycerol rhizotomy injection, it was shown that glycerol delivered pain relief more quickly than GKS while causing more facial numbness and having a larger failure rate. In fact, the proportion of GKS patients who achieve pain freedom frequently rises with time (24 months), indicating cumulative effects. In patients who are poor candidates for MVD, GKS shows greater long-term pain reduction with less treatment-related morbidity than glycerol rhizotomy. There are reports that GKS may be the preferred operation for recurrent CTN, even though posterior fossa surgery (MVD or partial nerve section) was demonstrated to be superior to GKS over a mean follow-up length of roughly 2 years In particular, the unknowable effects of radiation in the trigeminal root area make it difficult to estimate the long-term effects or problems of GKS at this time. Higher dosages of GKS are linked to greater results, but they also result in higher rates of sensory loss.

MICROVASCULAR DECOMPRESSION

The treatment effectively creates a barrier between the trigeminal nerve root and the intracerebral arteries, reducing pulsatile damage that could otherwise result in persistent demyelination and TN. Although mortality is always a possibility, the rather high surgical morbidity (10%) recorded in 1996 decreased to roughly 0.3%–3% in 2003, making MVD a safer option. The lowest complication rates can be found in hospitals with significant patient

volumes and when a surgeon performs a lot of MVDs each year. The dependability of MVD is supported by pooled data, with 62%–89% of CTN patients experiencing no pain at 3- 11 years. In the long run, MVD appears to be the surgical treatment for CTN that is the most economical.

. According to a review of the literature on surgical options for CTN, MVD is linked to the lowest percentage of pain recurrence and the highest rate of patient satisfaction. When used as an initial intervention for CTN, MVD has a notably high patient satisfaction rate. There is currently no convincing evidence or advice in favour of early surgery. According to several research, early MVD surgery has benefits, and neurosurgery has higher patient satisfaction than medication.

CONCLUSION

There are various "faces" or presentations of TN. We now have subgroups for TN based on background pain and NVC as the taxonomy of the condition has lately caught up with clinical reality. We are also aware that the 2-minute threshold for pain duration, the occurrence of lacrimation, and sensory changes all require further investigation. These might comprise upcoming subgroups. The huge developments in genetics and imaging could have a major impact on our comprehension of TN. Undoubtedly, a trustworthy and accurate animal model for TN would be useful. This could help with drug development; we need innovative, effective medicines with little adverse effects. Our current arsenal has to be updated because it is "ancient."

Most studies gather information on side effects and pain. However, relatively few studies gather information on how the disease and its treatment affect patient satisfaction, mental well-being, and physical functioning. 216 These outcomes are significant since this disease has the potential to lead to sadness and suicidal thoughts. Standardizing outcome measurements for pain alleviation, pain intensity, and the infrequently measured frequency of pain episodes is crucial.

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