

Neuralgia and facial pain

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اولین دوره
پرستار متخصص
سر درد و دردهای صورت

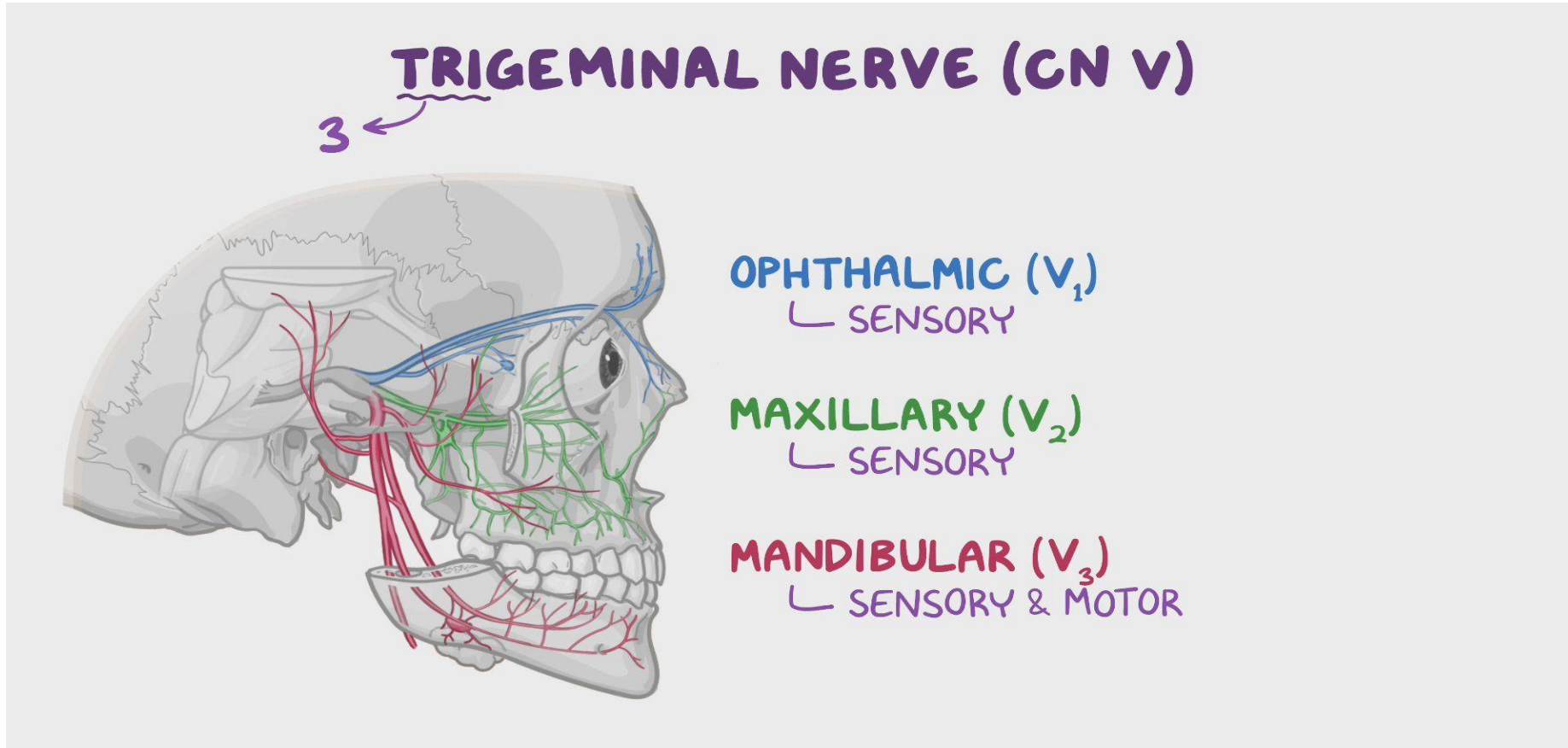
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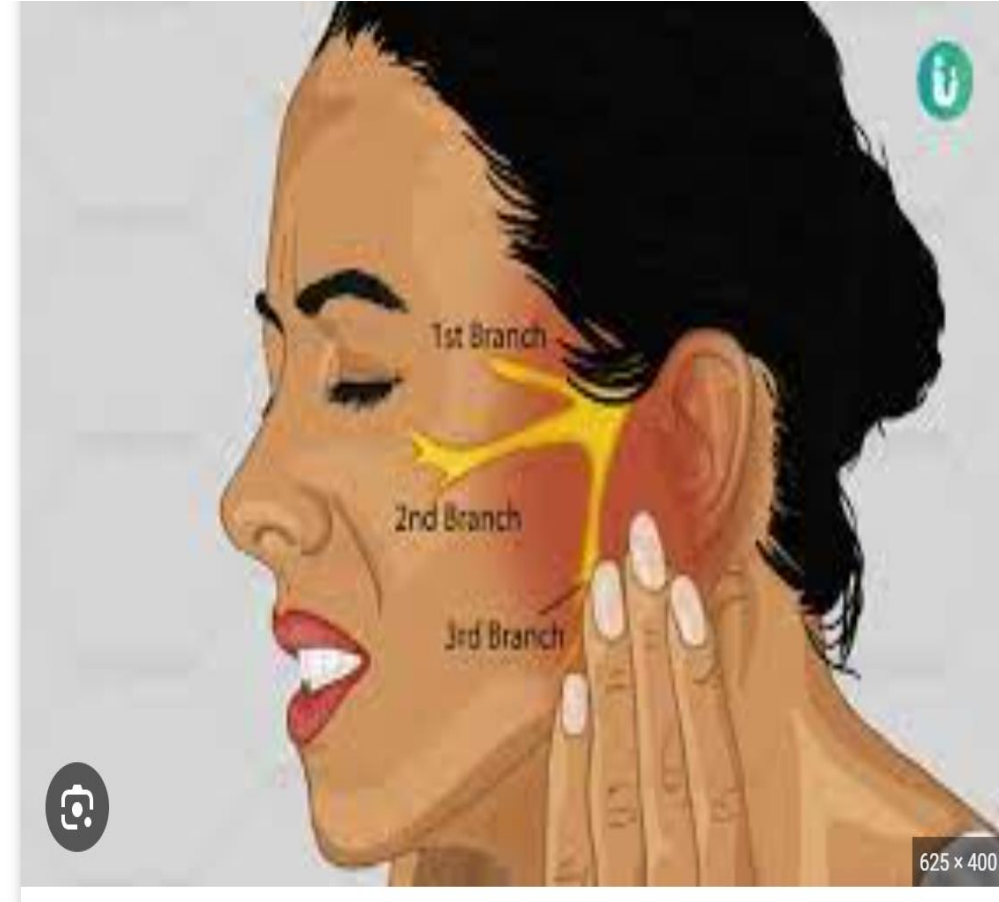


Trigeminal nerve



Trigeminal neuralgia

- Both **Trigeminal Neuralgia** and **cluster** headache are considered to be the cause of the most severe pain of neurological origin, hence the term “**suicide disease**.”



Introduction

- **Irritation** of individual nerves in the peripheral nervous system can contribute to head and facial pain
- It is important to distinguish between the terms neuralgia and neuropathy
- **Neuralgia**: a brief paroxysmal, often triggered, lancinating pain within a specific nerve dermatome, sometimes described as sharp, stabbing, or electric shock–like



Neuropathy

- persistent pain with neuropathic features, often described as burning, tingling, or prickling, sometimes with a false sense of swelling
- Sometimes may be associated with **weakness**
- **sensory deficit** within the nerve distribution

Triggers

- such as chewing/eating
- talking
- light touch over the face
- shaving or applying makeup
- brushing teeth
- cold wind on the face

THE 6 TRIGGERS OF TRIGEMINAL NEURALGIA



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TRIGGER ZONES OF OROFACIAL REGION

central portion of the face

around nose and mouth

nasolabial fold

lips



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Refractory period

- In most people with TN, a triggered attack is normally followed by **a period of seconds or minutes** during which further attacks cannot be provoked, a phenomenon called **refractory period**

Characters

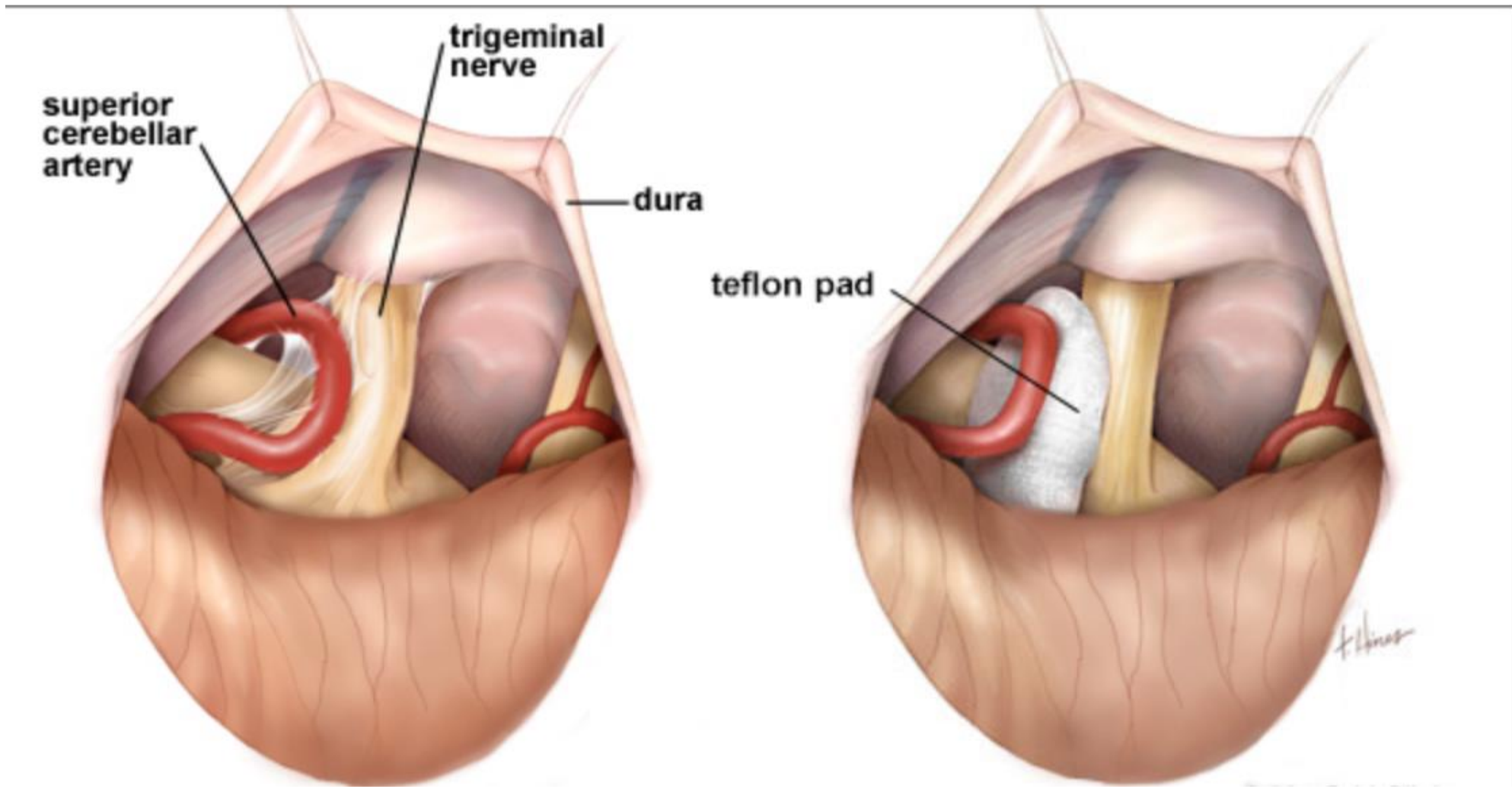
- Right side is more predisposed than left side
- The most common distribution: **V2,V3** (maxillary and mandibular)
- 5% : V1 (ophthalmic)
- **Bilateral** TN is more common in **MS** patients

Pathophysiology

- **Classical trigeminal neuralgia:**
- evidence of vascular compression of the trigeminal nerve typically by the superior cerebellar artery (SCA)

other vessels :

- anterior inferior cerebellar Artery (AICA)
- trigeminal vein
- superior petrosal vein



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Classification

- 1- Secondary :
 - tumors in CP angel like meningioma and schwannoma
 - MS (multiple sclerosis)
- 2- Classic : in imaging vascular compression is detected (compression or nerve atrophy)
- 3- Idiopathic : Nothing is found



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Diagnosis

- MRI of the brain, ideally with IV contrast and high-resolution thin cuts through the posterior fossa, is the preferred imaging if no contraindications are present.

Three-dimensional time-of-flight (TOF) magnetic resonance angiogram (MRA) can add additional visualization of arteries.

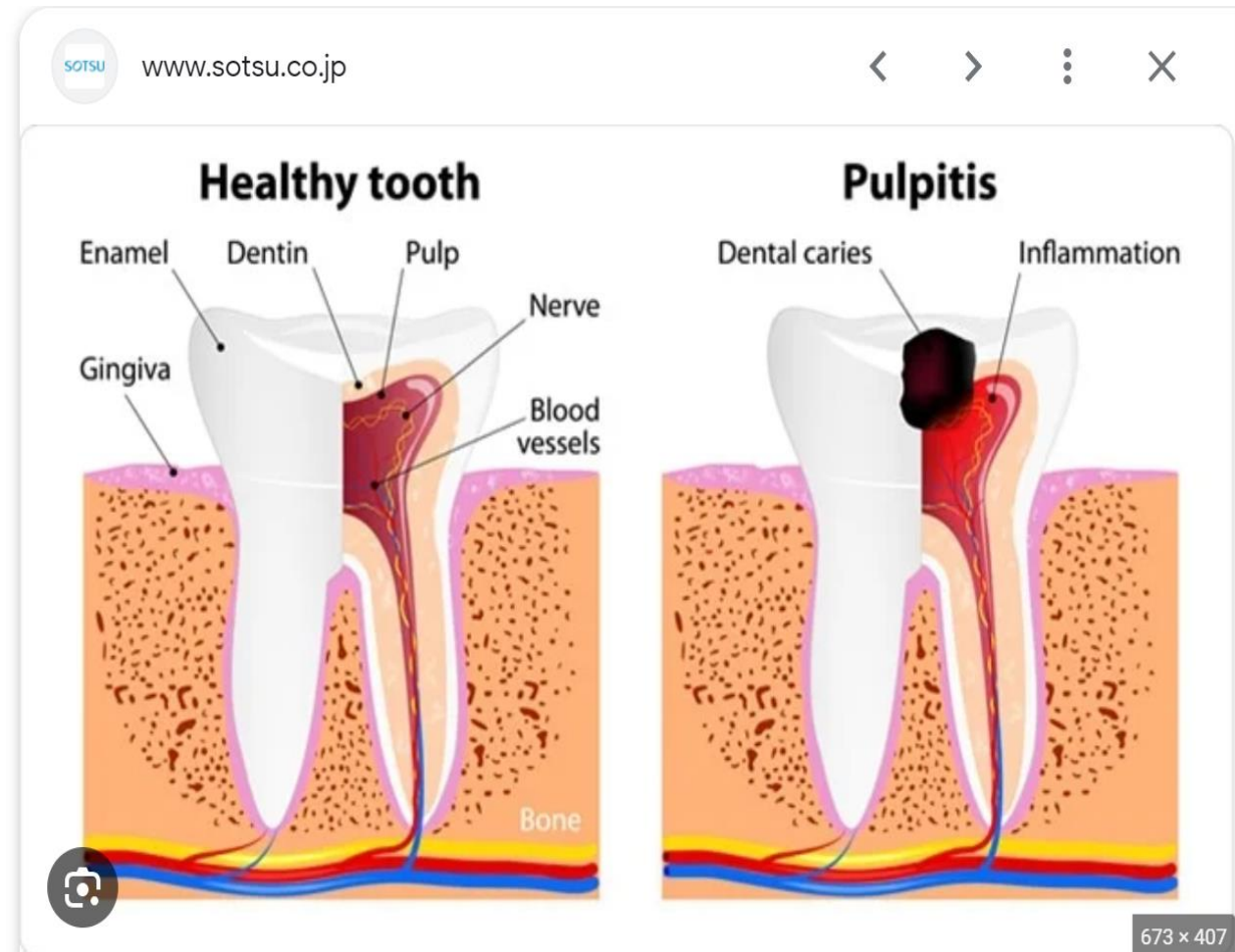
(Brain MRI + Gd and 3D TOF MRA)

Lab data

- **ECG**
- complete blood cell count (CBC)
- electrolytes with kidney (Na , K, BUN, Cr)
- liver function (AST, ALT, ALP)
- **Erythrocyte sedimentation(ESR) rate should be added if giant cell arteritis is a possibility.**

Dental evaluation

A dental evaluation is usually recommended if pain involves predominantly V2 and V3.



Treatment

Medical Surgery

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Carbamazepine

- CBZ: 200-1200
- **Oxcarbazepine** is reportedly better tolerated and has fewer potential drug interactions but may have a higher risk of causing hyponatremia (Na)
- Liver problems
- Failure rate : 50%



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Gabapentin

- 150-600 mg
- Pregabalin
- Renal metabolism
- Increase TG
- Risk suicide



The most reliable pharmaceutical supplier for pharmaceuticals with facial pain
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Other drugs

- Baclofen
- Levetiracetam (levebel) and brivaracetam: modest evidence that it was effective in reducing neuropathic pain, dose : 3000-4000 mg/day
- Opioids: add-on therapy
- Phenytoin, fosphenytoin: IV
- Sodium-valproate



Acute treatment

- **Subcutaneous injection of 6 mg sumatriptan** is significantly more effective than 100 mg of oral sumatriptan but is associated with more side effects.
- Oral and intranasal sumatriptan have similar efficacy but the nasal spray has a more rapid onset of action but a more limited therapeutic effect of about 30 minutes.



Acute Tx in emergency room

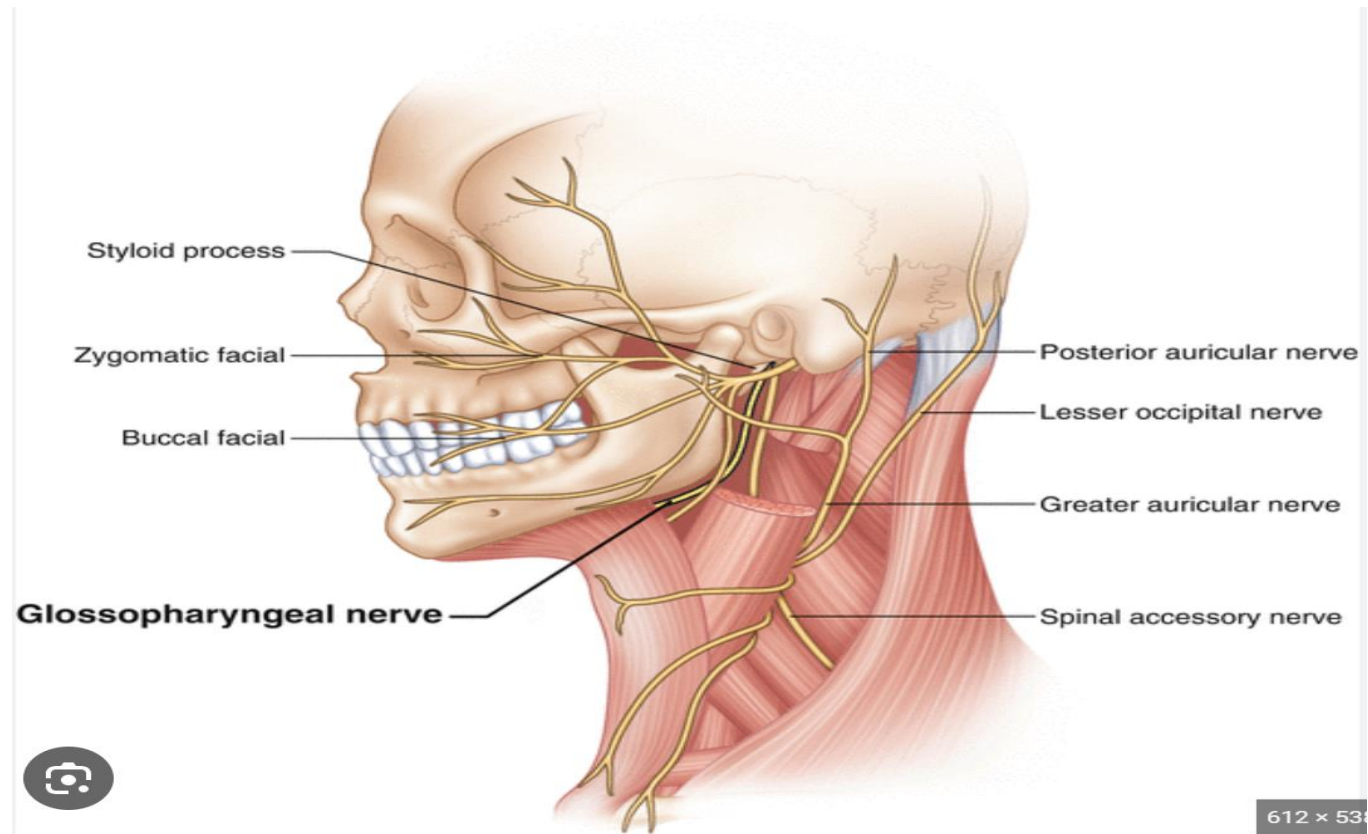
- Patients with an acute exacerbation of trigeminal neuralgia that is refractory to medication may present to an urgent care setting.
- Pain may be so severe that patients are unable to eat or drink and may require in-hospital treatment.
- -In these cases, **IV fosphenytoin** or possibly even **IV lidocaine** (5 mg/kg over 60 minutes) combined with rehydration may be required.
- - Acute pain relief might also be achieved with **peripheral blocks**



Other treatments

- Botox
- Surgery :
 - 1- microvascular decompression
 - 2- stereotactic radiosurgery

Glossopharyngeal neuralgia



Glossopharyngeal Nerve Entrapment | SpringerLink

Visit >



Characters

- It accounts 0.2-1.3 % of all cranial neuralgia
- 0.2-0.4 per 100,000 people per year
- Incidence: 0.7 per 100,000 : rare

- It is increasing with age
- female= male
- Spontaneous remission was reported in 74 %
- It is reported bilateral in 12 %

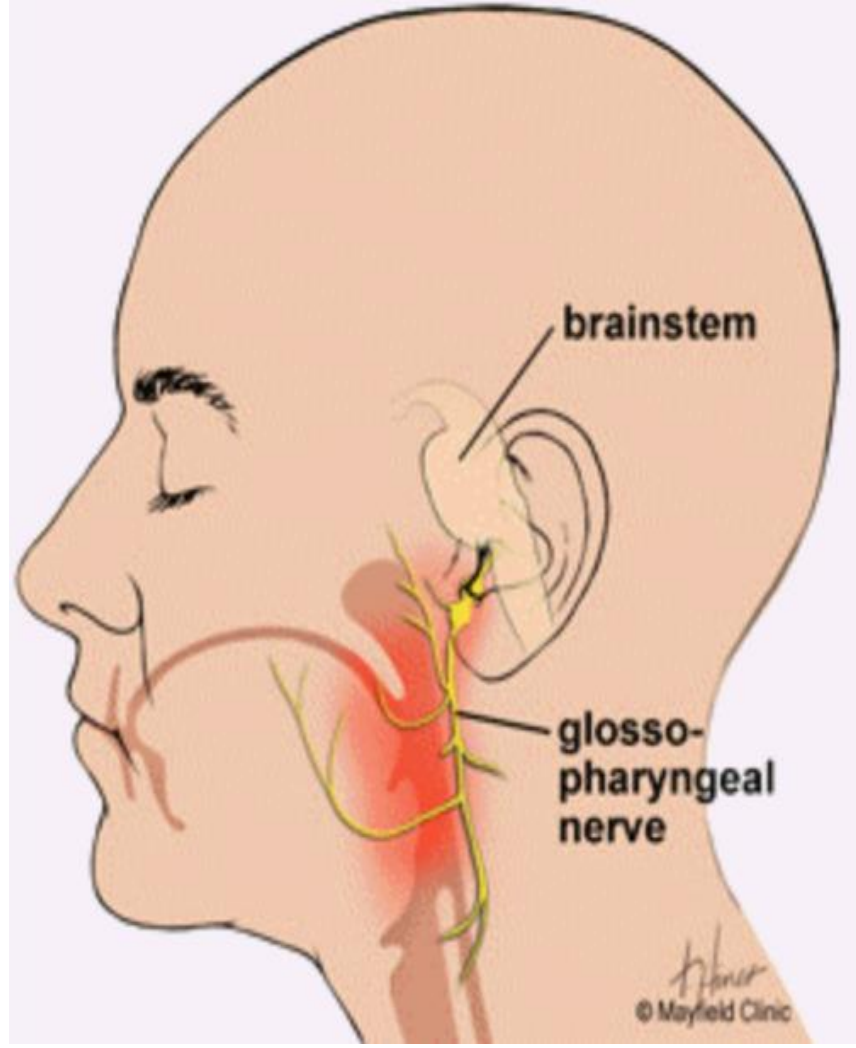


Clinical presentation

- acute, abrupt onset of repeated episodes of severe, sharp, stabbing unilateral pain in the areas of the sensory distribution of the glossopharyngeal nerve (9), along with a branch of sensory vagus (10) nerves
 - ▶ These areas include the **mastoid, the back of the throat, posterior 1/3 of the tongue**, Eustachian tube and **middle ear**, tonsils, and voice box.
 - ▶ Patients may or may not present with **coughing** and **hoarseness** and can have difficulty speaking and swallowing.



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Uncommon manifestations

- Rarely, glossopharyngeal neuralgia can cause
 - bradycardia
 - hypotension
 - even asystole
-
- The longevity of these painful episodes ranges from seconds to minutes, and they may occur many times throughout the day or night.

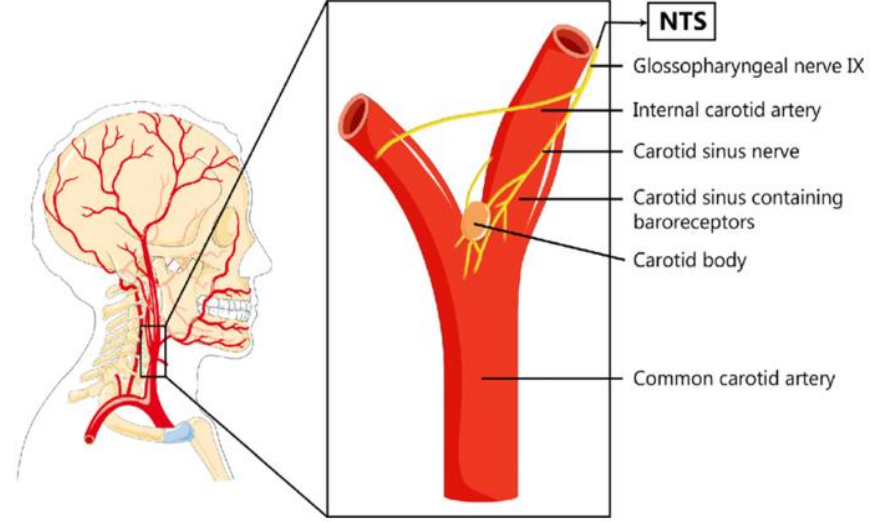
Comorbidities

1- bradycardia

2- asystole

3- tinnitus

4- vertigo



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Diagnosis

Diagnosis is clinical

Touching cotton swab to the back of throat and this maneuver induces pain

Relieved pain with local anesthetic like bupivacaine and lidocaine



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2 forms

- 1- The **first one is idiopathic**

- The idiopathic form is caused by vascular compression or central pontine dysfunction

- 2- The **second is secondary**

- CP angel tumor (schwannoma)
- Any tumor that can compress the nerve like carcinoma or tumors attributed to laryngeal or pharyngeal
- Cranial base tumors
- Post radiation
- Infections: tonsillitis, pharyngitis, arachnoiditis, pharyngeal abscess and TB

Treatment

- Carbamazepine
- Phenytoin
- Surgery



Temporal arthritis

- This inflammatory disease (giant cell arteritis) affects the media of medium sized cranial arteries.

1-It may present as claudication when chewing

2-constant unilateral headache and diffuse pain around the ear.

3- visual problems



- The presence of **tenderness and hypersensitivity over the superficial temporal artery**, together with a raised erythrocyte sedimentation rate (ESR), warrants immediate commencement of oral prednisolone (commonly 50 mg daily).
- The dose of prednisolone is titrated depending on ESR and clinical response, and it is frequently necessary to continue drug therapy for more than six months

Sinus headache

symptoms:

1-may feel pressure around the eyes, cheeks and forehead

Sometimes throbbing

2-Pain, pressure and fullness in the cheeks, brow or forehead

3-Worsening pain if you bend forward or lie down

4-Stuffy nose

5-Fatigue

6-Achy feeling in the upper teeth

Sinusitis usually:

- Occurs after a viral upper respiratory infection or cold
- Includes thick, discolored nasal mucus
- Is associated with a decreased sense of smell
- Causes pain in one cheek or upper teeth

Thank you for your attention



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