Trigeminal Trophic Syndrome (TTS)

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Trigeminal trophic syndrome: An unusual nasal ulceration. A case report and review of the literature

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Case Report: Patient History

- - 34-year-old female
- - History of meningioma resection (2013)
- - Developed nasal ala ulcer & homolateral keratitis 18 months post-surgery
- - Symptoms: Hypoesthesia in the trigeminal dermatomes, persistent itching, self-scratching

Case Report: Diagnostic Workup

- - Ulcer culture: Staphylococcus epidermidis
  → lesion exacerbated despite antibiotic given

- - Skin biopsy: Non-specific inflammatory changes

- - Final diagnosis: Trigeminal trophic syndrome (TTS)

Case Report: Treatment & Follow-up

- - Carbamazepine therapy (neuropathic pain control)
- - Local wound care & behavioral counseling
- - Ulcer healed within 2 weeks, but occasional scratching observed over 5 years.

Introduction

- TTS is a rare neurological disorder develops from damage to peripheral or central components to the trigeminal sensory fibers which characterized by:
  - Self-inflicted facial ulceration
  - persistent facial ulcers
  - Delayed onset (weeks to decades)

Historical Background

- First described by Wallenberg in 1901
- First English literature appearance: 1933 (Loveman & McKenzie)
- Initially observed in patients after trigeminal rhizotomy to treat trigeminal neuralgia.

Epidemiology

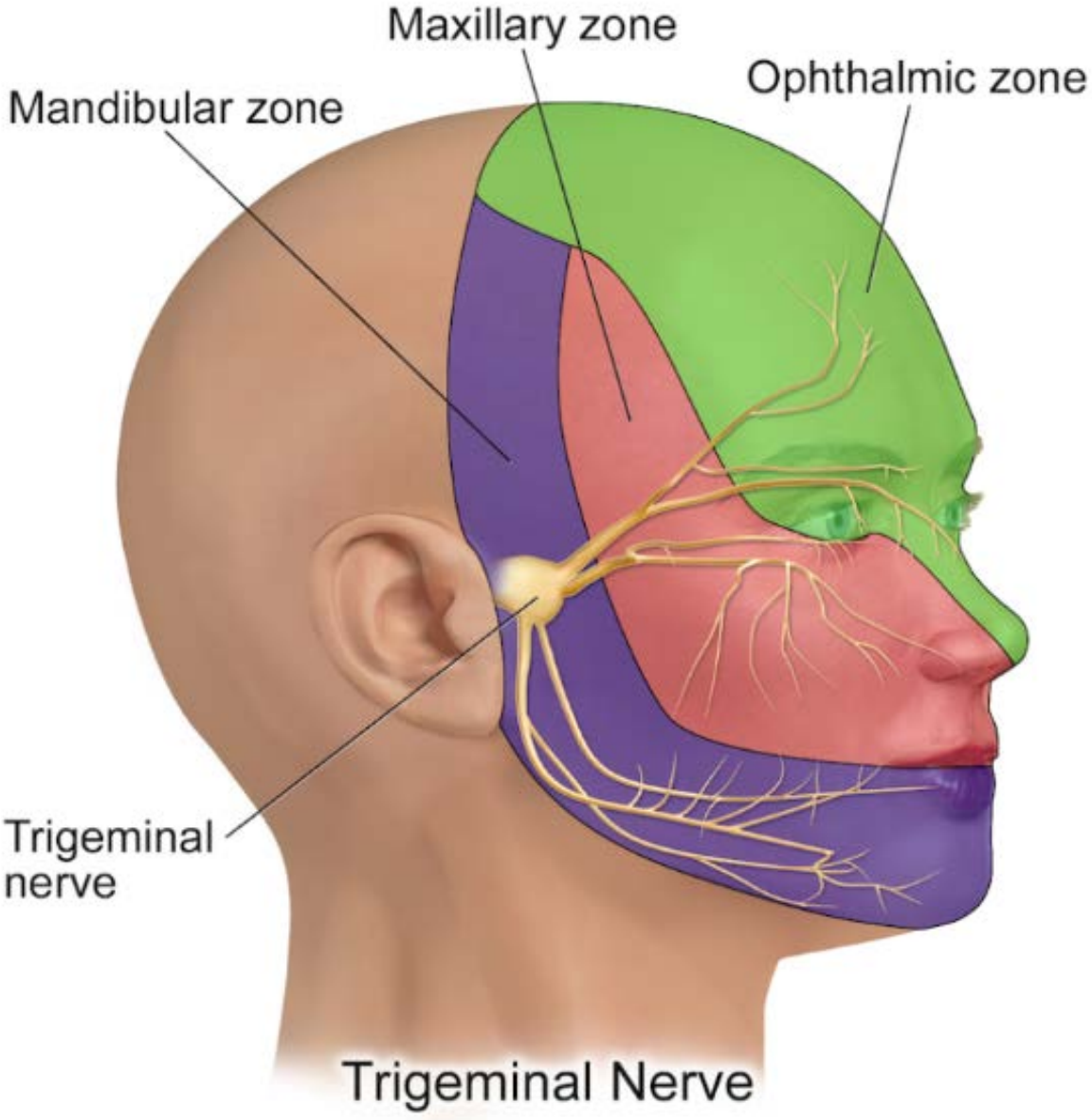
- - Mean age: 57 years
- - Female predominance: 2.2:1
- - Latency period: Weeks to decades after nerve injury.

Causes of Trigeminal Nerve Damage

- - Peripheral causes:
  - Trigeminal rhizotomy
  - Alcohol/glycerol injection in Gasserian ganglion
- - Central causes:
  - Stroke (Wallenberg syndrome)
  - vertebrobasilar insufficiency
  - Posterior fossa tumors (meningioma, acoustic neuroma)
  - trauma

Clinical Presentation

- - Primary symptoms:
- - Intractable facial ulceration
- - Anesthesia & paresthesia in trigeminal nerve territory
- - Most common site: Nasal ala (crescent-shaped ulcer) may extend to upper lip, cheek
- - keratitis, iritis and corneal ulceration


Maxillary zone
Ophthalmic zone
Mandibular zone
Trigeminal nerve
Trigeminal Nerve

Differential Diagnosis

- TTS resembles several conditions:
- - Neoplasms: Basal cell carcinoma, squamous cell carcinoma
- - Infections: Herpes, syphilis,
- - Vasculitis: Systemic vasculitis, pyoderma gangrenosum.

Diagnosis Approach

- TTS is a diagnosis of exclusion:
- - Rule out infections, malignancies, and vasculitis
- - Histology: Non-specific inflammatory changes
- - Blood tests: To exclude rheumatologic or infectious causes.
- - psychiatric disorders

Treatment Strategies

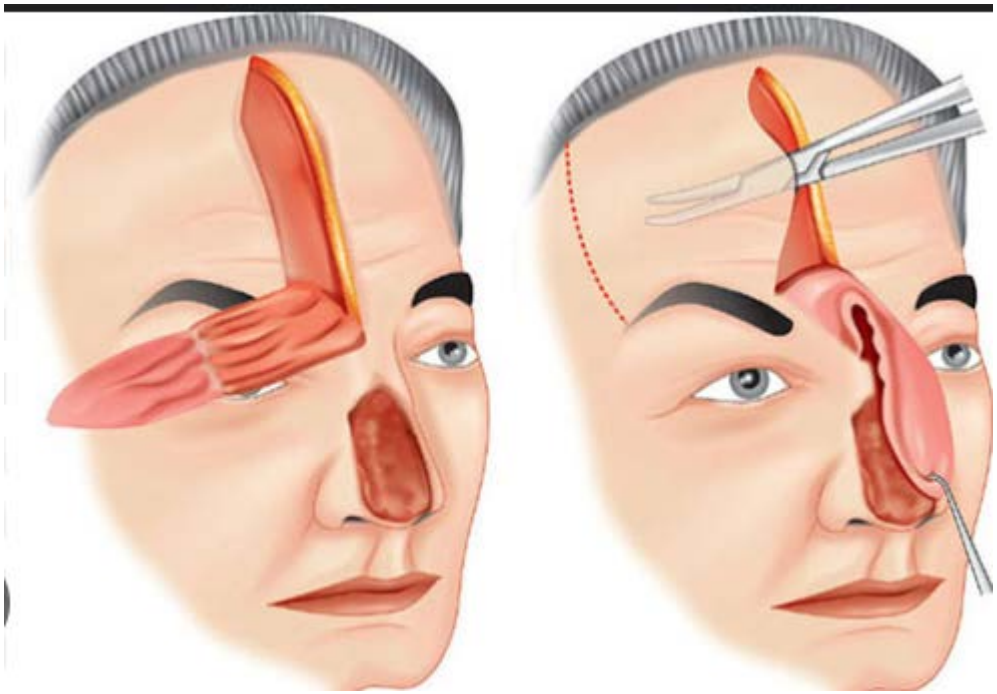
- Three main approaches:
- 1. Behavioral Modifications – Preventing self-inflicted injury
- 2. Pharmacological Therapy – Neuropathic pain control.
- 3. Wound Care – Standard chronic ulcer management

Pharmacological Treatment

- Commonly used medications:
- - Gabapentin
- - Amitriptyline (Tricyclic antidepressant)
- - Carbamazepine (Antiepileptic drug)
- - Neuroleptics (Chlorpromazine, Pimozide)

Surgical Treatment

- - Some success with contralateral forehead flap



- - Theories suggest:
- - Healthy nerve supply may disrupt the dysesthetic cycle
- - Reconstructive procedures have high recurrence rates

Challenges in Treatment

- -Psychiatric evaluation is crucial
- - Misdiagnosis & delayed treatment are common
- - High recurrence rates
- - Limited evidence for surgical success

Prognosis & Long-term Outlook

- - Chronic condition, but symptoms can be managed
- - Early intervention prevents severe ulceration
- - Multidisciplinary approach is necessary (Neurology, Dermatology, Psychiatry)