DISEASES OF NERVES
TRIGEMINAL NEURALGIA

Tic douloureux
Trifacial neuralgia
Fothergill’s disease
• Trigeminal neuralgia is an archetype of orofacial neuralgias which follows the anatomical distribution of the fifth cranial nerve

• Mainly affects 2\textsuperscript{nd} and 3\textsuperscript{rd} division of trigeminal nerve

• Associated with a trigger zone

Prof. Shaleen Chandra
ETIOLOGY

• Exact etiology is unknown and most cases are idiopathic

• Suggested possible mechanisms
  • Peripheral injury or disease of the trigeminal nerve
  • Failure of central inhibitory mechanisms
  • Compression of trigeminal roots by tumors or vascular anomalies
  • May be due to local demyelination associated with multiple sclerosis

Prof. Shaleen Chandra
CLINICAL FEATURES

• Age of onset
  • Older adults
  • Seldom seen before 35 years of life

• Females are more commonly affected (3:2)

• Right side of the face is more commonly affected (1.7 : 1)

Prof. Shaleen Chandra
• Pain is searing, stabbing, or lancinating type occurring in paroxysms

• Each attack persists for a few seconds to several minutes

• Usually initiated by touching the trigger zone

• May be associated with spasmodic contraction of facial muscles

• Sometimes associated with
  • Excessive lacrimation
  • Intense headache

Prof. Shaleen Chandra
• **In early stages**
  - Pain is mild (dull pain resembling toothache)
  - Time interval between attacks is long

• **As disease progresses**
  - Pain becomes more severe
  - Attacks are more frequent
  - Patients may develop suicidal tendency

Prof. Shaleen Chandra
• **Trigger zones**
  • Vermilion borders of the lips
  • Alae of nose and nasolabial fold
  • Cheeks
  • Around eyes

• Usually only one trigger zone in a patient
DIFFERENTIAL DIAGNOSIS

- Migrane
- Sinusitis
- Tumors of nasopharynx
- Postherpetic neuralgia
- Trigeminal neuritis or trigeminal neuropathy
  - Burning, or dull boring ache
  - Continues for hours, days, or weeks
TREATMENT

• Peripheral neurectomy
  • Sectioning of the nerve near mental foramen
  • Not used now

• Injection of alcohol
  • In peripheral nerve area
  • Centrally into the Gasserian ganglion

• Injection of boiling water into the Gasserian ganglion

• Surgical sectioning of trigeminal sensory root

• Microsurgical decompression of the nerve

• Drugs
  • Phenytoin
  • Carbamazapine
  • Gabapentin

Prof. Shaleen Chandra
SPHENOPALATINE NEURALGIA

Horton’s syndrome
Vidian neuralgia
CLINICAL FEATURES

- Unilateral paroxysms of intense pain
- Rapid onset
- Persist for about 15 minutes to several hours
- No trigger zone
• Site
  • Eyes
  • Maxilla
  • Ear
  • Mastoid
  • Base of nose
  • Beneath zygoma

• Attacks develop regularly

• At least once in a day and in some patients at almost the same time of the day → “alarm clock headache”
BURNING MOUTH SYNDROME

Prof. Shaleen Chandra
• Burning or stinging of the oral mucosa, lips, and/or tongue, in the absence of visible mucosal lesions

• Majority of the cases are idiopathic

• Strong female predilection

• Age of onset is usually 50 years
ETIOLOGY

• Local causes
  • Xerostomia
  • Mucosal disorders
    • Geographic tongue
    • Lichen planus
  • Trauma to oral mucosa
    • Poorly fitting dentures
  • Gastro-esophageal reflux
  • Sensory nerve damage

Prof. Shaleen Chandra
• **Systemic causes**
  - Nutritional deficiencies
    - Vit B12, folate, iron
  - Medications
    - ACE inhibitors
  - Sjogren’s syndrome
  - Psychological
    - Stress, anxiety, fear of cancer
  - Diabetes mellitus
  - Menopause

Prof. Shaleen Chandra
CLINICAL FEATURES

- Protracted history of the complain
- Continuous or intermittent discomfort
- Onset → sudden or gradual
- Dry mouth
- Increased thirst
- Altered taste sensation
  - Bitter or metallic
- No oral mucosal lesions will be detected on examination

Prof. Shaleen Chandra
AURICULOTEMPORAL SYNDROME

Frey’s syndrome
Gustatory sweating

Prof. Shaleen Chandra
- Unusual phenomenon, which arises as a result of damage to the auriculotemporal nerve and subsequent reinnervation of sweat glands by parasympathetic salivary fibers

- Arises as a complication of surgery in the parotid region or ramus of mandible
CLINICAL FEATURES

• Flushing and sweating of the involved side of the face during eating

• Profuse sweating is induced by parenteral administration of pilocarpine and eliminated by administration of atropin
BELL’S PALSY

Idiopathic seventh nerve paralysis

Prof. Shaleen Chandra
• Abrupt, isolated, unilateral, peripheral facial nerve paralysis without detectable cause

• One of the most common neurologic disorder affecting the cranial nerves
CLINICAL FEATURES

• Middle age

• Females affected more than males

• Onset may be rapid or gradual

• May be preceded by pain on the affected side of face
• Paralysis of facial muscles
  • Drooping of corner of mouth with drooling of saliva
  • Inability to close or wink the eye
    • Leads to infection and watering of eyes
  • Skin of the forehead does not wrinkle
  • Inability to raise the eyebrows
  • Mask-like or expressionless appearance of the face
  • Loss of taste sensation from the anterior 2/3 of tongue
  • Sometimes associated with Melkerson-Rosenthal syndrome