OROFACIAL PAIN

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DEFINITION

- PAIN

According to IASP, "it is unpleasant sensory and emotional experience associated with actual and potential tissue damage".

- OROFACIAL PAIN

Is a branch of dentistry concerned with preventing, evaluating, diagnosing,treating and rehabilating pain disorders involving the mouth and face

CLASSIFICATION

- First classification

1.Local pain

- Dental-pulpitis, dental hypersensitivity, periapical periodontitis,cracked tooth syndrome.
- Gingival-primary herpetic gingivostomatitis
- Mucosal-ulceration
- Salivary gland-acute suppurative sialadenitis
- Maxillary sinus-sinusitis,malignancies

- Second classification

1.Typical neuralgias

- Trigeminal
- Glossopharyngeal
- Post herpetic
- Geniculate

2.Atypical neuralgias

- Migraine
- Cluster headache

2.Neurological pain

- Trigeminal neuralgia
- Glossopharyngeal neuralgia
- Post herpetic neuralgia

3.Vascular

- Migraine and variant
- Cluster headache

4.Psychogenic pain

- Atypical facial pain
- Atypical odontalgia
- Burning mouth syndrome

3.Typical facial pain

- Pain of extracranial origin

-dental disease

-ocular disease

-TMJ syndrome

-salivary gland disease

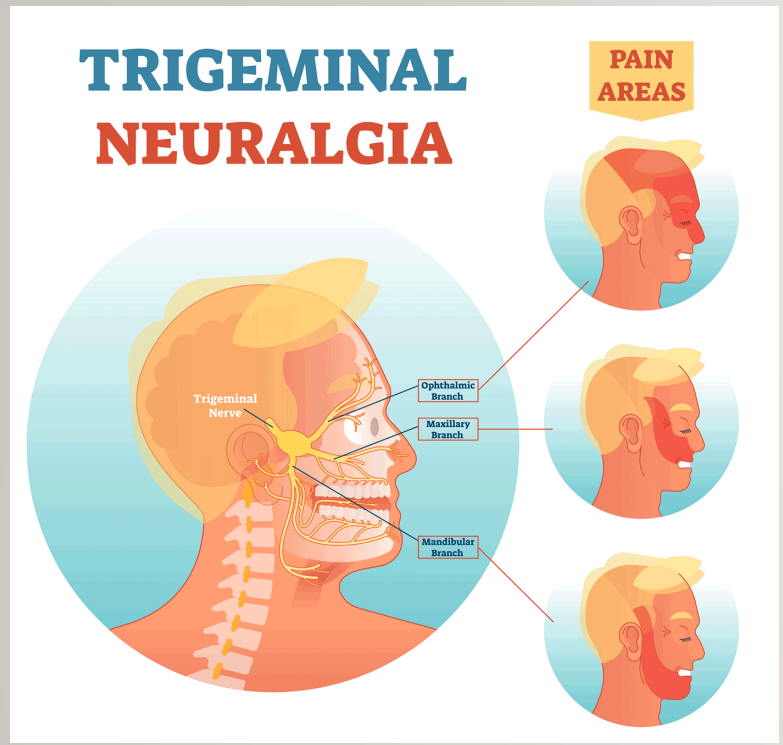
- Pain of intracranial origin

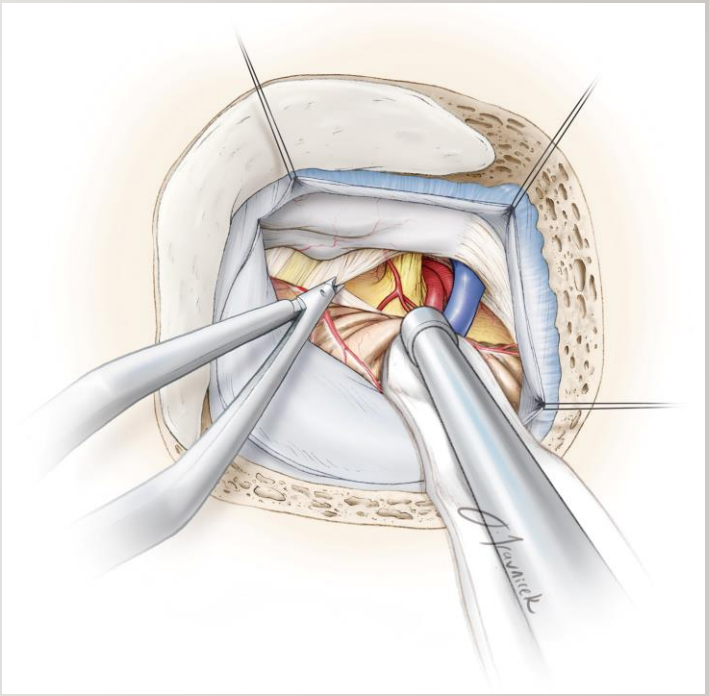
-trigeminal neuropathy

-trigeminal neuralgia in multiple sclerosis

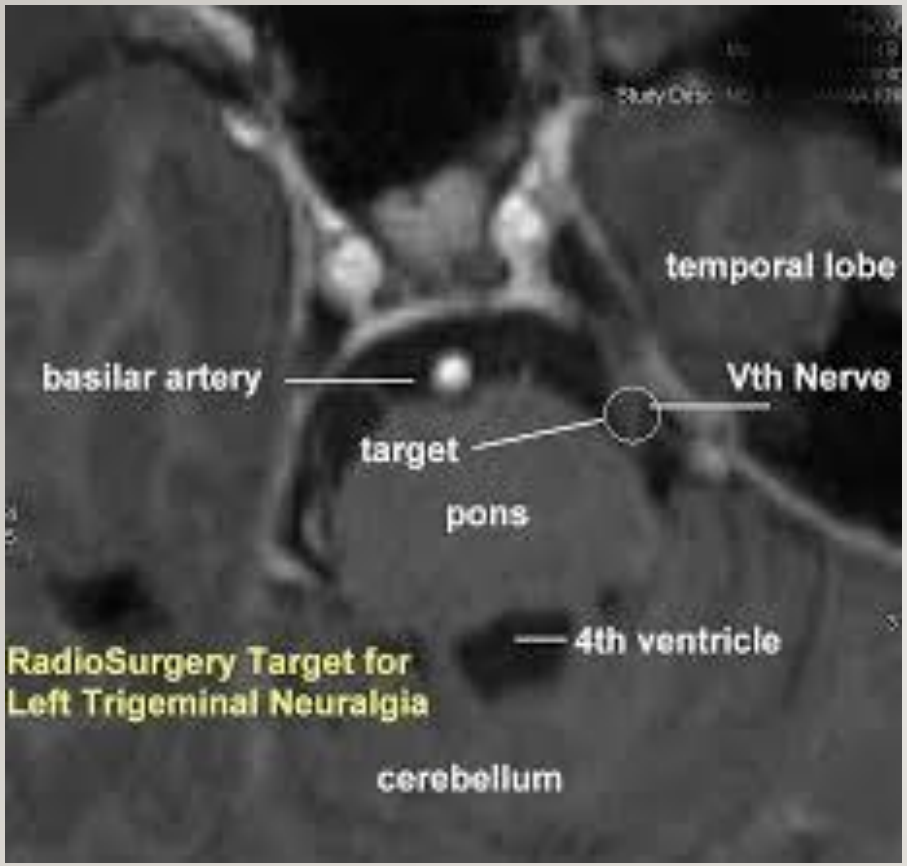
NEURALGIC PAIN

	TRIGEMINAL NEURALGIA/ TIC DOULOUREUX/ FOTHERGILL DISEASE	GLOSSOPHARYNGEAL NEURALGIA	POST HERPETIC NEURALGIA
DEFINITION	Unilateral severe brief sudden stabbing pain in distribution of one or more branches of trigeminal nerve.	Variant of trigeminal neuralgia that mimic the oral pathological condition in which pain is confined to distributrion of ninth cranial nerve.	It is a complication of herpes zoster infection in which there is persistence of pain more than1-6 months after resolution of rash.
ETIOLOGY	➢ Vascular compression of trigeminal nerve near its entry into pons. ➢ Multiple sclerosis,tumors,basilar artery,eneurysim or actasia	Intracranial or extracranial tumors and vascular abnormalities that compress glossopharyngeal nerve.	➢ Peripheral injury-zoster virus injures the peripheral nerve by demyelination,Wallerian degeneration and sclerosis. ➢ Central injury-atrophy of dorsal horn cells in the spinal cord. ➢ Infection-low grade persistent infection of trigeminal ganglion.
CLINICAL FINDINGS	➢ Episodic,recurrent unilateral facial pain of sudden high intensity stabbing or electric like shock.	➢ Age and sex-no sex predilection,middle age or older person. ➢ Unilateral,sharp excruciating	➢ It affects older age group and is more seen in women as compared to men. ➢ Initially there is presence of

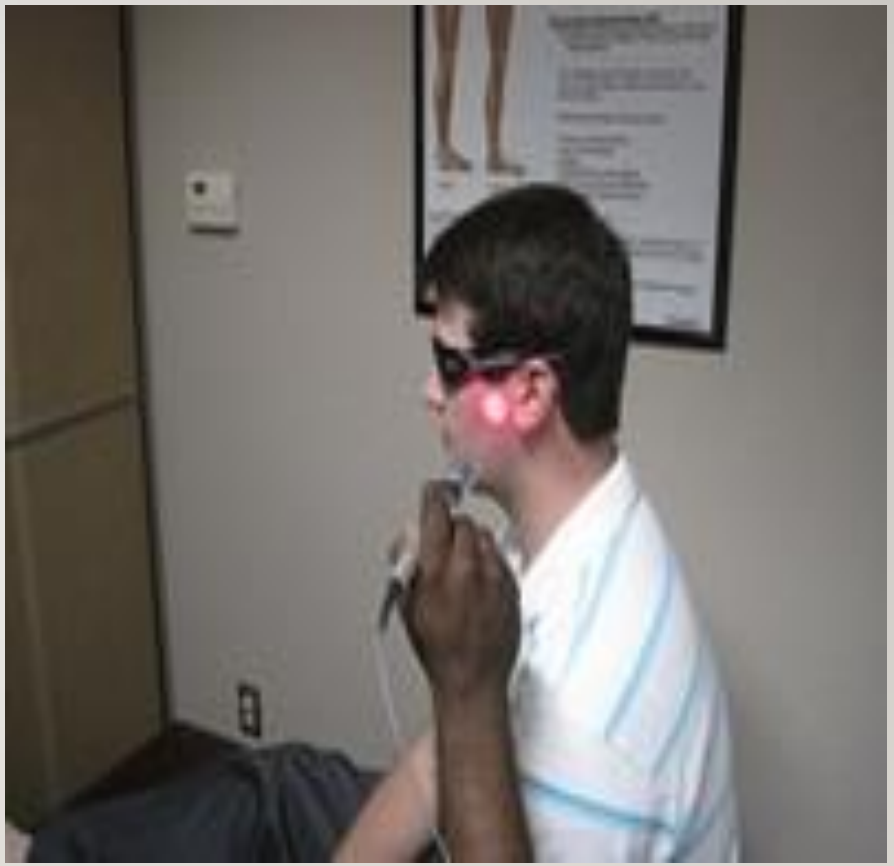




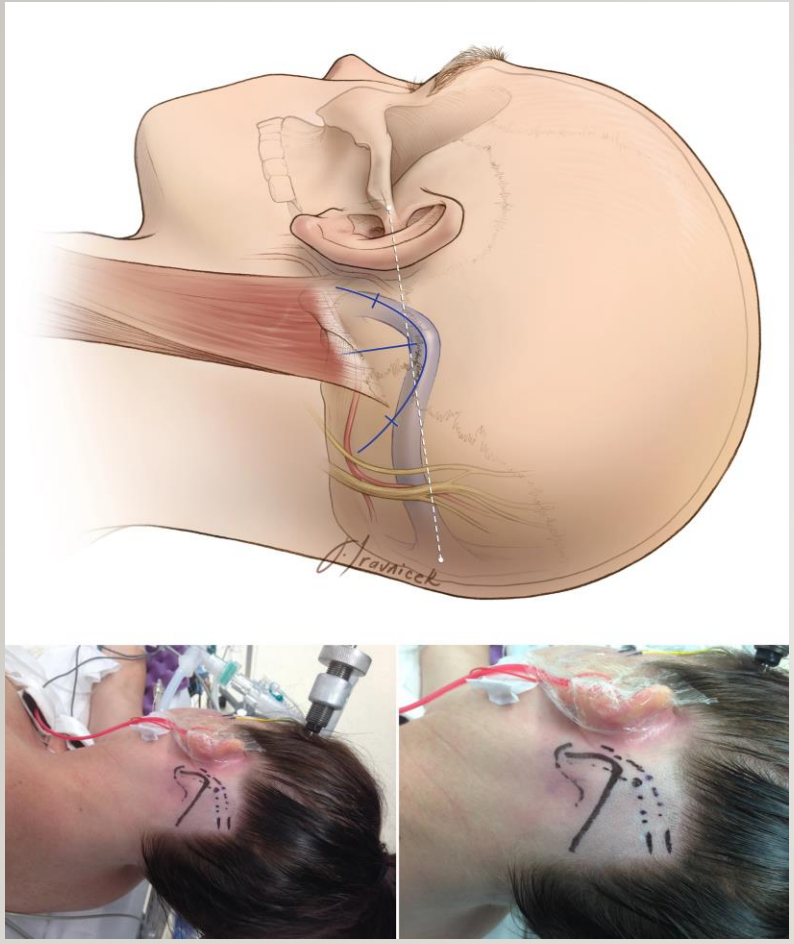
MICROVASCULAR DECOMPRESSION

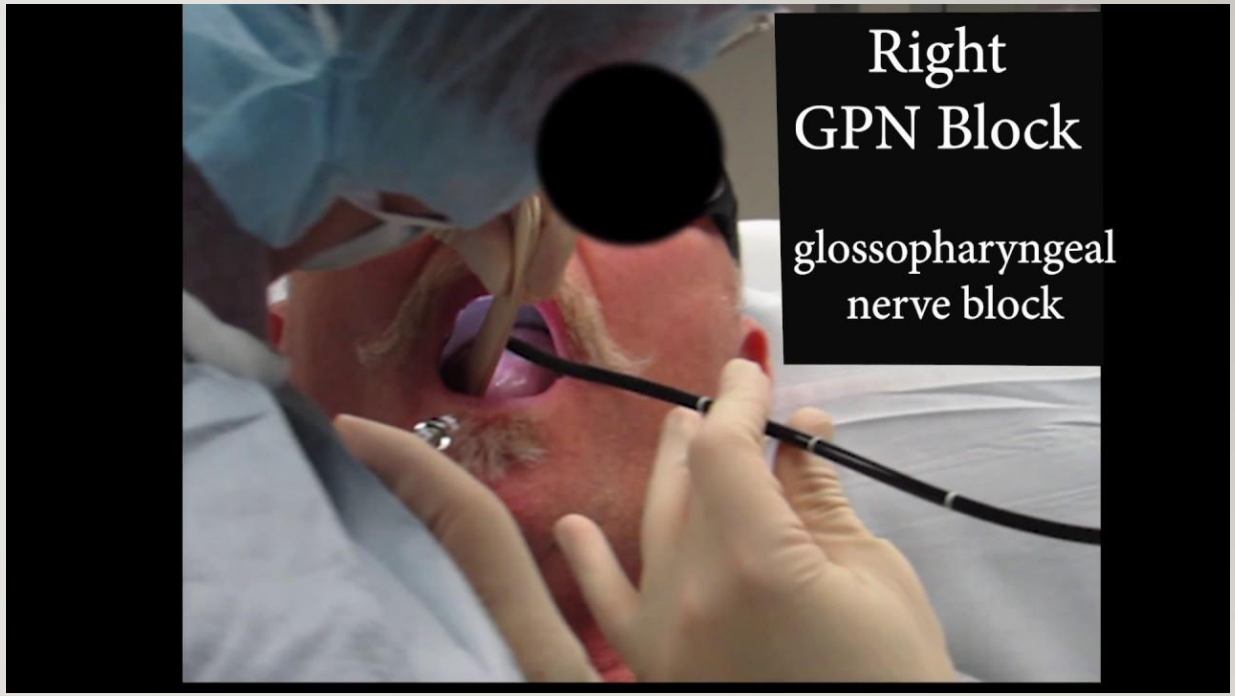


GAMMA KNIFE SURGERY



COLD LASER- TMJ

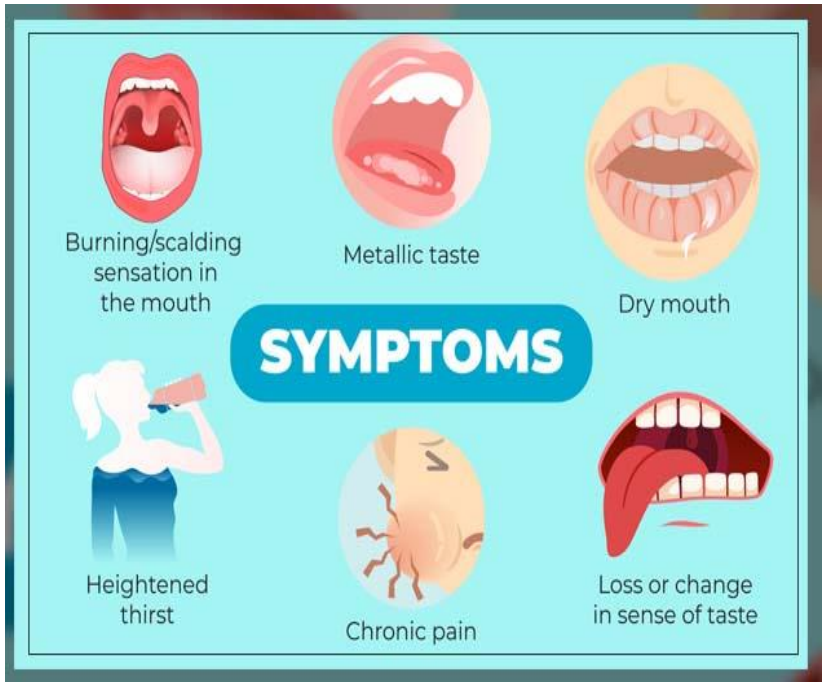




GLOSSOPHARYNGEAL DECOMPRESSION

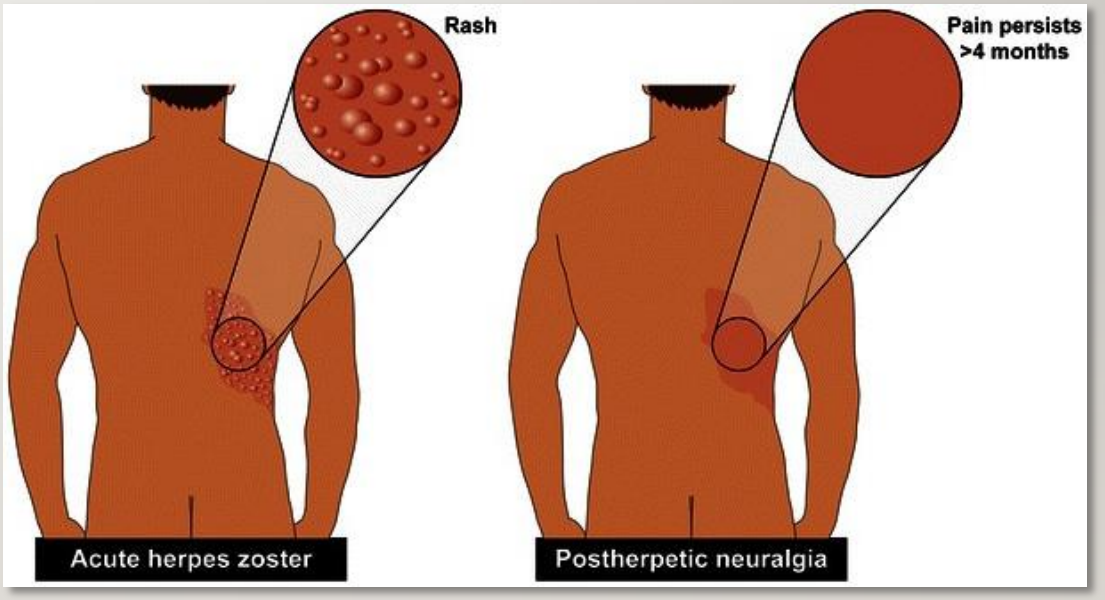
NEUROPATHIC PAIN

	POST TRAUMATIC NEUROPATHY	ATYPICAL FACIAL PAIN	ATYPICAL ODONTALGIA	BURNING MOUTH SYNDROME
DEFINITION	It is a disturbance of function or pathological change of the trigeminal nerve branches following trauma.	Constant dull aching pain, deep, diffuse variable intensity in absence of identifiable organic disease.	Constant dull aching pain without the apparent cause that can be detected by examination.	It is a common dysesthesia(sense distortion) described by patients as burning sensations of oral mucosa in absence of apparent mucosal alterations.
ETIOLOGY	It is caused by trigeminal nerve injury which may result from facial trauma or from surgical procedure such as removal of impacted third molar, placement of dental implant.	➢ Psychosocial factors ➢ Increased cerebral activity in CNS. ➢ Necrotizing intrabony cavitational osteonecrosis ➢ Minor nerve trauma	➢ It occurs after dental extraction or endodontic treatment.	➢ Hormonal factors, anxiety and stress ➢ Contact allergy-due to denture material ➢ Chronic mechanical trauma-due to denture,clasp etc. ➢ Habits-clenching,grinding and chronic tongue



BURNING MOUTH SYNDROME

Pharmacological treatment of post-traumatic and postoperative neuropathic pain		
First line	Second line	Third line
Tricyclinc antidepressants and dual norepinephrine/5 hydroxytryptamine reuptake inhibitors α2-δ calcium channels inhibitors, topic lidocaine	Tramadol Opioids	Anticonvulsants Other antidepressants NMDA antagonists Mexiletine Capsaicin Canabinoids
Pharmacological treatment of localized post-traumatic and postoperative neuropathic pain		
First line	Second line	Third line
Topic lidocaine	Topic Capsaicin	Topic amitriptyline



MIGRAINE

- DEFINITION: A recurrent throbbing headache that typically affects one side of the head and is often accompanied by nausea and disturbed vision.
- ETIOLOGY:

1. Trigeminovascular neuron activation-leads to cerebral ischemia followed by compensatory vasodilation with subsequent pain and cerebral edema.

2. Hereditary-autosomal dominant inheritance pattern.

3. Triggering factors-stress, sleep disturbance, hormonal disturbance, physical exertion, flash light, trauma, chocolates and certain drugs.

CLINICAL MANIFESTATIONS:

- CLASSIC MIGRAINE(starts with prodromal aura occurring over 20-30 mins)

-flashing lights

-scotoma(localized area of vision depression)

-sensory and motor deficit

-aura is followed by severe unilateral throbbing pain.

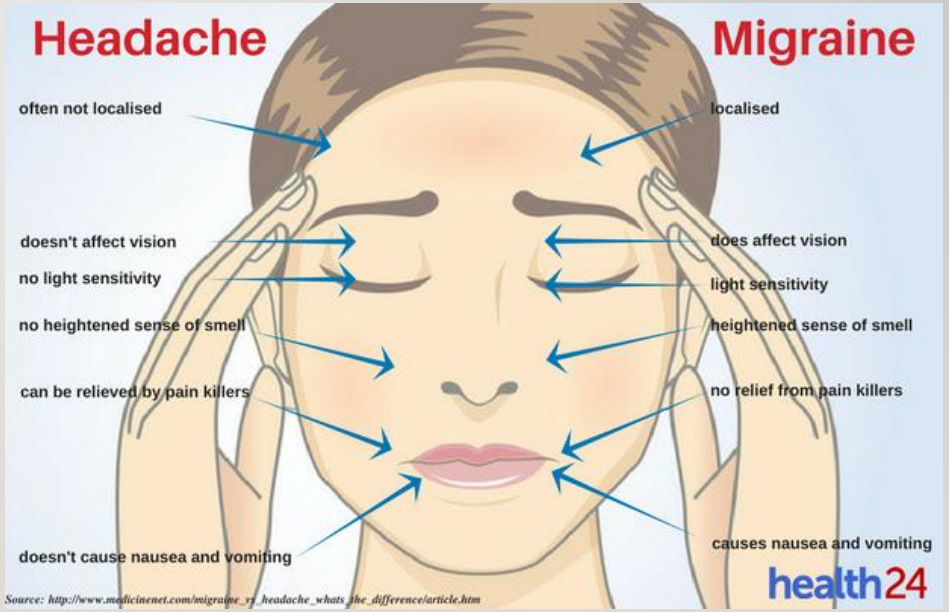
-headaches may last for hours or upto 2-3 days.

- COMMON MIGRAINE(not preceded by aura)

-severe unilateral throbbing pain.

-sensitivity to noise and light.

-nausea and vomiting.



❑FACIAL MIGRAINE(carotidynia)

-30-50 years of age

-pain last for minutes to hours and reccurs several times per week.

-throbbing pain of neck and jaw.

Patient often seek dental consultation.

-tenderness of carotid artery

❑BASILAR MIGRAINE

-the symptoms are primarily neurologic and includes aphasia, temporary blindness, vertigo, confusion and ataxia. Maybe accompanied by an occipital headache.

TREATMENT

- Avoid trigger factors
- Acute attack: analgesic, sumatriptan, ergotamine
- Prophylaxis: pizotifen, propranolol, calcium channel blockers and TCA

CLUSTER HEADACHE

- DEFINITION:A neurological condition in which there is pain focused around and behind an eye andpain occurs in cycles and clusters.
- ETIOLOGY:

Hypothalamus dysfunction.trigger by alcohol.

- CLINICAL FEATURES:

-80%of patients are men.

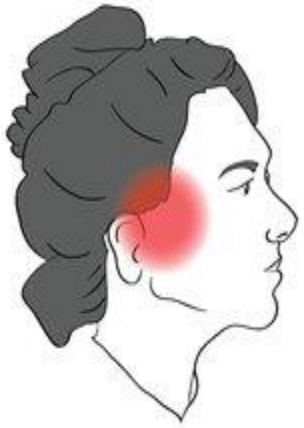
-attacks are sudden,unilateral,stabbing causing patients to pace,cry out,strike objects.

-pain as hot metal rod in or around eye.

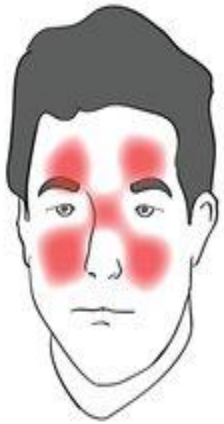
-Each attack lasts for 15 minutes to 2 hours and recurs several times a day,mostly at night.

-pain associated with nasal congestion and tearing.sweating of face,ptosis,increased salivation,edema of eyelid.pain in posterior maxilla.

TMJ
pain is at temples, in front of ears.



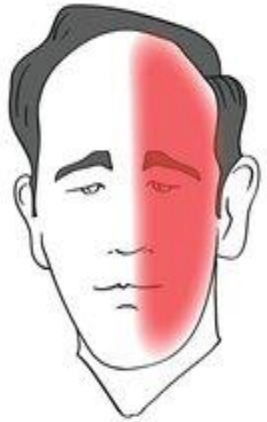
Sinus
pain is behind browbone and/or cheekbone.



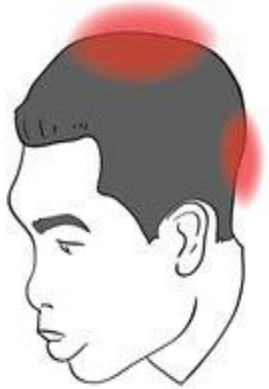
Cluster
pain is in and around one eye.

Tension
pain is like a band squeezing the head.

Migraine
pain, nausea and visual changes are typical of classic form.



Neck
pain is at the top and/or back of head.



TREATMENT

- Acute attack:

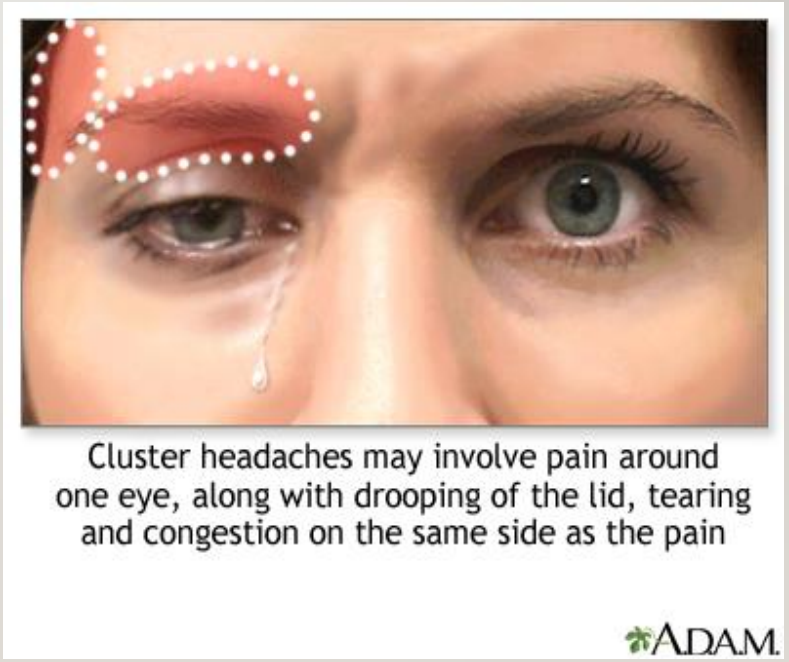
-100% oxygen,

-injection of sumatriptan

- sublingual or inhaled ergotamine.

- Prophylaxis:

Lithium,ergotamine,prophylactic prednisolone,calcium channel blockers.



Cluster headaches may involve pain around one eye, along with drooping of the lid, tearing and congestion on the same side as the pain

RECENT ADVANCES IN DIAGNOSIS AND TREATMENT

- The diagnosis and treatment of orofacial pain maybe challenging due to complex histories, pathophysiology and associated psychosocial comorbidities such as depression and anxiety.
- Neuropathic facial pain conditions such as burning mouth syndrome, persistent idiopathic facial pain, atypical odontalgia, trigeminal neuralgia require early recognition by primary care clinicians and referral secondary care.
- Acute pain related temporomandibular disorder maybe managed by primary care setting, with identification of those at risk of developing chronic TMD receiving an early referral to secondary care.
- Adopting biopsychosocial approach, consisting of physical therapies, pharmacotherapy and psychological support can lead to effective management and may limit the negative impact of facial pain upon quality of life

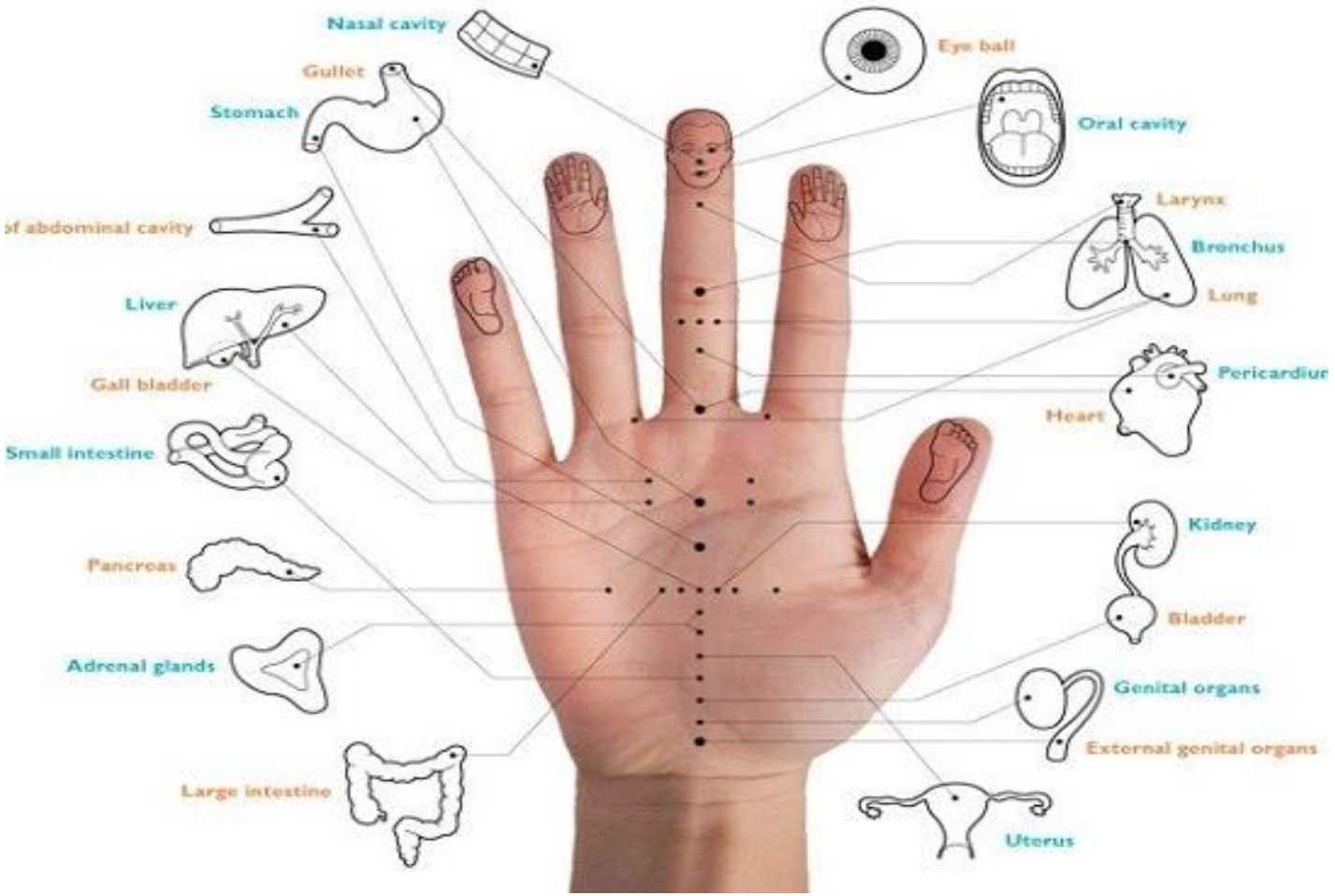
PHN

1st line treatment:
Anticonvulsants/Lidocaine 5%/ Tricyclic antidepressants

2nd line treatment:
Opioids/ topical capsaicin patch or cream

Refractory PHN Pain
Moderate:Epidural block/IV lidocaine/capsacin0.75%
Severe:Spinal cord stimulation/intrathecal steroid injection

PHOTOBIOMODULATION THERAPY FOR TRIGEMINAL NEURALGIA



ACCUPUNCTURE THERAPY FOR TRIGEMINAL NEURALGIA

MEASUREMENT OF PAIN

METHODS OF PAIN MEASUREMENT

1. Visual analog scale(VAS):0----------10

2. Descriptive rating scale(eg: no pain, mild, moderate, severe pain)

3. Faces rating scale

4. The Mcgill Pain questionnaire

THANK YOU