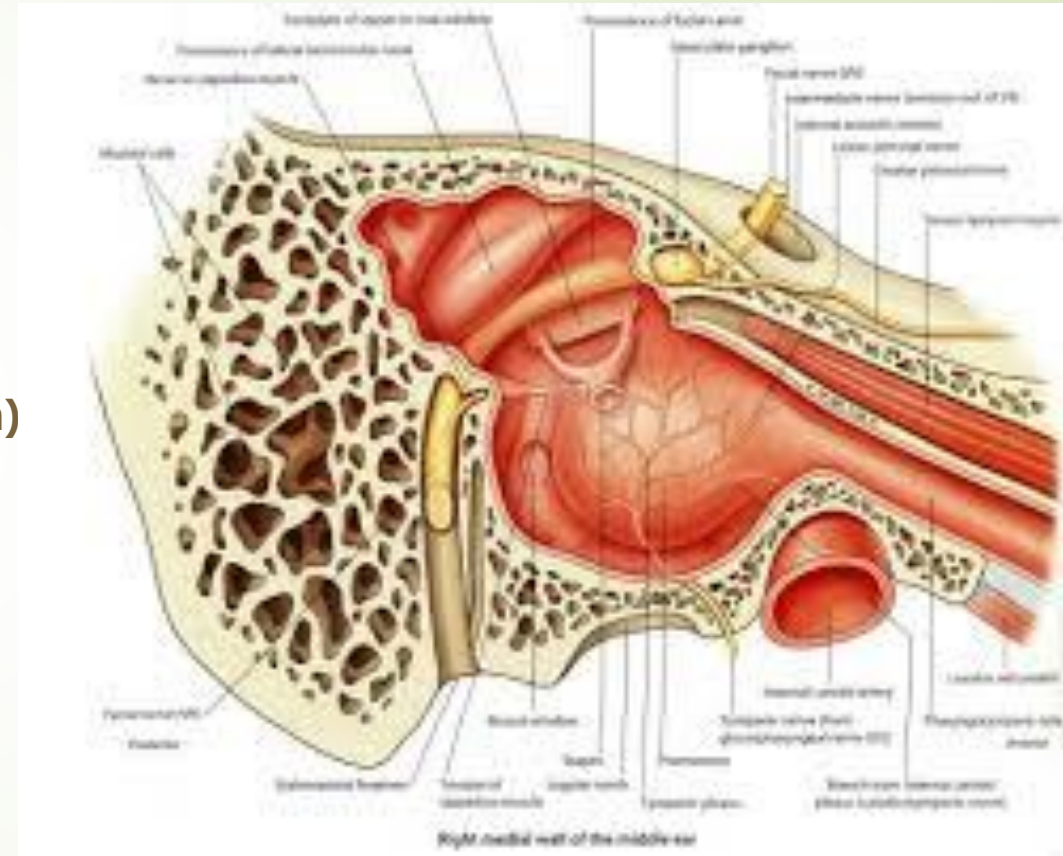


FACIAL NERVE DISORDERS

Dr Seema Monga
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ENT
HIMSR

FACIAL NERVE COURSE

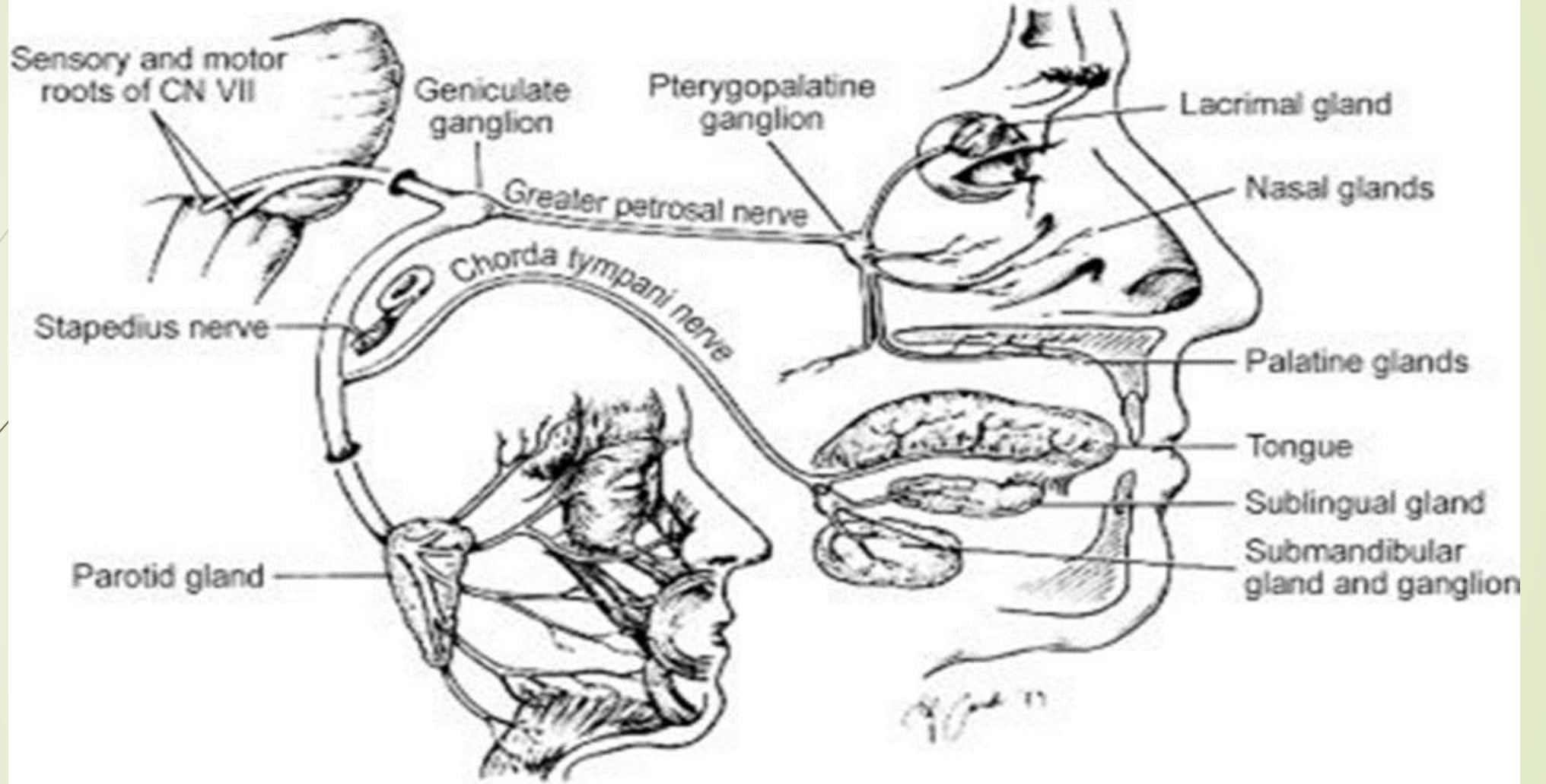
- INTRA CRANIAL COURSE (15-17mm)
- INTRA TEMPORAL COURSE –
 - MEATAL SEGMENT(8-10mm)
 - LABYRINTHINE SEGMENT(3-5 mm)
 - TYMPANIC SEGMENT(8-11mm)
 - MASTOID SEGMENT(10-14mm)
- EXTRA CRANIAL COURSE





BRANCHES OF FACIAL NERVE

- **GREATER SUPERFICIAL PETROSAL NERVE**
- **NERVE TO STAPEDIUS**
- **CHORDA TYMPANI**
- **COMMUNICATING BRANCHES**
- **POSTERIOR AURICULAR NERVE**
- **MUSCULAR BRANCHES TERMINAL BRANCHES**



Muscles of expression



BLOOD SUPPLY

- LABYRINTHINE ARTERY
 - PETROSAL ARTERY
 - STYLOMASTOID ARTERY
- 

PATHOPHYSIOLOGY NERVE INJURY

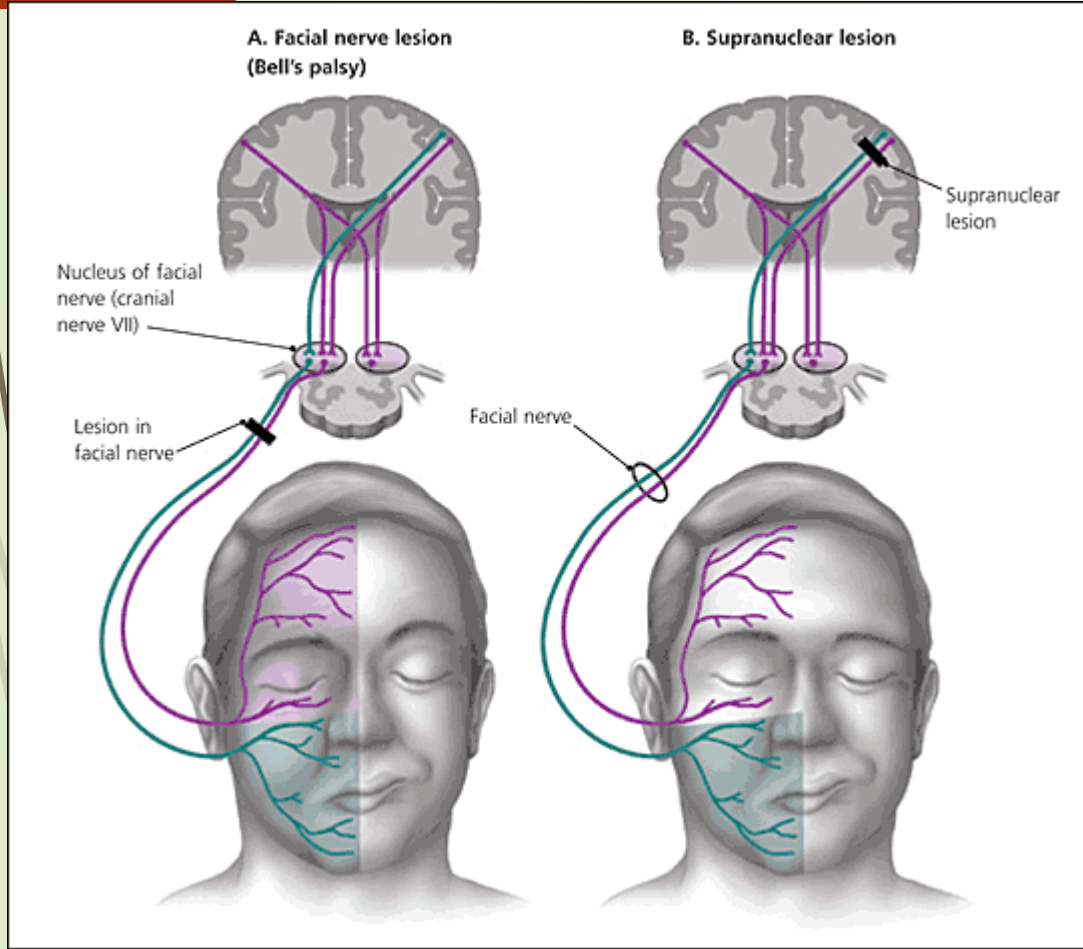
➤ SUNDERLAND CLASSIFICATION

- FIRST DEGREE (obstruction of axoplasm , neuropraxia)
- SECOND DEGREE (injury to axon , axonotmesis)
- THIRD DEGREE (injury to endoneurium , neurotmesis)
- FOURTH DEGREE (injury to perineurium)
- FIFTH DEGREE (injury to epineurium)

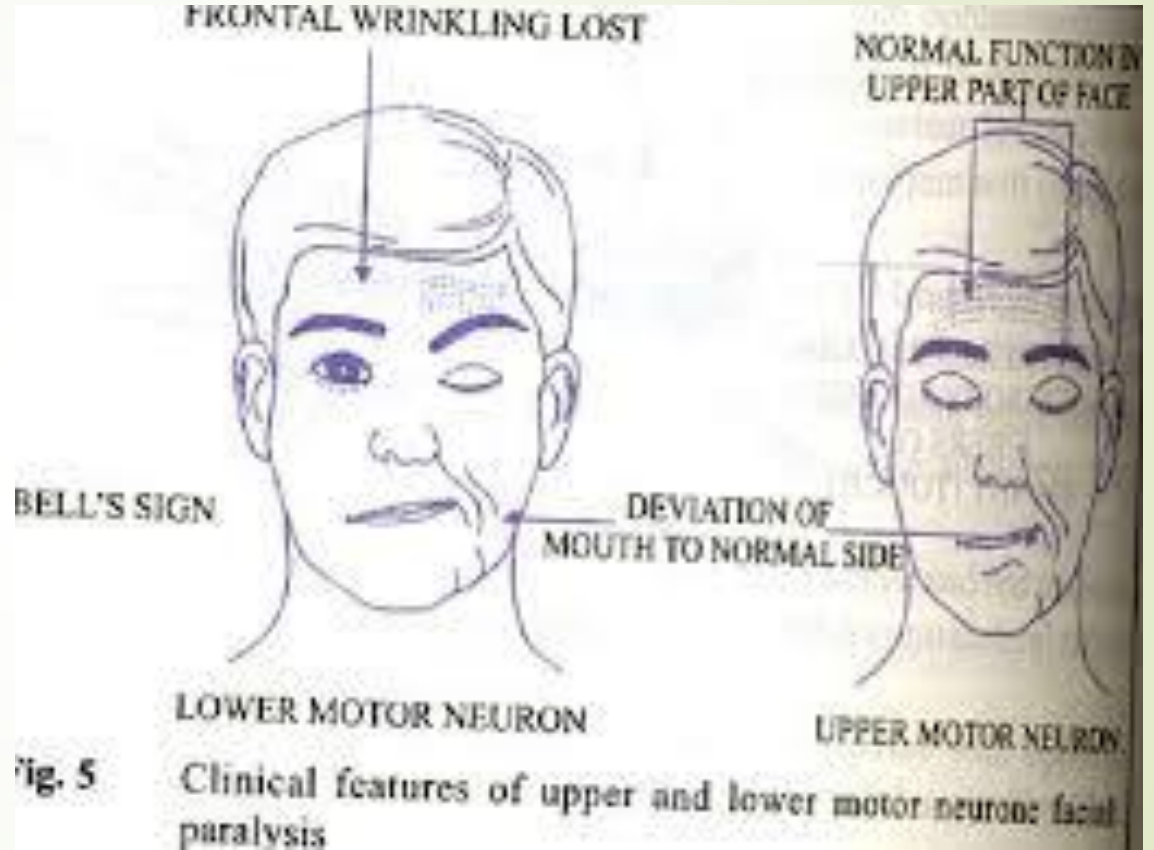


Types of facial palsy

- ▶ **Upper motor neuron facial palsy-** paralysis of only lower half of face on the contralateral side
- ▶ **Lower motor neuron facial palsy-** all the ipsilateral muscles become paralysed

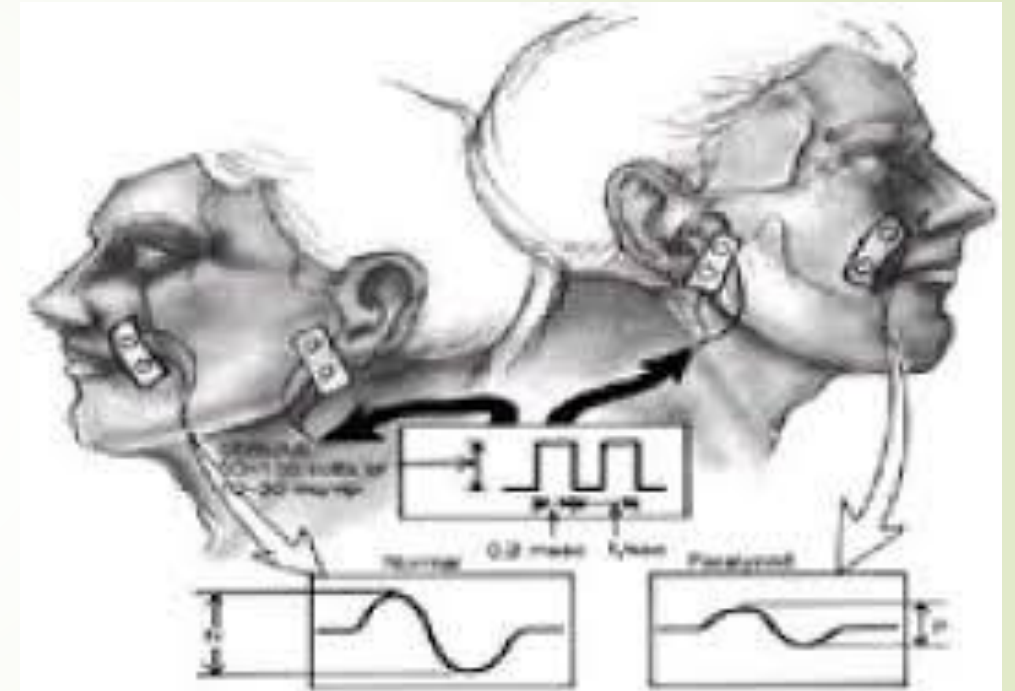


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INVESTIGATION

- ELECTRICAL TEST
- NERVE EXCITABILITY TEST
- MAXIMAL STIMULATION TEST
- ELECTRO NEURO GRAPHY
- ELECTROMYOGRAPHY
- NERVE CONDUCTION VELOCITY





Topo diagnostic test

- **SCHIRMER'S TEST** – a strip of filter is hooked in lower fornix of each eye and kept for five min . The length of wetting of strip is measured
- result : 20- 30 % decrease in lacrimation indicate that lesion is proximal to geniculate ganglion .
- **TASTE TEST OR ELECTROGUSTOMETRY**
- **SUBMANDIBULAR SALIVARY FLOW**



Saliva	Method
Mixed	<i>Drainings/pitting</i> and then spit into
Mixed	<i>Suction method:</i> S collection vessel (1
Mixed	<i>Swabs (absorbent)</i> mouth at the orifice collection period (1
Parotid	Modified Carlson-4 chamber. The inner that carries saliva 1 bulb. The bulb is c
Submandibular/ sublingual	Since submandibular and sublingual secretions enter the oral cavity via a common duct system, it is difficult to collect individual salivas separately. For combined submandibular-sublingual saliva, custom-made collectors can be fabricated (214). Those devices contain a central chamber for the collection of submandibular saliva and one or two side chambers for the collection of sublingual saliva (214).
Submandibular/ sublingual	Alternatively, Fox et al. (74) have described a simpler method for the collection of submandibular-sublingual. After blocking the parotid saliva secretion by placing a gauze pad at the orifice of the parotid ducts, saliva can be collected from the floor of the mouth with a micropipette.
Minor glands	Minor gland secretions can be collected by micropipette, absorbent filter paper or strips from the inner surface of lips, palate, or buccal mucosa and quantitated by weight differences or using a Periotron® device (249).



liva

of the mouth

a suitable

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tached to tubing

scrum squeeze

over the duct opening.



CAUSES

- **Central**
- **Cerebellopontine angle tumour**
- **Intratemporal part**
 - **idiopathic**
 - **Infection**
 - **surgical trauma**
 - **Accidental trauma**
 - **Neoplasm**
- **Parotid**
- **congenital**
- **systemic disease**



Complication

- Incomplete recovery
- exposure keratitis
- synkinesis
- tics and spasm
- Contractures crocodile tear
- Frets syndrome (gustatory sweating)
- Psychological and social problem

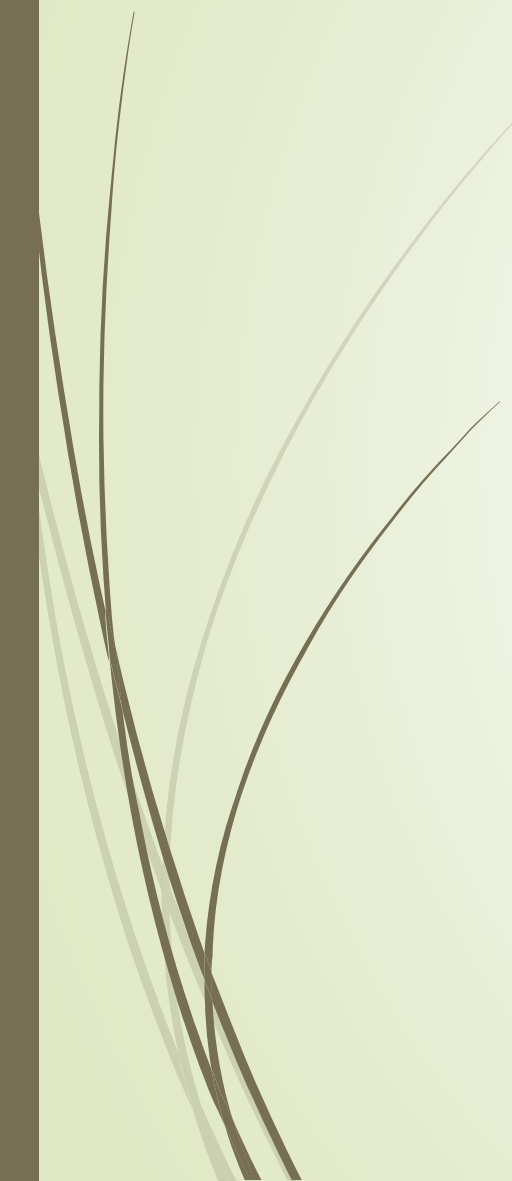


Bell's palsy

- Idiopathic demyelinating disease
- Unilateral lower motor neuron facial palsy
- Both sexes equally affected
- Risk factors-diabetes and pregnancy



Etiology

- **Viral infection**
 - **Vascular ischemia**
 - **Hereditary**
 - **autoimmunity**
- 



C/F

- Inability to close eye
- Bells phenomenon
- Dribbling of saliva
- Assymetrical face
- Epiphora
- Ear ache
- Hyperacusis
- Diminished taste sensation



DIAGNOSIS

- **LABORATORY TEST – CBC , peripheral smear , ESR , blood sugar .**
- **NERVE EXCITATION TEST**
- **TOPODIAGNOSTIC TEST**



TREATMENT

➤ GENERAL MEASURES

➤ REASSURANCE

➤ ANALGESICS

➤ EYE CARE-ARTIFICIAL TEARS,EYE BOINTMENT FOLLOWED BY EYE PATCH

➤ PHYSIOTHERAPY

➤ MEDICAL MEASURES

➤ STEROIDS

➤ ACYCLOVIR

➤ OTHER DRUGS –VASODILATOS,VITAMINS,MAST CELL INHIBITOS AND ANTIHISTAMINICS



CONT...

- **SURGICAL FACIAL DECOMPRESSION**
- **VERTICAL AND TYMPANIC SEGMENT IS DECOMPRESSED**
- **IT IMPROVES MICRO CIRCULATIONS**

- **PROGNOSIS**
- **MAJORITY OF PATIENTS (85-90%) RECOVER FULLY**
- **RECOVERY BEGINS WITHIN 3 WEEKS OF ONSET.**



Melkersson's Syndrome

- Idiopathic disorder
- Triad of facial palsy , swelling of lips and fissured tongue .
- Recurrent attacks of facial palsy
- Treatment similar to bell's palsy



RAMSAY HUNT SYNDROME OR HERPES ZOSTER OTICUS (VARICELLA-ZOSTER VIRUS)

- Caused by varicella-zoster virus
- **Clinical features-**
 - Painful vesicles with erythematous base in canal , concha , soft palate.
 - Later, crust formation
 - Unilateral facial palsy
 - Deep ear pain
 - 25% patients have vertigo , nystagmus , tinnitus and hearing loss



Cont.....

- **Treatment**
- **Tab. Acyclovir 800 mg 5 times a day or famcyclovir 500mg TDS or valacyclovir 1 g TDS for 7 days**
- **Tab. Prednisone tapering dose for 6 weeks**
- **Topical antibiotic /steroids ear drops**
- **Eye care**



TEMPORAL BONE FRACTURES

- Facial palsy is due to intraneural hematoma ,compression by bony spicule or transection of nerve
- c/f –
 - Hearing loss
 - Dizziness
 - Facial weakness
 - Ear bleeding
 - Hemotympanum
 - Racoon eye
 - Battle's sign



Cont...

► **Indication for surgery**

- Immediate onset of complete facial nerve palsy
- Delayed onset complete facial nerve palsy associated with :-
 - Radiological evidence of a fracture through fallopian canal
 - Poor prognostic test with ENG OR EMG



ITAROGENIC OR SURGICAL TRUMA

- ▶ **FACIAL NERVE** may be damaged accidentally during stapedectomy , tympanoplasty or mastoid surgery.
- ▶ **Paralysis** may be immediate or delayed

HYPERKINETIC DISORDERS

- ▶ INVOLANTARY TWITCHING of facial muscles on one or more sides
- ▶ occur in cases of :-
 - ▶ Hemifacial spasm
 - ▶ Blepharospasm



Surgical treatment

- **Decompression**
- **In SOM :-**
 - **Myringotomy**
 - **Tympanomastoid surgery**
- **End to end anastomosis**
- **Nerve graft**
- **Hypoglossal-facial anastomosis**
- **Plastic procedures**



Thank you

