1. Causes of epistaxis are all EXCEPT:

a) Nose picking

b) Foreign body

c) Allergic rhinitis

d) Thrombocytopenia

Correct Answer - A

Causes of Epistaxis:

- Idiopathic
- Local Causes

Trauma: Finger nail trauma, injuries of nose, intranasal surgery, fractures of middle third of face and base of skull, hard-blowing of nose, violent sneeze.

Infections:Viralrhinitis,nasaldiphtheria,acutesinusitis,atrophicrhinitis,rhin syphilis septal perforation, granulomatous lesion of the nose, e.g. Rhinosporidiosis.

Foreign bodies: Rhinolith, Maggots, leeches

Neoplasms of nose and paranasal sinuses: Hemangioma, Papilloma, Carcinoma or sarcoma. *Atmospheric changes:* High altitudes, sudden decompression (Caisson's disease). Deviated nasal septum

Nasopharyngeal Adenoiditis, Juvenile angiofibroma, Malignant tumors

- General Causes

Cardiovascular: Hypertension, arteriosclerosis, mitral stenosis, pregnancy

Disorders of blood and blood vessels: Aplastic anemia, leukemia, thrombocytopenic, vascular purpura, hemophilia, Christmas disease,

scurvy, vitamin K deficiency, hereditary hemorrhagic telangiectasia.
Liver disease: Hepatic cirrhosis (deficiency of factor II, VII, IX & X)
Kidney disease: Chronic nephritis
Drugs: Excessive use of salicylates and other analgesics, anticoagulant
Mediastinal compression: Tumors of mediastinum (raised venous pressure in the nose)
Acute general infection: Influenza, measles, chickenpox, whooping cough, rheumatic fever, infectious mononucleosis, typhoid, pneumonia, malaria, dengue fever
Vicarious Menstruation

2. Weber ferguson approach is used for?

a) Mastoidectomy

b) Maxillectomy

c) Myringoplasty

d) Mandibulectomy

Correct Answer - B

WEBER FERGUSON APPROACH:
This approach involves an extension of the lateral rhinotomy incision that includes the splitting of upperlip.
Indications: Exenteration of maxilla for total or subtotal maxillectomy (splitting the upper lip releases the facial flap for adequate lateral retraction and adds transoral exposure of palate and teeth)

3. Which of the following is seen in young's syndrome?

a) Azoospermia

b) Bronchiectasis

c) Infertility

d) All of the above

Correct Answer - D
Young's syndrome
Young's syndrome, also known as **azoospermia** sinopulmonary infections, sinusitis-infertility syndrome and Barry-Perkins-Young syndrome, is a rare condition that encompasses a combination of syndromes such as **bronchiectasis**, rhinosinusitis and **reduced fertility**.

4. An elderly diabetic with excruciating pain *in* ear, appearance of granulation in meatus, skull base infection with facial paralysis should be treated with

a) Penicillin

b) Ciprofloxacin

c) 2nd generation ciphalosporin

d) Erythromycin

Correct Answer - A

All clinical features are suggestive of malignant otitis externa, an inflammatory condition of the external ear. *Malignant otitis externa (also k/a Necrotizing external otitis)*

- Malignant otitis externa is an inflammatory condition of the external ear usually spreading deep to cause osteomyelitis of temporal bone and base of skull.
- It occurs primarily in *immunocompromised persons,* especially *older persons* with *diabetes mellitus,* and is often initiated by self-inflicted or iatrogenic trauma to the external auditory canal [May also be seen in pts. who received *radiotherapy to skull base* I
- The most frequent pathogen is *Pseudomonas aeruginosa.* Others may be S. aureus, Staphylococcus epidermidis, Aspergillus, Actinomyces, and some gram-negative bacterial.
- One of the *hallmarkof* malignant otitis externs is *granulation tissue in the external auditory canal,* especially at the *hone-cartilage* junction.
- As the infection spreads to the temporal bone, it may extend into the cranium and result in *cranial nerve palsies* (commonly the *facial nerve)*

- Cranial nerve involvement indicates *poor prognosis.* Death is usually due to *intracranial complications* such as *sigmoid sinus thrombosis.*
- It has *high mortality rate* due to which the name *'malignant'* is used for this disease.

  Treatment

  Includes correction of immunosuppression (when possible), local treatment of the auditory canal, long-term systemic antibiotic therapy, and in selected patients, surgery.

  - In all cases, the external ear canal is cleansed and a biopsy specimen of
  the granulation tissue sent for *culture.*
  - IV antibiotics is directed against the offending organism.
  - For Pseudomonas aeruginosa, the most common pathogen, the regimen involves an *antipseudomonal penicillin* or cephalosporin (3rd generation-piperacillin or ceftazidime) with an aminoglycoside. A fluoroquinolone antibiotic can be used in place of the aminoglycoside.

  Ear drops containing antipseudomonal antibiotic e.g. ciproflaxacin plus a glucocoticoid is also used.

  - Early cases can be managed with oral and otic fluoroquinolones only.
  - Extensive surgical debridement once an important part of the treatment is now rarely needed.

5. Septal hematoma is treated with:

a) Incision/ drainage

b) Antibiotics

c) Nasal packing

d) Decongestants

Correct Answer - A
If a **septal hematoma** is present, the **hematoma** should be incised, drained, and packed to prevent recurrence.
Prompt **treatment of septal hematomas** should prevent complications such as ischemia of the **septal** cartilage, which can lead to permanent necrosis and a saddle-nose deformity.

6. **A 10 year boy presents with discharge and hearing disturbance in the left ear. On examination of the left ear, a central perforation is noted. Which of the following is the surgical management of choice in this patient?**

a) Myringoplasty

b) Modified radical mastoidectomy

c) Radical mastoidectomy

d) Clearance and antibiotics

Correct Answer - A
Ans. A. Myringoplasty

7. Tuning fork frequency used MOST commonly in the ENT clinic is likely to be which of the following?

a) 256 Hz

b) 512 Hz

c) 1024 Hz

d) 2048 Hz

Correct Answer - B

Ideally 3 frequencies are used 256 Hz, 512 Hz, and 1024 Hz. These three frequencies are used because they fall within speech frequency range.

The most preferred and commonly used is 512 Hz since tuning forks of higher frequency have shorter decay time and those with lower frequency produce a sense of bone vibration. It is a frequency common in human speech.

8. **Incudomalleolar joint is a;**

a) Saddle joint

b) Pivot joint

c) Gliding joint

d) Hinge joint

Correct Answer - A

The incudomalleolar joint is a saddle joint while the incudostapedial is a ball and socket joint.

Both of them are synovial joints covered by capsular ligament.

9. **In Bing test, on alternately compressing and releasing the external acoustic meatus, the sound increases and decreases. What does this indicate?**

a) Otosclerosis

b) Sensorineural deafness

c) Adhesive otitis media

d) Chronic suppurative otitis media

Correct Answer - B

Bing test

It is a test of bone conduction which examines the effect of occlusion of the ear canal and the hearing.

A vibrating tuning fork is placed on the mastoid while the examiner alternately closes and opens the ear canal by pressing on the tragus inwards.

A normal person / one with sensorineural hearing loss hears louder when ear canal is occluded and softer when the canal is open.

A patient with conductive hearing loss will appreciate no change.

10. **Otosclerosis shows which type of tympanogram?**

a) Type A

b) Type B

c) Type C

d) Type D

Correct Answer - A

Type A tympanograms have normal peak height and pressure.
Two variations of the Type A tympanogram also are normal in pressure, but may be shallow (AS), reflecting otosclerosis or middle ear effusion, or peaked very high (AD), reflecting ossicular discontinuity or a monomeric eardrum

11. Middle ear effusion with intact eardrum gives rise to which type of tympanogram?

a) Type A

b) Type B

c) Type C

d) Type D

Correct Answer - B

Type B tympanogram is flat in appearance, indicating lack of compliance.
The volume measurement that is simultaneously performed with tympanometry helps to differentiate between a flat tympanogram suggesting an intact eardrum with middle ear effusion and a perforated eardrum or patent ventilating tube.

12. **Orbital cellulitis most commonly occurs after infection of which of the following sinuses?**

a) Maxillary sinus

b) Frontal sinus

c) Ethmoidal sinus

d) Sphenoidal sinus

Correct Answer - C

Bacterial orbital cellulitis is most commonly caused by the spread of infection in the ethmoid sinus into the orbit directly through the lamina papyracea or by travelling through the anterior and posterior ethmoid vessels.

13. **All are associated with superior relation of uncinate process, EXCEPT:**

a) Ethmoid

b) Nasal septum

c) Lamina papyracea

d) Middle turbinate

Correct Answer - B

Uncinate process:

The uncinate process is a superior extension of the lateral nasal wall (medial wall of the maxillary sinus).

It attaches,*anteriorly* to the posterior edge of the lacrimal bone, and *inferiorly* to the superior edge of the inferior turbinate.

Superior attachment of the uncinate process is highly variable, may be attached to the lamina papyracea, or the roof of the ethmoidal sinus, or sometimes to the middle turbinate.

The gap between the ethmoid bulla and the free edge of the uncinate process is the **hiatus semilunaris.**

14. **Isthmus of thyroid gland corresponds to which of the following tracheal rings?**

a) 1-3

b) 2-4

c) 4-6

d) 6-8

Correct Answer - B

Isthmus of the thyroid gland lies in front of the second, third and fourth tracheal rings.
It is covered in front by skin and fascia, and by sternothyroid and sternohyoid muscles and by the anterior juglar veins.
Upper end of each lobe of thyroid lies opposite C5 vertebrae.
The lower end of the lobe lies at the level of 5th or 6th tracheal ring corresponding to T1 vertebrae.

15. A patient presented with complaints of ipsilateral flushing and sweating with eating and salivation. He had a parotid gland surgery few weeks ago. Frey's syndrome is diagnosed. Frey's syndrome is related to:

a) Auriculotemporal nerve

b) Facial nerve

c) Abducens nerve

d) Glossopharyngeal nerve

Correct Answer - A

Frey syndrome:

- Aberrant nerve regeneration after parotid gland injury or surgery may result in ipsilateral flushing and sweating with eating and salivation.
- Sweating occurs in the distribution of the **auriculotemporal nerve** after an injury, abscess, or surgery in the parotid region.
- Freys syndrome can be seen in infants and children, often following birth trauma with forcep delivery.

16. Pott puffy tumor is:

a) Hemangiomal

b) Osteomyelitis

c) Osteoma

d) None of the above

Correct Answer - B
Pott Puffy Tumor occurs if infection of frontal sinusitis spreads to the marrow of the frontal bone, causing localized osteomyelitis with bone destruction that can result in a doughy swelling of the forehead. Surgical drainage and débridement must be undertaken.

17. The function of stria vascularis is:

a) To produce perilymph

b) To absorb perilymph

c) To maintain electric milieu of endolymph

d) To maintain electric milieu of perilymph

Correct Answer - C

Scala vestibuli and scala tympani are filled with perilymph, whereas scala media/membranous cochlea is filled with endolymph.

18. Pinna develops from:

a) 1st pharyngeal arch

b) 1st and 3rd pharyngeal arch

c) 1st and 2nd pharyngeal arch

d) 2nd pharyngeal arch

Correct Answer - C
Ans. C. 1st and 2nd pharyngeal arch

19. True regarding "Preauricular sinus" is:

a) Improper fusion of auricular tubercles

b) Persistent opening of first branchial arch

c) Autosomal recessive pattern

d) All

Correct Answer - A

- Failure of fusion of 1" and 2nd arch leads to the formation of preauricular sinus.
- It is commonly seen at the root of helix
- It is a blind track lined by squamous epithelium
- It may get repeatedly infected causing purulent discharge
- Abscess may also form
- Treatment is surgical excision of the track if the sinus gets repeatedly infected.

20. Conductive hearing loss is seen in all of the following except:

a) Otosclerosis

b) Otitis media with effusion

c) Endolymphatic hydrops

d) Suppurative otitis media

Correct Answer - C

Endolymphatic hydrops i.e menieres disease leads to SNHL and not conductive hearing loss.

21. In the right middle ear pathology, Weber's test will be:

a) Normal

b) Centralized

c) Lateralized to right side

d) Lateralized to left side

Correct Answer - C

22. In serous otitis media, which one of the following statements is true?

a) Sensorineural deafness occurs as a complication in 80% of the cases

b) Intracranial spread of the infection complicates the clinical courses

c) Tympanostomy tubes are usually required for treatment

d) Gram-positive organisms are grown routinely in culture in the aspirate

Correct Answer - C

Ans. C tympanostomy tubes are usually required for treatment

Lets see at the options one by one:

Serous otitis media:

Option a

Sensori neural deafness occurs as a complication in 80% of cases

This is not correct because serous otitis media leads to conductive type of hearing loss.

Option b

Intracranial spread of the infection complicates the clinical course

This is not true as complications of serous otitis media are:

2. Adhesive otitis media
3. Atrophy of tympanic membrane
4. Tympanosclerosis (chalky white deposits seen on. membrane)
5. Atelectasis of middle ear
6. Ossicular necrosis
7. Cholesteatoma due to retraction pockets
8. Cholesterol granuloma due to stasis of secretions

Option c

1. Tympanostomy tubes are usually required for treatment:
2. This is quite correct as myringotomy and aspiration of middle ear effusion without ventilation tube/Tyrnpanostomy tube/ grommet insertion has a short lived benefit and is not-recommended
3. Hence if otitis media with effusion I serous OM is notresolved spontaneously, tympanostomy tube is inserted.

Option d

1. Gram positive organism are grown routinely in culture in the aspirate
2. Absolutely incorrect because fluid collection in serous otitis media ls sterile

23. Most accepted theory for the formation of secondary cholesteatoma:

a) Congenital

b) Squamous metaplasia

c) Ingrowth of squamous epithelium

d) Retraction pocket

Correct Answer - D

According to this theory, chronic negative middle ear pressure (which occurs due to poor Eustachian tube function and chronic inflammation of the middle ear) leads to retractions of the structurally weakest area of the tympanic membrane, the pars flaccida.
Once the retractions form, the normal migratory pattern of the squamous epithelium is disrupted, resulting in the accumulation of keratin debris in the cholesteatoma sac..

24. Mastoid tip is involved in:

a) Bezold abscess

b) Luc abscess

c) Subperiosteal abscess

d) Parapharyngeal abscess

Correct Answer - A

25. A child was treated for H. Influenza meningitis for 6 month. Most important investigation to be done before discharging the patient is:

a) MRI

b) Brainstem evoked auditory response

c) Growth screening test

d) Psychotherapy

Correct Answer - B

H. Influenza Type Meninigtis
It is frequent in children between the ages of 3 and 12 months. Residual auditory deficit is a common complication. - *Ghai 6th/ed*
Since, residual auditory deficit is a common complication of H. influenza meningitis, audiological test to detect the deficit should be performed before discharging any patient suffering from H. influenza meningitis.
In children best test to detect hearing loss is brainstem evoked auditory response.

26. Schwartz operation is also called as:

a) Cortical mastoidectomy

b) Radial mastoidectomy

c) Fenestration operation

d) All

Correct Answer - A

27. Radical mastoidectomy includes all except:

a) Closure of the auditory tube

b) Ossicles removed

c) Cochlea removed

d) Exteriorisation of mastoid

Correct Answer - C

Ans. C Cochlea removed

Explanation

.. Radical mastoidectomy is a procedure to eradicate disease from middle ear and mastoid without any attempt to reconstruct hearing.

2. It is rarely done these days - Its only indications are:

- Malignancy of middle ear
- When cholesteatoma cannot be removed safely eg if it invades eustachian tube, round window or perilabrynthine cells

If previous attempts to eradicate cholesteatoma have failed

Following steps are done in radical mastoidectomy:

.. Posterior meatal wall is removed and the entire area of middle ear, attic, antrum and mastoid is converted into a single cavity, by removing the bridege and lowering the facial ridge.

2. All remnants of tympanic membrane, ossicles (except the stapes foot plate) and mucoperiosteal lining are removed (Not cohlea)

3. Eustachian tube is obliterated by a piece of muscle or cartilage

4. The diseased middle ear and mastoid are permanently exteriorised for inspection and cleaning.

Remember: Bridge is the most posterosuperior part of bony meatal wall lateral to aditus and anturm, which overlies the Notch of Rivinus while facial ridge lies lateral to fallopian canal. Bridge is removed

and ridge is lowered in radical or modified radical operation.

28. Carhart's notch in audiometery is seen in:

a) Ocular discontinuity

b) Haemotympanum

c) Otomycosis

d) Otosclerosis

Correct Answer - D

Carharts notch

- Bone conduction is normal in otosclerosis.
- In some cases there is a dip in bone conduction curve which is maximum at 2000 Hz / 2 KHZ called as Carharts notch.
- Carharts notch is seen only in bone conduction curve.
- It disappears after successful stapedectomy/stapedotomy.

- The reason why it disappears after successful surgery is that when the skull is vibrated by bone—conduction sound, the sound is detected by the cochlea via 3 routes:
  - Route (a)—is by direct vibration within the skull.
  - Route (b)—is by vibration of the ossicular chain which is suspended within the skull.
  - Route (c)—is by vibrations emanating into the external auditory canal as sound and being heard by the normal air-conduction route.
- In a conduction type of hearing loss (as in otosclerosis) the latter two routes are deficient but regained by successful reconstruction surgery. Hence bone conduction thresholds improve following surgery.

29. Following operations are done in case of otosclerosis:

a) Stapedectomy

b) Fenestration

c) Stapedotomy

d) All

Correct Answer - D

Role of surgery in a case of otosclerosis

Surgeryformsthe mainstay of management in a case of otosclerosis

(Surgery of choice) ↓ Stapedectoy / stapedotmy (surgery oh choice)	**Lemperts fenestration procedure** ↓ Fenestration of the lateral semicircular canal is done. It is reserved for cases where foot plate cannot be mobilized during stapedectomy (Outdated nowadays)	**Stapes mobilization** ↓ It is done in those cases only in wbichthere is partial ankylosis of footplate of stapes although reankylosis tends to develop a although reankylosis tends to develop

30. True about lower motor neuron palsy of VIIth nerve:

a) Other motor cranial nerves also involves

b) Melkersson's syndrome cause recurrent paralysis

c) Eye protection done

d) All

Correct Answer - D

- Most common cause of lower motor neuron (LMN) type of facial palsy is Bell's palsy.
- Melkersson's syndrome consists of a triad of: (i) Facial paralysis, (ii) Swelling of lips, (iii) Fissured tongue, Paralysis may be recurrent.
- As patient is unable to close the eye, eye protection is required to protect cornea and conjunctiva.
- The prognosis in acute facial palsy can be accurately determined by serial electrical testing.The response to electrical tests have been found to be most useful in the first 5 days *after the onset.*

31. Ramsay hunt syndrome all are true except:

a) VII Nerve is involved

b) Facial muscle are involved

c) Facial vesicle is seen

d) Herpes zoster is etiologic agent

Correct Answer - C
Ans. C Facial vesicle is seen
Vessicles in Ramsay hunt syndrome are seen in the preauricular skin, the skin of ear canal the soft palate and not on facial skin All other options are correct and explained in the perceeding text.

32. Most common cerebellopontine angle tumour is:

a) Acoustic neuroma

b) Cholesteastoma

c) Meningioma

d) All of the above

Correct Answer - A

- Cerebellopontine angle (CPA) tumors are the most common neoplasms in the posterior fossa, accounting for 5-10% of intracranial tumors.
- Most CPA tumors are benign, with over 85% being vestibular schwannomas (acoustic neuromas), lipomas, vascular malformations, and hemangiomas

33. In acoustic neuroma all are seen except:

a) Loss of corneal reflex

b) Tinnitus

c) Facial palsy

d) Diplopia

Correct Answer - C
Ans. C Facial palsy
In Acoustic Neuroma
1. Loss of corneal reflex is seen - due to the involvement of Tringeminal nerve
2. Tinnitus - due to pressure on cochlear nerve
3. Large tumors can cause diplopia

"Vestibular schwannomas, although inevitably grossly distort the Vllth nerve, very rarely present as a Vllth nerve palsy. If there is a clinical evidence of a cerebe/lopontine angle lesion and if the Vllth nerve is involved, alternative pathology is more likely':
Hence although Acoustic neuroma may involve the 7 nerve but complete palsy is never seen

34. Which about Vestibular neuroma is not correct?

a) Nystagmus

b) High frequency sensorineural deafness

c) Absence of caloric response

d) Normal corneal reflex

Correct Answer - D

35. Progressive loss of hearing, tinnitus and ataxia are commonly seen in a case of:

a) Otitis media

b) Cerebral glioma

c) Acoustic neuroma

d) Ependymoma

Correct Answer - C
Ans. C. Acoustic neuroma

36. All these structures are found in the lateral nasal wall except:

a) Superior turbinate

b) Vomer

c) Agger nasi

d) Hasner's vale

Correct Answer - B

The lateral nasal wall is composed of three turbinates

- Superior turbinate
- Middle turbinate
- Inferior turbinate Below each turbinate is the respective meatus:
- Inferior meatus
- Middle meatus
- Superior meatus
- Above the superior turbinate lies the sphenoethmoid recess.
- Just anterior to the middle meatus, is a small crest/mound on the lateral wall called as Agger nasi.

- In the inferior meatus - opens the nasolacrimal duct guarded at its terminal end by a mucosal valve k/a Hasner's valve.
- Vomer is an independent bone which forms the posterio inferior part of nasal septum (i.e. medial wall of nose).

37. Anterior ethmoidal artery arises from:

a) Maxillary artery

b) Mandibular artery

c) Superficial temporal artery

d) Ophthalmic artery

Correct Answer - D

Anterior and posterior ethmoidal arteries are branches of ophthalmic artery which is a branch of Internal carotid artery.

38. True about septal hematoma is:

a) Occurs due to trauma

b) Can lead to saddle-nose deformity

c) Conservative treatment

d) a and b

Correct Answer - D

Ans. D a and b. Occurs due to trauma; Can lead to saddle nose deformity; and May lead to abscess formation

.. Septal Hematoma is collection of blood within the subperichondrial plane of septum.

2. Etiology: It results from nasal trauma, septal surgery or bleeding disorder.

3. Clinical features: Bilateral nasal obstruction is the commonest presenting symptom. It may be associated with frontal headache and a sense of pressure over the nasal bridge.

4. Examination: Reveals smooth round swelling of the septum in both the nasal fossae.

5. On palpation: The mass is soft and fluctuant.

6. Treatment: Small hematomas can be aspirated with a wide bore sterile needle. Large hematomas are incised and drained. Heaccumalation is prevented by intranasal packing.

Complications

.. Septal hematoma, if not drained, may organize into fibrous tissue leading to a permanently thickened septum.

2. If secondary infection supervenes, it results in septal abscess.

3. Loss of structural support can cause depression of nasal dorsum leading to saddle nose deformaity.

1. Necrosis of the cartilage can cause perforation of the nasal septum - Dhingra 5th/ed, p 166

39. Mikulicz cell and Russell bodies are characterisitic of:

a) Rhinoscleroma

b) Rhinosporidiosis

c) Plasma cell disorder

d) Lethal midline granuloma

Correct Answer - A
Ans. A. Rhinoscleroma

40. All the following are true of antrochoanal polyp except:

a) Common in children

b) Single and Unilateral

c) Bleeds on touch

d) Treatment involves Avulsion

Correct Answer - C

41. FESS means:

a) Factual endoscopic sinus surgey

b) Functionl endonasal sinus surgery

c) Factual endonasal sinus surgery

d) Functionl endoscopic sinus surgery

Correct Answer - D
Indications ofFESS
i) Chronic bacterial sinusitis unresponsive to adequate medical treatment.
ii) Recurrentacutebacteridsinusitis.
iii) Polypoid rhinosinusitis (diftrse nasal polyposis)'
w) Fungal sinusitis with fungal ball or nasal polypi'
v) Antrochoanal polyp and Ethmoid polyp
vi) Mucocele of frontoethmoid or sphenoid sinus.
vii) Control of epistaxis by endoscopic cautery.
viii) Removal of foreign body from the nose or sinus'
ix) EndoscoPicsePtoPlastY.
x) Removal of benign tumours, e.g. invertedpapillomas or an$ofibromas.
xi) Orbital abscess ot cellulltls nonageme,tt.
xii) DacryocYstorhinostomY.
:lolii) RepaltofCSFleak,
xiv) Pituitarysurgery
xv) Optic nerve decomPression.
xvi) Orbitd decompression for Graves disease-
xvii) Control ofposterior epistaxis(endoscopic clipping ofsphenopalatine artery).
xviii) Choanal atresia.

42. Lynch Howarth surgery is for:

a) Nasal septal perforation

b) Sinonasal tumours

c) Acoustic neuroma

d) Otosclerosis

Correct Answer - B
Frontal osteomas can be excised by Lynch Howarth surgery

43. Fordyce's (Spots) Granules in oral cavity arise from:

a) Mucous glands

b) Sebaceous glands

c) Taste buds

d) Minor salivary glands

Correct Answer - B
Ans. B. Sebaceous glands

44. True statement about oral cancer is/are:

a) Most common in buccal mucosa

b) Systemic metastasis uncommon

c) Responds to radiotherapy

d) b and c

Correct Answer - D
Ans. D. b and c

45. In which one of the following head and neck cancer, perineural invasion is most commonly seen:

a) Adenocarcinoma

b) Adenoid cystic carcinoma

c) Basal cell carcinoma

d) Squamous cell carcinoma

Correct Answer - B

Adenoid Cystic Carcinoma (Cylindroma)

- Most common malignant tumor of submandibular glands.
- Most common minor salivary glands tumour.
- Most common site minor salivary gland.
- **Characterized** by its tendency to invade perineural space and lymphatics and thus causes **pain** (which may be a prominent and early syniptom) and **VII nerve paralysis.**
- **Skip lesions** along nerves are common.
- It is a **treacherous tumor** as it appears benign even when it is malignant.
- It can metastasize to lymph nodes
- They are highly recurrent.
- Local recurrence after surgical excision are common and can occur as late as 20 years after surgery. Distant metastases go to lung, brain and bone.
- Treatment of choice is **radical parotidectomy** irrespective of its benign appearance under the microscopy
- Radical neck dissection is not done unless nodal metastases are

present

- Postoperative radiation is given if margins of resected specimen are not free of tumor

46. Crypta magna is seen in:

a) Nasopharyngeal tonsil

b) Tubal tonsil

c) Palatine tonsil

d) Lingual tonsil

Correct Answer - C

The medial surface of palatine tonsils is covered by non keratinizing stratified squamous epithelium which dips into the substance of tonsil in the form of crypts.
One of these crypts is very large and deep and is called crypta magna or intratonsillar deft.

47. Most common presentation in nasopharyngeal carcinoma:

a) Epistaxis

b) Hoarseness of voice

c) Nasal stuffiness

d) Cervical lymphadenopathy

Correct Answer - D

Cervical lymphadenopathy is the M/C presentation of nasopharyngeal carcinoma. It may be the only manifestation in some cases.

48. True about larynx in neonate:

a) Epiglottis is large and omega shaped

b) Cricoid narrowest part

c) It extends till C4,5,6 vertebrae

d) a and b

Correct Answer - D

Ans. D. Epiglottis is large and omega shaped and Cricoid narrowest part

Infant's Larynx Differs from Adult in:

1. It is situated high up (C2 - C4).° (in adults = C3 - C6)
2. Of equal size in both sixes (in adults it is larger in males)
3. Larynx is funnel shaped
4. The narrowest part of the infantile larynx is the junction of subglottic larynx with trachea and this is because cricoid cartilage is very small

Cartilages:

1. **Epiglottis is omega shaped, soft, large and patulous.**
2. Laryngeal cartilages are soft and collapse easily
3. Thyroid cartilage is flat
4. Arytenoid cartilage is relatively large
5. The cricothyroid and thyrohyoid spaces are narrow
6. The submucosal tissue is thick and loose and becomes oedematous in response to inflammation
7. Vocal cords are angled and lie at level of C8
8. Trachea bifurcates at level of T9

49.

Narrowest part of infantile larynx is:

a) Supraglottic

b) Subglottic

c) Glottic

d) None of the above

Correct Answer - B

The diameter of cricoid cartilage is smaller than the size of glottis, making subglottis the narrowest part

50. Thumb sign in lateral X-ray of neck seen in:

a) Epiglottitis

b) Internal hemorrhage

c) Saccular cyst

d) Ca epiglottis

Correct Answer - A

In epiglottis: A plain lateral soft tissue radiograph of neck shows the following specific features

- Thickening of the epiglottis—the **thumb sign**
- Absence of a deep well-defined vallecula—the **vallecula sign**

Steeple sign i.e. Narrowing of subglottic region is seen in chest X-ray of patients of laryngotracheobronchitis (i.e. croup).

51. Rhinolalia clausa is associated with all of the following except:

a) Allergic rhinitis

b) Palatal paralysis

c) Adenoids

d) Nasal polyps

Correct Answer - B
Palatal paralysis

52. A 2 year old child with intercostal retraction and increasing cyanosis was brought with a history of foreign body aspiration. which might be lifesaving in this situation?

a) Oxygen through face mask

b) Heimlich's manoeuvre

c) Extra cardiac massage

d) Intracaridiac adrenaline

Correct Answer - B

- The child is presenting with cyanosis and intercostal retraction which indicates that the foreign body is lodged in the larynx.
- Initial management for a foreign body lodged in trachea/larynx is Heimlich's maneuver where a person stands behind the child and places his arms around his lower chest and gives four abdominal thrust.
- In infants, lying the child on its back on the adults knee and pressing firmly on the upper abdomen is the preferred maneuver.
- If Heimlich's maneuvre fails, cricothyrotomy or emergency tracheostomy should be done.
- Once acute respiratory emergency is over foreign body can be removed by direct laryngoscopy or by laryngofissure, if it is impacted.
- Tracheal and bronchial foreign bodies are removed by bronchoscopy with full preparation and under GA.

53. A 14-year old boy presents with history of frequent nasal bleeding. His Hb was found to be 6.4 g/dL and peripheral smear showed normocytic hypochromic anemia. The most probable diagnosis is:

a) Juvenile nasopharyngeal angiofibroma

b) Hemangioma

c) Antrochonal polyp

d) Carcinoma of nasopharynx

Correct Answer - A
A 14-year-old boy presents with history of frequent nasal bleeding. His Hb was found to be 6.4 g/dL and peripheral smear showed normocytic hypochromic anemia. The most probable diagnosis is juvenile nasopharyngeal angiofibroma.
As the age of the patient (14 years), Sex: (male) and presentation (nasal bleeding) all favour it.
In antrochoanal polyps, the presenting symptom is U/L nasal obstruction and not bleeding.
Age of the patient goes against Nasopharyngeal cancer.
As far as hematoma are concerned, a swelling is generally seen.

54. Recruitment test is positive in:

a) Retrocochlear lesions

b) Otosclerosis

c) Meniere's disease

d) None of the above

Correct Answer - C

55. A child with unilateral nasal obstruction along with a mass in cheek and profuse & recurrent epistaxis:

a) Juvenile Nasal angiofibroma

b) Glomus tumour

c) Antrochoanal polyp

d) Rhinolith

Correct Answer - A

Nasopharyngeal angiofibroma/ Juvenile nasopharyngeal angiofibroma

- It is a histologically benign but locally aggressive vascular tumor that grows in the back of the nasal cavity.
- It most commonly affects adolescent males.
- Patients with nasopharyngeal angiofibroma usually present with one-sided nasal obstruction and recurrent bleeding.

56. Fracture mandible occurs most common in ?

a) Body

b) Angle

c) Condylar process

d) Coronoid process

Correct Answer - C
Ans. is 'c' i.e., Condylar process
Condylar process fractures of the mandible are most common account for 35% of all the fractures of mandible. They are followed by angle, body and symphysis in decreasing order of frequency.
Mnemonic CABS: condylar process >angle >body >symphysis decreasing order of frequency of fracture mandible.

57. Failure of rupture of bucconasal membrane leads to?

a) Choanal atresia

b) Rhinophyma

c) Crooked nose

d) Epistaxis

Correct Answer - A

Ans. is 'a' i.e., Choanal atresia

<u>Choanal atresia</u>

- *Choana, also called posterior nares,* is an opening in the posterior part of each nasal cavity, through which nasal cavity communicates with nasopharynx. Choanal atresia is a congenital anomaly characterized by closure of one or both posterior nasal cavities (i.e., choana). It is due to persistence of bucconasal membrane. Approximately 6070% of cases are unilateral and are *more common on right side.* Bilateral cases occurs in 20-30% of patients and 50% of these patients are associated with other congenital anomaly, i.e., CHARGE syndrome → Coloboma, Heart defects, Choanal atresia, Retraded growth, Genitourinary abnormalities and Ear defects.

Diagnosis

- Unilateral lesions go unnoticed until the child presents with persistent unilateral nasal discharge. There is absence of air bubbles in nasal discharge. A simple test for unilateral choanal atresia is to have the child attempt nose blowing with opposite nostril occluded by external pressure. Failure to detect any air movement is suspicious for complete obstruction. *Bilateral choanal atresia presents as respiratory distress in newborn* and requires support immediately after birth.

58. Lumpy feeling in throat relieved on taking food is attributed to ?

a) Globus pharyngeus

b) Pharyngeal pouch

c) Diverticular disease

d) Esophageal atresia

Correct Answer - A
Ans. is 'a' i.e., Globus Pharyngeus
Globus Pharyngeus

- Symptom where in a patient describes something stuck in throat or a sensation of lump or tightness in throat which is relieved by taking food or talking.

59. Treatment of Puberphonia is ?

a) Thyroplasty type I

b) Thyroplasty type II

c) Thyroplasty type III

d) Thyroplasty type IV

Correct Answer - C

Ans. is `c' i.e., Thyroplasty type III

Puberphonia (Mutational falset to voice)

- In males at the time of puberty, the voice normally drops by an octave and becomes low pitch. It occurs because vocal cords lengthen.
- Failure of this change leads to persistence of childhood high pitched voice and is called as puberphonia.
- It is seen in boys who are emotionally insecure and show excessive attachment to their mothers. Their physical and sexual development is normal.
- So the surgical treatment of puberphonia is lengthening of vocal cord i. e. Thyroplasty type III

THYROPLASTY

- Isshiki divided thyroplasty procedures into 4 categories to produce functional alteration of vocal cords : -

i. *Type 1:* Medial displacement of vocal cord (done by injection of gel foam/Teflon paste)

i. *Type 2 :* Lateral displacement of cord (done to improve the airway).

i. *Type 3 :* Lengthening (relax) the cord, to lower the pitch (gender transformation from female to male).

v. *Type 4 :* Shortening (tightening) the cord, to elevate the pitch (gender transformation from male to female), for example as a

treatment of androphonia.

60. Cauliflower ear is due to ?

a) Hematoma

b) Carcinoma

c) Fungal infection

d) Herpes

Correct Answer - A

Ans. is 'a' i.e., Hematoma

Hematoma of the auricle

- It is the collection of blood between the auricular cartilage and its perichondrium.
- It usually occurs due to blunt trauma and often seen in boxers, wrestlers and rugby players, therefore it is also called Boxer's ear.
- Extravasated blood may clot and then organise, resulting in typical deformity called, Cauliflower ear. If haematoma gets infected, *severe perichondritis* may set in.

61. Antiemetic Phenothiazine with labrynthine suppressant activityused for vertigo is ?

a) Prochlorperazine

b) Cinnarazine

c) Hyoscine

d) Promethazine

Correct Answer - A
Ans. is 'A' i.e., Prochlorperazine
Labyrinthine suppressants used in vertigo
They suppress end organ receptors or inhibit central cholinergic pathways in vestibular nuclei.
These are :?

a. Antihistaminics (with anticholinergic action) - cinnarizine, cyclizine, dimenhydrinate, diphenhydramine, promethazine.
b. Anticholinergics- atropine, hyoscine.
c. Antiemetic phenothiazines-prochlorperazine, thiethylperazine.

62. Ludwigs angina usually begins in ?

a) Submandibular space

b) Sublingual space

c) Parotid space

d) Retropharyngeal space

Correct Answer - A
Ans. is 'a' i.e., Submandibular space
Ludwig's angina is a *rapidly spreading bilateral cellulitis* that involves the floor of mouth, under the tongue.
Floor of mouth is comprised of sublingual space, submandibular space and submental space.
Ludwig's angina usually begins in the submandibular space, and then rapidly spreads to involve the *subligual space,* usually on a bilateral basis.
Most common cause is infection of the root of the teeth (Dental infection), especially 2nd and 3nd mandibular molar.
Other causes are mouth injury, mandibular fracture, and submandibular sialadenitis.

63. If a patient gets an attack of vertigo/dizziness by loud noise, he is having ?

a) Tullio phenomenon

b) Dysplacusis

c) Hyperacusis

d) Paracusis

Correct Answer - A
Ans. is 'a' i.e., Tullio phenomenon
Hyperacusis refers to sensation of discomfort or pain on exposure to normal sounds. It is seen in *injury* to nerve to stapedius and in case of *congenital syphilis (Hennebert sign).*
Displacusis is a condition where same tone is heard as notes of different pitch in either ear.
Paracusis willisii is a condition where patient hears a sound better in presence of background noise. It is seen in *otosclerosis.*
Tullio phenomenon is a condition where the subject gets attack of vertigo/dizziness by loud sounds.It is seen in *labyrinthine fistula and after fenestration surgery.*

64. Frequency of Carhart's notch is ?

a) 1000 Hz

b) 2000 Hz

c) 3000 Hz

d) 4000 Hz

Correct Answer - B
Ans. is 'b' i.e., 2000 Hz

- *Dip in bone conduction in otosclerosis (Carhart's notch) → 2000 Hz*
- *Dip in noise induced hearing loss (Acoustic dip) → 4000 Hz*
- In otosclerosis bone conduction is usually normal (as would be in cases of conductive hearing loss). However, some cases show a dip in bone conduction on audiogram which is maximum at 2000 Hz (Cahart's notch).
- In NIHL both bone conduction and air conduction are defective (as would be in SNHL) and there is a typical notch (acoustic dip) at 4000 Hz, both for air and bone conduction.
- So, Cahart's notch of otosclerosis is a dip for bone conduction, while acoustic dip of NIHL is for both air as well as bone conduction.

65. Bilateral Rinne test +ve and Weber test lateralized to right with a shortened Schwabach test on left side suggests ?

a) Left middle ear pathology

b) Right middle ear pathology

c) Left inner ear pathology

d) Right inner ear pathology

Correct Answer - C
Ans. is 'c' i.e., Left inner ear pathology

66. Otitic Barotrauma occurs while ?

a) Ascending in Aircraft

b) When ambient pressure is decreasing

c) Underwater diving

d) All of the above

Correct Answer - C
Ans. is `c' i.e., Underwater diving
Otitic Barotrauma
This condition is seen *when the ambient pressure is rising,* e.g. in scuba diving *(underwater diving), descending in an aircraft,* or compression in pressure chamber.
It occurs due to pressure differences between the inside and outside of the eardrum.
Clinical features
Ear discomfort or pain, hearing loss, and tinnitus are common
Vertigo is uncommon
Otoscopy findings are :-
Congested and retracted tympanic membrane
Blood may extravasate into middle ear producing haemotympanum
On examination there is conductive deafness.
Pathogenesis of otitic barotrauma
The middle ear pressure is normally maintained at a level similar to that of the atmosphere by the *function of Eustachian tube* which allows passage of air from middle ear to pharynx. Sudden or dramatic changes of external pressure may defeat this mechanism and cause injury to middle ear. *When atmospheric pressure is higher than that of middle ear by critical level of 90 mm Hg,* eustachian tube gets locked as the soft tissues of pharyngeal end of

the tube are forced into the lumen by high atmospheric pressure. This results in sudden negative pressure in the middle ear which causes retraction of tympanic membrane, hyperemia, transudation with hemorrhage and development of Aero-otitis media (barotrauma).

At pressure difference >100 to 500 mm Hg, tympanic membrane can rupture when the pressure difference is more than 100 mg Hg, tympanic membrane can rupture.

Treatment of otitic Barotrauma

Routine self treatment of pain associated with changing pressure in air craft includes *chewing gum, attempting to yawn & swallow, blowing against closed nostrils, and using decongestant nasal sprays.* The aim is to restore middle ear areation. *Catheterization* or *politzerization* can also be used. If the eustachian tube will not open with other treatments, surgery may be necessory. *Myringotomy and aspiration of fluid* is the surgical procedure used.

67. Most common cause of Croup ?

a) H influenza

b) S pneumoniae

c) Influenza virus

d) Parainfluenza virus

Correct Answer - D

Ans. is `d.' i.e., Parainfluenza virus

Croup (Laryngotracheobronchitis)

- Laryngotracheobronchitis is the *most common infectious cause of obstruction in children* usually occurring between the ages of 6 months and 3 years.
- *Male children (boys) are characteristically more frequently involved than females (girls)*

Etiology

- It is a *viral infection* most frequently caused by *Parainfluenza virus*

Pathology

- *The most characteristic pathological feature is edema formation in the subglottic area*
- The loose areolar tissue in the subglottic area swells up and causes predominant signs of upper airway obstruction.

Presentation

- Gradual onset with a *prodrome of upper respiratory symptoms*
- Hoarseness and *barking cough* (croupy cough)
- *Stridor* (initially inspiratory than biphasic)
- *Fever* is usually low grade (or absent) although may occasionally be high grade
- Droolings is characteristically absent and there is no dysphagia (seen in epiglottitis)

- Imaging (X ray)
- Symmetric 'steeple' or 'funnel shaped' narrowing of the subglottic region (steeple sign)
- Hypopharyngeal widening or distension
- Normal epiglottis and aryepiglottic folds

Treatment

- *Mild symptoms (barking cough but no stridor at rest)*
- Supportive therapy alone with humified oxygen, oral hydration and minimal handling.
- *Moderate symptoms (barking cough with stridor at rest)*
- Active intervention with humified oxygen, Nebulized racemic epinephrine and glucocorticoids (steroids).
- *Severe symptoms (impending respiratory failure)*
- Require an artificial airway (Intubation with endotracheal tube or tracheostomy may be required).
- *Antibiotics are not routinely indicated in the treatment of Acute Laryngotracheobronchitis. Their use is limited if there is evidence of secondary bacterial infection.*

68. External auditory canal exostosis occurs due to?

a) Repeated instrumentation

b) Recurrent otitis externa

c) Wide external auditor meatus

d) Recurrent proplonged cold water exposure

Correct Answer - D
Ans. is 'd' i.e., Recurrent proplonged cold water exposure

- **Ear canal exostoses** are bilateral, usually symmetric multiple bony growths occurring in the medial portion of the external auditory canal.
- Also known as **surfer's ear**, exostosis is thought to be a reactive process from **repeated stimulation by cold water** and is much more common than external auditory osteoma

69. Keratinizing squamous cell carcinoma of nasopharynx is ?

a) Type I

b) Type II

c) Type III

d) Type IV

Correct Answer - A
Ans. is 'a' i.e., Type I

70. Torrential bleed during tonsillectomy is due to ?

a) Facial artery

b) Tonsilar artery

c) Paratonsillar vein

d) None

Correct Answer - C

Ans. is 'c' i.e., Paratonsillar vein

"Excessive bleeding at the time of operation usually arises because of trauma to an aberrant vessel or paratonsillar vein".

Complications of tonsillectomy

Complications of tonsillectomy may be :-

i) Immediate

ii) Delayed

Immediate complications

1) Primary haemorrhage Occurs at the time of operation. It can be controlled by pressure, ligation or electrocoagulation of the bleeding vessels.

2) Reactionary haemorrhage : Occurs within a period of 24 hours.

3) Injury to tonsillar pillars, uvula, soft palate, tongue or superior constrictor muscle due to bad surgical technique.

4) Injury to teeth.

5) Aspiration of blood.

6) Facial oedema : Some patients get oedema of the face particularly of the eyelids.

7) Surgical emphysema

Dalaved complications

1) Seconclaty haemorrhage : Usually seen between the 5^{th} to 10^{th}

post-operative day. It is the result of sepsis and premature separation of the membrane. Usually, it is heralded by bloodstained sputum but may be profuse.
2) Infection : Infection of tonsillar fossa may lead to parapharyngeal abscess or otitis media.
3) Lung complications : Aspiration of blood, mucus or tissue fragments may cause atelectasis or lung abscess.
4) Scarring in soft palate and pillars.
5) Tonsillar remnants : Tonsil tags or tissue, left due to inadequate surgery, may get repeatedly infected.
6) Hypertrophy of lingual tonsil : This is a late complication and is compensatory to loss of palatine tonsils.

71. Young male presents with ear discharge since three years; recently patient developed swelling in neck below and behind the angle of mandible, torticollis; on examination external auditory canal was tilled with granulation tissue. What is the diagnosis ?

a) Luc's abscess

b) Citelli's abscess

c) Bezold's abscess

d) All

Correct Answer - C

Ans. is 'c' i.e., Bezold's abscess

Patient has presence of ear discharge since 3 years - thus patient is suffering from chronic suppurative otitis media. Following CSOM patient developed mastoiditis and following mastoidoitis patient has developed abscess behind the angle of mandible and deep to the sternocleidomastoid leading to torticollis.

Following are the abscesses related to mastoid infection :

1) *Postauricular abscess :-* This is the *commonest subperiosteal abscess* associated with acute mastoiditis. It occurs lateral to the cortex of mastoid in MacEwen's triangle

2) *Bezold abscess :-* Pus passes through mastoid tip and presents as upper neck swelling. The abscess may :-

i) Lies deep to sternocleidomastoid

ii) Follow the posterior belly of diagastric and presents swelling

between mastoid tip and angle of jaw.
iii) Be present in posterior triangle
iv) Reach the parapharyngeal pouch
v) Track down along the carotid vessels.
3) *Zygomatic abscess :-* Infection of zygomatic air cells.
4) *Meatal (Luc's) abscess :-* Pus passes between the antrum and external osseous meatus.
5) *Citelli's abscess :-* Abscess is formed behind the mastoid more towards occipital bone. Some consider it as abscess of *diagastric triangle.*
6) *Parapharyngeal and retropharyngeal abscess.*

72. True about nasal myiasis ?

a) Commonly occurs in ethmoidal polys patient

b) Results from the ova of fly chrysomia

c) Treated by nasal saline instillation

d) Cannot cause death of the patient

Correct Answer - B

Ans. is 'b' i.e., Results from the ova of fly chrysomia

Nasal myiasis (Maggots in nose)

- It results from the presence of ova of flies particularly chrysomia species in the nose which produce ulceration and destruction of nasal structure. Mostly seen in atrophic rhinitis when the mucosa becomes insensitive to flies laying eggs inside.

Clinical features

- *Initial symptoms (3-4 days maggots) :-* Intense irritation, sneezing, headache, blood stained disharge, lacrimation.
- Later :- Maggots may crawl out of nose and there is foul smell.

Complications

- Destruction of nose, sinuses, soft tissues of face, palate and eyeball. Fistulae in nose and palate. Death occurs due to meningitis.

Treatment

- Chloroform water or vapor must be instilled in order to anaesthetize or kill the maggots and so release their grip from the skin.

73. Materials used for injection thyroplasty are ?

a) Collagen

b) Acellular miconized human dermis

c) Gelatin powder

d) All the above

Correct Answer - D
Ans. is 'd' i.e., All the above
Injection thyroplasty accomplishes medicalization of the immobile vocal cord by injecting the cord directly to close an identified glottis gap.
Many materials are currently used for injection thyroplasty including fat, fascia, gelatin powder, collagen, and miconized acellular human dermis.

74. Scutum is ?

a) Bony part of outer attic wall

b) Bony part of inner attic wall

c) Cartilaginous part of outer attic wall

d) Cartilagenous part of inner attic wall

Correct Answer - A
Ans. is 'a' i.e., Bony part of outer attic wall
The lateral wall of the middle ear is formed largely by the tympanic membrane and to a lesser extent by the bony outer attic wall called the scutum.

75. Patient presents to us 3 days after bell's palsy what is the initial treatment for the patient ?

a) Medical management

b) Nerve decompression

c) Wait and watch

d) Electrical stimulation

Correct Answer - A

Ans. is 'a' i.e., Medical management

Treatment of Bell's palsy

- Treatment of Bell's palsy is divided into three :- (1) Medical treatment, (2) Physical treatment, (3) Surgical treatment.

1) Medical treatment

Prednisolone (steroid) is the drug of choice and is started at initial visit. Initiation of therapy during first 24 hours of symptom confers a higher likelihood of recovery. *Antiviral therapy (Acyclovir)* is a newer adjunct in treating acute facial palsy of viral origin (both Bell's palsy and Ramsay hunt syndrome).

Most surgeons these days advocate *combination of steroids and antiviral drugs.*

2) Physical treatment

Physical treatment includes : -

i) Eye care :- Artificial tear drops, ocular ointment and use of sunglasses to prevent eye complication due to dry eye.

ii) Electric stimulation :- To maintain membrane conductivity and reduce muscle atrophy.

If the patient of Bell's palsy is not responding to conservative treatment, electrodiagnostic study (electrophysiological study)

treatment, electrodiagnostic study (electrophysiological study) should be done. Electrodiagnostic study includes, electromyography (EMG), Electroneurography (ENG), minimal excitibility test and maximal excitibility test. Surgery is reserved for those who meet electrodiagnostic (electrophysiological) study criteria or are worsening on medial treatment.

3) Surgical treatment

Nerve decompression relieves pressure on the nerve fibers and thus improves the microcirculation of the nerve.Usually *vertical and tympanic segments of nerve* are decompressed. However, some worker's suggest total decompression including labyrinthine segment. *Decompression is done in cases who have a poor prognosis for complete recovery with medical therapy alone or in cases who do not respond to medical therapy after 8-12 weeks.*

76. Lines of Sebileau pass through

a) Floor of orbit and maxillary antrum

b) Floor of nasal cavity and maxillary antrum

c) Floor of orbit and nasal cavity

d) Floor of orbit and roof of mouth

Correct Answer - A

Ledermann's classification of maxillary carcinoma uses two horizontal lines - one passing through the floor of orbits and the other through the floor of the maxillary antra dividing the area into superstructure, mesostructure and infrastructure.

77. Fluctuating deafness is seen in

a) Meniers disease

b) Otosclerosis

c) CSOM

d) ASOM

Correct Answer - A

Meniere's disease is a disorder of the inner ear which is characterized by :-
i) Episodes of vertigo
ii) Tinnitus (ringing in the ears)
iii) Fluctuating sensorineural hearing loss
iv) Feeling of fullness or pressure in ear (aural fullness)

78. Patient presents with mass in paraphaygeal region pushing carotid artery backwards, the likely cause is ?

a) Carotid body tumor

b) Lymph node enlargement

c) Sternocleidomastoid tumor

d) None of the above

Correct Answer - A

Paragangliomas are clusters of neuroendocrine cells associated with the sympathetic and parasympathetic nervous system.
Paraganglioma is the tumor of neuroendocrine cells of these paraganglia that occurs at various body sites including head, neck, thorax and abdomen.
Most common location of paragangliomas is adrenal medulla, where they are referred to as pheochromocytomas.
Other locations are :
1) Paravertebral ganglion (organs of zuckerkandl) and rarely bladder.
2) Paraganglia related to the great vessels of head and neck, so called aorticopulmonary chain, including carotid bodies (most common); ganglion nodosum of vagus nerve; and clusters located about the oral cavity, nose nasopharynx, larynx, and orbit.
Note: Paragangliomas arising from the carotid body typically pushes the great vessels of the aorticopulmonary chain, thus the most likely diagnosis in this patient is a carotid body tumor.

79. All of the following are causes of saddle nose deformity except

a) Trauma

b) Hematoma

c) Leprosy

d) Sarcoidosis

Correct Answer - D

Saddle nose (Depressed nose)

- Nasal dorsum is depressed (sagging of the bridge of nose).
- Depressed nasal dorsum may involve either bony, cartilaginous or both bony and cartilaginous components.
- Most common etiology : Nasal trauma.
- Causes are hematoma, excessive surgical removal, trauma, syphilis, abscess, Leprosy, and tuberculosis.

80.

In Maxillary carcinoma of a 60 year old patient involving anterolateral part of maxilla, the preferred treatment is

a) Radiotherapy only

b) Total/extended Maxillectomy followed by radiotherapy

c) Radiotherapy followed by total/extended maxillectomy

d) Total/extended maxillectomy alone

Correct Answer - C

Paranasal sinus cancer is uncommon and represents only 0·2 to 0·8% of all malignancies.

- Cancer of paranasal sinus constitutes 3% of all carcinomas of the aerodigestive tract.
- The majority of paranasal sinus malignancies (50-80%) originate within the maxillary sinus antrum. Malignancies rarely occur within the other sinuses and originate in the ethmoid, frontal, and sphenoid sinuses in 10%, 1% and 1% respectively.
- The cause of parasinus malignancy is unknown. However several risk factors have been associated and therefore it is seen more commonly in people working in hardwood furniture industry, nickel refining, leather work, and manufacturer of mustard gas.
- More than 80% of the malignant tumours are of squamous cell variety. Rest are adenocarcinoma, adenoid cystic carcinoma, melanoma, and various type of sarcomas.
- Workers of furniture industry develop adenocarcinoma of the Ethmoids and upper nasal cavity. While those engaged in Nickel refining get squamous cell and Anaplastic carcinoma.

Clinical features for maxillary carcinoma

- It is seen more commonly in the 7^{th} decade of life.
- Males are affected more commonly than females.
- Early features of maxillary sinus malignancy are nasal stuffiness, blood-stained nasal discharge, facial paraesthesias or pain and epiphora. These symptoms may be missed or simply treated as sinusitis. Late features will depend on the direction of spread and extent of growth.
- Medial spread to nasal cavity gives rise to nasal obstruction, discharge and epistaxis. It may also spread into anterior and posterior ethmoid sinuses and that is why most antral malignancies are antroethmoidal in nature.
- Anterior spread causes swelling of cheeks.
- Inferior spread leads to expansion of alveolus with dental pain, loosening of teeth, poor fitting dentures, ulceration of gingiva.
- Superior spread invades the orbit causing proptosis, diplopia, ocular pain and epiphora.
- Posterior spread is into pterygomaxillary fossa, pterygoid plate and the pterygoid muscles causing trismus.
- Lymphatic spread in maxillary carcinoma is rare and occurs only in the late stages.
- Most commonly involved lymph node is submandibular lymph node followed by jugular nodes.

Treatment of maxillary carcinoma

- For squamous cell carcinoma, the treatment of choice is a combination of radiotherapy and surgery.
- Radiotherapy can be given before or after surgery. Very often, a full course of pre-operative telecobalt therapy is given, followed 4 - 6 weeks later by surgical excision of the growth by total or extended maxillectomy.

81. Treatment of choice for laryngeal carcinoma of glottis extending to supraglottic region with vocal cord fixation with papable solitary ipsilateral lymph node is ?

a) Conservative laryngectomy

b) Total laryngectomy

c) Total laryngectomy with radical neck dissection

d) Palliative therapy

Correct Answer - C

- Patient with with glottis carcinoma extending to the supra glottis region along with vocal cord fixation (bad prognostic sign; involvement of thyroarytenoid muscle) belongs to T3 stage og glottis carcinoma
- Single ipsilateral lymph node of 2 cm size signifies N1 nodal status
- And there is no evidence of distal metastases so MO
- This patient belongs to T3N1 MO.
- Treatment of choice in such patient is total laryngectomy with radical neck dissection.

STAGING OF LARYNX CANCER

- Treatment of larynx cancer depends upon the stage of the tumor.
- Therefore, one should know the TNM staging (TNM classification) of large cancer.

82. Trismus in CA of temporal bone occurs due to involvement of ?

a) Dura

b) Temporo mandibular joint

c) Mastoid

d) Eustachian tube

Correct Answer - B

Clinical Assessment of Temporal bone Tumors

- A long history of ear discharge suggests cancer associated with inflammatory ear disease (Marjolins ulcer)
- Pulsatile tinnitus suggests tumor of vascular origin such as glomus tumor or a middle ear vascular anamoly, or a duralarteriovenous abnormality.
- Deep headache raises the suspicion of dural involvement.
- Facial weakness indicates invasion of the facial nerve
- Onset of vertigo and sensineuronal hearing loss indicates involvement of the labyrinth and the development of speech and swallowing problems heralds involvement of the lower cranial nerves in the jugular foramen.
- The onset of trismus due to the involvement of **temporomandibular joint**, pterygoid muscles or mandible suggests advanced disease that has spread anteriorly. Also the appearance of preauricular and parotid swelling is a grave sign.

83. Following is/ are the causes of chronic cough with noncontributory chest radiograph?

a) Asthma

b) Post nasal drip

c) GERD

d) All the above

Correct Answer - D

90% of patients who have chronic cough and a normal or noncontributory chest radiograph belong to one of the following causes:
i) Use of an angiotensin-converting enzyme inhibitor
ii) Post-nasal drainage
iii) Gastroesophageal reflux and
iv) Asthma.

84. Acoustic neuroma causes ?

a) Cochlear deafness

b) Retrocochlear deafness

c) Conductive deafness

d) None of the above

Correct Answer - B

The clinical features depend on the extent of tumor and involved structure :?

1) When tumor is still confined to the internal auditory canal

- Cochleovestibular symptoms are the earliest symptoms of acoustic neuroma when tumour is still confined to internal auditory canal. The commonest presenting symptoms are unilateral deafness or tinnitus, or a combination of both.
- Hearing loss is **retrocochlear sensorineural type**. There is marked difficulty in understanding speech, out of proportion to the pure tone hearing loss, a characteristic feature of **acoustic neuroma.**
- Vestibular symptoms are imbalance or unsteadiness. True vertigo is very rare.

2) When tumor extends beyond IAC and involves other structures
V^{th}cranial nerve :- It is the earliest nerve to be involved. There is reduced corneal sensitivity and loss of corneal reflex which is the earliest sign of acoustic neuroma. Numbness or paresthesia of face may occur. Involvement of Vth nerve indicates that tumor is roughly 2.5 cm in diameter and occupies the CP angle.
VIP nerve :- Sensory fibres of facial nerve are involved. There is hypoesthesia of posterior meatal wall (Hitzelberg's sign), loss of taste, and loss of lacrimation on Schirmer's test. Motor fibres are more resistant

more resistant.
IXth and Xth nerves :- Dysphagia and hoarseness due to palatal, pharyngeal and laryngeal paralysis.
Brainstem :- Ataxia, weakness, numbness of arms & legs, exaggerated tendon reflexes.
Cerebellum :- Ataxia, Dysdiadochokinesia, Nystagmus.
Due to raised ICT :- Headache, neusea, vomiting, diplopia due to VI nerve involvement, and papilloedema.

85. Antral sign is seen in ?

a) Juvenile angiofibroma

b) CSOM

c) Sinusitis

d) Otoscelrosis

Correct Answer - A

Investigations of JNA
Following investigations are used in JNA :-
i) Soft tissue lateral film of nasopharynx :- shows soft tissue mass in the nasopharynx.
ii) X-rays paranasal sinus and base of skull :- findings have been explained in previous explanation.
iii) CT scan of head with contrast :- is the investigation of choice. It shows the extent of tumour, bony destruction, or displacement. Anterior bowing of the posterior wall of maxillary sinus (antral sign or Hohnan-Miller sign) is pathgnomonic of JNA.
iv) MR1 complementory to CT when soft tissue extensions are present intracranially, in infratemporal foss or in orbit.
v) Carotid angiography :- shows extension of tumor, its vascularity and feeding vessels.

- Biopsy should be avoided as it can cause severe bleeding.

86. In Ramsay Hunt syndrome, most commonly involved nerve is ?

a) V

b) VII

c) VIII

d) IX

Correct Answer - B

Ramsay Hunt syndrome

Ramsay Hunt syndrome (RHS) is a complication of shingles. It is the name given to describe the symptoms of a shingles infection affecting the **facial nerve**.

It is lower motor neuron type of facial palsy due to Varicella (herpes) zoster. Pain is often a prominent feature and vesicles are seen in the ipsilateral ear, on the hard palate and/or on anterior two third of tongue.

It may involve other cranial nerves-V, VIII, IX and X and cervical branches (C_2, C_3 & C_4) that have anastomotic communications with facial nerve.

This results in features like :

- Anaesthesia of face
- Giddiness
- Hearing impairment along with VII nerve palsy.

The mechanism of disease is reactivation of the latent varicella zoster virus in the geniculate ganglion. The onset of palsy is preceeded by pain which may persist & become excruciating. When the rash is absent it is known as zoster sine herpete.

The prognosis of Ramsay Hunt syndrome is worse than Bell's palsy. Persistent weakness is observed in 30-50% of patients and only 10% recover completely after complete loss of function without treatment. Treatment recommended is prednisone (steroid) combined with acyclvir.

87. Masculine voice in females is treated by

a) Thyroplasty type 1

b) Thyroplasty type 2

c) Thyroplasty type 3

d) Thyroplasty type 4

Correct Answer - D

88. Antrochoanal polyp is associated most commonly with ?

a) Superior meatus

b) Inferior meatus

c) Middle meatus

d) Sphenoethmoidal recess

Correct Answer - C

ANTROCHOANAL POLYP

Antrochoanal polyp is non-cancerous growth arising from the mucous membrane of the maxillary sinus and reaches the opening of the sinus in the nasal cavity through the opening of maxillary sinus in the middle meatus.

It is single and unilateral, i.e. it occurs in one of the maxillary sinus. It arises from maxillary sinus and grows backward in the nose towards the choana and may reach the nasopharynx.

Generally occurs in young age group (children and young adults) and is more common in male. Exact etiology is not known, However sinus infection has been incriminated (in contrast to ethmoidal polyp, which is considered as allergic).

Clinical features of antrochoanal polyp

- Unilateral Nasal blockage (more on expiration than on inspiration)
- Obstruction may become bilateral when polyp grows into nasopharynx and starts obstructing opposite choana.
- Hyponasal voice
- Mucoid nasal discharge
- Conductive deafness due to eustachian tube dysfunction
- On examination, polyp may not be visible on anterior rhinoscopy as

it grows posteriorly

- On posterior rhinoscopy - smooth, greyish white, spherical mass is seen in choana.

Treatment of antrochoanal polyp

- There is no medical treatment for antrochoanal polyp. The treatment of choice is complete surgical removal of polyp along with removal of lining of maxillary sinus to prevent the recurrence. Surgeries for antrochoanal polyp include :?

1) Avulsion of a polyp

- The stalk of the polyp is grasped and gently moved around to tease out the antral lining.
- Most of the time, avulsion fails to remove the polyp and antral lining completely.

2) Intranasal polypectomy

- It was the treatment of choice for all age groups prior to the advent of endoscopic sinus surgery and is still the treatment of choice in those setups where endoscopic surgery is not practised.

3) Caldwell Luc operation

- It is indicated if there is a recurrence and the age of the patient is more than 17 years.
- Now a days with FESS available - Caldwell luc operation is avoided.

89. Common site for CSF Rhinorrhoea is ?

a) Ethmoidal sinus

b) Frontal sinus

c) Petrous

d) All

Correct Answer - A

- **The cribriform plate and air cells of the ethmoid sinus account for maximum number of CSF leaks**, i.e., through anterior cranial fossa.
- Other sites are frontal sinus, area of sellatursica and sphenoid sinus.
- Rare sites of leak are middle or posterior cranial fossa and CSF can reach the nasal cavity by way of the middle ear and Eustachian tube.
- Traumatic leak → Cribriform plate and ethmoidal air cells.
- Spontaneous (non-traumatic) leak → Cribriform plate.

90. CSF otorrhoea is caused by ?

a) Rupture of tympanic membrane

b) Fracture of cribriform plate

c) Fracture of parietal bone

d) Fracture of petrous temporal bone

Correct Answer - D

CSF otorrhea

- CSF otorrhea, i.e., leakage of cerebrospinal fluid through ear structure, is a rare but potentially life threatening situation that requires rapid intervention.
- The underlying etiology of spinal fluid leak through temporal bone is a violation of the bony and meningeal barriers that separate the subarachoid space from the middle ear and mastoid.
- This means that a defect must exist not only in the bone, but also in the dura matter.
- Causes of CSF otorrhea are : ?
  1) Congenital : - Defect in otic capsule.
  2) Acquired : - More common than congenital and cause are : -

i. Surgery : - Post-operative leakage is the most common cause of CSF otorrhea. Surgical causes are acoustic neuroma removal, skull base surgeries and sometimes mastoid surgery.

i. Trauma : - Fracture of petrous part of temporal can lead to CSF otorrhea.

i. Infection

3) Spontaneous : - It is without an obvious antecedent pathology. There may be some defect in the temporal bone.

91. A 12 year old presents with fever, unilateral post auricular pain, mastoid bulging displacing the pinna forward and outwards with loss of bony trabeculae. This patient has history of chronic persistent pus discharge from same ear. Treatment of choice is?

a) Antibiotics only

b) Incision and drainage

c) Antibiotics, incision and drainage

d) Mastoidectomy with incision, drainage and antibiotics

Correct Answer - D

The patient is presenting with features of postauricular subperiosteal abscess. Treatment for this is antibiotics along with drainage of abscess and cortical mastoidectomy.
This patient has developed this abscess as a complication of CSOM (History of chronic ear discharge) for which he requires meastoidectomy.

92. Paroxymal sneezing on getting up early in morning from bed is associated with ?

a) Vasomotor rhinitis

b) Perineal rhinitis

c) Seasonal rhinitis

d) Allergic rhinitis

Correct Answer - A

Vasomotor Rhinitis

- It is a non allergic rhinitis clinically simulating nasal allergy.

Symptoms

- Paroxysmal sneezing : Bouts of sneezing start just after getting out of the bed in the morning.
- Excessive rhinorrhoea : This accompanies sneezing and may be the **only predominant symptom**. It is profuse and watery and may even wet several handkerchiefs. The nose may drip when the patient leans forward, and this may need to be differentiated from CSF rhinorrhoea.
- Nasal obstruction : This alternates from side to side. Usually more marked at night. It is the dependent side of nose which is often blocked when lying on one side.
- Postnasal drip.

93. Which of the following is true about pleomorphic adenoma except ?

a) Most common tumor of salivary glands

b) Has a tendency to invade perineural space

c) Most commoly involves the parotid gland

d) It is also called a mixed tumor

Correct Answer - B

Pleomorphic adenoma

- This is the Commonest neoplasm of Salivary glands.
- The most Common salivary gland involved is Parotid - represent about 60% tumors in the parotid. o Submandibular and minor salivary glands may also be involved rarely.
- Pleomorphic adenoma → Parotid > Submandibular > minor salivary glands.
- They are derived from a mixture of ductal (epithelial) and myoepithelial cells and therefore they show both epithelial and mesenchymal differentiation - Also called mixed tumor.

94. Name of the curved laryngoscope ?

a) Miller

b) Macintosh

c) Muller

d) Merkel

Correct Answer - B

Laryngoscopy (larynx + scopy) is a medical procedure that is used to obtain a view of the vocal folds and the glottis.
Following are the types of the available laryngoscopes :-
i) Straight blade: Miller
ii) Curved blade: Macintosh

95. Cottle test is positive in case of ?

a) Deviated Nasal septum

b) Rhinosporidiosis

c) Hypertrophied inferior nasal turbinate

d) Atrophic rhinitis

Correct Answer - A

Cottle test : It is used to test nasal obstruction due to abnormality of nasal valve as in case of deviated nasal septum.
In this test, cheek is drawn laterally while the patient breathes quietly. If the nasal airway improves on the test side, the test is positive, and indicates abnormality of the vestibular component of nasal valve.

96. In allergic pharyngitis, granularity in posterior pharynx is due to ?

a) Hyperplasia of mucous membrane

b) Hyperplasia of sebaceous glands

c) Hyperplasia of submucosal lymphoid tissue

d) Inspisated mucous

Correct Answer - C

Clinical Features of Allergic Pharyngitis

Frequent colds, persistently stuffy nose, pale edematous nasal mucosa, loss of sense of smell due to mucosal edema, post nasal drip, chronic cough and hearing impairment due to Eustachian tube blockade or fluid in the middle ear.

Nasal signs: Transverse nasal crease, Turbinates are usually swollen, Thin watery mucoid discharge.

Ocular signs: edema of lids, congestion and cobblestone appearance of conjunctiva, dark circles under the eyes (allergic shiners).

Otologic signs: retracted tympanic membrane, serous otitis media, Eustachian tube blockade

Pharyngeal signs: granular pharyngitis due to hyperplasia of submucosal lymphoid tissue. Child with prolonged symptoms have mouth breathing

Laryngeal signs: hoarseness of voice and edema of vocal cords.

97. Which structure is not seen in water's view?

a) Anterior ethmoid air cells

b) Posterior ethmoid air cells

c) Maxillary sinus

d) Petrous bone

Correct Answer - D

98. Commonest site of Ivory osteoma ?

a) Frontal-Ethmodial region

b) Mandible

c) Maxilla

d) Sphenoid

Correct Answer - A

Osteoma

Osteoma is a slow growing tumor formed by mature bone tissue. Osteoma are commonly seen in fronto-ethmoid region.

The most common sites of osteomas are the frontal sinus followed by ethmoid and maxillary sinuses. They are rare in the sphenoid sinus and extremely rare on temporal and occipital squama.

Three histological patterns are recognised : -

i) Ivory osteoma (i.e., iburnated osteoma) : - Most common and composed of dense, compact and lamellar bone with lack of Haversion system.

ii) Mature (osteoma spongiosum) : - Resembles normal bone, including trabecular bone often with marrow.

iii) Mixed type : Mixed elements of above two.

99. Pyriform sinus is laterally bounded by what?

a) Interarytenoid artery

b) Thyroid artery

c) Epiglottis

d) Thyrohyoid membrane

Correct Answer - D

- On either side of the laryngeal orifice in humans is a recess, termed the **piriform sinus** (also **piriform**recess, **pyriform sinus**, **piriform fossa**, or smuggler's **fossa**), which is bounded medially by the aryepiglottic fold, laterally by the thyroid cartilage and thyrohyoid membrane.
- The fossae are involved in speech.

100. 3 cm oral cavity tumor with single ipsilateral 5 cm lymph node with no distant metastases; stage of tumor is ?

a) T3N3M0

b) T2N2aM0

c) T2N3M0

d) T2N2bM0

Correct Answer - B

101. A 15 year aged boy presents with unilateral nasal blockade,mass in the cheek and epistaxis, the likely diagnosis is ?

a) Nasopharyngeal carcinoma

b) Nasopharyngeal Angiofibroma

c) Inverted papilloma

d) None of the above

Correct Answer - B

Recurrent epistaxis, nasal obstruction and swelling over cheek in a 15 years boy suggest the diagnosis of nasopharyngeal angiofibroma.
Juvenile nasopharyngeal angiofibroma (JNA) is a benign, but locally aggresive, tumor of nasopharynx seen in prepubertal and adolescent males. It is the most common benign neoplasm of nasopharynx. It is a highly vascular tumor and blood supply of the tumor most commonly arises from the internal maxillary artery.
Juvenile nasopharyngeal angiofibroma (JNA) occurs almost exclusively in males. Female with Juvenile nasopharyngeal angiofibroma (JNA) should undergo genetic testing. Onset is most commonly in the second decades, the range is 7-19 years.
The exact cause is unknown. As the tumour is predominantly seen in adolescent males in the second decade of life, it is thought to be testosterone dependent.
Such patients have a hamartomatous nidus of vascular tissue in the nasopharynx and this is activated to form angiofibroma when male

sex normone appears.

102. Preferred treatment approach for locally advanced head and neck cancers is ?

a) Radiotherapy alone

b) Surgery alone

c) Induction chemotherapy followed by radiotherapy / surgery

d) Concomitant chemotherapy with radiotherapy

Correct Answer - D

LOCALLY OR REGIONALLY ADVANCED Head and neck cancer
Locally or regionally advanced disease-disease with a large primary tumor and/or lymph node metastases-is the stage of presentation for 50% of patients.
Such patients can also be treated with curative intent, but not with surgery or radiation therapy alone.
Combined modality therapy including surgery, radiation therapy, and chemotherapy is most successful.
It can be administered as induction chemotherapy (chemotherapy before surgery and/or radiotherapy) or as concomitant (simultaneous) chemotherapy and radiation therapy. The latter is currently most commonly used and best evidence-supported.
In patients with intermediate stage (stage III and early stage IV) concomitant chemoradiotherapy is given postoperatively.
It can be administered either as a primary treatment for patients with unresectable disease, to pursue an organ-preserving approach, or in the postoperative setting for intermediate-stage resectable tumors.
Preferred chemotherapy agents - cisplatin and cetuximab

103. Ideal hearing aid for patient with anotia is

a) Incanal

b) Bone anchored hearing aid

c) Vestibular

d) Transcutaneous

Correct Answer - B

Anotia ("no ear") describes a rare, congenital deformity, that involves the complete absence of the pinna, the outer projected portion of the ear, and narrowing or absence of the ear canal.
A *bone-anchored hearing aid* is an implantable device that allows the listener to hear by bone conduction without the inconvenience of a traditional bone conduction hearing aid. It's more comfortable, and the sound quality is better, partly because the device stays in place. Unlike a middle ear implant, which requires a normally functioning middle ear, this type of hearing aid is typically used by listeners who have conductive or mixed hearing loss. Bone conduction hearing aids have traditionally been used by people born without ear canals or with small, misshapen ears that can't support conventional hearing aids, or by people who have chronic middle ear disease that's aggravated by wearing a hearing aid or earmold in the ear canal (for example, people with draining ears).

104. Most common site of rupture of esophagus during rigid esophagoscopy is at

a) Above cricopharynx

b) Near vocal cord

c) GE junction

d) At killian's dehiscence

Correct Answer - D

Complications of Rigid esophagoscopv

- Injury to lips and teeth.
- Injury to arytenoids.
- Injury to pharyngeal mucosa.
- Perforation of esophagus; most often it occurs at the site of killians dehiscence (near the cricopharyngeal sphincter).
- Compression of trachea.

105. Following is/ are the indications of cryotherapy

a) Vasomotor rhinitis

b) Hemoangiomas

c) Epistaxis

d) All the above

Correct Answer - D

Following are the indications of cryotherapy

- Vasomotor rhinitis
- Leukoplakia
- Mucous cysts
- Aphthous ulcers
- Hemangiomas
- Pappilomas
- Granulation tissue
- Epistaxis
- Carcinomas
- Adhesions

106. Tripod fracture is the name given for

a) Zygomatic fracture

b) Maxillary fracture

c) Mandibular fracture

d) Temporal fracture

Correct Answer - A

Zygoma fracture is also known as tripod fracture.

Clinical features of zygoma fracture

- Considerable swelling over zygomatic arch is common and makes clinical diagnosis more difficult.
- Flattening of malar prominence.
- Step-deformity of infraorbital margin.
- Anaesthesia in the distribution of infraorbital nerve.
- Trismus, due to depression of zygoma on the underlying coronoid process.
- Oblique palpebral fissure, due to the displacement of lateral palpebral ligament.
- Restricted ocular movement, due to entrapment of inferior rectus muscle. It may cause diplopia.
- Periorbital emphysema, due to escape of air from the maxillary sinus on nose-blowing.
- The mucosa of the maxillary sinus may be lacerated and cause epistaxis on that side.
- Fracture of the zygoma may or may not be painful to palpation and running a finger along the zygomatic arch may give a feel of a depressed fracture or a small dimple. The cheek may appear flattened compared to symmetry with the opposite side. This may be

obvious immediately following trauma or several days later once swelling has subsided.

107. Xray showing air column between soft tissue mass and posterior wall of nasopharynx is suggestive of ?

a) Ethmoidal polyp

b) Antrochoanal polyp

c) Nasal myiasis

d) None of the above

Correct Answer - B
Ans. is b' i.e., Antrochoanal polyp
On xray,antrochoanal polyp appears as a soft tissue density and shows a column of air between the soft tissue mass and posterior wall of nasopharynx.

108. Blomsingher prosthesis is used for production of?

a) Voice

b) Image

c) Radiowaves

d) Light

Correct Answer - A

Ans. is 'a' i.e., Voice

Blom-singher Prosthesis

- In 1978, Drs. Singer and Blom pioneered the methods of tracheoesophageal puncture and valved silicone voice prostheses that over the past 30 years have become the international standard for voice restoration, allowing thousands of patients worldwide to regain their ability to speak.
- By creating a small surgical passage just inside the stoma, from the back wall of the trachea into the esophageal wall, a voice prosthesis can be placed into this passage to enable tracheoesophageal speech.
- Voice is produced by temporarily blocking the stoma so that exhaled air from the lungs can be directed from the trachea through the prosthesis into the esophagus and then out through the mouth. Fluent, conversational speech may be acquired within just a few days.

109. Following arteries anastomose in the little's area except ?

a) Anterior ethmoidal artery

b) Superior labial artery

c) Sphenopalatine artery

d) Lesser palatine artery

Correct Answer - D
Ans. is 'd' i.e., Lesser palatine artery
Four arteries contribute to little's area :
i) Anterior ethmoidal artery.
ii) Septal branch of superior labial artery (Branch of facial A).
iii) Septal branch of sphenopalatine artery (Branch of maxillary A).
iv) Greater palatine artery (Branch of maxillary A).

110. Tensor of vocal cord is ?

a) Vocalis

b) Cricothyroid

c) Cricoarytenoid

d) Thyroarytenoid

Correct Answer - B
Ans. is 'a' i.e., Vocalis

MUSCLES	ORIGIN	INSERTION	INNERVATION	A
Cricothyroid **(Located on external aspect)**	Anterolateral part of cricoid cartilage	Inferior margin & inferior horn of thyroid cartilage	**External laryngeal**	**S t**
Post. cricoarytenoid (**Safety muscle of larynx)**	Post. surface of lamina of cricoid cartilage	Muscular process of arytenoid cartilage	Reccurent laryngeal	**A** T **c k**
Lateral cricoarytenoid	Arch of cricoid cartilage	Muscular process of arytenoid cartilage	Reccurent laryngeal	**A**
1. Arytenoid **transverse/interarytenoid** 2. oblique fibers	One arytenoid cartilage	Another arytenoid cartilage	Reccurent laryngeal	1. 2.

				i
Thyroarytenoid	Post. surface of thyroid cartilage	Muscular process of arytenoid cartilage	Reccurent laryngeal	**A**
Vocalis	Depression b/w laminae of thyroid cartilage	Part of vocal ligament & vocal process of arytenoid cartilage	Reccurent laryngeal	**P** l r **c**

111. Rhinitis medicamentosa is caused by excessive use of ?

a) Topical decongestants

b) Topical steroids

c) Systemic decongestants

d) Systemic steroids

Correct Answer - A
Ans. is 'a' i.e., Topical decongestants
<u>Rhinitis medicamentosa</u>
Caused by excessive use of topical decongestant nasal drops.
It is treated by withdrawal of nasal drops, short course of systemic steroid therapy and in some cases surgical reduction of turbinates, if they have become hypertrophied.

112. Hemlichs maneuver is used for ?

a) Upper airway obstruction by foreign body

b) BPPV

c) Eustachian tube patency test

d) Tympanic membrane integrity test

Correct Answer - A

Ans. is 'a' i.e., Upper airway obstruction by foreign body

<u>Heimlich manoeuvre</u>

Abdominal thrusts, also called the Heimlich manoeuvre or Heimlich maneuver, is a first aid procedure used to treat upper airway obstructions (or choking) by foreign objects. The term Heimlich maneuver is named after Dr. Henry Heimlich, who first described it in 1974.

113. Preferred imaging modality for choanal atresia is

a) X ray

b) CT SCAN

c) MRI

d) PET SCAN

Correct Answer - B

CT SCAN in choanal atresia
CT SCAN in coronal and saggital projections provides a thorough evaluation of choanal atresia and adjescent structures.
The axial views supply fundamental information including site of obstruction, composition of atretic plate and unilateral or bilateral involvement.
Thus CT SCAN is the preferred imaging modality.

114. Most common site for mucoepidermoid carcinoma is

a) Parotid gland

b) Submandibular gland

c) Sublingual gland

d) Minor salivary gland

Correct Answer - A
Mucoepidermoid carcinoma is the most frequently diagnosed malignancy of the salivary gland.
Among the major salivary glands, the **parotid gland** is most commonly involved.

115. Anterior bowing of the posterior maxillary wall is described as

a) Holman miller sign

b) Hennebert sign

c) Holsky sign

d) Honeybell sign

Correct Answer - A

Anterior bowing of the posterior wall of maxillary sinus (antral sign or Holman-Miller sign) is pathognomic of Juvenile Nasopharyngeal Angiofibroma.

116. Rhinolith can cause

a) Nasal obstruction

b) Epistaxis

c) Epiphora

d) All of the above

Correct Answer - D

- A rhinolith is a calculus present in the nasal cavity.
- The word is derived from the roots rhino- and -lith, literally meaning "nose stone".
- A rhinolith usually forms around the nucleus of a small exogenous foreign body, blood clot or secretion by slow deposition of calcium and magnesium salts.
- Over a period of time, they grow into large irregular masses that fill the nasal cavity.
- **They may cause pressure necrosis of the nasal septum or lateral wall of nose leading to nasal obstruction, epistaxis, headache, sinusitis and epiphora.**

117. Allergic salute is seen in

a) Allergic rhinitis

b) Chronic sinusitis

c) Nasal Myiasis

d) Chronic conjunctivitis

Correct Answer - A
Allergic salute: The characteristic gesture of a person with **allergic rhinitis:** rubbing his or her nose with the index finger.

118. SNHL is seen in all except

a) Nail patella syndrome

b) Distal RTA

c) Barter syndrome

d) All of the above

Correct Answer - D

119. Wave II in BERA originates from ?

a) Cochlear nucleus

b) Lateral laminiscus

c) Proximal eighth nerve

d) Distal eighth nerve

Correct Answer - C

Waves of BERA

- Anatomical site from where the waves arises are:

1. Wave I- distal part of 8th nerve
2. **Wave II - proximal part of 8th nerve**
3. Wave III- cochlear nucleus
4. Wave IV- superior olivary complex
5. Wave V- lateral lemniscus
6. Waves VI & VII- inferior colliculus

120. Pyramidal fracture of maxilla is

a) Le Fort-1

b) Le Fort-2

c) Le Fort-3

d) Craniofacial disruption

Correct Answer - B

Fracture of maxilla

It is classified into 3 types : ?

1. Le Fort I (transverse) fracture runs above and parallel to the plate. It crosses lower part of nasal septum, maxillary antra and the pterygoid plates.
2. Le Fort II (pyramidal) fracture passes through the root of nose, lacrimal bone, floor of orbit, upper part of maxillary sinus and pterygoid plates. This fracture has some features common with the zygomatic fractures.
3. Le Fort III (craniofacial dysjunction). There is complete separation of facial bones from the cranial bones. The fracture line passes through root of nose, ethmofrontal junction, superior orbital fissure, lateral wall of orbit, frontozygomatic and temporozygomatic sutures and the upper part of pterygoid plates.

121. Mouse-nibbled vocal cord is seen in ?

a) TB

b) Leprosy

c) Laryngeal papilloma

d) Epiglottitis

Correct Answer - A

Tubercular laryngitis

- Tubercular laryngitis is almost always secondary to pulmonary lesions, mostly affecting *males in middle age (20-40 years).*
- Disease affects the posterior third of larynx more commonly than anterior part.
- The parts affected in descending order of frequency are :- i) Interarytenoid fold, ii) Ventricular band, iii) Vocal cords, iv) Epiglottis

Clinical features

- Weakness of voice with periods of aphonia --> earliest symptoms.
- Hoarsness, cough, dysphagia (odynophagia)
- Referred otalgia

Laryngeal examination in TB laryngitis

- Hyperaemia of the vocal cord in its whole extent or confined to posterior part with impairment of adduction is the first sign.
- Swelling in the interarytenoid region giving a mammilated appearance.
- Ulceration of vocal cord giving **mouse-nibbled appearance.**
- Superficial ragged ulceration on the arytenoids and interarytenoid region.
- Granulation tissue in interarytenoid region or vocal process of arytenoid.
- Pseudoedema of the epiglottis "turban epiglottis".

- Swelling of ventricular bands and aryepiglottic folds.
- Marked pallor of surrounding mucosa.

122. A minor symptom of sinusitis is

a) Nasal blockage

b) Facial congestion

c) Nasal congestion

d) Halitosis

Correct Answer - D

The clinical symptoms of acute sinusitis have been classified into major and minor.

Major

- Facial pain or pressure
- Purulent nasal discharge
- Fever
- Nasal congestion
- *Nasal obstruction*
- Hyposmia or Anosmia
- *Facial congestion or fullness*

Minor

- Headache
- Cough
- Fatigue
- Halitosis
- Dental pain
- Ear pain or pressure

123. Which of the following is not a complication of adenoidectomy?

a) Hyponasality of speech

b) Retro pharyngeal abscess

c) Velopharyngeal insufficiency

d) Grisel syndrome

Correct Answer - A

Ans. a. Hyponasality of speech

Causes of Hyponasality (Rhinolalia clausa)

- Common cold[Q]
- Nasal allergy[Q]
- Nasal polyp[Q]
- Nasal growth[Q]
- Adenoids[Q]
- Nasopharyngeal mass[Q]
- Familial speech pattern[Q]
- Habitua[QI]

Causes of Hypernasality (Rhinolalia aperta)

- Velopharyngeal insufficiency[Q]
- Congenitally short soft palate[Q]
- Submucous palate[Q]
- Large nasopharynx[Q]
- Cleft of soft palate[Q]
- Paralysis of soft palate[Q]
- Post-adenoidectomy[Q]
- Oronasal fistula[Q]

- Familial speech pattern[Q]
- Habitual[Q]

Complications of Adenoidectomy

Hemorrhage	Grisel syndrome
Injury to eustachian tube opening	Velopharyngeal insufficiency
Injury to pharyngeal musculature and vertebrate	Nasopharyngeal stenosis
	Recurrence

124. Cranial nerve most commonly involved in malignant otitis externa ?

a) 3rd

b) 4th

c) 6th

d) 7th

Correct Answer - D
Ans. is'd' i.e., 7th

Malignant otitis externa

- Malignant otitis externa, also called necrotizing external otitis, is a misnomer as it is not a neoplastic condition, rather it is an infectious condition. Malignant otitis externa is a disorder involving inflammation and damage of the bones and cartilage at the base of skull in temporal bone as a result of spread of infection from outer ear. Malignant otitis externa is often caused by difficult to treat bacteria such as pseudomonas aeruginosa. Only rare cases of malignant otitis externa due to S.aureus, Proteus mirabilis and Aspergillus fumigatus have been reported. The infection spreads from the floor of the ear canal to the nearby tissues and into the bones at the base of the skull. The infection and inflammation may damage or destroy the bones. The infection may spread more and affect the cranial nerves, brain, or other parts of the body.
- Predisposing factors for malignant otitis externa
- Elderly diabetics (most common predisposing factor)
- Individuals with altered immune function (immunodeficiency)
- Chemotherapy
- Clinical features of malignant otitis externa

- Severe pain:- inside the ear and may get worse when moving head.
- Granulation tissue in the external auditory canal, at the junction of bony and cartilagenous part.
- Drainage from the ear - yellow, yellow - green, foul smelling, persistent.
- Fever
- Itching of ear or ear canal
- Troubled swallowing & weakness of face.
- Complications
- Cranial nerve palsies :- most commonly facial nerve is involved. Other cranial nerves can also be involved (glossopharyngeal, vagus, spinal accessory, hypoglossal, abducens, trigeminal).
- Jugular venous thrombosis
- Cavernous sinus thrombosis
- Meningitis
- Treatment of malignant otitis externa
- In all cases, the external ear canal is cleansed and a biopsy specimen of the granulation tissue sent for culture. IV antibiotics is directed against the offending organism. For Pseudomonas aeruginosa, the most common pathogen, the regimen involves an antipseudomonal penicillin or cephalosporin (r generation piperacillin or ceftazidime) with an aminoglycoside. A fluoroquinolone antibiotic can be used in place of the aminoglycoside. Ear drops
- containing antipseudomonal antibiotic e.g. ciproflaxacin plus a glucocorticoid is also used. Early cases can be managed with oral and otic fluoroquinolones only. Extensive surgical debridement once an important part of the treatment is now rarely needed.

125. Frey's syndrome is caused by ?

a) Post traumatic nerve fibres of facial nerve with parasympathetic of auriculotemporal nerve

b) Greater auricular with auriculotemporal nerve

c) Facial nerve with greater auricular nerve

d) None

Correct Answer - A

Ans. is 'a' i.e., Post traumatic nerve fibres of facial nerve with parasympathetic of auriculotemporal nerve

Frey's syndrome (gustatory sweating)

- Gustatory sweating or Frey's syndrome involves post-parotidectomy facial sweating and skin flushing while eating.
- The symptoms usually occur several months or even years after parotid surgery.
- The likely pathophysiology is aberrant regeneration of postganglionic secretomotor parasympathetic nerve fibres (originating from the otic ganglion) misdirected through several axonal sheaths of post-ganglionic sympathetic fibres feeding the sweat glands. These sympathetic fibres are to the sweat glands of the skin in the dissected field.
- The frey's syndrome is likely due to injury to auriculotemporal nerve with faulty regeneration, therefore Frey's syndrome is also known as Auriculotemporal syndrome.
- A variant of Frey's syndrome in which there is gustatory facial flushing but not sweating, occurs following facial paralysis due to faulty regeneration following injury to the facial nerve. So, Frey's syndrome is not limited to parotid surgery with injury to auriculotemporal nerve.

126. Most common cause of otomycosis ?

a) Histoplasma

b) Rhinosporidium

c) Aspergillus

d) Actinomyces

Correct Answer - C
Ans. is 'c' i.e., Aspergillus
Otomycosis

- Otomycosis, also called acute fungal otitis externa, describes a fungal or yeast infection of the external auditory meatus.
- Saprophytic fungi potentially residing in the ear canal include Aspergillus, Candida albicans, Phycomycetes, Rhizopus, Actinomyces, and Penicillium.
- Under certain conditions of increased heat, humidity, glucose concentration (diabetes), immunosuppression, or overuse of systemic or topical antibiotics and steroids, these saprophytic fungi can become pathogenic.
- Aspergillus niger accounts for 90% of otomycosis infections.
- Other common organisms are candida albicans (2"^{a} most common) and Aspergillus fumigatus.
- Less common organisms are Phycomycetes, Rhizopus, Actinomyces and Penicillium

127. Predisposing factor for Nasal myiasis ?

a) Allergic rhinitis

b) Vasomotor rhinitis

c) Atrophic rhinitis

d) Rhinitis medicomentosa

Correct Answer - C
Ans. is 'c' i.e., Atrophic rhinitis
Nasal myiasis (Maggots in nose)

- It results from the presence of ova of flies particularly chrysomia species in the nose which produce ulceration and destruction of nasal structure. Mostly seen in atrophic rhinitis when the mucosa becomes insensitive to flies laying eggs inside.
- Clinical features
- Initial symptoms (3-4 days maggots) :- Intense irritation, sneezing, headache, blood stained disharge, lacrimation. o Later :- Maggots may crawl out of nose and there is foul smell.
- Complications
- Destruction of nose, sinuses, soft tissues of face, palate and eyeball.
- Fistulae in nose and palate.
- Death occurs due to meningitis.
- Treatment
- Chloroform water or vapor must be instilled in order to anaesthetize or kill the maggots and so release their grip from the skin.

128. Treatment of choice of Bell's palsy ?

a) Surgical decompression

b) Corticosteroids

c) Electric stimulation

d) Antiviral drugs

Correct Answer - B
Ans. is 'b' i.e., Corticosteroids
<u>Treatment of Bell's palsy</u>

- Treatment of Bell's palsy is divided into three : - 1) Medical treatment, 2) Physical treatment, 3) Surgical treatment
1. Medical treatment
- **Prednisolone (steroid)** is the drug of choice and is started at initial visit. Initiation of therapy during first 24 hours of symptom confers a higher likelihood of recovery.
- Antiviral therapy (Acyclovir) is a newer adjunct in treating acute facial palsy of viral origin (both Bell's palsy and Ramsay hunt syndrome).
- Most surgeons these days advocate combination of steroids and antiviral drugs.

2. Physical treatment
- Physical treatment includes : -
- Eye care : - Artificial tear drops, ocular ointment and use of sunglasses to prevent eye complication due to dry eye.
- Electric stimulation : - To maintain membrane conductivity and reduce muscle atrophy.
- If the patient of Bell's palsy is not responding to conservative treatment, electrodiagnostic study (electrophysiological study) should be done. Electrodiagnostic study includes, electromyography

(EMG), Electroneurography (ENG), minimal excitibility test and maximal excitibility test. Surgery is reserved for those who meet electrodiagnostic (electrophysiological) study criteria or are worsening on medial treatment.

3. Surgical treatment

- Nerve decompression relieves pressure on the nerve fibers and thus improves the microcirculation of the nerve. Usually vertical and tympanic segments of nerve are decompressed. However, some worker's suggest total decompression including labyrinthine segment. Decompression is done in cases who have a poor prognosis for complete recovery with medical therapy alone or in cases who do not respond to medical therapy after 8-12 weeks.

129. True about central nystagmus ?

a) Changing direction

b) Not suppressed by optic fixation

c) Horizontal or vertical

d) All of the above

Correct Answer - D

Ans. is 'd' i.e., All of the above

Nystagmus

- Nystagmus is *rhythmic oscillatory movement* of eye.
- Nystagmus has following characteristics :?

1. Rapid,
2. Involuntary,
3. Repetitive

- Nystagmus may be *:?*

1. Side to side **(horizontal nystagmus)**
2. Up and down **(verticle nystagmus)**
3. Rotary

- Vestibular nystagmus has two components, i.e. a slow and a fast.
- The direction of nystagmus is indicated by the direction of fast component.
- Vestibular nystagmus may be :?

1. Peripheral :- due to lesion of labyrinth or VIII nerve.
2. Central :- due to lesion of vestibular nuclei, brainstem or cerebellum.

i. Peripheral nystagmus

- Diminshes or suppresses with gaze fixation (optic fixation)
- Enhances in darkness or by use of Frenzel glasses
- Unidirectional fast component
- Direction is typically horzonto - rotary, not purely horizontal or rotary

and not vertical

- Direction is fixed towards undermost ear
- Present in one head position

ii. Central nystagmus

- **Not suppressed by optic fixation**
- Fast component can be unidirectional or bidirectional
- Can be horizontal, vertical or rotary
- **Direction is changing**
- Present in multiple head positions

130. Treatment of choice for atticoantral type of CSOM?

a) Antiboiotics

b) Tympanoplasty

c) Modified radical mastoidectomy

d) None

Correct Answer - C
Ans. is'c' i.e., Modified radical mastoidectomy
Treatment of atticoantral disease

- Since cholesteatoma is going to expand and destroy bone and mucous membrane, it has to be removed.
- Therefore, surgery is the mainstay of treatment.
- Primary aim is removal of disease by mastoidectomy to make ear safe followed by reconstruction of hearing at a later stage.
- **Modified radical mastoidectomy is the surgery of choice.**
- Two types of surgical procedures (mastoidectomy) are done to deal with cholesteatoma:-
  1. Canal wall down procedures
- These leave the mastoid cavity open into the external auditory canal so that the diseased area is fully exteriorized.
- The commonly used procedures for atticoantral disease are atticotomy, modified radical mastoidectomy and rarely radical mastoidectomy.
- Modified radical mastoidectomy is the procedure of choice.
  2. Canal wall up procedures (cortical mastoidectomy)
- Here disease is removed by combined approach through the meatus and mastoid but retaining the posterior bony meatus wall, thereby avoiding an open mastoid cavity.

- For reconstruction of hearing mechanism myringoplasty or tympanoplasty can be done at the time of primary surgery or as a second stage procedure.

131. Cottle test is used for ?

a) Septal perforation

b) Rhinophyma

c) Choanal atresia

d) DNS

Correct Answer - D
Ans. is 'd' i.e., DNS

- **Cottle test :** It is used to test nasal obstruction due to abnormality of nasal valve as in case of deviated nasal septum.
- In this test, cheek is drawn laterally while the patient breathes quietly. If the nasal airway improves on the test side, the test is positive, and indicates abnormality of the vestibular component of nasal valve.

132. Hot potato voice is characteristic of ?

a) Nasopharyngeal carcinoma

b) Glottic carcinoma

c) Subglottic carcinoma

d) Supraglottic carcinoma

Correct Answer - D
Ans. is 'd' i.e., Supraglottic carcinoma
Clinical features of supraglottic carcinoma

- Pain on swallowing is the most frequent initial symptom -- Devita 7th/e p. 698
- Mass in neck may be the first sign.
- Hoarsness is a late symptom.
- Pain may be referred to ear by vagus nerve and auricular nerve of arnold.
- Late symptoms include foul breath, dysphagia and aspiration.
- **Large tumors can cause "hot potato voice/muffled voice".**
- Hemoptysis, sore throat, shorteness of breath, stridor, otalgia and aspiration pneumonia may also occur.

133. Muller's manoeuver is used ?

a) To findout opening of mouth

b) To remove laryngeal foreign body

c) To find degree of obstruction in sleep disordered breathing

d) To remove foreign body from ear

Correct Answer - C

Ans. is 'c' i.e., To find degree of obstruction in sleep disordered breathing

Muller's manoeuvre

- **Used to find the level and degree of obstruction in sleep-disordered breathing.**
- It is performed while using flexible nasopharyngoscope.
- First the examiner sees the upper airways at rest and then during the time when patient makes maximal inspiratory effort with nose and mouth closed.
- Base of tongue, lateral pharyngeal wall and palate are examined for collapsibility and then rated form 0 (minimal collapse) to 4+ (complete collapse).

134. Schatzki's Ring is present at ?

a) Upper end of trachea

b) Lower end of trachea

c) Upper end of esophagus

d) Lower end of esophagus

Correct Answer - D
Ans. is 'd' i.e., Lower end of esophagus
<u>Schatzki's ring</u>

- It occurs at the junction of squamous and columnar epithelium at the lower end of oesophagus and has also been called **lower oesophageal ring.**
- Usually seen in patients above 50 years of age.
- Cause is unknown.
- Symptomatic patients complain of intermittent dysphagia and some may even present with bolus obstruction.
- It may be associated with hiatus hernia.
- Treatment is oesophageal dilatation.

135. All are seen in treacher collin syndrome except

a) Conductive deafness

b) Cleft palate

c) Mandibular hypoplasia

d) Choanal atresia

Correct Answer - D
Ans. is 'd' i.e., Choanal atresia
<u>Treacher collins syndrome</u>

- It is rare condition that presents several craniofacial deformities of different levels.
- This is a congenital malformation involving the first and second branchial arches.
- The disorder is characterized by abnormalities of the auricular pinna, hypoplasia of facial bones, antimongoloid slanting palpebral fissures with coloboma of the lower eyelids and cleft palate.
- Important clinical findings are :-

1. Antimongoloid palpebral fissures
2. Malformed malleus and incus (normal stapes)
3. Coloboma of lower lid
4. **Conductive deafness**
5. **Hypoplasia of mandible** (micrognathia) and molar bones
6. **Cleft palate**
7. **Malformed pinna and meatal atresia**

- It is the most common benign neoplasm of nasopharynx.
- It is a highly vascular tumor and blood supply of the tumor most commonly arises from the internal maxillary artery.
- Juvenile nasopharyngeal angiofibroma (JNA) occurs almost

exclusively in males.

- Female with Juvenile nasopharyngeal angiofibroma (JNA) should undergo genetic testing.
- Onset is most commonly in the second decades, the range is 7-19 years.
- The exact cause is unknown. As the tumour is predominantly seen in adolescent males in the second decade of life, it is thought to be testosterone dependent.
- The most common site is posterior part of nasal cavity close to the margin of sphenopalatine foramen.
- The tumor starts adjacent to the sphenopalatine foramen.
- Large tumors are frequently bilobed or dumbbel shaped, with one portion of tumor filling the nasopharynx and the other portion extending to the pterygopalatine fossa.

Clinical features

- Symptoms depend on spread of tumour to nasal cavity, paranasal sinuses, pterygomaxillary fossa, infratemporal fossa, cheek, orbits (through inferior orbital fissure), cranial cavity (most common site is middle cranial fossa).
- Nasal obstruction (80-90%) is the most common symptom, especially in the initial stages. This results in denasal speech, hyposmia, broadening of nasal bridge.
- pontaneous profuse & recurrent epistaxis is the second most common symptom
- Otalgia, conductive hearing loss, serous otitis media, due to eustachian tube obstruction.
- Pink or purplish mass obstructing one or both chonae in nasopharynx.
- Tumour in the orbit causes : proptosis; and *frog-face deformity;* diplopia and diminshed vision.
- Tumour in infratemporal fossa can cause trismus and bulge of parotid.
- II, III, IV, V, VI cranial nerve can be involved.
- Splaying of nasal bones.
- Swelling of cheek and fullness of face.

Diagnosis and treatment

- Contrast CT is the investigation of choice.

- Biopsy should be avoided as it can cause severe bleeding.
- Surgical excision is the treatment of choice.

136. Referred ear pain may travel through all except?

a) Trigeminal nerve

b) Glossopharyngeal nerve

c) Abducens nerve

d) Vagus nerve

Correct Answer - C

Ans. is 'c' i.e., Abducens nerve

Referred otalgia

- As ear receives nerve supply from Vth (auriculotemporal branch), IXth (tympanic branch) and Xth (auricular branch) cranial nerves; and from C_2 (lesser occipital) and C_2 and C_3 (greater auricular), pain may be referred from these remote areas:

1. Via Vth cranial nerve

1. Dental : - Caries tooth, apical abscess, impacted molar, malocclusion.
2. Oral cavity : - Benign or malignant ulcerative lesions of oral cavity or tongue.
3. Temporomandibular joint disorders : - Bruxism, osteoarthritis, recurrent dislocation, ill-fitting denture.
4. Sphenopalatine neuralgia

- Vi intensity will hear it. Therefore, if identical vibrating tuning forks are held at equal distances from both ears they are heard in both ears. However, if one tuning fork is moved closer to one ear the person hears only that fork although the other fork is still vibrating sufficiently for him to hear. In stenger test, two vibrating tuning forks are held equidistant from either ear. If the patient is claiming

deafness in his left ear he will clain to hear only the fork on his right side. The fork on the left side is moved closer. If the patient is feigning deafness he will perceive only the tuning fork on the left side and will claim not to hear anything. If the patient has a genuine hearing loss on the left he will still hear the tuning fork on the right side.

2. Teal test

- This can be used when the patient admits to hearing bone conduction in his 'deaf' ear. The examiner stands behind the patient and applies a tuning fork to the mastoid process of his 'deaf' ear. The patient admits to
- a IXth cranial nerve

.. Oropharynx : - Acute tonsillitis, peritonsillar abscess, tonsillectomy. Benign or malignant ulcers of soft palate, tonsil and its pillars.

2. Base of tongue : - Tuberculosis or malignancy

3. Elongated styloid process.

3.Via Xth cranial cerve :

- Malignancy or ulcerative lesion of vallecula, epiglottis, larynx or laryngopharynx, oesophagus.

4. Via C_2 and C_3 spinal nerves :

- Cervical spondylosis, injuries of cervical spine, caries spine.

137. Most common presentation of adult rhinosporidiosis is-

a) Halitosis

b) Pain

c) Anosmia

d) Polypoidal mass

Correct Answer - D
Rhinosporidiosis presents as **soft leafy polypoidal mass.**

138. Inspiratory stridor is found in what kind of lesions:

a) Supraglottic

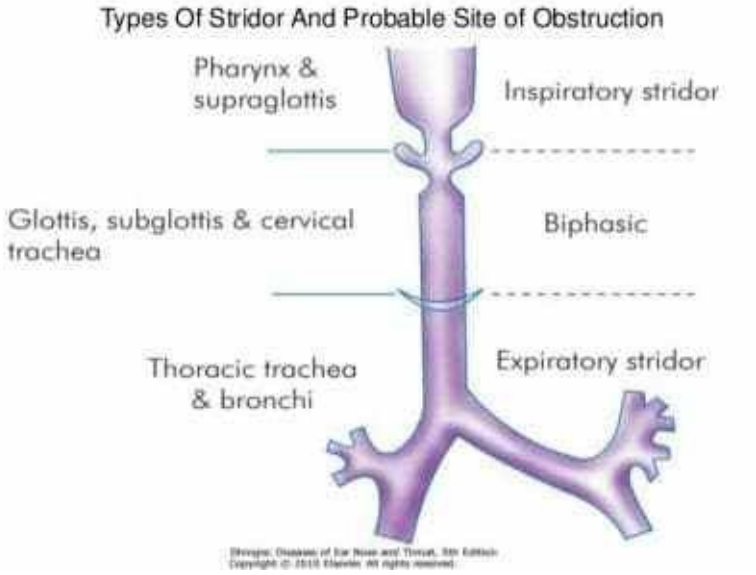
b) Subglottic

c) Tracheal

d) Bronchus

Correct Answer - A
Answer A. Supraglottic

- Generally, an inspiratory stridor suggests airway obstruction above the glottis.
- While an expiratory stridor is indicative of obstruction in the lower trachea.
- A biphasic stridor suggests a glottic or subglottic lesion.



139. Herpes zoster oticus is caused by-

a) Herpes virus type I

b) Herpes virus type 2

c) Herpes virus type 3

d) Herpes virus type 4

Correct Answer - C

Ans. C. Herpes virus type 3

- Herpes Zoster oticus or Ramsay - Hunt syndrome is caused by varicella (herpes) Zoster virus also know as Human herpes virus type-3.

140. The function of middle ear is-

a) Impedence matching

b) Converting sound energy into electric energy

c) Increase in intensity of sound

d) Helps in equilibrium

Correct Answer - A
Ans: A. Impedence matching
(Ref: Dhingra's S'h/e p. 18; Tuli L't/e p. 35)

- The middle ear ossicles provide a pathway for sound to travel from the outer to the inner ear.
- Opposition to sound energy transfer is known as impedance.
- The ossicles exist to help overcome the effect of impedance by impedance matching, thus permitting more sound energy to be transmitted from the outer to the inner ear.

141. Philthrum is derived from-

a) Maxillary process

b) Mandibular process

c) Medial nasal process

d) Lateral nasal process

Correct Answer - C
Ans. C. Medial nasal process
[Ref: IB Singh's Vh/e p. 142-147]
Frontonasal process is divided into:-
i) Lateral nasal processes:

- From alae of nose.

ii) Medial nasal processes:

- These merge with each other to form intermaxillary segment which gives rise to :

1. philtrum (middle part of upper lip),
2. premaxillary plate.

142. Which of the following arises from pheryngeal bursa-

a) Thornwald's disease

b) Craniopharyngioma

c) Chordoma

d) Lymphoma

Correct Answer - A

Ans: A. Thornwald's disease

(Ref: Scott-Brown's otolaryngologlt Vh/e vol-2 p. 161, 2122; Dhingra Sh/e p. 260]

Thornwald's disease (Pharyngeal bursitis):

- Infection of the pharyngeal bursa which is a median recess representing attachment of notochord to endoderm of the primitive pharynx.
- Pharyngeal bursa is located in the midline of posterior wall of the nasopharynx in the adenoid mass.
- Asymptomatic lesions require no treatment.
- If treatment is required then de-roofing the cyst (marsupialization) is usually sufficient, and can be performed via a transpalatal approach.

143. Cells of the Organ of Corti which are vulnerable to noise induced damage are ?

a) Inner hair cells

b) Outer hair cells

c) Deiter's cells

d) Cells of Hensen

Correct Answer - B
Ans. is 'b' i.e., Outer hair cells

144. Bleeding ear discharge is mostly due ?

a) Glomus tumour

b) Otosclerosis

c) Otitis media with effusion

d) Acoustic neuroma

Correct Answer - A
Ans. is'a'i.e., Glomus tumour
(Ref: Dhingra 6h/e p. 109)

145. The structure damaged in High Tracheostomy ?

a) Thyroid isthmus

b) Aortic knuckle

c) First tracheal ring

d) Recurrent laryngeal nerve

Correct Answer - C
Ans. is'c' i.e., First tracheal ring
(Ref: Dhingra dle p' 317)

- High tracheostomy: Performed above the level of thyroid isthmus which lies against II, III and IV tracheal rings:
- Indicated in carcinoma larynx when laryngectomy is anticipated.
- Drawback : tracheostomy at this point violates the 1st ring of trachea and causes perichondritis of the cricoid cartilage and subglottic stenosis, so it is better avoided.

146. A 15 year old male has nominal aphasia. There is also history of scanty, foul smelling discharge in the past. The patient reports of some bleeding when cleaning the ear. Which of the following is the most likely diagnosis?

a) Extradural abscess

b) Temporal lobe abscess

c) Cavernous thrombosis

d) Lateral sinus thrombophlebitis

Correct Answer - B
Ans. is'b'i.e., Temporal lobe abscess
lRef: Dhingra Sh/e p. 85
Otogenic brain abscess

- Ear infections are the most common cause of brain abscess.
- Most common site of cerebral abscess is temporal lobe.
- Due to increased ICT.
- Headache
- Nausea/vomiting
- Lethargy progressing to drowsiness, confusion, stupor and coma.

147. Most common cause of congenital sensineuronal hearing loss ?

a) Parvovirus

b) CMV

c) Rubella

d) Toxoplasmosis

Correct Answer - B
Ans. is'b'i.e., CMV
[Rel paediatric Otolaryngology p. 78]

- Cytomegalovirus -+ Most common viral cause of congenital viral deafness
- Mumps -+ Most common cause viral of acquired sensorineural hearing loss.

148. Incision used in endomeatal approach to the ear ?

a) Lempert I incision

b) Lempert II incision

c) Rosen's incision

d) Wilde's incision

Correct Answer - C
Ans. is 'C i.e., Rosen's incision
(Ref Dhingra @/e p. 400)
Endomeatal or transcanal approach.

- It is used to raise a tympanomeatal flap in order to expose the middle ear.
- Rosen's incision is the most commonly used lot stapedectomy.

149. Which of the following is the feature of aphthous ulcer?

a) Recurrent

b) Genital ulcer

c) Malignant

d) Old age

Correct Answer - A
Ans. is 'a' i.e., Recurrent
(Ref: Dhingra eh/e p. 218)

- Aphthous ulcers are small ulcer craters in the lining of the mouth that are frequently painfuL and sensitive.
- Characterized by recurrent, small, round or oval ulcers with circumscribed margins, erythematous haloes, and yellow or gray floor.

150. Prolonged blockade of Eustachian tube leads to ?

a) Atelectatic ear

b) Cholesteatoma

c) Perforation

d) All of the above

Correct Answer - D
Ans. is'd'i.e., All of the above
[Rf Dhingra 6h/e p. 60)

- Acute tubal blockage → AbsorPtion of ME gases → Negative Pressure in ME → Retraction of TM → Transudate in ME/haemorrhage (acute OME) → Prolonged tubal blockage/dysfunction → OME (thin watery or mucoid discharge) → Atelectatic ear/Perforation → Retraction pocket/cholesteatoma

151. Most common cause of nasal polyp in children is?

a) Human papilloma virus

b) Allergic rhinitis

c) Inverted papilloma

d) Rhinosporidiosis

Correct Answer - B
Ans. is'b'i.e., Allergic rhinitis
Re/ BRS Gross Anatomy p' 405)

- The most common cause of nasal polyp is allergic rhinitis'
- Nasal polyps are not particularly common in children.
- Occasionally so-called "allergic PolyPs" are encountered' and occasionally recurrent bouts of allergy and infection lead to chronic hypertrophic polypoid rhinosinusitis.
- However' most commonly when nasal polyps are encountered in children, the underlying problem is cystic fibrosis'

152. All the following can cause mouth ulcers except ?

a) Sickle cell anemia

b) Lichen planus

c) Mouth washes

d) Psoriasis

Correct Answer - D
Ans. is 'd' i.e., Psoriasis
(lRef Dhingra &/e p. 217)

153. Juvenile nasopharyngeal angiofibroma spreading to pterygomaxillary fossa is which stage?

a) Stage I

b) Stage II

c) Stage III

d) Stage IV

Correct Answer - B

Ans. is .b, i.e., Stage II

lRef: Neuroradiologlt by Zimmerman p. 455; CT and MRI of the Whole Boily Shle p' 6101

- IA -+ Tumor limited to posterior nares or nasopharyngeal vault
- IB + Extension into one or more Paranasal sinuses
- IIA -+ Minimal lateral extension through sphenopalatine foramen into medial pterygomaxillary fossa.
- IIB + Full occupation of pterygomaxillary fossa, di-splacing posterior wall of antrum forward; superior extension eroding orbital bones.
- IIC + Extension tt roogi ptetygomoilary fossa into cheek and temporal fossa
- III -+ Intracranial extension

154. Structures removed in vertical partial laryngectomy are all except ?

a) True cord

b) Epiglottis

c) Arytenoid

d) Thyroid cartilage

Correct Answer - B
Ans. is'b'i.e., Epiglottis
(Ref' ENT by Michaels p' 307
Partial Vertical larYngectomY :

- Used to remove carcinoma confined to or with little spread from the true vocal cord.

Structures removed are:

1. Whole vocal cord on the affected side, including the carcinoma
2. Ipsilateral arytenoid cartilage
3. Adjacent part of ipsilateral thyroid cartilage
4. Part of the adjacent cricoid cartilage, if there is some subglottic spread.

155. Treatment of early cases of vocal nodules is ?

a) Excision

b) Laser Ablation

c) Voice therapy

d) Tissue sampling followed by definitive therapy

Correct Answer - C
Ans. is'c'i.e., Voice therapy
[Ref: Dhingra &/e p. 3031]

- Early cases of vocal nodules can be treated conservatively by educating the patient in proper use of voice.
- Many nodules especially in children, disappear with this treatment'
- Surgery is required for large nodules or long standing nodules in adults.
- Microscopic (microlaryngoscopic) erosion is the treatment of choice,

156. Which of the following is not a feature of chronic tonsillitis?

a) Fever

b) Halitosis

c) Recurrent attacks of sore throat

d) Choking spells at night

Correct Answer - A

Ans. is 'a' i.e., Fever

(ref Dhingra 6h/e p. 258]

- Fever is a symptom in case of acute tonsillitis, not chronic tonsillitis.

Chronic tonsillitis is characterized by:-

- Recurrent attacks of sore throat or acute tonsillitis.

157. **Regarding Juvenile 1,7ngeal papillomatosis, false is ?**

a) Recurrent

b) Interferon is used in treatment

c) Premalignant

d) HPV 18 is the causative agent

Correct Answer - D

Ans. is 'd' i.e., HPV 18 is the causative agent [

(Ref Nelson l8n/e p' 1772; Dhingra 6h/e p' 449)

- Juvenile papilloma (Recurrent laryngeal papillomatosis/Recurrent respiratory papillomatosis)
- Recurrent Respiratory Laryngeal Papillomatosis is a disease of viral origin characterized by the presence of multiple recurrent papillomas in the larynx.
- The disease is common in anterior part of glottis, especially anterior commissure.

Etiology:

- Associated with Human Papilloma Virus infection (HpV).
- HPV6 and HPV 11 are most commonly associated with laryngeal disease.
- HPV 11 is associated with a more aggressive disease and makes the patient more prone to malignant change.

158. Normal volume of middle ear and mastoid ?

a) 1 cc

b) 6 cc

c) 12 cc

d) 15 cc

Correct Answer - B

Ans. is 'b' i.e., 6 cc l

- ReJ: Glasscock-shambaugh surgery of the ear p. 65)
- The normal average volume of middle ear and mastoid is 6 cc.

159. Dix Hallpike monouvre is used to assess ?

a) Differentiate peripheral and central lesions of vestibular system

b) Differentiate cochlear and retrocochlear deafness

c) Assess neonatal hearing loss

d) Assess patency of Eustachian tube

Correct Answer - A

Ans. is'a'i.e., Differentiate peripheral and central lesions of vestibular system

Ref: Dhingra Sh/e p. 47)

- Hallpike test is a test for assessing vestibular function.
- It is particularly useful when patients complain of vertigo in certain head positions.
- It helps to differentiate peripheral and central lesions.

160. A 65 year old diabetic presents with necrosis of the external auditory meatus with foul smelling discharge. The probable organism associated with the condition is?

a) Hemophilus Influenzae

b) Pseudomonas Aeroginosa

c) Streptococcus Pyogens

d) E Coli

Correct Answer - B

Ans. is'b'i.e., Pseudomonas Aeroginosa

[Ref: Dhingra Sth/e p. 5g; pediatric otolaryngology p. 465]

- It is case of malignant otitis externa caused by pseudomonas.
- Malignant otitis externa, also called necrotizing external otitis, is a misnomer
- as it is not a neoplastic condition, rather it is an infectious condition.

161. WEBER'S test in otitis media will be?

a) Not lateralized

b) Lateralised to poorer ear

c) Lateralised to better ear

d) Inconclusive

Correct Answer - B

Ans. is 'b' i.e., Lateralised to poorer ear *[Ref: Dhingra Vie* p. *26]*

- Otitis media causes conductive hearing loss

Weber's test

- Lateralized to poorer ear - conductive hearing loss
- Lateralized to better ear - SNHL
- No lateralization - Normal

162. Picket fence fever is a feature of -

a) Acute mastoiditis

b) Lateral sinus thrombophlebitis

c) Bell's Palsy

d) Atticoantral CSOM

Correct Answer - B
Ans. B. Lateral sinus thrombophlebitis
Ref: Dhingra Sth/e p. 95]

- Hectic Picket-Fence fi:pe of fever with rigor,

163. Tobe Ayer's Test is seen in ?

a) Acute mastoiditis with lateral sinus thrombosis

b) Maxillary cancer with spread to nasal cavity

c) Rhinosporidiosis

d) Jugular vein thrombosis

Correct Answer - A
Ans' is'a'i.e., Acute mastoiditis with lateral sinus thrombosis
[Ref: Dhingra sn/e p. 95]

164. Which sign is seen due to thrombosis of mastoid emissary veins?

a) Battle sign

b) Gresinger sign

c) Irwin Moore Sign

d) Hennebert's sign

Correct Answer - B
Ans. is'b'i.e., Gresinger sign
(Ref Dhingra 5th/e p. 95)

- Griesinger's sign: - Edema over the posterior part of mastoid due to thrombosis of mastoid emissary veins.

165. Edema over the mastoid is seen in -

a) Bell's Palsy

b) Lateral sinus thrombophlebitis

c) CSOM

d) ASOM

Correct Answer - B
Ans. is'b'i.e., Lateral sinus thrombophlebitis
(Ref: Dhingra sth/e p. 95)

- Edema over posterior post of mastoid (Griesinger's sign) is seen in lateral sinus thrombosis (signal sinus thrombosis).

166. A year old child presents with bilateral hearing difficulty. Impedance audiometry shows type B Curve. There is bilateral conductive hearing deficit. There is no sign of infection. Next step is ?

a) Wait and watch

b) Grommet

c) Myringotomy and aspiration

d) Canal wall down procedure

Correct Answer - A

Ans. is'a'i.e., wait and watch

[Ref: Dhingra 5th/e p. 72; ENT in primary care p/e p. 611

- The diagnosis is of serous otitis media.
- It is the most common cause of hearing loss in school children.
- Unless there is a sign of an infection, most health care providers will not treat SoM at first. rnstead, they will recheck the problem in 2-3 months.

167. Facial nerve lies with which nerve in internal auditory meatus ?

a) Trigeminal nerve

b) Abducent nerve

c) Vestibulocochlear nerve

d) Hypoglossal nerve

Correct Answer - C
Ans. is.c'i.e., vestibulocochlear nerve
(Ref: BDc Sh/e vol. 3 p. 15-17)

168. Most common presentation of nasopharyngeal carcinoma is?

a) Neck mass

b) Trotter's triad

c) Ophtalmoplegia

d) Glue ear

Correct Answer - A
Ans. is'a'i.e., Neck mass
(Ref: Dhingra Sn/e p. 265)

- Neck mass is the most common presentation (60-90%) due to cervical lymphadenopathy.

169. Juvenile angiofibroma confined to nasal cavity, preferred approach for surgery ?

a) Transnasal endoscopic

b) Transpalatal

c) Lateral rhinotomy

d) Transmaxillary

Correct Answer - A
Ans. is'a'i.e., Transnasal endoscopic
(Ref: Clinical otolaryngology p. 911)

170. Treatment of choice for nasal synachiae ?

a) Surgical removal of adhesions

b) Topical mitomycin

c) Nasal stent

d) None of the above

Correct Answer - A

Ans. is'a'i.e., Surgical removal of adhesions

- Removal of adhesion is the procedure of choice for nasal synechiae.

171. Which sinus is the last sinus to appear radiologically on X-ray?

a) Maxillary sinus

b) Sphenoid sinus

c) Frontal sinus

d) Ethmoidal air cells

Correct Answer - C
Ans. is'c'i.e., Frontal sinus
[Ref Textbook Of The Ear, Nose And Throat By De Soum, C. Et Al. p 394)

172. TESPAL done in -

a) Severe epistaxis

b) Rhinophyma

c) CA Maxillary Sinus

d) Multiple Antrochoanal polyps

Correct Answer - A
Ans. is'a' i.e., Severe epistaxis
[RefAm I Rhinol Allergy. 2O12la*Feb;26(I): 55-60.]

- Management of intractable spontaneous epistaxis.
- TESPAL - transnasal endoscopic sphenopalatine artery ligation

Indication:

- Epistaxis not responding to conventional conservative management.
- Posterior epistaxis

173. Lower limit of retropharyngeal space is at ?

a) C 7

b) Bifurcation of trachea

c) 4^{th} esophageal constriction

d) None

Correct Answer - B

Ans. is'b'i.e., Bifurcation of trachea

- Retropharyngeal space is divided into two lateral spaces (space of gillette) by a fibrous band.
- Retropharyngeal space is limited above by the base of skull and below where the alar fascia fuses with buccopharyngeal fascia at the level of T4 and carina (bifurcation of trachea).

174. Epipharynx is also called -

a) Nasopharynx

b) Oropharynx

c) Laryngopharynx

d) Hypopharynx

Correct Answer - A
Ans. is'a'i.e., Nasopharynx [Ref: Thefree medical dictionary]

175. Which cancer has maximum propensity to spread to cervical lymph nodes ?

a) Nasopharyngal carcinoma

b) Carcinoma of hard palate

c) Carcinoma of soft palate

d) Carcinoma of mandible

Correct Answer - A
Ans. is'a'i.e., Nasopharyngeal carcinoma
Ref: Clinical oncology &/e p. 741)

- " Nasopharynx is a centrally located structure with extensive submucosal capillary lymphatic plexus.
- Partly due to this extensive lymphatic existence, NPC has a propensity of lymph node involvement in its early stages.
- Clinical evident cervical lymphadenopathy is seen in more than 86% of the patients with nasopharyngeal carcinoma"

176. A 53 year old male man cpmplains of pain around his cheek and *neck.* On examination there is pus pouring out from his Stenson's duct. Which gland is involved?

a) Parotid gland

b) Submandibular gland

c) Sublingual Gland

d) Lacrimal Gland

Correct Answer - A
Ans. is 'a' i.e., Parotid gland
(Ref: Ten Cate's Oral Histology, Nanci, Elsevier, 2013, p. 255)

- Pus from stensen's duct + Parotid gland
- Pus from wharton duct -+ Submandibular gland

177. A 24 year old girl with history of head trauma presented with multiple lacerations on the face and eyelids and base of skull fracture. It was noticed she wasn't able to pass tears. The probable cause is injury to?

a) lacrimal Gland

b) Superior Canaliculus

c) Inferior Canaliculus

d) Upper eyelid

Correct Answer - C

Ans. is'c'i.e., Inferior Canaliculus

[Ref:Hawes M, Dortzbach R. Trauma of the lacrimal drainage system.]

Linberg L ed. Lacrimal Surgery. New York: Churchill Livingstone; 1988. 241-262)

- The lacrimal drainage apparatus consists of the puncta on the upper lid and the lower lid, the canaliculi, the common canaliculus, lacrimal sac, and the nasolacrimal duct.
- Canalicular lacerations are the most frequent cause of injury to the lacrimal system.
- The inferior canaliculus is involved in more than 50-75% of cases. The horizontal lower limb is the most frequently involved site.

178. External auditory canal atresia has been associated with all of the following except?

a) Low Birth Weight

b) Intrauterine infections

c) Intrauterine toxins

d) Polyhydramnios

Correct Answer - D

Ans. is'd'i.e., Polyhydramnios

[Ref: Lambert PR. Major congenital ear malfunction* surgical management and results. Ann Otol rhinol Laryngol. 1988 Nov-Dec. 97(6 Pt 1):641-91]

External auditory canal atresia:

- The precise etiology of the failure of EAC canalization is not known'
- Associations havJeen postulated between EACA and low birth weight, intrauterine trauma, toxins, infection.
- Genetic defects are being identified for several craniofacial anomalies.

179. Which of the following is used to assess deafness infants?

a) Auditory brainstem response

b) Rinne's Test

c) SISI

d) CALORIE Test

Correct Answer - A

Ans. is 'a' i.e., Auditory brainstem response

[Ref Erenberg A, Lemons J, Sia C, *Trunkel D, Ziring P. Newborn and infant hearing loss: detection and intervention. American Academy of Pediatrics. Task Force on Newborn and Infant Hearing, 1998- 1999.Pediatrics. 1999 Feb. 103(2):527-30.]*

Tests to assess neonatal hearing loss

1. Otoacoustic emissions
2. Auditory Brainstem response
3. Automated Auditory Brainstem response

180. Cochlear implants convert what energy to which form of energy

a) Sound energy to mechanical energy to move the hair cells

b) Electrical energy to mechanical energy to move the hair cells

c) Sound energy to electrical impulses

d) Mechanical energy to electrical impulses

Correct Answer - C
Ans. is 'c' i.e., Sound energy to electrical impulses *[Ref: NIH Publication No. 11-4798 (2013-11-01).*

181. Type Ad curve is seen in -

a) Eustachian tube obstruction

b) After stapedectomy

c) Middle ear tumours

d) Secretory otitis media

Correct Answer - B

Ans. is 'b' i.e., After stapedectomy ***[Ref: Dhingra 5th ie*** **p.** ***29; Logan Turner 10th/e p. 250]***

182. Retroauricular incision in children less than 2 years old may cause damage to which cranial nerve

a) VIII

b) VII

c) VI

d) V

Correct Answer - B

Ans. is 'b' i.e., VII ***[Ref :Fundamentals of Pediatric Surgery p1981***

- Retroauricular incision especially in young children may cause damage to facial nerve as it runs very closely

183. Eagle syndrome is also known as -

a) Styalgia

b) Ludwig's Angina

c) Pharyngeal bursitis

d) Amourosis

Correct Answer - A
Ans. is 'a' i.e., Styalgia ***[Ref Essentials of Otolaryngology by Frank E p. 221;***
Scott-Brown's Otolaryngology 7Ve Vol .-2 p. 2081]
Styalgia

- Chronic throat pain along the anatomic course of thyrohyoid ligament.
- It is also called Eagle's syndrome
- It is related to unrecognised elongation of styloid process, a clacified stylohoid ligament, or stylohyoid muscle tendinitis.
- Elongated styloid process protrudes into the tonsillar fossa and puts pressure on the trigeminal, glossopharyngeal,vagus or facial nerves.

184. Which agent is used to prevent synechiae after DCR surgery

a) Mitomycin

b) Tacrolimus

c) Cyclosporine

d) Doxycycline

Correct Answer - A

Ans. is 'a' i.e., Mitomycin [Ref: Current Diagnosis and Treatment in Otorrhinology 2"^{d} le p. 506; Ear Nose,

Throat & Head and neck Surgery by Dhillon 3rd/e p. 67]

- Now, Mitomycin is being increasingly used for this purpose and is proving more useful
- Mitomycin is an anticancer agent that has shown to decrease scar formation after E.N.T. surgery
- It is an antifibroblastic agent and thus prevents the wound healing and subsequent synechae formation.
- It is useful in preventing synechae formation in following operations :?
- DCR
- Sinus surgery

185. Hearing loss in Meneire's disease is of what type?

a) Fluctuating SNHL

b) Progressive SNHL

c) Conductive hearing loss

d) Mixed Hearing loss

Correct Answer - A

Ans. is 'a' i.e., Fluctuating SNHL ***[Ref Dhingra 5thie p. 112, Turner 10'Ye p.*** **335]**

- Fluctuating nature of hearing loss is quite characteristic of **Meneire's disease. Initially there is loss of low frequency sound, later both low and high frequencies are involved.**
- **Distortion of sound** occurs in some patients, e.g. a tone of a particular frequency may appear normal in one ear and of higher pitch in the other leading to **diplacusis.**
- Intolerance to loud sounds occurs due to recruitment phenomenon.

186. What is the treatment of unilateral vocal cord paralysis?

a) Speech therapy

b) Urgent tracheostomy

c) Total laryngectomy

d) Cordectomy

Correct Answer - A

Ans. is 'a' i.e., Speech therapy [Ref Essentials otolaryngology 2"^{d} le p. 740]

Treatment includes : ?

- Speech therapy
- Medialization of cord : - The aim is to bring the paralysed cord towards the midline so that healthy cord can meet it and can prevent aspiration.

This is achieved by -

- Injection of teflon paste lateral to the paralysed cord; i
- Thyroplasty type I;
- Muscle or cartilage implant; or
- Arthrodesis of cricoarytenoid joint.

187. A 55 year old known smoker since 25 years presents with a low pitched voice. Endoscopy shows a mass limited to the vocal cord on the left. Biopsy is suggestive of laryngeal cancer type T1NO. Treatment of choice would be

a) Vertical partial hemilaryngectomy

b) Radiotherapy

c) Chemotherapy

d) Total laryngectomy with cervical lymph node dis section

Correct Answer - B

Ans. is 'B' i.e., Radiotherapy [Ref: Dhingra 4th/e p. 284; http://128.255.52.245/oto/Beta/database/contents]

Treatment of glottic cancer:

- T, carcinoma : - Radiotherapy is the treatment of choice. Surgery is used only after they recur.
- T_i carcinoma with extension to anterior commissure : - The treatment of choice is radiotherapy.
- If it is unavailable, frontolateral partial laryngectomy is done with regular follow up. If it fails, total laryngectomy is performed.
- T, Ca with extension to arytenoid : - Treatment is same as above but surgery is preferred
- T, carcinoma : - Treatment depends on- i) Mobility of vocal cords, and ii) Involvement of anterior commissure and/or arytenoid :
- If mobility of cord is not impaired (cord is mobile) and anterior commissure and/or arytenoid not involved.

- Radiotherapy is the treatment of choice. In case of recurrence total laryngectomy or partial vertical laryngectomy is done.

188. Zenker's diverticulum is called as

a) Prepharyngeal diverticulum

b) Pharyngobasilar diverticulum

c) Pharyngotympanic diverticulum

d) Hypopharyngeal diverticulum

Correct Answer - D

Ans. is 'd' i.e., Hypopharyngeal diverticulum ***[Ref Dhingra 5thie p. 289 & 4`Ve p. 255, 256; Bally & love 23"'/e*** **p.** ***886]***

Hypopharyngeal diverticulum or Zenker's diverticulum or pharyngeal pouch

- It **is a pulsion diverticulum** where pharyngeal musoca herniates through the killian's dehiscence, a weak area between two parts of the inferior constrictor.
- It is the most common esophageal diverticulum.
- The diverticula **arises posteriorly** in the **midline** of neck. The mouth of the diverticula is in the midline but the sacprojects laterally **(usually left laterally)**
- Zenker's diverticula are rarely seen below 30 yrs of age, most patients are over 50.

189. Which test is used to measure nasal mucociliary clearance?

a) Saccharin test

b) SISI test

c) handkerchief test

d) Endoscopy

Correct Answer - A

Ans. is 'a' i.e., Saccharin test ***[Ref Arch Dis Child. 1989*** **Apr; 64(4):** ***546-550.Measurement of nasal mucociliary clearance. G M Corbo, A Foresi, P Bonfitto,*** **A** ***Mugnano, N Agabiti, and P J Cole]***

Nasal mucociliary clearance tests

- Nasal nitric oxide measurement
- *Saccharin test*
- Tests using radioisotope labeled particles.

190. A Person hearing two different tones in left and right ear when presented with a single tone. This condition is called

a) Monoaural diplacusis

b) Binaural diplacusis

c) Tinnitus

d) Increased sensitivity to sound

Correct Answer - B

Ans. 'b' i.e., Binaural diplacusis *[Ref Tuli I^{s}`le p. 114]*

- **Monaural diplacusis:-** Inmonauraldiplacusis,alistenerhearstwotoneswhenasinglet ear, i.e. one ear hears two different tones when presented one.
- **Binaural diplacusis :-** In binaural diplacusis, a listener hears two different tones in right & left ear when a single tone is presented to both ears.
- Both monoaural and binaural diplacusis are caused by **inhomogeneities in the cochlea** that also give rise to spontaneous otoacoustic emissions.

191. Halo sign and handkerchief test are positive in

a) CSF Rhinorrhoea

b) Deviated nasal septum

c) Nasal Myiasis

d) Choanal atresia

Correct Answer - A

Ans. is 'a' i.e., CSF Rhinorrhoea [Ref Logan Turner 10^{m}/e p. 28, Dhingra 5thie p. 179]

- Tissue test (Handker chief test) and holo sign are for CSF Rhinorrhoea. Detection of CSF Leak

Biochemical tests

- Concentrations of Glucose are higher in CSF than in nasal discharge. Glucose value > 30-40 mg% and protein value < 100 mg % (max 200 mg %) support a diagnosis of CSF leak.
- Presence of p, transferrin is the most definitive test for detection of CSF and P_2 transferrin assay is the test of choice when a confirmatory test is needed, **because of high sensitivity as well as specificity.**
- (3-trace protein (prostaglandin D synthase) is also used, however it is nonspecific as it is also present in human testes, heart and seroma.

Basic clinical tests

- Tissue test (Handker chief test) : - Unlike nasal mucous, CSF does not cause a tissue to stiffen.
- Filter paper test : - Sample of nasal discharge on a filter paper exhibits a light CSF border and a dark central area of blood, i.e.,

double ring sign or halo sign.

- Queckensted test : - Compression of the jugular vein leas to increased CSF leak due to increase in ICP.
- Rhinoscopy : - Visualization of CSF leak from paranasal sinus.

CSF tracers

- Intrathecal fluorescein dye adminstration, radionuclide cisternography, CT cisternography.

192. Which of following is not derived from first pouch?

a) Auditory tube

b) External acoustic meatus

c) Tympanic cavity

d) Mastoid antrum

Correct Answer - B
Ans. is'b' i.e., External acoustic meatus
Ref: Langman's Medical Embryology 12th/e p. 326,366

193. Retroauricular incision is also known as?

a) Rosen's incision

b) Lempert's -I incision

c) Lempert's-II incision

d) Wilde's incision

Correct Answer - D
Ans. is'd'i.e., Wilde's incision
[Ref: Dhingra Sth/e p. 410]

- Wilde's incision is used for postaural (retroauricular) approach.
- Lempert's incision is used for endaural approach.
- Rosen's incision is used for stapedectomy through endomeatal or transcanal approach,

194. Which of the following is not a derivative of first arch?

a) Pinna

b) Auditory tube

c) Mastoid

d) Cochlea

Correct Answer - D
Ans. is'd'i.e., Cochlea

195. Which of following is derived from otic placode?

a) Mastoid

b) Tympanic antrum

c) Ear ossicles

d) Cochlea

Correct Answer - D
Ans. is'd'i.e., Cochlea
Ref: Langmann' 70th/e p. 92,403
Otic placode form otic vesicle which in turn divides into :-

- Ventral component that gives rise to the saccule and cochlear duct.
- Dorsal component that forms the utricle, semicircular canals, and endolymphatic duct.

196. Electrode of cochlear implant is placed at ?

a) Horizontal semicircular canal

b) Scala media

c) Scala tympani

d) Scala vestibuli

Correct Answer - C
Ans. is 'c' i.e., Scala tympani
[Ref Essentials otolaryngology 2d/e p. 82]
Cochlear implants

- Internal component : -
- It contains receiver/stimulator which is implanted under the skin and electrode which is implanted in the scala tympani of the cochlea a cochleostomy opening in the basal turn of cochlea.
- It may also be placed at other locations like promontory or round window but these sites has poorer performance.

197. Which of following is not an absolute contraindication of tympanoplasty?

a) Malignant otits externa

b) Tumor of middle ear

c) Poor eustachian tube function

d) Active ear discharge

Correct Answer - C

Ans. is 'c' i.e., Poor eustachian tube function

[Ref: Glasscock-Shambaugh Surgery of the Ear Aina l, Gulya &/e p. 469]

Absolute contraindications for tympanoplasty

- Active infection
- Malignant otitis externa
- Middle/external ear neoplasms
- Uncontrolled cholesteatoma
- Meningitis
- Poor Eustachian tube function is a relative contraindication.

198. Which of the followig is a derivative of otic capsule?

a) Membraneous labyrinth

b) Perilymphatic labyrinth

c) Bony labyrinth

d) Ossicles

Correct Answer - C
Ans. is'c'i.e., Bony labyrinth
Ref Dhingra 4h/e p. 86; Langmann 317

- Otic capsule or the bony labyrinth ossifies from 14 centres, the first one appears in the region of cochlea at 16 weeks and the last one appears in the postero lateral part of posterior semicircular canal at 20d week

199. Internal nasal valve is bounded by?

a) Columella

b) Lower lateral cartilage

c) Upper lateral cartilage

d) Alae

Correct Answer - C

A**ns. is'c'i.e., Upper lateral cartilage**

Rel Gray's anatomy Ch. 32

Disease of Ear, Nose and Throat By Mohan Bansal p. 287

- Mink gave the nasal valve anatomy in 1903. It was described as the area with highest nasal resistance.
- It is bound superiorly between the caudal end of the upper lateral cartilage and the nasal septum;
- Inferiorly The nasal floor;
- Laterally the bony piriform aperture and the fibrofatty tissue.
- Posteriorly the head of the inferior turbinates.
- Its normal cross sectional area is 55 - 83 mm2.

200. What type of tympanoplasty is myringostapediopexy?

a) Type 1

b) Type 2

c) Type 3

d) Type 4

Correct Answer - C

Ans. is'c'i.e., Type 3

[Ref: Dhingra Sth/e p. 35; Tuli 14/e p. 491]

Types of Tympanoplasty

- Wulstein classified tympanoplasty into five types :-

Type I:

- Defect is perforation of tympanic membrane which is repaired with a graft.
- It is also called myringoplasty.

Type II:

- Defect is perforation of tympanic membrane with erosion of malleus.
- Graft is placed on the incus or remnants of malleus.

Type III:

- Malleus and incus are absent.
- Graft is placed directly on the stapes head.
- It is also called myringostapediopexy or columella tympanoplasty,

201. Which of the following is not a suprahyoid space?

a) Masticator space

b) Peritonsillar space

c) Anterior visceral space

d) Parapharyngeal space

Correct Answer - C

Ans. is'c'i.e., Anterior visceral space

- Ref: Ballenger's Otorhinolaryngology: Heat and Neck Surgery 1//e by james Byron Snow, Phillip A. Wackym, John lacob Ballenger p. 1021, Cummings Otolaryngology- Head and Neck Surgery Sh/e, Ch. 14
- Suprahyoid neck

These spaces are :-

- Peritonsillar space
- Submandibular 6 sublingual spaces
- Prestyloid parapharyngeal space
- Masticator space
- Parotid space

202. Nerve injured in Caldwell Lus operation is?

a) Lingual nerve

b) Infra orbital nerve

c) Optic nerve

d) Facial nerve

Correct Answer - B
Ans. is'b'i.e., Infra orbital nerve.
[Ref: Microendoscopic surgery p. 182]
Complications of Caldwell - Luc operation
1. Post - operative bleeding. This can be controlled by nasal pack
2. Anaesthesia of the cheek due to stretching of infraorbital nerve. It may last for a few weeks or months.
3. Anaesthesia Teeth
4. Injury to nasolacrimal duct
5. Sublabial fistula (oroantral fistula)
6. Osteomyelitis of maxilla (rare)

203. Which of the following is not a function of nose?

a) Olfaction

b) Air pressure control

c) Humidification of air

d) Temperature control of inspired air

Correct Answer - B
Ans. is'b'i.e., Air pressure control
Ref Dhingra 4n/e p. 133
Functions of the nose are classified as r
1) Respiration
2) Air conditioning of inspired air
- Filtration and purification
- Temperature control of the inspired air
- Humidification

3) Protection of lower airway
- Mucociliary Mechanism
- Secretion of Enzymes and immunoglobulins
- Sneezing

4) Vocal resonance
5) Nasal reflex functions: Smell of a palatable food cause reflex secretion of saliva and gastric juice. Irritation of nasal mucosa causes sneezing.
6) Olfaction

204. Approach to Caldwell Luc operation is via?

a) Hard palate

b) Sublabial sulcus

c) Inferior metus

d) Superior meatus

Correct Answer - B
Ans. is'b'i.e., Sublabial sulcus
[Rel Dhingra Sh/ep. 422)

- Caldwell-Luc operation is a process of opening the maxillary antrum through canine fossa by sublabial approach and dealing with the pathology inside the antrum.

205. Pitch discrimination is best between ?

a) 0-100 Hz

b) 100-1000 Hz

c) 1000-4000 Hz

d) 20-20,000 Hz

Correct Answer - B
Ans. is'b'i.e., 100-1000 Hz
Ref Dhingra p. 18-20

206. Threshold of hearing in a young normal adult is ?

a) 0 dB

b) 10 dB

c) 20 dB

d) 30 dB

Correct Answer - A
Ans. is'a'i.e.,0 dB
[Rd Dhingra 4n/e p. 21]
Audiometric zero

- **Threshold of hearing, i.e. The faintest intensity which a normal healthy person can hear will vary from person to person.**
- The International Standards Organisation (ISO) adopted a standard for this, which is represented as the zero level on the audiometer (0 dB).
- According to ISO, audiometric zero is the mean value of minimal audible intensity in a group of normally hearing healthy young adults.

207. In infant most sensitive audiometric screening is ?

a) Electrocochleography

b) BERA

c) Cortical evoked response

d) Tympanometry

Correct Answer - B
Ans. is 'b' i.e., BERA
Ref: Logan turner Ltr/e p. 416, 417; Anirban biswas clinical audio vestibulometry 3'd/e p. 68, 99

- BERA (brain stem evoked response audiometry) is now the most widely used method to estimate hearing threshold in infants.

208. In nasal endoscopy Eustachian tube is examined at?

a) 1st pass

b) 2nd pass

c) 3rd pass

d) 4th pass

Correct Answer - A
Ans. is'a'i.e., 1st pass
[Ref: Dhingra 427]

- Nasal endoscopy is done in three passes :-
- First Pass: Examination of nasal cavity, nasopharynx, opening of eustachian tube, walls of nasopharynx, upper surface of soft palate and uvula, opening of eustachian tube of opposite side opening of nasolacrimal duct and inferior meatus.

209. Styalgia most common nerve affected ?

a) Glossopharyngeal nerve

b) Abducent nerve

c) Auditory nerve

d) Greater Petrosal nerve

Correct Answer - A
Ans. is'a'i.e., Glossopharyngeal nerve
Ref: Essentials of Otolaryngology by Frank E p. 221; Scott-Brown's Otolaryngology //e Vol .-2 p. 2081

- Elongated styloid process protrudes into the tonsillar fossa and puts pressure on the trigeminal, glossopharyngeal, vagus or facial nerves.

210. Antrum of Highmore is ?

a) Maxillary

b) Ethmoid

c) Sphenoid

d) Frontal

Correct Answer - A
Ans. is'a'i.e., Maxillary
[Ref: Dhingra 5n/e p. 201]

- Maxillary sinus is also called Antrum of Highmore.

211. Aspirin triad is?

a) Churg-Strauss syndrome

b) Kartagener's syndrome

c) Sampter's syndrome

d) Young syndrome

Correct Answer - C
Ans. is'c'i.e., Sampter's syndrome
Ref: Dhingra 4'h/e p. 162)

- Samter's triad is also called as aspirin triad and consists of nasal polyp, asthma and aspirin intolerance.

212. Sinonasal neoplasm is commonly seen in which industry?

a) Fishing

b) Building

c) Hard wood

d) Iron steel

Correct Answer - C
Ans. is'c'i.e., Hard wood
Ref: Dhingra S'h/e p. 219, 220

- Paranasal sinus cancer is uncommon and represents only 0.2 to 0.8% of all malignancies.
- The majority of paranasal sinus malignancies (50-80%) originate within the maxillary sinus antrum.
- Malignancies rarely occur within the other sinuses and originate in the ethmoid, frontal, and sphenoid sinuses in 10%, 1% and 21% respectively.
- It is seen more commonly in people working in hardwood furniture industry, nickel refining, leather work, and manufacturer of mustard gas.

213. Most common site of osteomas among the paranasal sinuses is ?

a) Maxillary

b) Frontal

c) Ethmoidal

d) Sphenoidal

Correct Answer - B
Ans. is'b'i.e., Frontal
[Ref: Dhingra 4h/e p. 195)

- Osteoma are commonly seen in fronto-ethmoid region.
- The most common sites of osteomas are the frontal sinus followed by ethmoid and maxillary sinuses.
- They are rare in the sphenoid sinus and extremely rare on temporal and occipital squama.

214. Most common paranasal sinus involved by Fibrous dysplasia is?

a) Maxillary sinus

b) Frontal sinus

c) Ethmoid sinus

d) Sphenoid sinus

Correct Answer - A
Ans. is'a' i.e., Maxillary sinus
[Rel Ballmger's Otorhinolaryngology: Head and Neck Surg by james Byron Snow, PhiLip A. Wackym,John lacob Ballenge centennial ed, p. 506]

- Fibrous dysplasia most commonly involves maxillary sinus.

215. Sinus which is not present at birth is?

a) Maxillary sinus

b) Ethmoid sinus

c) Frontal sinus

d) All of the above

Correct Answer - C
Ans. is'c'i.e., Frontal sinus
[Ref Dhingra Sh/e p. 203; Hanison 75th/e p. 188; CPDT 15n/e p. 415]

216. Nasopharyngeal carcinoma seen in which occupation?

a) Asbestos industry

b) Cement industry

c) Wood workers

d) Chimney workers

Correct Answer - C
Ans. is 'c' i.e., Wood workers
Ref Dhingra 4h/e p. 235; Nasopharyngeal carcinoma By Andrew Van Hasselt,

- Alan G. Gibb 2d/e p. 4
- Wood dusts exposure is a risk factor of nasopharyngeal carcinoma and
- Adenocarcinoma of PNS.
- Formaldehyde exposure is a risk factor of Nasopharyngeal carcinoma.

217. Treatment of nasoalveolar cyst is?

a) Aspiration

b) Excision

c) Cautery

d) Laser

Correct Answer - B

Ans. is 'b' i.e., Encision

[Ref: Dherira 4/e p. 139; Shafer's Textbook of oral Pathology #/e p. 66]

- Nasoalveolar cyst (nasolabial cyst) is a developmental cyst arising outside the bone in the nasolabial below alae nasi.
- It presents as smooth bulge or swelling of upper lip lateral to midline. It is painless, except in secondary infection.
- Nasoalveolar cyst are excised by sublabial approach.

218. Blom singer prosthesis for voice rehabilitation is used in?

a) Total laryngectomy

b) Near total laryngectomy

c) Hemi laryngectomy

d) None

Correct Answer - A

Ansis'a'ie.,Total Laryngectomy

- [Ref Dhingra /ep.288.
- Vocal rehabilitation after total laryngectomy

After laryngectomy, various methods can be used for communication :-

l) Esophageal speech:

- Patient is taught to swallow air and hold it in the upper esophagus and then slowly eject it from the esoPhagus into the pharynx.
- It is the most commonly used method.

2) Artificial larynx:

- Who Fail to learn esophageal speech.
- The Device Include(1)Electrolaryzrand(ii)Transoral Pneumatic device.

3) Tracheo-esophageal speech:

- Attempt is made to carry air from trachea to esophagus or hypopharynx by creation of skin-lined fistula or by placement of an artificial prosthesis.
- **Bloom singer prosthesis and provox prosthesis are used for T-E speech.**

219. COWS is related to ?

a) Romberg test

b) Caloric test

c) Fistula test

d) Hallpike positional test

Correct Answer - B
Ans. is'b'i.e., Caloric test
[Ref Dhingra 5h/e p. 48]

- In bithermal caloric< test r
- Cold water provokes nystagmus towards the opposite ear, while wann wotet grovolecs nystagmus towards sarne ear (COWS:- Cold - opposite, Warm - same).

220. Pure tone audiometry in presbycusis shows?

a) Normal study

b) Sensory neural hearing loss

c) Conductive hearing loss

d) Mixed hearing loss

Correct Answer - B
Ans. is 'b' i.e., Sensorineural hearing loss
[Ref; Dhingra Sh/e p. 41]

- Presbycusis refers to serrsodnewalheafingloss in eldeiy.
- Characteristicalln presbycusis involves bilateral higfi-frequency heanng loss associated with difficulty in speech discrimination and central auditory processing information.

221. Investigation of choice for nasopharyngeal angiofibroma?

a) X-ray

b) MRI

c) Plane-CT

d) CT- contrast

Correct Answer - D
Ans. is'd'i.e., CT contrast
Ref: Dhingra Sth/e p. 262

- CT scan of head with contrast enhancement is the investigation of choice for JNA.

222. Complications of paranasal sinusitis include all except?

a) Orbital cellulitis

b) Seizure

c) Nasal furuncles

d) Cavernous sinus thrombosis

Correct Answer - C

Ans. is'c'i.e., Nasal furuncles

[Ref Dhingra 5'h/e p. 211-215; Pediatric otolaryngologist 2d/e p. 619]

Complications of sinusitis

- Complications in properly managed sinusitis are uncommon.
- Local:- Mucocele / mucopyocele, mucous retention cyst, osteomyelitis.

Orbital :-

- Periorbital cellulitis, orbital cellulitis, orbital abscess, subperiosteal abscess, cavernous sinus thrombosis, superior orbital fissure syndrome, orbital apex syndrome, edema of eye lids, retrobulbar neuritis with impaired vision.

Intracranial :-

- Intracranial abscess (Epidural, subdural, parenchymal), meningitis, seizures, sepsis, focal neurological deficit.

Descending infections:-

- Pharyngitis, laryngitis, tonsillitis, tracheobronchitis, otitis media.

Systemic :-

- Toxic shock syndrome (very rare)

Osteomyelitis:

- More common in frontal sinusitis.
- Osteomyelitis of the frontal bone can cause subperiosteal abscess

known as Poft Puft Tumor.

- Orbital cellulitis is particularly common in ethmoid sinusitis.
- Cavernous sinus thrombosis and intracranial complications are more common with sphenoid sinusitis.

223. Which drug do not causes rhinits?

a) ACE inhibitors

b) Glucocorticoid

c) Reserpine

d) Prazosin

Correct Answer - B
Ans. is 'b' i.e., Glucocorticoid.
Ref: Head eb Neck Surgery - otolaryngology, Vol. I edited by Byron l. Bailey, Jonas T. johnson, Shawn D. Newlands 4tu/e p. 355
Important drugs causing rhinitis are :-

- Aspirin
- Hydralazine
- Beta - blockers
- Clonidine
- Reserpine
- Gabapentin
- Methyldopa
- ACE inhibitors
- Cocaine

224. In functional endoscopic sinus surgery (FESS) opening is made through?

a) Sphenoethmoidal recess

b) Osteomeatal complex

c) Inferior turbinate

d) Middle turbinate

Correct Answer - B

Ans. is'b'i.e., Osteomeatal complex

[Ref HeaddNeckSurgery -otolnryryologlt,Vol. l byByronl.Bailey,lonasT.Ionson, ShawnD. Newlands4h/ep. 459; Textbook Of Oral and maxillofacial Surgery (full colour) l/eByNeelimaAniL p. 583

Functional endoscopic sinus surgery (FESS):

- FESS is minimally invasive technique in which sinus air cells and sinus ostia are opened under direct vision.
- It is called functional because it aims to return the working of the sinus to normal.
- FESS is based on the hypothesis that the osteomeatal complex (maxillary sinus ostium, anterior & middle ethmoid ostia, frontal recess, infundibulum and middle meatal complex) is a key area in the pathogenesis of chronic sinus disease.

225. Most feared complication of endoscopic sinus surgery is?

a) Retroorbital hematoma

b) CSF rhinorrhoea

c) Internal carotid injury

d) Nasolacrimal duct injury

Correct Answer - C
Ans. is'c' i.e., Internal carotid injury
lRef: Bollinger 4th/e p. 319

- Carotid artery injury during endonasal surgery is the most feared and catastrophic complication during sinus surgeries including FESS.
- Internal carotid artery injury is more frequent during skull base surgery, and risk factors include acromegaly,
- previous revision surgery, and prior radiotherapy and bromocriptine therapy.
- Injury to the ICA is the most devastating and, fortunately, the rarest complication.
- The ICA is vulnerable when surgery is performed in or around the posterior ethmoid air cells and the sphenoid sinus.