Commonest intra-ocular tumor in children  |  Retinoblastoma
--- | ---
Commonest intra-orbital tumor in children | Rhabdomyosarcoma*

- **One and a half syndrome**
  - PPRF+MLF damaged (both are present in pons)
  - There is impaired adduction during contralateral gaze (‘the half’) and ipsilateral horizontal gaze palsy (‘the one’).
- ROP is also called retrolental fibroplasia because of formation of a fibrovascular mass behind the lens.
- MOA of acetazolamide in galucoma---> reduction of resorption of bicarbonate
- Causes of mydriasis(dilated pupil)- HOT CP + TATA
  - Holmes-Adie pupil
  - Oculomotor nerve palsy
  - Traumatic iridoplegia
  - Congenital
  - Pheochromocytoma
  - **Drugs-TATA**
    - Tropicamide
    - Atropine
    - TCA
    - Amphetamines
- M/C cause of ruberosis iridis is---> DM*(M/C in *India) and CRYO(M/C in world)
- **Ring of Summering** is seen in---> After cataract
- Bruckner’s test- done for detection of congenital amblyopia
- In chronic papilledema, persistently elevated CSF pressure in the optic nerve produces stasis of axoplasmic flow and swellin of optic disc which eventually causes disruption of neurofilament and nerve fibre atrophy.
- **Optic atrophy**.
  - **Congenital hereditary optic atrophy**-appear at birth
  - **Primary or simple atrophy**-It is d/t disease or poisoning of second visual neuron proximal to the disc. No evidence of local inflammation. The classic cause of primary atrophy is tabes. In such a case, disc is grey or white. The stippling of lamina cribrosa is seen. Edges are sharply defined and surrounding retina is normal*.
  - **Secondary optic atrophy**: Follows any injury or direct pressure, affecting the visual fibre in any part of their course from the lamina cribrosa to the geniculate body.
  - **Consecutive optic atrophy**- occurs secondary to retinal disease. Eg.
    - Retinitis pigmentosa*
    - Retinal detachment
    - High myopia
    - Retinochoroiditis
  - **Vascular optic atrophy**: seen in-
    - Occlusion of central retinal artery or vein
    - Arteriosclerosis
    - Anaemia
    - Sudden massive loss of blood
  - **Post neuritic optic atrophy**- ensues after optic neuritis

Q. True about retinitis pigmentosa is-
1. Black spots
2. Waxy, pale optic disc------------------------ans
3. Salt and pepper appearance of fundus
4. Retinal haemorrhage
**Discussion** - Retinal pigmentosa is a slow degenerative disease of retina which begins in childhood and affects both eyes (specially rods) resulting in blindness in middle or advanced age. Macular region is not affected until very late stage. Most important symptom is defective vision in night (nyctalopia). The field vision show concentric contraction leading to ring scotoma. Central vision is retained for a long time but the patient experiences great difficulty d/t their tube vision. In the affected zone retina is studded with small *jet-black spots*. The retinal veins often have a sheath of pigment for a part of their course. Retinal arteries never show such pigmentary changes. The retinal blood vessels, both arteri es and veins become extremely attenuated and thread-like. As the d/e progresses *optic atrophy* sets in. The ERG and EOG is markedly sub-normal or completely extinguished early in the course of disease. **Lawrence Moon-Biedl syndrome** is the most common syndrome associated with RP.

Q. What is the antifungal agent of choice for filamentous fungi-

1. Natamycin---------ans
2. Nystatin
3. Amp B
4. None

**Discussion** -

- Natamycin acts on the surface, and is preferred for Filamentous fungi having larger Surface area.
- Nystatin is Doc for Mucosal Candidiasis
- Amphotericin B is preferred in yeast and candida infections of eye......

<table>
<thead>
<tr>
<th>Anisometropia</th>
<th>Refractions of the two eyes are different</th>
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<tr>
<td>Aniseikonia</td>
<td>Difference in size of retinal images of the two eyes</td>
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Q. Iogenic pump in d corneal endo-thelium is necessary 4 maintaining deturgescence of d cornea & thus transparency. It can b blocked by-

1. inb of anaerobic glycolysis
2. activation
3. inh of kreb's cycle
4. inh of hmp pathway

**Discussion** - 2(bhatia), 4(AA)

ya i guess.. t and d main discuss nahii hua..wait if its controvertial ill check...waise in iams this was the answr told...
ques is from this link.. read it once.. i m also readin tryin to arrive at answer

http://jp.physoc.org/content/426/1/81.full.pdf

The fluid pump of the corneal endothelium is normally fueled by energy derived largely from aerobic metabolism. Under anaerobic conditions, the strong Pasteur response of these cells generates sufficient ATP to maintain this fluid transport.

so wth this i feel.. ans is aerobic ka activation and anaerobic ka inhib....wat say

**Keratoconus**

A degenerative disorder of the eye in which structural changes within the cornea cause it to thin and change to a more conical shape than its normal gradual curve. RGP* (Rigid Gas Permeable) contact lens is most suitable for patient with keratoconus--> Parson 20/e, p=203,81. (**Corneal cross-linking with riboflavin(CC-R)**: New treatment modality for keratoconus. The riboflavin causes new bonds to form across adjacent collagen strands which recovers and preserves some of cornea’s mechanical strength.)

**Keratoglobus**

A degenerative non-inflammatory disorder of the eye in which structural changes within the cornea cause it to become extremely thin and change to a more globular shape than its normal gradual curve. It causes corneal
thinning, primarily at the margins, resulting in a spherical, slightly enlarged eye. It is sometimes equated with "megalocornea"

- Ulcer serpens in cornea → caused by Pneumococcus
- Shaffer's sign is seen in early cases of → retinal detachment

<table>
<thead>
<tr>
<th>Blow-out fracture of orbit involves</th>
<th>Roof of orbit</th>
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<tr>
<td>Blow-out fracture of orbit involves</td>
<td>Postero-medial part of floor of orbit</td>
</tr>
</tbody>
</table>

- Axial proptosis → best method of approach is by Kronlein operation or lateral orbitotomy
- Intermittent proptosis → d/t varicosity of the orbital veins and arteriovenous fistula. The degree of proptosis varies with head postures.
- Pulsating exophthalmos → d/t arteriovenous aneurysm. Rx → ligation of carotid artery
- Three snip operation done for → Punctum block
- Vossious's ring is impression of miotic pupil on lens due to impression of iris produced by concussion injury.
- In ERG wave-
  0 R1 and R2 are due to photochemical reactions in rod and cone
  0 ‘A’ wave reflects the photoreceptor activity
  0 ‘B’ wave is due to the response of Bipolar cells
  0 ‘C’ wave is generated by retinal pigment epithelium
- The dilator pupillae is innervated by sympathetic fibers via long ciliary nerves. The sphincter pupillae is innervated by parasympathetic fibers through short ciliary nerves.
- Corneal stem cell grafting is being tried in cases of chemical injury to corneas. These stem cells are located at palisades of voga at limbus. The germinative region of the corneal epithelium, represented by the stem cells, lies at the limbus. These mitotically active cells are present in maximum numbers at the limbus. Cells migrate from the limbus towards the centre of the cornea.
- Radical surgeries-
  0 Enucleation - Surgical removal of entire globe is called enucleation
  0 Exenteration - Removal of entire orbit including globe, eyelids, and orbital contents
  0 Evisceration - Surgical removal of entire contents of globe leaving a scleral shell is called evisceration.
- Peribulbar block → given in periorbital space

| Central retinal artery occlusion | Sudden complete, painless loss of vision in one eye, most commonly in an elderly patient. Retinal examination reveals pallor of the optic disc; edema of the retina; cherry red fovea, bloodless constricted arterioles; and a ‘boxcar’ segmentation of blood in the retinal veins. |
| Central retinal vein occlusion | Sudden painless unilateral loss of vision in patients with hypercoagule states (polycythemia rubra vera), diabetes mellitus or glaucoma. Retinal examination reveals swelling of the optic disc, venous dilatation and tortuosity, widespread retinal hemorrhages and cotton wool exudates. |

- Posterior chamber IOL implantation can be done either in the ciliary sulcus or capsular bag. The “in the bag” implantation is more physiological and hence preferred.
  0 C/I- Proliferative diabetic retinopathy
- Cataracts are well-recognised sequel of high voltage electric burn. They occur in 5-7% patients, frequently are bilateral and typically manifest within 1-2 yrs of injury.
  0 Common causes of cataract-
- Age related
- UV light
- Systemic disease-DREAM HUTS-
  - Down’s
  - Rubella(congenital)
  - Elevated glucose
  - Excess galactose and low calcium
  - Myotonic dystrophy
  - High myopia
  - Uveitis
  - Trauma
  - Steroids(systemic)

Classification of cataract-PONDS-
- Polar: localised, commonly inherited, lie in the visual axis
- Nuclear: changed lens refractive index, common in old age
- Dot opacities: common in normal lenses, also seen in diabetes and myotonic dystrophy
- Subscapular: due to steroid use, just deep to the lens capsule in visual axis

- **Tolosa-Hunt syndrome**(THS) is a rare disorder characterized by severe and unilateral headaches with extraocular palsies, usually involving the third, fourth, fifth, and sixth cranial nerves, and pain around the sides and back of the eye, along with weakness and paralysis (ophthalmoplegia) of certain eye muscles. Rx: *Steroid

- **Morning glory syndrome**: It is a mesodermal defect a/w absence of the lamina cribrosa, the undeveloped optic nerve(while in utero, the nerve ending from the eye never reached the nerve ending from the brain. A central core of white glial tissue occupies the position of the normal optic cup, causing a white mass. When a picture is taken of the eye, this white mass stands out apart from the veins of the eyes, looking very much like the center of a Morning glory flower.)

- **Antony syndrome**: Cortical blindness (Normal disc, Normal fundus)

- **Brown’s syndrome**: congenital ocular motility defects due to fibrous tightening of SO tendon→ limitation of elevation of eye in adduction→ straight in primary position

- In primates retinal ganglion cell are of **three** types:
  1. **M cell**: project to magnocellular pathway. controlled by bipolar cell. Show phasic non-linear responses to complex stimuli. More sensitive to luminance
  2. **P cell**: project to parvocellular layer of LGN. Controlled by bipolar cell. Show linear summation of responses and are more sensitive to wavelength
  3. **W cell**: Mainly have diffuse extensive receptive field. Controlled by amacrine cells. Respond poorly to visual stimuli

- **RED EYE**
  - **Anterior uveitis**: Pain, Blurred vision and photophobia, Small fixed oval pupil, Ciliary flush
  - **Glaucoma**: Severe pain, decreased acuity, halos, dilated pupil, hazy cornea

1. **Bow tie optic atrophy** is seen in lesion of-
   1. Occipital cortex
   2. Optic radiation
   3. Optic chiasma------------------------ans
   4. Lateral geniculate body

Discussion:
---(1)---->Retina---->(2)------>Ganglion cell------(3)---->LGB------(4)-----Occipital Cortex
2. Which of the following statements is false-
   1. Papilledema occurs after ICT of 200mm of water
   2. Accumulation of axoplasmic flow at lamina cribrosa produces disc swelling
   3. Retrograde component of axoplasmic flow is blocked-----------------ans(orthograde)
   4. Paton’s lines are present

Discussion-
   • Normal ICT= 50-180 mm of H₂O

4. On retinoscopy at 67 cms refraction is 1.5 he is-
   1. Myopic
   2. Hypermetropic
   3. Astigmatism
   4. Emmetropic----------------ans

Discussion- Parson-64
67 cm = 2/3 metre
P=1/f=3/2=1.5
i.e. 1.5-1.5=0 (emmetropic)

6. Spherical equivalent of +2DS/-3C x 90 is-
   1. +0.5----------------ans
   2. -0.5
   3. +1
   4. -1

Discussion-
Spherical equivalent = Cyl/2 + S
-3/2 + 2 = +0.5

7. Which ani glaucoma drug is contraindicated in patients on MAO inhibitors for depression-
   1. Latanoprost
   2. Dorzolamide
   3. Brimonidine----------------ans
   4. Timolol

Discussion-
• Brimonidine-
  ◦ Depression
  ◦ Drowsiness
• Dorzolamide--> DOC for children (safest anti-glaucoma drug)

8. Investigation of glaucoma which is the most important-
   1. Pachymetry----------------ans
   2. Pupillometry
   3. Keratometry
   4. Biometry

Discussion-
• Pachymetry- Corneal thickness measurement
• Biometry- IOL power calculations

9. Patient of post-op increased IOP and shallow AC, patent PI(Peripheral Iridectomy); diagnosis is-
   1. Malignant glaucoma----------------ans
   2. Angle closure glaucoma
   3. Pupillary block glaucoma
4. Neovascular glaucoma

Discussion - In malignant glaucoma PI (Peripheral iridotomy) is patent i.e there is no pupillary block and iridotomy can not relieve the flow obstruction.

10. All are true except-
1. The outer plexiform layer is the watershed area of the retina
2. The central retinal artery is an end artery
3. The retinal arteries lie in nerve fibre layer
4. The outer one thirds of retina receives nutrition from the choroidal circulation-------ans

11. Which stromal dystrophy is autosomal recessive in nature, spreads to the limbus, has no clear spaces in the middle and has poor vision at an early age-
1. Granular
2. Macular----------------ans
3. Lattice
4. Fuch’s Endothelial

12. Homonymous hemianopia with asymmetric optokinetic nystagmus means the lesion is in-
1. Optic tract
2. Occipital lobe
3. Parietal lobe----------------ans
4. Lateral geniculate body

Discussion-
- Nystagmus-
  - +nt : Symmetrical (Normal people)
  - -nt : Asymmetrical (Parietal damage)

Saccades and smooth pursuit eye movements are two different modes of oculomotor control. Saccades are primarily directed toward stationary targets whereas smooth pursuit is elicited to track moving targets. In recent years, behavioural and neurophysiological data demonstrated that both types of eye movements work in synergy for visual tracking.

81. The site of origin of neural impulses leading to right–ward pursuit is the
1. Right frontal lobe
2. Left frontal lobe
3. Right parieto – occipital lobe----------------ans (occurs on the same side)
4. Left parieto – occipital lobe

Discussion - Pursuit--> Parietal

74. The site of origin of neural impulses leading to a right-ward saccade is the-
1. Right frontal lobe
2. Left frontal lobe----------------ans (opposite hota hai...see 81)
3. Right parieto-occipital lobe
4. Left parieto-occipital lobe

13. Para central scotoma means there’s a defect in-
1. Arcuate nerve fibre bundle
2. Superior nasal nerve fibre
3. Papillo mascular bundle----------------ans
4. Lateral geniculate body

14. Inverse glaucoma is glaucoma seen in-
1. Spherophakia
2. Aphakia
3. Pseudophakia
4. Pigmentary

Discussion: Paradoxical rise of pressure on putting pilocarpine.

Optic disc are nasal—> so blind spots are temporal. In glaucoma nasal fields are damaged last—> so temporal fields are last to go

15. All are true about lens except-
   1. The refractive index of nucleus is 1.46, cortex is 1.38
   2. The anterior pole of the lens moves forward in accommodation
   3. The axial width of the lens increases in accommodation
   4. Equatorial diameter of the lens increases in accommodation—>-ans

Discussion: Contracting the ciliary body increases the refractive power of the eye for near vision. When the ciliary muscle contracts, it pulls the suspensory ligaments toward the cornea, which permits the lens to relax and causes the lens surface to bulge, increasing its refractive power.

16. Regarding occurrence of sympathetic ophthalmitis, all of the following are true except-
   1. It almost always follows a perforating Wound
   2. Wounds in the ciliary region are more prone to it
   3. More common in adults than in children—>-ans
   4. Less common when actual suppuration develops in the injured eye

Discussion: More common in children since children are more prone to trauma

17. ICG (Indo Cyanin Green) angiography is indicated in-
   1. Classic CNVM
   2. Occult CNVM
   3. Polypoidal choroidal vasculopathy—>-ans
   4. Angioid streaks with CNVM

Discussion: 3>2

18. Vogt’s triad is indicative of-
   1. Past attack of herpes zoster ophthalmicus
   2. Past attack of acute angle closure glaucoma—>-ans
   4. Past attack of acute iridocyclitis

Discussion: Vogt’s triad in glaucoma (GAP)-
   1. Glaucomfleksen (Ant cortical opacity- a type of ant subcapsular opacity)
   2. Iris Atrophy (stromal)
   3. Pigment on the corneal endothelium

Vogt’s triad in Tuberous sclerosis- epilepsy, idiocy, and adenoma sebaceum

19. Ptosis with lid lag is seen in-
   1. Traumatic ptosis
   2. Myogenic ptosis
   3. Synkinesis
   4. Congenital ptosis—>-ans

20. 60 year old man has intermittent jaw claudication and presents with sudden dimness of vision and optic disc edema. He has-
   1. Optic neuritis
   2. Papilledema
3. AION (Anterior ischemic optic neuropathy) - d/t Giant cell arteritis

Discussion

21. All are true about photoretinitis except-
   1. Persistence of after image
   2. Metamorphosia
   3. Positive scotoma
   4. Abnormal pupillary reactions

Discussion

22. All are true about malignant hypertension (200/120) except-
   1. Associated with renal insufficiency
   2. Papilledema
   3. Young patients
   4. Good prognosis

Discussion

23. A salmon colored lesion in the cul-de-sac usually means-
   1. Lymphoma
   2. Hemangioma
   3. Graves ophthalmopathy
   4. Trauma

Discussion - Ocular lymphoma usually - NHL

24. Vascular congestion over insertions of the rectus muscles (particularly lateral rectus) is seen in-
   1. Lymphoma
   2. Hemangioma
   3. Graves ophthalmopathy
   4. Trauma

25. Cork screw conjunctival blood vessels are seen in-
   1. Lymphoma
   2. Hemangioma
   3. Arterio venous fistula
   4. Vatrix

26. S shaped eyelid is seen in-
   1. Plexiform neurofibroma
   2. Hemangioma
   3. Arterio venous fistula
   4. Varix

27. All are true in toxemia of pregnancy except-
   1. Tractional retinal detachment
   2. Constriction of nasal arterioles
   3. Termination of pregnancy may be required
   4. Usually occurs late in pregnancy

Discussion

28. Orange peel retina is seen in-
   1. Angioid streaks
   2. Lacquer cracks
   3. High myopia
   4. Retinal detachment

Discussion

- Angioid streaks are found in PEPSI
  - Pseudoxanthoma elastica*
• Ehler's danlos syndrome
• Paget's disease
• Sickle cell anemia
• Idiopathic

29. Which of the following is most often associated with low educational levels-
   1. Sympathetic opthalmitis
   2. Cataracts----------------------ans(donno why)
   3. Retinal detachment
   4. Optic neuritis

30. True statement about the ocular effects of congenital rubella includes-
   1. Congenital rubella causes progressive chorioretinitis
   2. Lamellar cataract is the most common type of cataract seen in congenital rubella
   3. Viral particles usually remain in the lens long after birth----------------------ans
   4. Myopia is common

Discussion-
Ocular effects of congenital rubella(compare with options above)-
   1. Salt and pepper
   2. Nuclear cataract
   3. Yes true
   4. Hypermetropia

31. A recurrent chalazion should be subjected to histopathologic evacuation to exclude the possibility of:
   1. Squamous cell carcinoma
   2. Sebaceous cell carcinoma----------------ans
   3. Malignant melanoma
   4. Basal cell carcinoma

Discussion- Meibomian glands are modified sebaceous glands--> so increased chances of sebaceous cell carcinoma

32. On performing refraction using a plane mirror on a patient who has a refractive error of -3 D sphere with -2D cylinder at 90° from distance of 1 metre under no cycloplegia, the reflex would be seen to move
   1. With the movement in the horizontal axis and against the movement in the vertical axis
   2. With the movement in both the axes
   3. Against the movement in both the axes----------------ans
   4. With the movement in the vertical axis and against the movement in horizontal axis

33. A 3 year child presents with a right convergent squint of 6 months duration. What is the appropriate management-
   1. Immediate surgical correction followed by amblyopia therapy
   2. Proper refractive correction, amblyopia therapy followed by surgical correction--------ans
   3. Prescribed spectacles and defer surgery until the child is 5 year old
   4. Botulinum toxin injection followed by occlusion therapy

Discussion- Accomodative squint correct with glasses

34. The last muscle to be paralysed after a retrobulbar block is-
   1. Superior oblique--------ans
   2. Superior rectus
   3. Inferor oblique
   4. Inferiro rectus

Discussion- Nerve of SO(IVth) is outside the cone of muscles
35. Which of the following concerning retrobulbar hypertension-induced choroidopathy is false-
   1. Elsch nig spots are characteristic
   2. Exudative retinal detachment may develop
   3. Hypertensive choroidopathy may be associated with chronic elevation in blood pressure
   4. Hypertensive choroidopathy is associated with acute elevation in blood pressure

36. Which of the following conditions developing in a healthy young man should raise suspicion of HIV infection-
   1. Acute retinal necrosis
   2. Herpes simplex keratitis
   3. Herpes Zoster Ophthalmicus
   4. Tubercular Uveitis

37. While working in a neonatal ICU your team delivers a premature infant at 27 weeks of gestation and weighing 1500 gm. How soon will you request fundus examination by an ophthalmologist-
   1. Immediately
   2. 3-4 weeks after delivery
   3. At 34 weeks gestational age
   4. At 40 weeks gestational age

Discussion-
ROP (Retinopathy of prematurity)-
- <32 wks
- <1500 gm*
- 4-6 wks after birth or 31-33 wk post gestational age whichever is later

38. A 60 year old man presented with watering from his left eye since 1 year. Syringing revealed a patent drainage system. Rest of the ocular examination was normal. A provisional diagnosis of lacrimal pump failure was made. Confirmations of the diagnosis would be by-
   1. Dacryoscintigraphy
   2. Dacryocystography
   3. Pressure syringing
   4. Canaliculus irrigation test

Discussion- Dacryoscintigraphy. Orbicularis (Horner's muscle)---> acts as pump

39. A lesion of the optic radiation involving the Meyer's loop causes-
   1. Homonymous hemianopia
   2. Superior quadrantopia
   3. Inferior quadrantopia
   4. Central scotoma

40. Most common cause of posterior uveitis in adults is-
   1. Toxocarasis
   2. Toxoplasmosis
   3. Sarcoidosis
   4. Tuberculosis

Discussion-
- Toxoplasmosis-
  - Congenital form more common than acquired form
  - Man is intermediate host
  - M/C presentation--> asymptomatic
  - Macula* is involved
C/F- seizures, hydrocephalous, area of calcification in brain and mental retardation

- Typical ocular lesion is necrotic granuloma/retinochoroiditis. It typically produces **headlight in fog** appearance of retina

41. Best Corrected Visual Acuity is 6/18 of a patient with a corneal scar which improves with pin hole to 6/9. Best explanation is-
   1. Spherical aberration
   2. Myopic astigmatism
   3. Irregular astigmatism--ans(corrected with contact lens or pin hole)
   4. Cataract

42. All are seen in papilledema after a head injury **except**-
   1. Blurring of disc margin
   2. Hyperemia
   3. Afferent papillary defect--ans
   4. Filling of cup

43. The most common complication of hypermature sclerotic cataract is-
   1. Dislocation of the lens--ans
   2. Phakomorphic glaucoma
   3. Uveitis
   4. Neovascularization of retina

44. A 14 year old boy complains of pain during reading. On examination, his both eyes are normal and vision with Snellen's reading is 6/12. He still complains of pain on occluding one eye. The diagnosis is-
   1. Myopia
   2. Pseudomyopia--ans(if 6/6 it becomes hyperopia i.e. hypermetropia)
   3. Hyperopia
   4. Emmetropia

45. A male patient with a history of hypermature cataract presents with a 2 day history of ciliary congestion, photophobia, blurring of vision and on examination has a deep anterior chamber in the right eye. The left eye is normal. The diagnosis is-
   1. Phakomorphic glaucoma
   2. Phacolytic glaucoma--ans(Parson P-281)
   3. Phacotoxic glaucoma
   4. Phacoanaphylactic uveitis

46. A 60 year old male patient operated for cataract 6 months back now complains of floaters and sudden loss of vision. The diagnosis is-
   1. Vitreous hemorrhage
   2. Retinal detachment--ans
   3. Central retinal artery occlusion
   4. Cystoid macular edema

47. A neonate, 30 days old, presented with excessive lacrimation and photophobia. He has a large and hazy cornea. His both lacrimal duct systems are normal. The diagnosis is-
   1. Megalocornea
   2. Keratoconus
   3. Congenital glaucoma--ans
   4. Hunter's syndrome

Discussion- **Haab's striae--> rupture of BM--> diagnostic**
48. A patient has normal anterior chamber and hazy cornea in one eye and shallow anterior chamber and miotic pupil in fellow eye, the diagnosis is-
   1. Endophthalmitis
   2. Acute congestive glaucoma
   3. Chronic simple glaucoma
   4. Acute anterior uveitis

49. Most common intraocular infection associated with HIV is-
   1. Toxoplasmosis
   2. CMV retinitis
   3. Syphilitic Uveitis
   4. Acute retinal necrosis Due to herpes simplex

50. A patient presents with h/o evening halos and occasional headache for some months. His examination shows normal IOP but shallow AC. He is in which stage of glaucoma-
   1. Acute
   2. Absolute
   3. Prodrome
   4. Constant instability

51. A child presented with difficulty in seeing the backboard in school. His teachers say that he frequently squeezes his eyes. Most probable cause is-
   1. Hypermetropia
   2. Myopia
   3. Presbyopia
   4. Astigmatism

52. Shanti, aged 27 years presented with complaints of difficulty in reading near print. There is ptosis and diplopia in all directions. She is having-
   1. III CN palsy
   2. Myasthenia gravis
   3. Presbyopia
   4. VI CN palsy

Discussion-
   • Picks--> Female and not a presbiopic age
   • Myasthenia never involves internal ocular muscles but external ocular.

53. Dalen Fuchs nodules may be seen in all except-
   1. Sympathetic ophthalmitis
   2. Tuberculosis choroiditis
   3. VKH syndrome
   4. Behcet’s disease

Discussion- Dalen Fuchs nodules are collections of epithelial cells lying between Bruch membrane and the retinal pigment epithelium in sympathetic ophthalmia and rarely in other granulomatous intraocular inflammations.

54. Dalen Fuchs nodules may be seen in all except-
   1. Sympathetic ophthalmitis
   2. Tuberculosis choroiditis
   3. VKH syndrome
   4. Behcet’s disease

Discussion- Dalen Fuchs nodules are collections of epithelial cells lying between Bruch membrane and the retinal pigment epithelium in sympathetic ophthalmia and rarely in other granulomatous intraocular inflammations.

60. A patient complains of blurred vision and glare on walking up with clears up as the day progresses. Diagnosis-
   1. Diabetes
   2. Fuchs dystrophy
   3. Low tension glaucoma
   4. Dry eye

Discussion-
   • Fuch's dystrophy--> damaged endothelium--> corneal edema--> symptoms worst in morning. Rx: hair dryer--> to be used on eye
Dry eye--> worst in evening

69. Which of the following history favours the diagnosis of Dry Eyes-
   1. Symptoms worse in the morning
   2. History of recurrent chalazia
   3. Symptoms worse in an AC room---------ans
   4. Fluctuations in IOP

54. A 60 year male presents with colored halos, was examined with Fincham’s test, which revealed that halos split and then reunion. Diagnosis is-
   1. Acute congestive glaucoma
   2. Open angle glaucoma
   3. Senile immature cataract---------------ans
   4. Mucopurulent conjunctivitis

55. Epidemic dropsy is characterized by all EXCEPT-
   1. Disc-edema
   2. Hard-exudates------------------------ans
   3. Peri-retinal haemorrhage
   4. Tortuous-retinal vessels

56. Which of these statements are correct-
   1. Reflex tear secretion is by the accessory lacrimal glands of Krause and Wolfring
   2. Basic tear secretion is by the lacrimal gland
   3. The oil slick sign(swirls of multicolored oil on surface of tear film) is seen in meibomianitis------------------ans
   4. Tear film break up time is 25 seconds
   Discussion-
   - Tear-
     - Basic tear secretion--> *accessory lacrimal gland
     - Reflex tear secretion--> lacrimal gland
     - Splitting--> minimum 10 sec (if <10 sec--> blinking rate increases)

57. The most common non-ocular malignancy to be associated with retinoblastoma is-
   1. Pinealoblastoma---------------ans
   2. Ewing’s sarcoma
   3. Wilms’ tumour
   4. Neuroblastoma
   Discussion- Retinoblastome is the m/c cause of calcification in the orbit

58. Which ocular structures is the most radiosensitive-
   1. Lens----------------ans
   2. Cornea
   3. Retina
   4. Optic nerve
   Discussion- Lens> Cornea> Retina>ON> Sclera

59. All the following can penetrate an intact cornea except-
   1. Neisseria
   2. Corynebacterium
   3. Listeria
   4. Pseudomonas---------------ans
   Discussion-
   - Cornea is penetrated by-
     - Gonococcus/Meningococcus
61. Contact lenses can be used after refractive surgery to do which of the following-
   1. Prevent regression
   2. Prevent astigmatism
   3. Improve visual acuity in irregular astigmatism
   4. Reduce chances of ectasia
   
   Discussion-
   • Regreesion: Power comes gain after surgical correction

62. A severely painful corneal ulcer with a ring infiltrate with marked absence of vascularization is indicative of-
   1. Bacterial keratitis
   2. Fungal keratitis
   3. Acanthamoeba keratitis
   4. Viral keratitis
   
   Discussion-
   • Viral keratitis--> least painful--> Virus anesthetises

63. An obese 23 year old woman presents with headache and transient visual obscurations. Bilateral papiledema is documented. The next step should be which of the following-
   1. Start oral acetazolamide
   2. Perform lumbar puncture
   3. Suggest weight reduction
   4. Obtain CT or MRI brain
   
   Discussion- Increased intracranial pressure can be due to a rise in cerebrospinal fluid pressure. It can also be due to increased pressure within the brain matter caused by a mass (such as a tumor), bleeding into the brain or fluid around the brain, or swelling within the brain matter itself or pseudotumor cerebri.
   • Causes of peudotumor cerebri-
     • Vit. A
     • Tetracycline
     • OCPs
     • Steroids*

64. The most common etiology of band shaped keratopathy is-
   1. JRA
   2. Systemic hypercalcemia
   3. Renal failure
   4. Sarcoidosis

65. Which is the final common pathway for horizontal movements of eye-
   1. Oculomotor nucleus
   2. Abducent nucleus
   3. Trochlear nucleus
   4. Vestibular nucleus

66. A patient develops osteosarcoma of the mandible after being treated for a retinoblastoma. Which of the following is false about the osteosarcoma-
   1. It follows radiation therapy
2. It follows chemotherapy--------------------------------ans
3. It is caused due to mutations of Rb gene
4. None of the above
Discussion- Parson P-360. Secondary malignancies develop particularly within the irradiated field.
   • Chemo(VAC)- Vincristine, Etoposide, Carboplatin

67. The power of contact lens is determined by all except-
1. Thickness
2. Posterior curvature
3. Refractive index
4. Diameter--------------------------------ans

68. Von Hippal Lindau syndrome is associated with ophthalmic lesion-
   1. Capillary hemangioma-----------------ans
   2. Glaucoma
   3. Cataract
   4. Uveitis
Discussion-
   • von Hippel-Lindau syndrome- a type of phacomatosis, consisting of retinal vascular malformations, which may be multiple and bilateral, associated with hemangioblastomas primarily of the cerebellum and walls of the fourth ventricle, occasionally involving the spinal cord; sometimes associated with renal cell carcinomas or cysts or hamartomas of kidney, adrenal, or other organs; autosomal dominant inheritance due to mutation in the von Hippel-Lindau gene (VHL) on 3p.

70. In against-the-rule astigmatism which one is false-
1. Horizontal meridian has more power than vertical meridian
2. Visual quality is less affected in with the rule astigmatism
3. A minus cylinder at 180 degrees will correct astigmatism---------ans(-90/+180)
4. A plus cylinder a 180 degrees will correct astigmatism
Discussion-
   • With-the-rule astigmatism- the vertical meridian is more curved compared. Corrected by +90 or -180 lenses (reverse for against the rule astigmatism)

71. What is the best single medication for treatment of POAG(Post operative acute galucoma) in a patient with chronic bronchitis, labile hypertension and depression who is 5 years aphakic patient-
   1. Epinephrine
   2. Pilocarpine--------------------ans
   3. Timolol
   4. Brimonidine
Discussion-
   • Depression- no brimonidine

72. The “tomato catsup” fundus is a classic finding in which of the phacomatoses-
   1. Sturge Weber syndrome--------------ans
   2. Neurofibromatosis
   3. Tubrous sclerosis
   4. Von Hippel Lindau syndrome
Discussion-
   • Sturge Weber syndrome is a triad of unilateral occurrence of-
     1. congenital capillary malformation (flame nevus) in the distribution of the trigeminal nerve;
     2. leptomeningeal vascular malformations with intracranial calcification and neurologic signs; and
     3. vascular malformation of the choroid, often with secondary glaucoma.
• Tomato catchup fundus- CRVO

73. **Definition of low vision**-
   1. Best corrected 6/60 to 3/60
   2. Best corrected 6/60 to 6/18
   3. Best corrected 6/18 to 6/6
   4. Best corrected 3/60 to 1/60

**Discussion**-
   - Normal: 6/6-6/18
   - Low: <6/18
   - Blind: <6/60

75. **Compared to spectacles, contact lenses**-
   1. Minify images in myopia
   2. Increase convergence and accommodation in myopia
   3. Magnify images in hypermetropia
   4. Decrease field of vision

**Discussion**- occurs d/t prismatic effect

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<tr>
<th>Myopes</th>
<th>have contact lens power less than spectacles (opposite in hypermetropes). Therefore hypermetropes dont use contact lens usually.</th>
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76. **NF-1 associated with**-
   1. Choroidal hemangioma
   2. Glaucoma
   3. Lisch nodules
   4. Optic nerve glioma

**Discussion**-
   - 90% of NF-1 have lisch nodules. Other options are also seen
   - NF-2:
     - Bilateral acoustic neuroma
     - MISME(Multiple Intracranial Schwannoma Meningioma and Ependidymoma)
     - Only one ophthalmic finding--> Cataract

77. **Which of the following is not included in the SAFE strategy for Trachoma**-
   1. Facial cleanliness
   2. Environmental cleanliness
   3. Screening
   4. Antibiotics

**Discussion**: Antibiotic--> Azithromycin

78. Orbital mass with intermittent proptosis, increases on bending forward, no thrill/bruit.
   MRI shows retro-orbital mass with enhancement with anechogenic (hypoechogenic) shadows and hyperechoic shadows
   1. Orbital AV malformation
   2. Orbital Varix
   3. Orbital Encephalocele
   4. Carotico cavenous fistula

79. **Which of the following signs is classic for CT scanning in Graves ophthalmopathy**-
   1. Nodular muscle enlargement
   2. Solitary muscle enlargement
   3. Fusiform muscle enlargement with sparing of tendons
   4. Kinking of extraocular muscles
80. Which of the following congenital cataract requires urgent surgical management-
1. Monocular anterior polar cataract
2. Binocular nuclear cataract
3. Monocular nuclear cataract
4. Binuclear posterior lenticous

82. Branching posterior spoke like cataracts (Propeller) are seen in
1. Down’s syndrome
2. Fabry’s disease
3. Neurofibromatosis
4. Atopic keratoconjunctivitis

84. Prostate’s pupil is called
1. Argyll Robertson pupil
2. Hutchinson pupil
3. Wernicke’s pupil
4. Adie’s pupil

Discussion- Argyll Robertson pupils are bilateral small pupils that constrict when the patient focuses on a near object (they “accommodate”), but do not constrict when exposed to bright light (they do not “react” to light). They were formerly known as “Prostitute’s Pupils” because of their association with tertiary syphilis and because of the convenient mnemonic that, like a prostitute, they “accommodate but do not react. They are a highly specific sign of neurosyphilis.

83. Patient presents with ptosis, down and out eye and normal reacting Pupils. Which is diagnosis-
1. Oculomotor palsy
2. Forth nerve palsy
3. Abducent nerve palsy
4. All of the above

Discussion- • 3rd nerve palsy-
  ○ Can result from injury at *PCA(Post. Communicating Artery)
  ○ Other causes- Tumor, MS, MG etc
  ○ Presentation-
    ▪ Pto
    ▪ Eyes down and out
    ▪ Mydriasis

85. Patients presents with a hypertropia(strabismus) of r/e with a small esotropia resulting in a diagonal diplopia with tilted images and a head tilt on the opposite shoulder. Diagnosis-
1. 3rd nerve palsy
2. 4th nerve palsy
3. Horizontal gaze palsy
4. INO

Discussion- • 4th nerve palsy-
  ○ Eye presents as up and in
  ○ Longest intracranial nerve
  ○ Comes from dorsum of the brain
  ○ Contralateral supply-
    • LSO supplied by right IV nerve
    • RSO supplied by left IV nerve (so in RSO squint head turns to left--> i.e head turns to the side of lesion)

86. Kayser Fleischer ring is
1. Pathognomic of Wilson’s disease
2. Occurs in all patients with hepatic failure due to Wilson’s disease
3. Occurs in all patients with neurological manifestations of Wilson’s disease
4. Disappears with desferrioxamine treatment

Discussion-
- Found on DM (Desmet’s membrane) --> Sunflower cataract
- Also found --> Fleischer’s ring --> d/t Fe on basement membrane

87. On fixing a pen-light, cornea reflex in the right eye is central and in the left eye is displaced 3 mm temporal to the centre of pupil. Patient has
1. 45 degree esotropia
2. 45 degree exotropia
3. 45 prism diopter esotropia
4. 45 prism diopter exotropia

Discussion-

See pupil is esophoric

88. Gram’s stain of a corneal ulcer patient reveals Gram negative rods. The following are possible diagnoses except-
1. Pseudomonas aruginosa
2. Neisseria
3. Serratia marcescens
4. Moraxella

89. Irreversible structural damage in the retina occurs after what duration of total ischemia-
1. 15-20 min.
2. 30-40 min.
3. 45-60 min.
4. 90-100 min.

90. The following are true about retinoblastoma-
1. About 40% of all retinoblastoma are heritable
2. Deletion of 13q14 chromosome is seen in 10% of patients
3. Systemic malformations are more common in those with bilateral than unilateral retinoblastoma
4. Secondary cancers are more common in non-heritable than heritable retinoblastoma

91. In involutional (senile) ptosis, which is true-
1. Height of skin crease is increased
2. Levator function is reduced
3. Up gaze is usually abnormal
4. Levator resection is the treatment of choice

Discussion- Involutional ptosis is a ptosis of varying degree with good levator function and high lid fold and increased lid excursion on downgaze.

92. The following lens changes correspond with the medical condition except-
1. Posterior subcapsular cataract in retinitis pigmentosa
2. Posterior lenticous in Alport’s Syndome
3. Droplet cataract in galactosemia
4. Christmas tree cataract in myotonic dystrophy
Discussion: Alport's --> Anterior lenticonus (given wrong in Parson)

93. Which one of the extra-ocular muscles are served by a single nucleus that is shared by both oculomotor nerve nuclei-
   1. Superior rectus
   2. Medial rectus
   3. Inferior oblique
   4. LPS-----------------ans

95. A 22 year old woman in 7th month of her pregnancy complains of visual loss. Potential causes could be all except-
   1. Cortical blindness
   2. Acute glaucoma-----------------------------ans
   3. Ischemic optic neuropathy
   4. Exudative retinal detachment

Discussion: In pregnancy uveo-scleral outflow increases--> no glaucoma

96. Which of the following is most useful for testing vision of pre-verbal children(1-3years)-
   1. Visual evoked response
   2. Preferential looking test
   3. Illiterate E test
   4. Optokinetic nystagmus-------------------ans

Discussion: All can be used but it can quantify vision (6/6 or 6/60 etc.)

97. Patient with bilateral narrow anterior chamber angles and normal IOP should undergo which of these tests-
   1. Topical steroid challenge
   2. Oral water drinking test
   3. Prone dark-room test------------------------ans
   4. Dilated examination

Discussion: To determine the efficacy and safety of the dark-room prone-position test (DRPT) for intermittent angle closure (IAC)

98. Gram negative rods growing in gray blue colonies with a sweet grape aroma is-
   1. Pseudomonas aeruginosa-------------------ans
   2. Neisseria gonorrhoea
   3. Haemophilus influenza
   4. Proteus

99. Regarding hypermetropia which statement is true-
   1. Total hypermetropia=latent + manifest ----------------------ans
   2. Latent hypermetropia= absolute + manifest
   3. Absolute =manifest + latent
   4. Absolute= manifest + facultative

55. Right homonymous hemianopia is seen in lesion of-
   1. Rt. optic tract
   2. Left optic tract----------------ans
   3. Right parietal lobe
   4. Left parietal lobe

Discussion: (FAQ)

Lesions in optic pathway-
- Compression of chiasma (Pituitary adenoma)--> Bitemporal hemianopia*
- Optic tract lesion--> C/L Homonymous hemianopia*
  - Lt. lesion--> Rt. Homonymous hemianopia
• Lesions in optic radiation in *temporal lobe (Meyer's loop) --> *Superior quadrantic homonymous hemianopia
• Lesions in optic radiation in parietal lobe--> Inferior quadrantic homo.homonymous