COMMONEST IN OPHTHALMOLOGY

AND

IMPORTANT POINTS

www.gims-org.com

Dr.G.Bhanu PrakashKulkarni
Most common cause of viral corneal ulcer - H. simplex.
Most common cause of viral conjunctivitis - Adeno virus.
Most common cause of Bilateral papilloedema - Brain tumor.
Most common bacteria causing central corneal ulcer - pneumococci.
Most common site for lodgement of intraocular foreign body – vitreous.
Most common manifestation of maternal rubella – Cataract.
Most common intraocular Cyst is – Traumatic.
Most common site in eye for secondary metastasis – Choroid.
Most common ophthalmic diagnostic procedure in Sjogren’s syndrome is – slit lamp examination of cornea after Rose Bengal staining.
Most common manifestation of Behcet’s syndrome – is recurrent Aphthous ulceration.
Most common complication of Behcet’s syndrome is – Hypopyon uveitis.
Most common lid swelling – Chalazion, meibomian cyst.
Most common. Malignant tumor of eye lid – Basal cell carcinoma (Rodent ulcer).
Most common malignant intraocular tumor in adult – Malignant melanoma.
Most common site of metastasis for intraocular malignant melanoma- Liver
Most common type of keratitis – Herpes simplex Keratitis.
Most common cause of subluxation of lens – Trauma.
Most common form of uveitis - Idiopathic.
Most common cause of acute retinal necrosis syndrome is – herpes infection in AIDS.
Cavernous haemangioma is the most common benign orbital tumour, growth rate may be accelerated by pregnancy, may give rise to visual loss without much proptosis, high internal reflectivity is seen on ultrasonography.
Rhabdomyosarcoma is the most common primary malignant orbital tumor in children.
Astigmatism is without a doubt the most common refractive error corrected today.
Most common cause of hypermetropia is axial hypermetropia( due to abnormal shortness of antero – posterior diameter of globe).
The commonest symptom complained of by an aphakic wearing aphakic correction is pincushion distortion.
The commonest age of presentation of myopia is between 5-10 yrs.
The most commonly used tests for colour vision testing are the polychromatic plates of Ishihara, Stilling, or Hardy- Rand-Ritler.
The device most commonly used by the general physician for measuring IOP is Schiotz tonometer.
The most commonly used ophthalmoscope is being hand- held ophthalmoscope designed for direct magnified (14X) view.
The most commonest eye disorders in childhood are squint and obstruction of the nasolacrimal duct.
The most common indentation tonometer in clinical use is that of schiotz.
Conjunctivitis is the most common eye disease in the western hemisphere.
The commonest bacterium responsible for anacut mucopurulent conjunctivitis is staphylococcus aureus.
The most common cause of ophthalmia neonatorum is *Chlamydia trachomatis.*
The most common site of corneal ulceration in ophthalmia neonatorum is below the centre of the cornea.
The commonest cause of acute catarrhal conjunctivitis are the *Pneumococcus* (in temperate climates) & *H. aegypticus* (in warm climates).
The most common cause of a red eye is *acute conjunctivitis.*
The most common cause (now) of phlyctenulosis is *staphylococci.*
The most commonest cause of conjunctiva is *Lymphatic cyst.*
The most commonest cause of phlyctenulosis is a hypersensitive response to microbial protein (staphylococci)
The most commonest micro-organism responsible for a neonatal conjunctivitis is *TRIC agents.*
In trachoma corneal ulcer occur anywhere but are commonest at the advancing edge of the pannus.
The most common cause of corneal edema is increased intraocular pressure.
The commonest cause of failure in treatment of hypopyon ulcer is the development of secondary glaucoma (a complication which usually occurs in elderly people.)
The commonest corneal dystrophy is *Reis-Buckler’s type.*
Epithelial basement membrane dystrophies are seen most commonly after the age of 30.
*Keratoconus* most commonly progresses slowly over a number of decades.
The most common cranial nerve palsy affected by herpes zoster ophthalmicus is third cranial nerve.
Rheumatoid arthritis is the most common collagen vascular disorder to affect the peripheral cornea.
The commonest ocular complication of SLE is punctuate epithelial keratopathy.
The *commonest* cause of cornea opacity is healed corneal ulcer.
Microcystic dystrophy (*cogan’s mapdot – *finger print or epithelial basement membrane*) is the *most common* dystrophy of cornea seen in clinical practice (macular dystrophy is least common)
Disciform keratitis is the *commonest* complication of HSV infection.
Tuberculous is the *commonest* cause of uveit’s.
Synchysis (liquefaction) and syneresis (collapse) are the two *most common* degenerative changes in the vitreous gel.
Posterior staphyloma is *most commonly* seen in pathological myopia.
The most commonest complication in recurrent uveitis is Glaucoma.
The commonest complication of pars planitis is complicated cataract.
The commonest cause of iridoschisis is senile atrophy.
Haemangioma of choroid is *most commonly* associated with Sturge-Weber’s syndrome.
The most common lesion of choroid as a result of myopia or obliterator vasculosis is *Central Choroidal Atrophy.*
The most common form of cataract is the *commonest* congenital cataract causing visual impairment (Otherwise blue dot cataract is the *commonest* congenital type.)
Most common postoperative complication of extracapsular cataract extraction is posterior capsule thickening.
The most commonly encountered developmental cataract is anterior axial embryonal cataract.

The most common form of glaucoma is primary open angle glaucoma.

The most common associated congenital anomalies with Buphthalmos is Neurofibromatosis.

The most common complication following trephining operation for glaucoma is secondary infection.

The commonest hazard following surgery of congestive glaucoma is malignant glaucoma.

The commonest side-effect of acetazolamide is numbness and tingling of fingers and toes.

Diabetes is the most common cause of cotton wool spots.

Retinal haemorrhage is the change most commonly associated with hypertension.

The most common cause of traction retinal detachment are proliferative retinopathies (diabetic retinopathy) or penetrating injuries.

Autosomal recessive is the most common mode of inheritance of retinitis pigmentosa.

Embolization is the most common cause of obstruction to the retinal circulation.

Retinal branch artery occlusion is most commonly caused by emboli.

Pseudoxanthoma elasticum is the most common systemic disorder associated with angioid streaks.

The most common syndrome associated with retinitis pigmentosa is Laurence-Moon-Biedl syndrome.

The most common cause of spontaneous vitreous haemorrhage is proliferative diabetic retinopathy.

Most common inheritance of pigmentary retinal dystrophy is recessive.

The most common quadrant to have retinal holes is superotemporal.

Retinal detachment is common in aphakia and myopia.

The most common variety of primary pigmentary retinal dystrophy is without any family history.

Retinoschisis most commonly occurs in lower temporal quadrants.

Homonymous hemianopia is the commonest form of field loss & may be due to a lesion any where the occipital lobe & the chiasma.

Accident or facitious instillation Of drug that cause papillary dilation is seen most commonly in person in medical settings.

The chromophobe adenoma is the most common primary intracranial tumor producing neuroophthalmological features.

The most common conditions that affect the III CN is trauma (second most common cause is diabetes)

By far the most common cause of anterior ischemic optic neuropathy is giant cell arthritis.

Internuclear opthalmoplegia (INO) is most commonly associated with multiple sclerosis.

The two most common ocular signs of myasthenia gravis are drooping eyelid (ptosis) and extrocular muscle weakness (causing strabismus)

Vision loss is the most common facial symptom of optic nerve glioma.

Most commonly suppression occurs in strabismus patients, where abnormal alignment of the eye causes different areas of the two retinas to be simulated; a condition that would result in double vision or diplopia.
The most commonest cause of binocular diplopia is paralysis of extraocular muscles.
The most common cause of paretic strabismus is due to haemorrhagic thrombotic lesion in the midbrain associated with arteriosclerosis or diabetes.
In pressure paralysis the nerve most commonly involved is abducens (6th) cranial nerve.
The common cause of bilateral internuclear ophthalmoplegia is multiple sclerosis.
The most common type of strabismus is Esotropia (manifest convergentstrabismus).
The most common and most virulent fungal disease (phycomysis) involving the orbits are caused by organisms of the class phycomycetes.
The most common fungal causing phycomycosis are mucor (mucormycosis) and Rhizopus.
Marginal blepharitis is the most common disorder of the lids.
Surgery is by far the most common method of treatment for chalazion.
Congenital ptosis is the commonest form of ptosis affliction.
Meibomian cyst (chalazion) is the most common lid swelling.
The most common cause of congenital ptosis is defective development of levator palpebrae superioris.
The commonest malignant growth of the lid is basal cell carcinoma.
Chronic dacryocystitis is more common abnormality of the lacrimal passage is an obstruction at nasolacrimal duct.
The commonest site of obstruction in epiphore occurring in an adult is junction of the sac and the nasolacrimal duct.
In the orbital cellulites, the most common nasal sinus from where extension of inflammation occurs is ethmoidal sinus.
Pseudotumour of the orbits is commonest between the age group of 40-60yrs.
Mucocoele of accessory sinues of the nose affecting the orbit most commonly occurs in Frontal sinus.
The most common cause of intermittent exophthalmos is orbital vertices.
The most frequent cause of pulsating exophthalmos is caroticocavernous fistula.
The commonest cause of canaliculitis is Actinomyces.
The primary tumour of the orbit most commonly presenting with proptosis is cavernous haemangioma.
The commonest histological type of rhabdomyosarcoma of the orbit is embryonal type.
The commonest finding in anaemia is pallor of the tarsal conjunctiva.
The eye is most commonly involved in the severe bullous form of erythema multiforme disease (in which membrane is involved — the Steven-Johnson syndrome).
The most common ophthalmic complaints of acoustic neuroma are diplopia & blurred vision (the most common non-ocular symptom is unilateral hearing loss).
Toxoplasmosis is probably the most common cause of posterior chorioretinitis.
Thyrotoxicosis is the commonest cause of proptosis.
The commonest extraocular muscle palsy in tabes dorsalis is oculomotor nerve.
The commonest lid sign of dysthyroid exophthalmos is Dalrymple’s sign.
The commonest ocular sign of hypothyroidism is cataract.
- The **commonest** feature of Waardenburg's syndrome is lateral displacement of both medial canthi and lacrimal puncta.
- Basal cell carcinoma is the **most common** human malignancy (90% occur in head & neck and of these 10% involve eye lid).
- Basal cell carcinoma is the **most common** malignant tumour of the eye lid (90% of all cases).
- The two external beams **most commonly** used to treat lid neoplasms are orthovolatage photons and megavoltage lesion of the conjunctive.
- Choroidal malignant melanoma is the **most common** primary intraocular tumor of adults.
- The **most common** adult iris lesions are naevi, melanoma and cysts.
- The **most common** initial presentation of von-Hippel – Lindau syndrome is decreased vision in the second or third decade of life.
- **Most common** benign ocular tumor of infancy is capillary hemangioma.
- Rhabdomyosarcoma is the **most common** primary orbital malignancy (accounts for 5% of all childhood malignancies).
- **Most common** presentations of orbital rhabdomyosarcoma is ptosis or lid mass.
- **Most commonly**, children who develop either orbital osteogenic sarcomas or leiomyosarcomas had bilateral retinoblastoma approximately 10 yrs previously.
- The commonest orbital ocular vascular tumor presenting in children is lymphangioma.
- Cavernous haemangioma is the **most common** adult intracranial (the volume surrounded by the extraocular muscles) tumor.
- Optic nerve sheath meningioma is the **most common** adult optic nerve tumor.
- The second **most common** sinus process that involves that adult orbit is malignant squamous cell carcinoma with contiguous spread.
- Metastatic tumours to the orbit –
  - In woman – breast cancer is most common
  - In man- lung cancer is most common
  - In children – neuroblastoma is most common.
- Pathologically the **most common** cell type in choroidal malignant melanoma is mixed cell type.
- The **most common** mode of metastasis of retinoblastoma is by direct extension, by continuity to the nerve.
- The **most common** site of metastasis of retinoblastoma is brain in the intracranial cavity.
- The **commonest** histological type of rhabdomyosarcoma of the orbit is embryonal.
- The **commonest** tumour of the lacrimal gland is benign mixed tumour.
- The most **commonest** malignant tumor of mesenchymal origin in the orbit is Rhabdomyosarcoma.
- The **most common** type of injury to iris is rupture of papillary margin.
- The **most common** site for rupture of the eyeball is **along the limbus**.
- The **most common** cause of deterioration of visual acuity 4-12 weeks after intracapsular cataract is cystoids macular oedema.
- The common material used for manufacture of intraocular lens is PMMA.
- The **most common** complication of intraocular lens implantation is posterior capsule thickening.
• The **most common** method used for treating the retinal hole is cryotherapy.
• The **commonest** complication in exfoliation of the lens capsule is Glaucoma.
• **Commonest** complication of posterior intraocular implant is Dislocation.
• The most common presentation of functional visual loss is constricted visual fields or decreased visual acuity in one or both eyes.
• **Most commonly** employed color vision test to detect colour blindness is Isochromatic charts.
• Glaucoma is the second most common cause of vision loss in the elderly population.
• **Most common** primary malignant tumor of orbit in childhood is Rhabdomyosarcoma.
• **Most common** benign tumor of lachrymal gland is mixed –cell Tumor
• **Most common** adjacent tumor which invades the orbit is sq. cell carcinoma of Maxillary Antrum.
• **Most common** type of Rhabdomyosarcoma is Embryonal Type.
• **Most common** tumor of Lacrimal sac is Transitional Cell Tumor.
• **Most common** part of orbit involved by Rhabdomyosarcoma is Superonasal Quadrant.
• **Most common** tumor of conjunctiva is Naevus (Benign pigment tumor)
• **Most common** epibulbar tumor in children is Choriostoma.
• **Most common** site of conjunctival dermoid is Interotemporal part of the Limbus.
• **Most common** site of epibulbar osseous choriostoma is superotemporal part of bulbar conjunctiva.
• **Most common** site of squamous papilloma of conjunctiva is circumscribed nervus.
• **Most common** site of malignant melanoma of conjunctiva is Limbus
• **Most common** site of local metastasis from conjunctival malignant melanoma is Regional lymph nodes.
• **Most common** site of distant metastasis from conjunctival malignant melanoma is Brain.
• **Most common** adjacent tumor from which conjunctiva is secondarily involved is Sebaceous Gland Carcinoma of the Eyelid.
• **Most common** caruncular tumors from are papilloma & nervus.
• **Most common** site of benign Oncocytoma in eye is Lacrimal glands.
• **Most common** benign tumor of eyelid is Squamous Papilloma.
• **Most common** malignant tumor of eyelid is Basal cell carcinoma.
• **Most common** mesenchymal tumor of eyelid is Hemangioma.
• **Most common** site of sebaceous gland carcinoma (Meibomian cell carcinoma) is upper lid.
• **Most common** vascular tumor of eyelid is capillary hemangioma.
• **Most common** primary intraocular tumor is malignant melanoma of choroid in adults.
• **Most common** clinical form of retinoblastoma is Somaticnonhereditary.
• **Most common** genetic form of retinoblastoma is Somaticnonhereditary
• **Most common** endogenous mutagen in retinoblastoma is 5- methylcytosine.
• **Most common** cause of glaucoma in patient with retinoblastoma is Iris neovascularization .
• **Most common** cause of **pseudoretinoblastoma** is persistent hyperplastic primary vitreous.
• **Most common** hereditary cause of **pseudoretinoblastoma** is Noorie’s disease.
• **Most common** site of metastasis in retinoblastoma is – bone (Skull most commonly).
• **Most common** disease associated with retinal and optic nerve astrocytoma is Tuberous Sclerosis (Bourneville’s disease, Epiloia).
Most common site for retinal pigment epithelial hamartoma is juxtapupillary Region.

Most common presentation of Ocular reticulum cell sarcoma (Histiocytic Lymphoma) is Bilateral vitreous infiltration.

Most common site for Basal cell carcinoma of conjunctiva is Plica-secmilunaris.

Beta soluble crystalline protein is the commonest type in lens.

The most commonest cause of proptosis is dysthyroi disease.

A meibomain cyst is the commonest type of lid swelling.

Diabetic retinopathy is the commonest in middle life.

Chronic open angle glaucoma is the commonest type of glaucoma.

The most common cause of blindness in person over 65 (in developed countries) is macular degeneration.

Inflammation is the commonest disease of uvea.

Most common type of cataract is senile type.

Rheumatoid arthritis is the commonest disease associated with true defective tear production.

Steroids react with amino group of lens crystallins to precipitate the formation of disulphide bonds leading to protein aggregation and cataract (post. Subcapsular is most common).

Commonest cause of binocular diplopia is paralysis of extra ocular muscles.

Zonular or lamellar cataract is the commonest congenital cataract causing visual impairment; otherwise blue dot cataract is the commonest congenital type.

Tuberculosis is the commonest cause of uveitis.

Thyrotoxicosis is the commonest cause of proptosis.

Cataract is the commonest cause of blindness in India.

The commonest organism responsible for corneal ulcer is pneumococcus.

Epibullbar dermoid is commonest congenital tumor of conjunctive.

Basal cell carcinoma is the most common malignant lid tumor.

The most common cause for failure to reattack the retina is open retinal break (Preoperative or operative.)

IMPORTANT POINTS TO BE REMEMBERED:
In neurogenic ptosis, the amount of levator function is inversely proportional to the innervational defect.

Blepharophimosis is inherited as an autosomal dominant trait.

In congenital ptosis the ptotic lid is higher in down-gaze than the normal lid.

Lid colobomas may be associated with dermoids.

Atopic dermatitis may be associated with anterior subcapsular cataracts.

A blow out fracture of the orbit may cause numbness of the upper lip.

Loss of vision in the absence of significant proptosis may be seen in the Glioma of the optic nerve, apical cavernous haemangioma, apical granulomas, thyroid ophthalmopathy.

Enlargement of the superior orbital fissure may be seen in infraclinoid aneurysms, intracavernous aneurysms, orbital tumours.

Intraorbital calcification is seen in orbital varices, optic nerve sheath meningiomas, lacrimal gland carcinoma, retinoblastoma.

Increased bone density of the orbit is seen in meningioma, Paget’s disease, osteoblastic secondaries, fibrous dysplasia.

In thyroid ophthalmopathy an α-adrenergic blocking agent may be effective in treatment of lid retraction.

Bilateral pseudotumour may be associated with polyarteritis nodosa, Wedener’s granulomatosis, waldenstrom’s macroglobulinaemia.

Hand–Schuller–Christian disease is associated with diabetes insipidus

About 40% of children with neuroblastomas have orbital metastasis.

Ewing’s sarcoma cause a haemorrhagic proptosis.

Orbital metastasis most commonly occurs from the bronchus, the kidney the gastrointestinal tract,

Disorders which may be associated with an aqueous deficiency of tears: psoriatic arthritis, Riley Day syndrome (familial dysautonomia), pseudotumour, Hashimoto’s thyroiditis, primary Biliary cirrhosis.

In Sjogren’s syndrome, 50% have hypergammaglobulinaemia, 70-90% may be rheumatoid factor positive, 80% have antinuclear antibodies, antiDNA antibodies may be seen, antibodies to gastric parietal cells may be seen.

The agent used in the tear substitutes are Polyethylene glycol 2%, Dextran70.

The iatrogenic causes of punctual stenosis: IDU, phospholine iodide, 5 FU.

In investigation of the patency of the lacrimal drainage system, negative Jones-I test is indicative of a lacrimal pump failure.

Positive Jones-II-test is indicative of a partial nasolacrimal duct obstruction.

Macrodacryocystography is useful to detect a filling defect caused by streptothrix.

In nasolacrimal duct obstruction, involutional stenosis is probably the most common cause, Hydrostatic massage is effective in 95% of cases in the first year of life, Non–canalization at birth is frequent near the valve of Hasner, A DCR may be done for an incomplete obstruction.

Amass usually below the medial canthal tendon may be indicative of a lacrimal sac tumor.

Canalicultis is commonly caused by herpes simplex infection.

A mucocele is an indication for a DCR
Blepharitis may be associated with the following sign on the lid margin: Madarosis: Poliosis, Trichiasis. Collarettes, Rosettes (dilated blood vessels)

Ophthalmia neonatorum may be caused by herpes simplex.

Spring catarrh may give rise to Trantas dots, corneal plaques, Cupid’s bow.

Superior limbic keratoconjunctivitis (SLK) is more common in women, SLK is associated with dysthyroid eye disease.

Hutchinson’s freckle is Precancerous.

Goldenhar’s syndrome may be associated with Choristomas, Hemifacial hypoplasia, Strabismus, optic Hypoplasia, Tilated disc.

In the cornea, the Bowman’s membrane is acellular.

Filamentary keratitis may be seen in prolonged patching of the eyelid, superior limbic keratoconjunctivitis, herpes zoster, sjogren’s syndrome.

Gross pannus formation may be seen in Rosacea, Pemphigoid.

Melanin and Krukenberg’s spindle are associated.

Brloene and neomycin are effective in amoebic keratitis.

Congan’s syndrome may be associated with polyarteritis nodosa.

Herpetic eye disease may be precipitated by Systemic corticosteroids, trauma, sunshine, psychiatric disturbances.

In primary herpes simplex infection of the eye, pre-auricular adenopathy is seen, 50% develop a keratitis, Disciform keratitis is rare.

Pseudodendrites are associated with soft contact lens wear, Healing corneal abrasions.

Decresed corneal sensation occurs in Diabetes, Riley –Day syndrome, Lattice corneal drstrophy, Anhidrotic ectodermal dysplasia.

In peripheral corneal ulcerations, contact lens cornea may be associated with rheumatoid arthritis.

Salzmann’s nodular degeneration in cornea occurs following trachoma.

Fuchs endothelial dystrophy is autosomal dominant.

Cornea verticillata may be associated with or seen in the treatment of systemic lupus erythematosus, cardiac arrhythmias, α- Galactosidase- Adeniciency, breast carcinoma, arthritis.

Corneal depositions are associated with the mucopolysaccharidoses Morquio’s.

Hard lenses are usually small and steep.

Radial keratotomy may be followed by diurnal fluctuations of vision.

Epikeratophakia may be used to treat Aphakia, myopia, keratoconus, hypermetropia.

In Uveitis, floaters are usually the presenting feature of pars planitis, associated with sarcoidosis, development of disc new vessels may be a feature.

Masquerade syndrome includes melanoma, histiocytic lymphoma.

In the uveitis associated with juvenile chronic arthritis the eye is white even in the presence of severe uveitis, the second eye involvement in unilateral cases is rate after one year.

In the uveitis associated with juvenile chronic arthritis. The eye is white even in the presence of severe uveitis the second eye involvement in unilateral cases is rate after one year.

Vogt-Koyanagi-Harada syndrome: affects the posterior segment initially as a multifocal choroiditis.
The drugs used in the treatment of vision-threatening toxoplasmosis: Clindamycin,
Pyrimenthamine.

In ocular manifestations of acquired immunodeficiency syndrome (AIDS): CMV retinitis is a
major cause of visual loss, 50% of patient have transient cotton wool spots: Skin tumours of the
lids are a feature; scattered retinal nerve fibre haemorrhage can occur as in isolated feature.

Presumed ocular histoplasmosis is characterized by Histot spots, peripapillary atrophy,
Haemorrhagic disciform macular degeneration.

Heterochromic cyclitis has small stellate KPs scattered all over the cornea as a pathognomonic
feature.

The cytotoxic agent used in uveitis, is Azathioprine.

Pigmentation of the trabecular meshwork is more prominent inferiorly in Trauma, Uveitis,
pseudoexfoliation, Senile eyes.

Blood in the schlemm’s canal is commonly seen in Sturge Weber syndrome, Hypotony,
Carotidcavernous fistula.

Blood vessels may be observed in the angle in normal eyes, in chronic uveitis, as a complication
of diabetes, as a complication of glaucoma.

Kinetic perimetry may be performed on a Lister’s perimeter.

In the management of primary open angle glaucoma (POAG) with miotics, Iris cysts may be
prevented by concomitant use of phenylephrine.

The side effects of dichlorphenamide include depression, decreased libido, renal stones,
metabolic acidosis, Stevens Hohnson syndrome.

Following Argon Laser trabeculoplasty, transient pressure elevations occurs in 25% of cases, the
pressure rise is commonly detected within the first three hours, anterior non-granulomatous
uveitis is seen, Permanent intraocular pressure elevations occur in 3% of cases.

Excellent result with argon laser trabeculoplasty occurs in Glaucoma capsulare, eyes with
primary open angle glaucoma prior to lens extraction, Pigmentary glaucoma.

Argon laser iridotomy causes less bleeding, failure of iridotomy patency is commoner with argon
laser.

In pigment dispersion syndrome, the size and density of the Krukenberg spindle is directly
proportional to the extent of associated iris atrophy, extreme retinal periphery may have
pigment deposition.

The pseudoxefoliation syndrome causes glaucoma in 60% of affected eyes. Has eyes with a
hyperpigmented trabecular meshwork.

In the formation of a cataract and its morphology, Galactokinase deficiency is responsible for
some forms of presenile cataract.

α-Galactosidase deficiency is associated with spokelike lens opacities, α-2-Glo bulin deficiency
is associated with sunflower cataract.

In systemic disease associated with cataract, hypoparathyroidism is associated with small white
flecks of cataract which rarely progress to maturity.

The postririo subcapsular lens opacities are seen in gyrate atrophy of the retina. Stickler’s
syndrome. Leber’s congenital amaurosis.
In the evaluation of congential cataracts, Bilateral cataracts have a more favorable visual outcome than unilateral cataracts. Delayed treatment of unilateral cataract leads to structural changes in the geniculocortical pathways.

- Abnormal vitreoretinal, areas of white pressure, congenital cystic retinal tufts.
- The dome-shaped mirror of the Goldman allows visualization of ora serrata.
- Snail track degeneration has the same complications as lattice degeneration.
- Giant tears are associated with areas of white without pressure.
- Snow flake degeneration is important because it is frequently associated with other vitreoretinal degenerations of importance.

In the surgical management of retinal detachment, inferior equatorial tears require subretinal fluid drainage; air may be used to flatten radial retinal folds.

- Features that suggest preproliferative diabetic retinopathy include: large blot haemorrhages, Interetinal microvascular anomalies, ‘Sausage-like’ segmentation of veins, arteriolar narrowing.

In proliferative diabetic retinopathy: it has been estimated that one-quarter of the retina has to be non-perfused before new vessels develop, the predilection of new vessels on the disc is due to the absence of an internal limiting membrane, total vitreous detachment could lead to a regression of new vessels, vitreous haemorrhage may be precipitated by severe physical exertion pregnancy may adversely affect this stage of eye disease.

In proliferative diabetic retinopathy: NVD have a greater propensity to bleed than NVE, NVE without vitreous haemorrhage untreated have a 10% chance of severe visual loss in two years. NVE without vitreous haemorrhage have a 7% risk of severe visual loss in two yrs, a sign of involution of new vessels after PRP is pallor of the optic disc.’

In the treatment of vitreous haemorrhage in proliferative diabetic retinopathy, in the absence of rubeosis irides, and vitreous haemorrhage early vitrectomy should be considered in insulin dependent patients, associated with rubeosis irides, early vitrectomy allows PRP which prevents neovascular glaucoma.

- Recognized risk factors in the development of central retinal vein occlusion are: Waldenstrom’s macroglobulinaemia, Behcet’s disease.
- Retinal artery occlusion is associated with mural thrombus, atrial myxoma, scleroderma, myocarditis, angle closur glaucoma.
- In the pathogenesis and clinical feature of retinopathy of prematurity (ROP), vascularzation of the retina starts at the fourth months of gestation plus disease is characterized by venous dilation and tortuosity of the arterioles, myopia is a feature of cicatricial disease.
- In the macula area, the internal limiting membrane is a thinnest within the fovea.
- Subretinal neovascular membranes are associated with serpiginous choriodopathy, rubella retinopathy, Best’s disease, excessive photocoagulation.
- Central serous chorioretinopahty manifests as an acquired hypermetropia.
- Lacquer cracks have a predilection of fundi of highly myopic young adults; macular pucker is a complication of retinal, choroidal folds may occur for no apparent reason bilaterally in hypermetropic patients with normal vision.
- **Angioid streaks** are associated with optic nerve head drusen, Groenblad-Strandberg syndrome, sickle cell disease.
- **Bulls eye maculopathy** may occur during treatment of malaria in non-endemic areas, systemic lupus erythematosus (SLE).
- In the electroretinogram: the ‘b’ wave arises from the retinal pigment epithelium, the ‘b’ wave is generated by the Muller cells.
- The inheritance of **retinitis pigmentosa** is autosomal dominant, autosomal recessive, X-linked recessive.
- Retinitis pigmentosa is associated with translucent vitreous floaters, optic nerve head drusen, cellophane maculopthalmy myopia.
- Systemic associated of retinitis pigmentosa include Ataxia, acanthoytosis, heart block, non progressive sensorineural deafness, Malabsorption.
- Luber’s congenital amaurosis is associated with oculodigital syndrome, keratoconus, renal abnormalities, epilepsy.
- **Best’s disease** is associated with a subretinal neovascular membrane in stage V of the disease.
- **Cherry red spot** at the macula is identified in infantile amaurotic familial idiocy, GM2 gangliosidosis type 2, Niemann- Pick disease, Sialidosis.
- The ERG and EOG are normal in central areolar choroidal dystrophy, Wagner’s disease.
- Aniris melanoma is usually composed of spindle cells.
- Retinoblastoma which is associated with abundant rosettes histopthologically has poorer prognosis than a retinoblastoma with none.
- Spontaneous hyphema may occur in Retinoblastoma, Juvenile xanthogranuloma, Incontinentia pigmeni.
- The following are recognized clinical features of persistent hyperplastic primary vitreous: Elongated ciliary processes, cataract, angle closure glaucoma, microphthalmia.
- A horopter is an imaginary surface in space all points of which still stimulate corresponding retinal elements and are therefore projected to the same position in space, Pannum’s area is a zone surrounding points on the horopter in which objects are seen singly.
- In evaluation of diplopia **Hess chart** may be used as a prognostic guide to recovery.
- **Hirschberg’s test** is useful in eliminationg pseudostrabismus, a 4 dioptre prism in front of a squinting eye (with microtropia) does not include corrective movement.
- Infantile (congenital) esotropia is associated with cerebral palsy.
- In non-refractive accommodative esotropia bimedial recession is the surgical procedure of choice.
- The helpful methods in the treatment of amblyopia are Pleoptics, Cam therapy, Occlusion, Penalization.
- **Duane’s retraction syndrome** is congenital is associated with co-contraction of the horizontal recti, may be associated with congenital skeletal defects.
- **Mobius syndrome** has the following clinical features: infantile feeding difficulties, exposure keratitis, atrophy of the tongue, and expressionless face.
- In the surgical correction of ocular motility disorders’ A’ pattern esotropia is treated by bilateral medial rectus recession with upward transposition, Faden procedure is used to correct DVD,
**Hummelsheim procedure** is used for correction of sixth nerve palsy, adjustable sutures are used for surgery in cases of thyroid myopathy.

- Arcuate defects in the visual field may occur in Optic nerve head drusen. Optic neuritis, optic neuropathy (ischaemic), optic nerve head cupping.
- In multiple sclerosis with optic neuritis, colour vision is severely impaired even in patients with relatively good visual acuity.
- Anterior ischaemic optic neuropathy occurs in Polyarteritis nodosa, migraine, atherosclerosis, giant cell arteritis, papilloedema.
- In optic nerve gliomas, Diffuse enlargement of the optic foramina are noted on the Rhese View X-ray.
- In diabetes, the pupil is **spared**.
- **Painful ophthalmoplegia** is caused by Tolosa- Hunt syndrome, Diabetes, Aneurysms.
- **Light near dissociation** may occur in Juvenile diabetes, aberrant regeneration of the third nerve, pinealomas, neurosyphilis, dystrophia myotonica.
- Congenital nystagmus may be dampened by convergence.
- The bony orbit is a pear-shaped cavity that is made from constituents of **seven** individual bones.
- All paranasal sinuses are normally present at birth (apart from the frontal sinus which is rudimentary until **2 yrs** of age). All sinuses are lined by a pseudostratified columnar ciliated epithelium.
- The embryonic nucleus is the **innermost** nucleus of the lens.
- Muller cells are responsible for the nutrition of retinal resources, and are responsible for the nutrition of retinal resources, and are responsible for the nutrition of retinal resources, and are responsible for the B wave of the electroetinogram.
- The central retinal artery arises from the opthalmic artery where it lies **inferolateral** to the optic nerve.
- **Staphylococcus epidermidis** is found in up to 70% of eyes, and **Staphylococcus aureus** approximately 45°. The most common anaerobe is Propionibacterium acnes.
- Protozoan commensals include Demodex follicularum (found on the eye lashes in almost everyone over 70yrs of age). Up to 100 fungi (including pityrosporon orbiculari, a yeast found on the lashes and lid margins) have been found.
- **Cottonwool spots** are the most common finding in AIDS.
- **Candida albicans** can also cause retinitis whose appearance is often mistaken of the cottonwoll spots induced by ischaemia.
- ELISA is the **most sensitive and specific diagnostic** aid for toxocariasis.
- The chance of congenital toxoplasmosis is increased if the maternal infection is in the third trimester, but the severity of the illness is greatest if the infection occurs in the first trimester.
- **Flucytosine** has a limited spectrum, including candidiasis or Cryptococcosis.
- **Foscarnet** appears to be about as effective as ganciclovir for the initial **2-3 weeks** induction therapy of CMV retinitis.
Type II MHC antigens are classified by HLAD sequences, and are found predominantly on macrophages, Langhans cells dendritic cells, and occasionally on cells that have been exposed to IFN-g interferon.

The ideal topical preparation should be biphasic so that it can pass through the hydrophilic and hydrophobic layer of the cornea.

The only known ocular side effect of phenyoin is nystagmus.

The protein content of the lens is higher than in any other body tissue (33% of lens weight). Soluble proteins such as α-β and γ crystalline make up 85% of the total protein content. β Crystalline accounts for 50% of these soluble proteins; a crystalline is predominantly found in the cortex.

Lipids accounts for 5% of the dry weight of the lens (cholesterol approximately 50%, phospholipid 45%, glycosphingolipids 5%) and the cholesterol; phospholipid ratio is higher than in any other tissue. Glycolysis utilizes 80% of the lens glucose but does not produce a correspondingly high percentage of the ATP output as glycolysis will produce a net gain of only 2 ATP for every glucose molecule.

The near triad consists of convergence, accommodation and papillary constriction (not dilatation).

The framework of the vitreous is made up of specialized type of collagen called vitrosin.

Anisocoria is increased in dim light because the normal pupil will dilate, whereas the Horner’s pupil will not.

The exact details of the critical period for acquity humans are not as well defined as those for experimental animals (cats)

Optotypes all derive from the Landholdt “C”

Tear film is composed of 3 layers: a lipid layer (by tarsal glands), second aqueus layer (from gland of Krause & Wolfring) and inner hydrophilic mucin layer (by goblet cells), is 0.05mm thick.