Done by waeel.

Accommodation

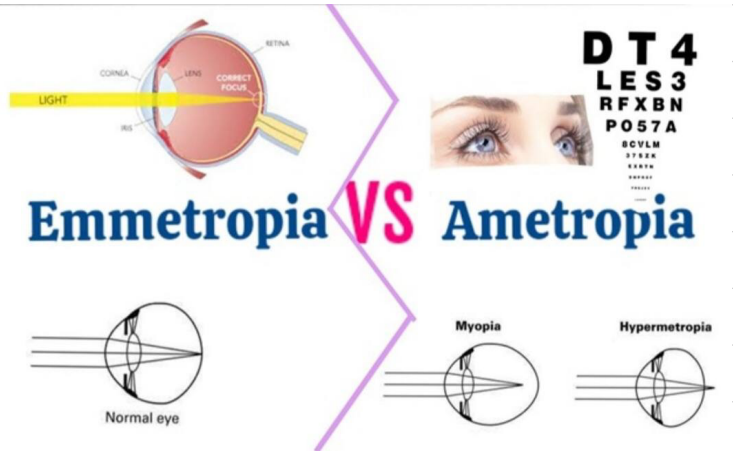
this is the process by which the clear lens inside the eye can actually change shape to help our focus and then see the clear lens can become flat like a thin slice of stilton (جبنة الستيلتون) and help you see far away or it can become round and plump like sausage and let you see things close up (very important for reading)

In the age of 40 our lens become stiff and we become more and more dependent upon our reading glasses to see up close we are losing our ability to accommodate

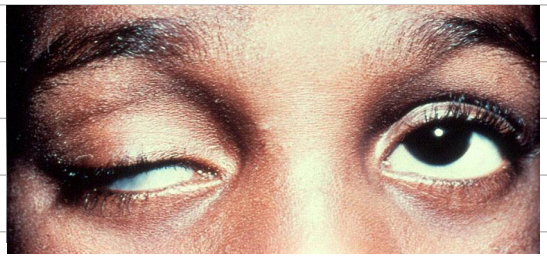
During accommodation the ciliary muscles adjust lens shape to properly focus images.

Refractive errors definitions

Emmetropic (normally refracted eye) entering light rays are focused on the retina by the cornea and the lens creating a sharp image that is transmited to the brain.



Ammetropic (the presence of refractive error) the eye is unable to converge parallel rays from infinity directly to the retina without the aid of the elastic lens. The lens is elastic, more so in younger people.



Anisometropia is a significant difference between the refractive errors of the 2 eyes (usually >3 diopters)

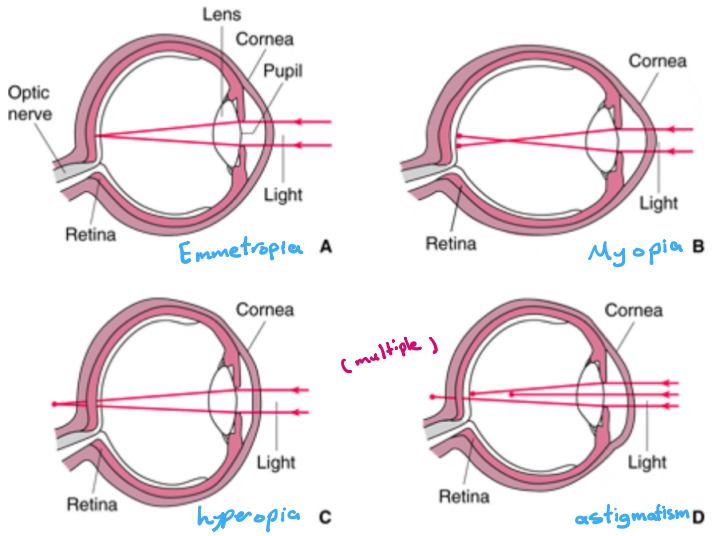
when corrected with eyeglasses, a difference in image size (aniseikonia) is produced; it can lead to difficulties with fusion of the 2 differently sized images and even to suppression of one of the images.

a condition of asymmetric refraction between the two eyes.

Refractive errors are failure of the eye to focus images sharply on the retina, causing blurred vision.

Type of refractive errors

① Myopia (nearsightedness) the point of focus is in front of the retina because the cornea is too steeply curved, the axial length of the eye is too long, or both.
Distant objects are blurred, but near object can be seen clearly.
To correct myopia, a concave (minus) lens is used.



Myopia refractive errors in children frequently increase until the child stop growing.

*Myopia it is a form of refractive error inability to reflact bend focus the light rays properly in which parallel rays of light coming from a distinct object after entering the eye are focused in front of the retina instead of on the retina with eye muscles at rest.

Causes

① curvature increase of curvature of cornea or lens causes light rays to be focused in front of retina
② axial increase in axial length of eye increases the converging power and cause light race to be focused
③ index increase in refractive index eye light bending focusing power of the lens
④ positional anterior displacement of lens after trauma this again causes light race to be focused in front of retina

Types

① Consenital
② Simple (m.c) & start from 5-10 years till 15-20 years and is mostly due curvature or length problem of eye ball
③ pathological (hereditary, progrosive and due degenerative changes in the eyes

Clinical features

① Symptoms [blurred vision / half shutting of eyes / outward deviation of eye / squint]

② Signs [prominent eyeball as eye is big / retinal changes in pathological myopia]

Diagnosis

① Retinoscopy

② Scan (small US)

Treatment we have to dec the focusing power of the eye, so the image is formed on the retina instead of in front of it [by using a diverging lens like glasses, contact lenses or some surgical procedure]

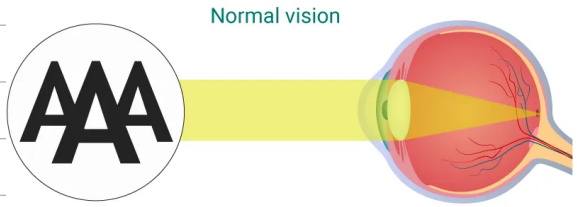
① flattening of cornea → RK, PRK, LASEK, LASIK

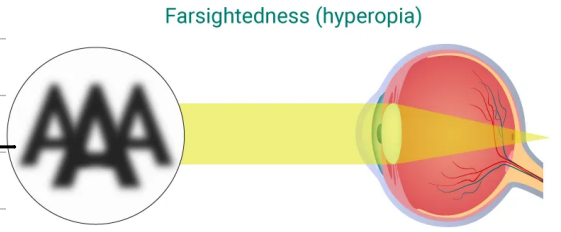
② lens extraction

③ contact lens implantation

---

② hyperopia (farsightedness) the point of focus is behind the retina because the cornea is too flatly curved, the axial Lenght is too short, or both. in adults, both near and distant object are blurred. But children and young adults with mild hyperopia may be able to see clearly because of their ability to accommodate. To correct hyperopia, a convex (plus) lens is used.





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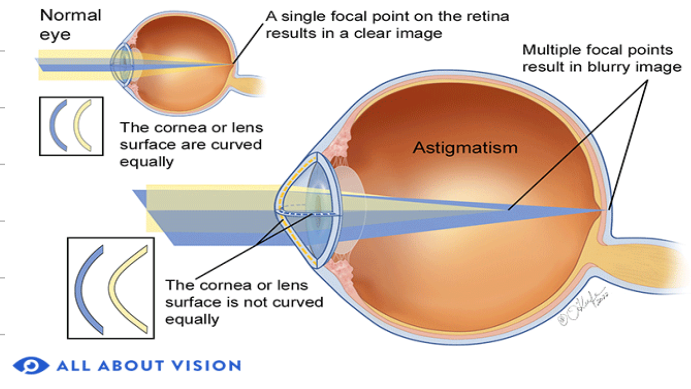
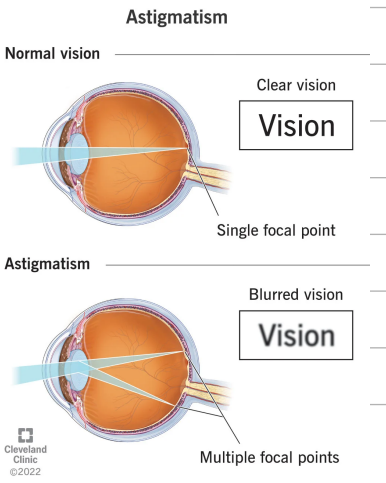
③ astigmatism, non-spherical (varible) cruvature of the cornea or lens causes light rays of different orientation (vertical, oblique, horizontal) to focus at different points. To correct astigmatism, a cylindrical lens is used.

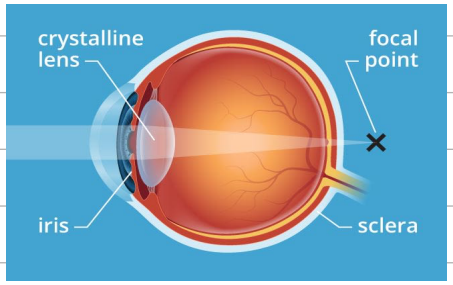
Cylindrical lenses have no refractive power along one axis and are concave or convex along the other axis.





④ Emmetropia (presbyopia) is loss of the lens ability to change shape to focus on near objects due to aging. Typically, presbyopia becomes noticeable by the time a person reaches the early or mid 40s.

A convex (plus) lens is used for correction when viewing near objects. These lense may be supplied as separate glasses or built into a lens as bifocals or variable focus lenses.

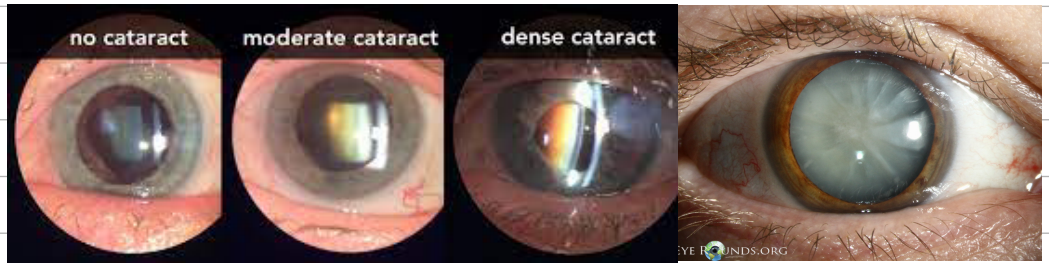


العدسة تفقد مرونتها
Lose elasticity and hardens of it (more rigid)

Sign & symptoms

1. blurred vision
2. headaches
3. eye irritation
4. itching
5. visual fatigue
6. foreign body sensation, redness

Cataracts

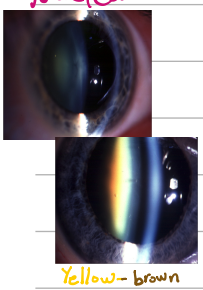


Cataractes is a dense, cloudy area [when the proteins in the eye form clumps] [opacification]

- Causes
  - senile
    - smoking
    - UV light
    - blood sugar level
  - pre-senile
    - ocular
      - Trauma / Tumors
      - Uveitis
      - high myopia
      - Topical med (steroid)
    - systamic dis
      - DM
      - systemic drugs (steroid)
      - Atopic dermatitis
      - infection (eg. Rubella)

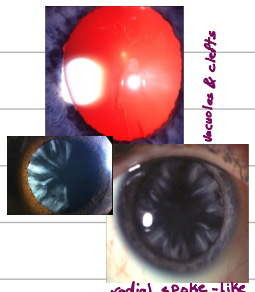
Types of cataract

Nuclear



Yellow-brown

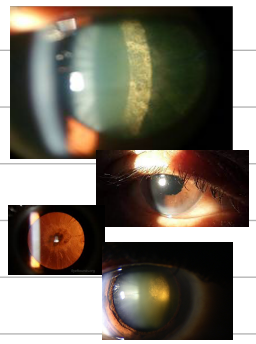
Cortical



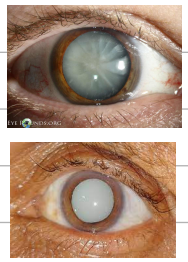
radial spoke-like opacities

In the eadges

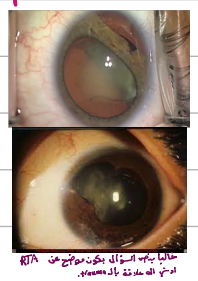
posterior subcapsular



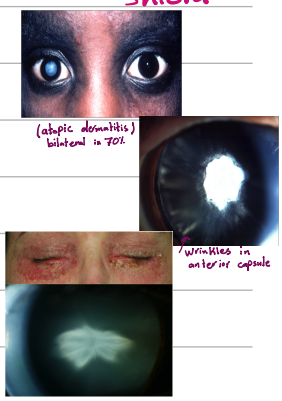
Mature



presenile traumatic



shield



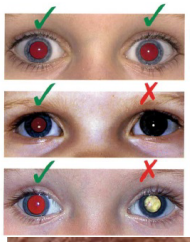
frequently becomes

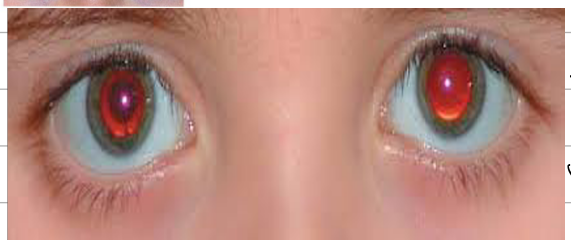
Signs

① ↓ visual acuity especially when measured in Light

② lens opacity

③ Black spot in the center of the red reflex





Congenital

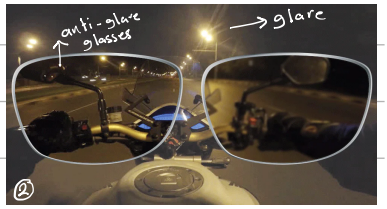
symptoms

① Loss of vision

② glare

③ change in refractive error (with nuclear sclerosis)

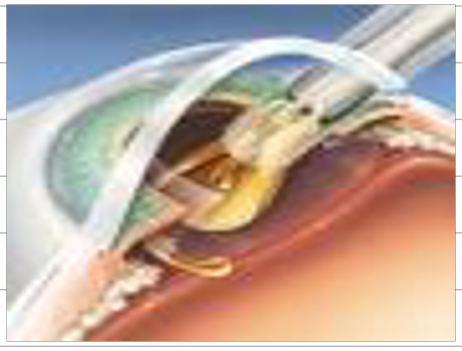
④ Leukocoria (whith pupil)

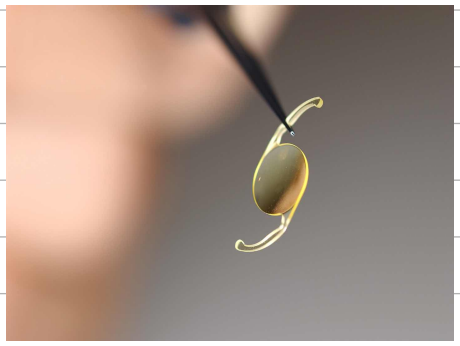


①

Treatment

surgery
- phacoemulsification (m.c)
- extra capsular cataract extraction (ECCE) remove the lens only.
- Intra capsular Cataract extraction (ICCE) remove the lens with its capsule (whole lens)

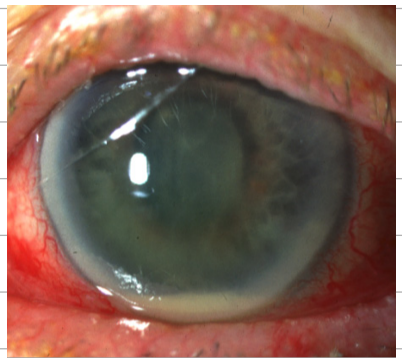




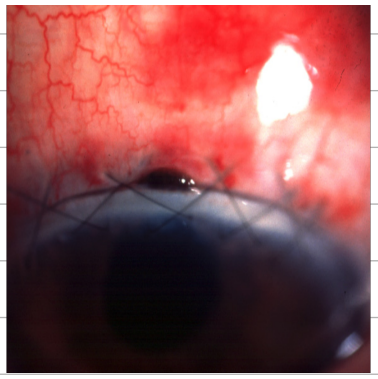
phacoemulsification (insertion of IOL)

Complications

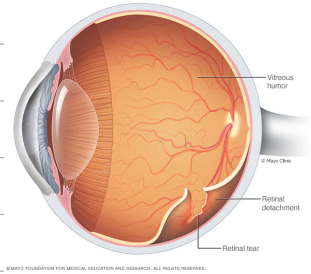
1. Vitreous Loss
2. iris prolapse (early postoperative complication)
3. endophthalmitis
4. postoperative astigmatism
5. Macular edema
6. Retinal detachment
7. Opacification of the posterior capsule



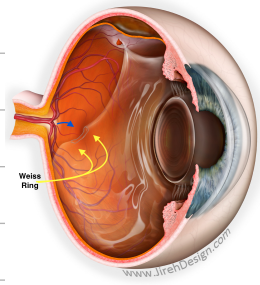
Acute bacterial endophthalmitis
- staph epidermids
- staph. aureus
- pseudomonas sp.



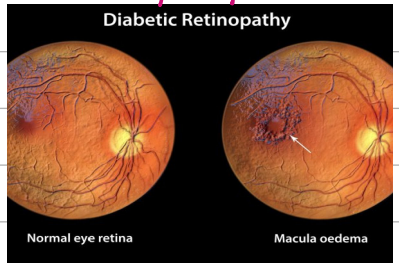
Iris prolapse



Retinal detachment



vitreous Loss

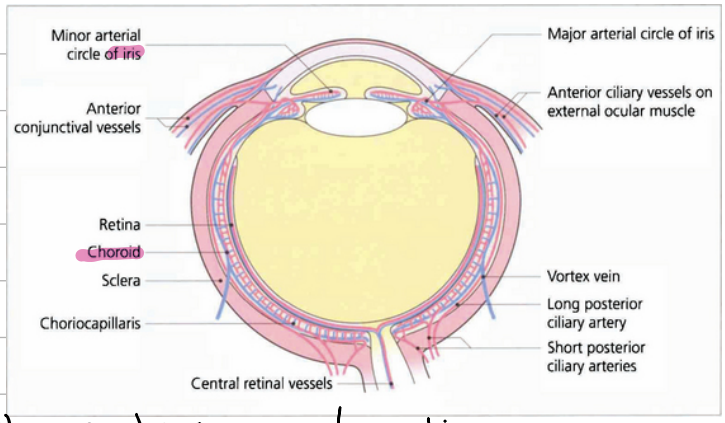


uveitis

uveal tract (vascular pigmented layer, vascular tunic, uvea).

The uveal tract consists of:

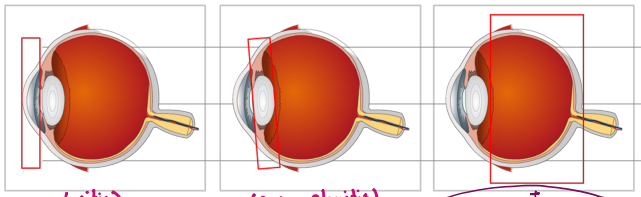
1. Iris
2. ciliary body
3. choroid (uvea)



The uveal tract lies between the sclera and retina.

Anatomical | etiological (infectious, non infectious) | chronological (acute or chronic)

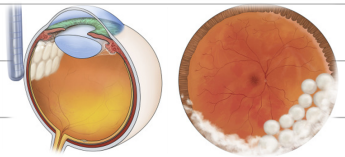
Classification of Uveitis
Anterior, Intermediate, Posterior and Panuveities



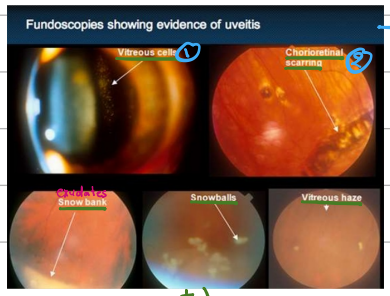
(iritis) | (pars planitis) | +

Anterior Uveitis (iris + anterior part of ciliary body) | **Intermediate Uveitis** (post part of ciliary body, anterior part of choroid) | **Posterior Uveitis** (choroid)

common form intermediate

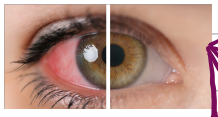


- cell in the vitreous
- retinal or choroidal foci of inflammation
- Macular oedema



* panuveities = all the three components

* when the adjacent ciliary body is also inflamed ⇒ iridocyclitis



- Periocular pain
- photophobia
- blurred vision
- conjunctival injection
- turbidity on slit-lamp
- Keratic precipitates
- hypopyon

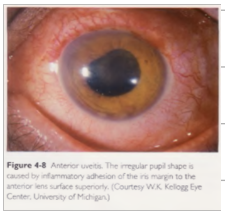
irregular pupil

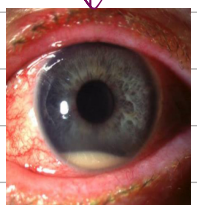
IOP ↑ or ↓

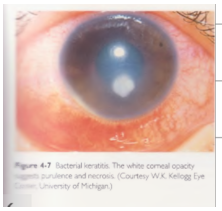
spondyloarthritis presentation

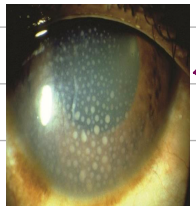
+

Painless | floaters | ↓visual acuity





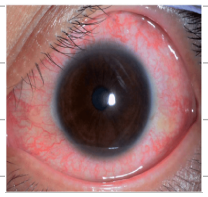


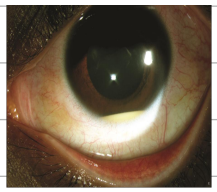


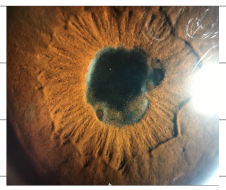
Complications:

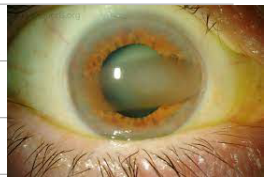
1. Band Keratopathy (deposition of calcium)
2. posterior synechiae
3. cataract
4. glaucoma and Intraocular HTN
5. cystoid macular edema

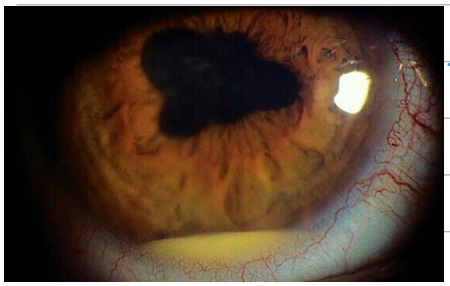
Signs

1. 
ciliary injection

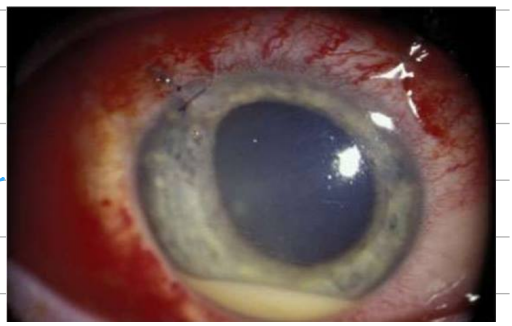
2. 
hypopion

3. 
posterior synechiae

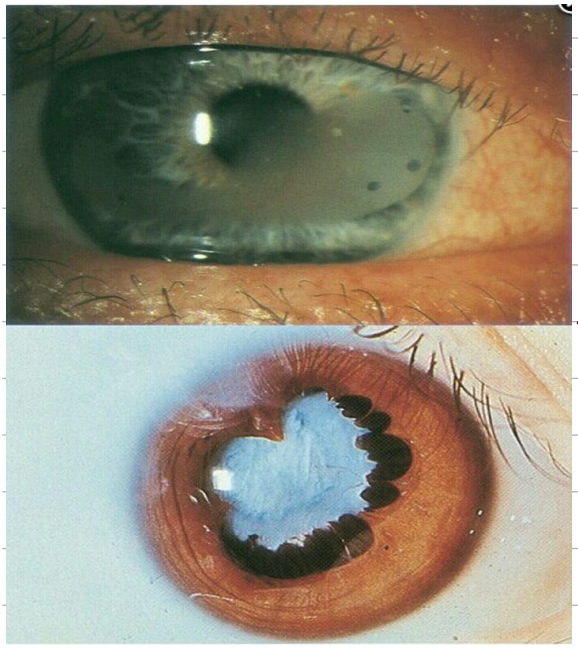
4. 
Band Keratopathy



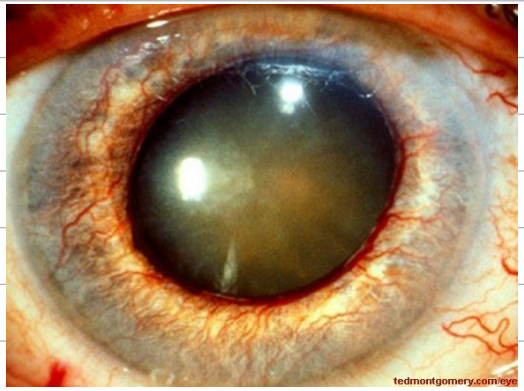
① posterior synechiae
② hypopyon
③ ciliary injection
[Anterior uveitis]



hypopyon
[Anterior uveitis]

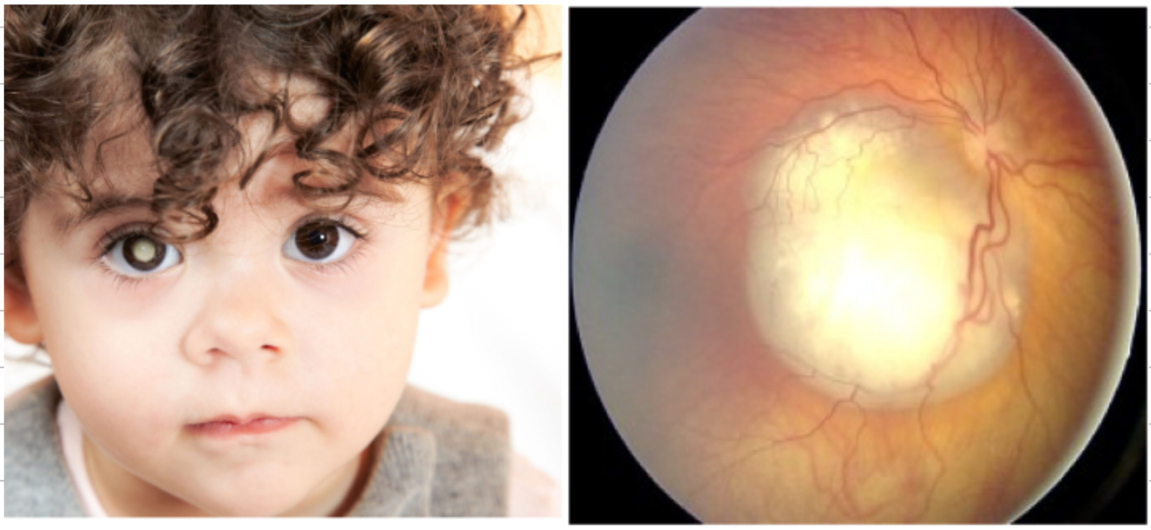


→ chronic anterior uveitis.



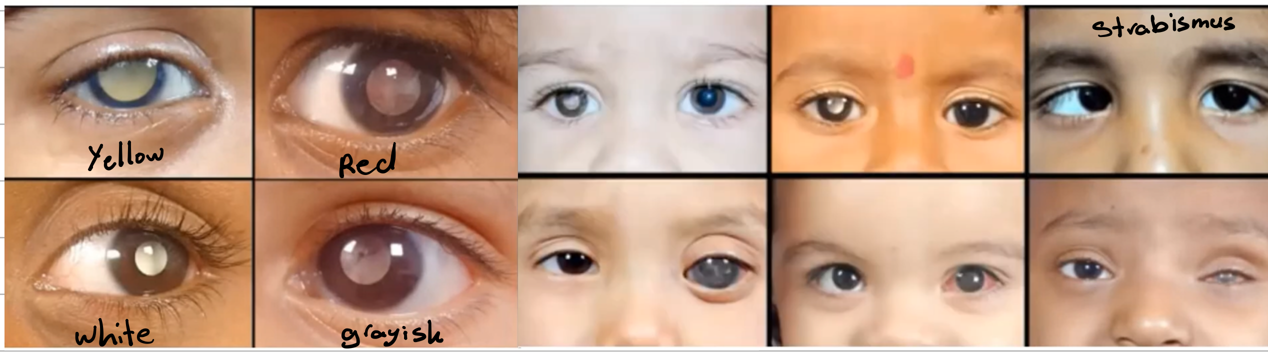
Rubeosis Iridis

Retinoblastoma



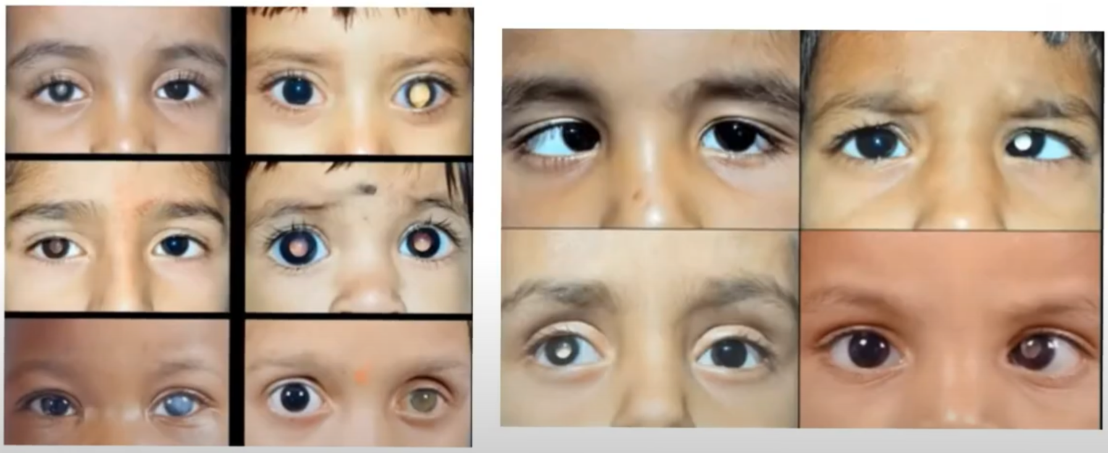
The most common malignant intraocular tumour in children.

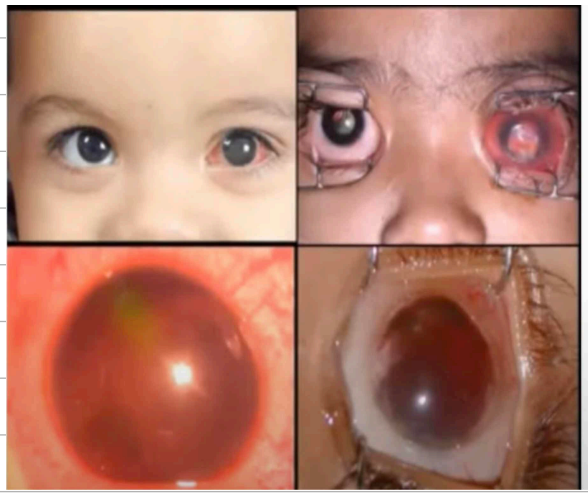
* mutation in the RB1 gene / autosomal dominant inheritance.



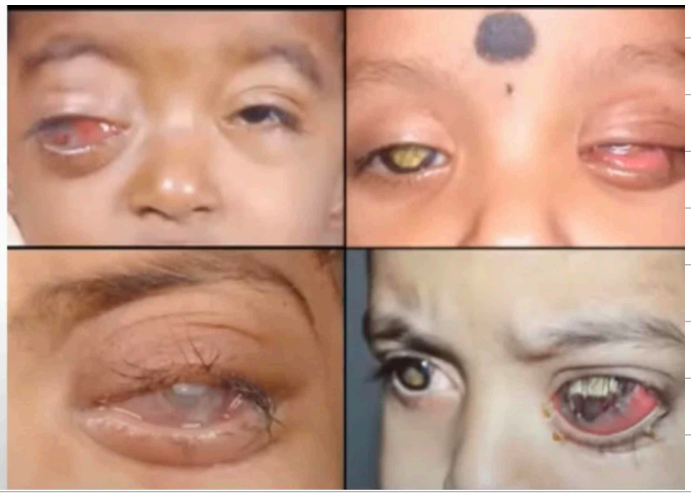
children is the presence of Leucocoria or white pupil but it's not always. sometimes the pupil can be grayish, buphthalmos due to increas in the IOP, they can present with a squint, hyphaema (yellow) or present with phthisis bulbi [Lucky] ⟶ regressed بكون tumor الا بس علاج عنا في كأنه مش

Presentation of pupillary color change VS strabismus





Red eye



pseudocellulitis

Pseudocellulitis

↳ which means that the tumor is really growing rapidly that it can represent cellulitis

Treatment

↳ antibiotics

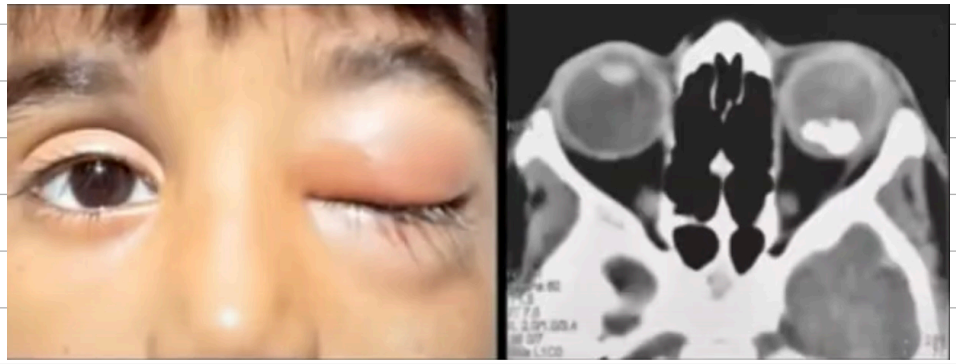
How I can discriminate (تميز) whether the pt has pseudocellulitis or true cillulitis?

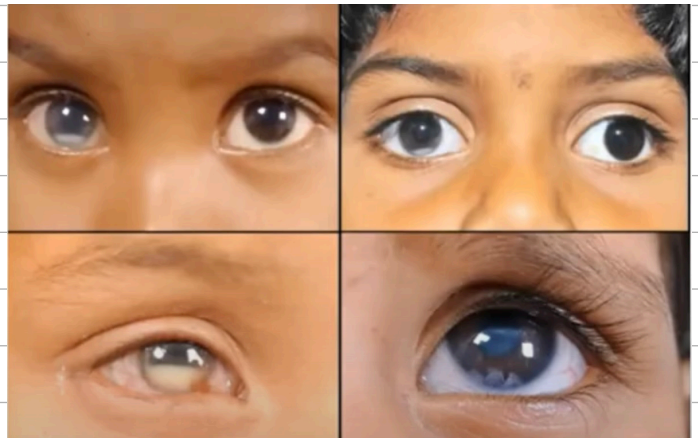
by the CT scan [intraocular calcification if seen in the CT this mean the pt has retinoblastoma rather than having orbital cellulitis].

why dose calcification happen in retinoblastoma?

Calcification in a tumor mass, means this tumor has a high metabolic rate and calcification happens secondary to tumor necrosis and spillage of DNA in the matrix.

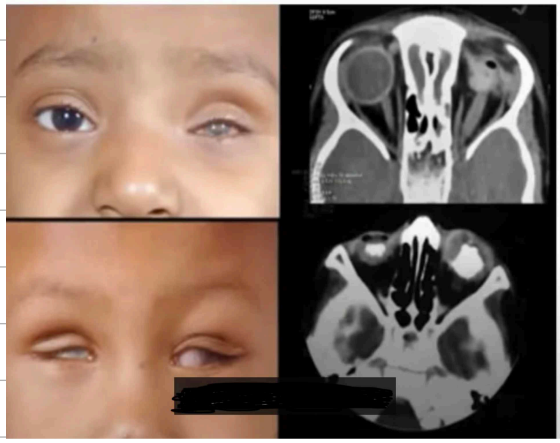
DNA is negatively charged due to the presence of phosphate group, which adhere to Ca^{+2} → calcification.

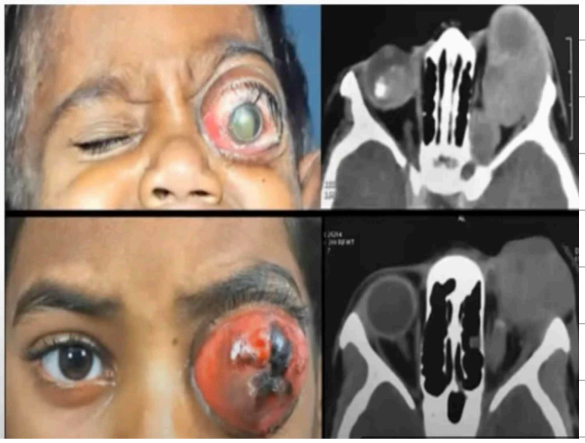




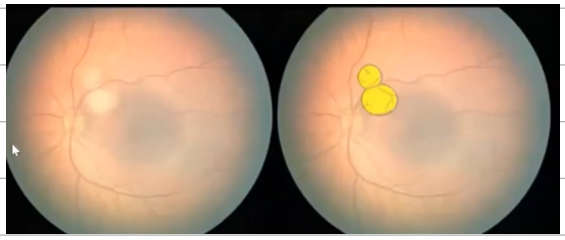
pseudo hypopyon can happen.
why pseudo?
because the white not hypopyon
it's an accumolation of fluid
* it might mistaken it for endogenous endophthalmitis.

Phthisis bulbi because of tumor over growth VS extension to the orbit

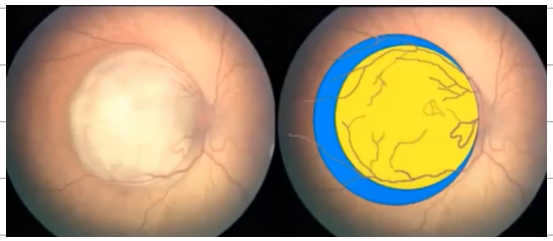




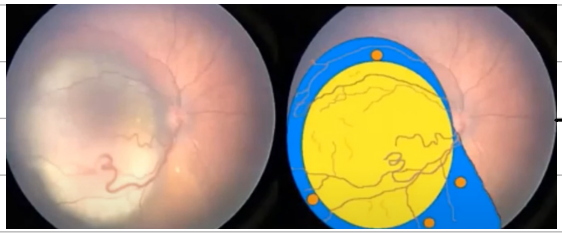
International Classification of retinoblastoma



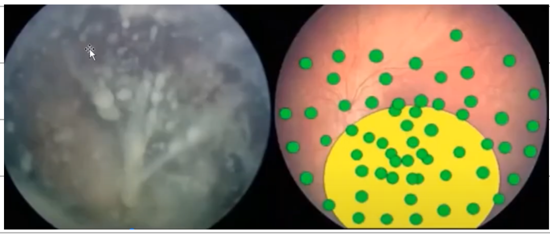
Group A, tumor size less than 3mm



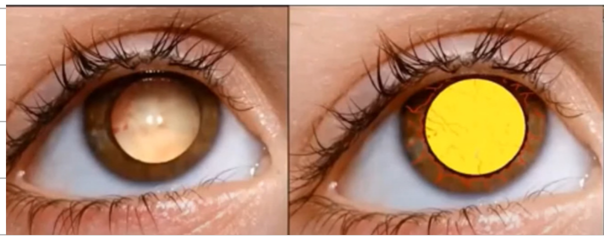
Group B, tumor size more than 3mm presence of subretinal fluid, macular involvement (no seeding of the vitreous)



Group C, tumor size more than 3 mm, presence of subretinal fluid, macular involvement and presence of submacular seeds (not seed into the vitreous)



Groub D, tumor size more than 3mm, presence of diffuse vitral seeds



Group E, tumor size more than 3mm, presence of diffuse vitral seeds (really extensive and huge ↳ It's require inoculation)

Treatment

Focal therapy

- **Cryotherapy** (effective in small lesion and the tumor away from macule and optic nerve)
- **Transpupillary thermotherapy** may be alone or with chemo) complication subsequent formation of catract
  يعرض علاقة الغشاء ال Leaser الأزرق 7 minutes
- **enucleation** done for solitary tumors those with sporadic cases

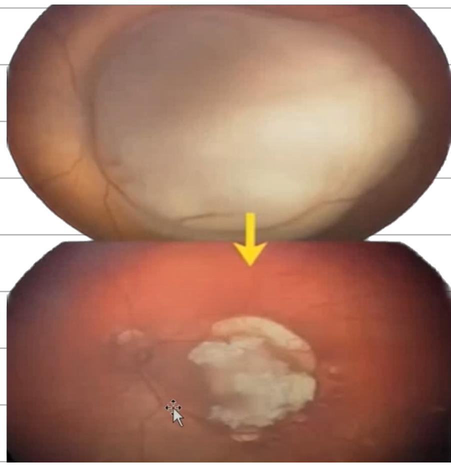
Systemic

- **Intravitrous chemotherapy** (melfilan)
- **Intra aterial chemotherapy**
- **Intravitreal chemotherapy by cath to carotid (ophthalmic)**

(Intra aterial and intravitreal:) Vincristine, carboplatin

Radiotherapy

- plaque therapy
- external beam radio



the size of tumor after chemotherapy

Retina

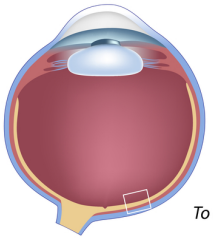
The retina has 10 layers the first layers is the retinal pigment epithelium (which is different from the other nine layers - neurosensory retina-)

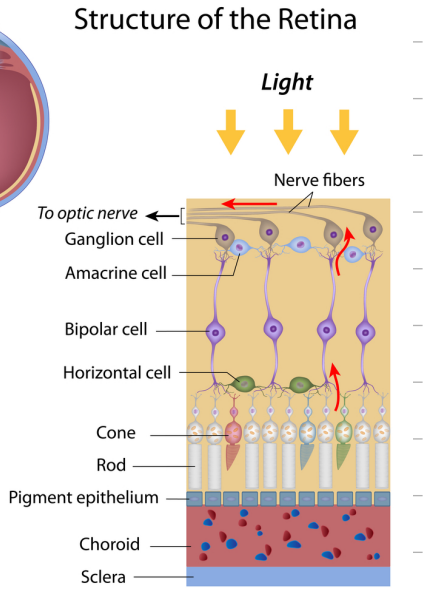
neurosensory retina is divided into receptors
- first order neurons
- second order neurons

(the receptors are called the photoreceptors)
- cones (short)
- rods (long)

Cones responsible for sharp vision (colored and static vision)

Rods responsible for night vision (black and white vision)





blood supply
- choroid (to the outer 1/3 of the retina)
- retinal vasculature (ordinary) (to the inner 2/3 of the retina)

Retinal disease caused by diabetes [Diabetic retinopathy]

*people with DM can lose vision from macular edema, macular ischemia, vitreous hemorrhage and tractional retinal detachment.

classification of Diabetic retinopathy

Non proliferative diabetic retinopathy (NPDR)

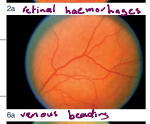
Mild
at least one microaneurysm

Moderate
1. intraretinal haemorrhages
2. microaneurysms
3. cotton wool spots
4. venous beading
5. intraretinal microvascular abnormalities.

Severe
relies on the 4-2-1 rule
- intraretinal hemorrhages or microaneurysms in 4 quadrants
- venous beading ≥ ETDRS in 2 quadrants (2a)
- intraretinal arterial malformation ≥ ETDRS in 1 quadrants (2a)

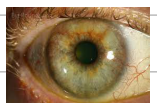
*Treatment is advised if there is clinically significant macular oedema comprising at least one of the following:
1. Thickening of the retina within 500Mm of the fovea
2. Presence of hard exudates located within 500 Mm of the fovea with adjacent retinal thickening
3. Retinal thickening at least one disc area in size.


2a retinal haemorrhages


6a venous beading


8a intraretinal arterial malformation

*if the pt has Rubeosis iridis it is important to check the intraocular pressure.


Neovascularization of the iris

proliferative diabetic retinopathy (PDR)

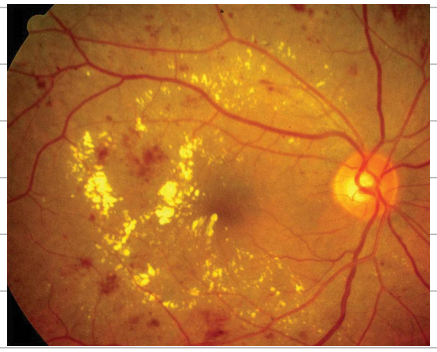
- symptoms progressive loss of vision (ضعف بالنظر اللي ما اخذت اي علاج)
- signs the presence of fine to severe loops of new vessels that may grow on the optic disc

*Neovessels of the iris may cause occlusion of the angle and may lead to closed angle glaucoma tit may leak → retinal edema tit may bleed → vitreous hemorrhage

*contraction of this fibrovascular tissue may lead to:
- Distortion or dragging of the macula
- tractional retinal detachment
- Avulsion of retinal vessels and vitreous hemorrhage

#Risk factors

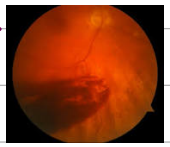
1. Duration of the diabetes
2. overt albuminuria
3. ↑ total cholesterol and LDL
4. race, cigarette, smoking, alcohol



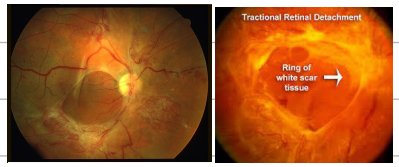
the picture shows presence of lipid and edema of the macula, hemorrhage in the macular area, dot and blot hemorrhage

Complication of DR disease

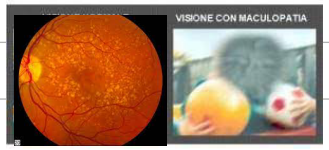
1. vitreous hemorrhage



2. Tractional retinal detachment

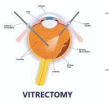


3. Maculopathy



#management of retinal dis caused by DR

1. strict blood glucose, blood pressure and cholesterol control.
2. photocoagulation for macular edema
3. vitrectomy



4. experimental treatments (steroid injection for diabetic macular edema, sys protein kinase-C inhibitor and aldolase reductase inhibitor.

DDx

non proliferative

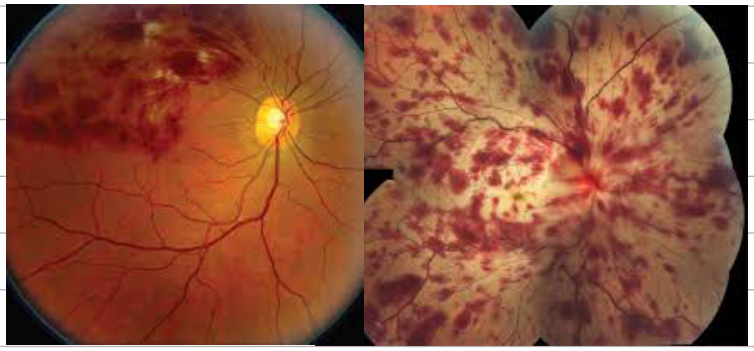
1. central or branch retinal vein occlusion
2. ocular ischaemic syndrome
3. hypertensive retinopathy
4. radiation retinopathy
5. Leukaemia/anemia
6. HIV microangiopathy

proliferative

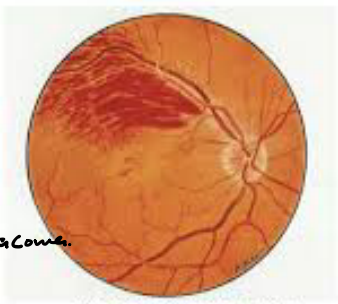
1. vascular obstruction
2. sickle cell retinopathy
3. ocular ischaemic syndrom
4. sarcoidosis
5. Eales' disease
6. tuberculosis
7. embolization from IV drug use

Retinal vascular disease

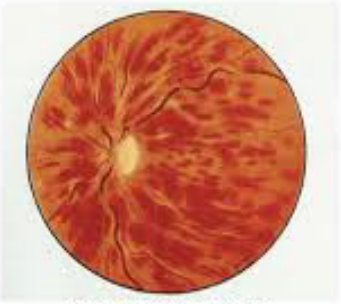
1. central Retinal vein occlusion (CRVO)
2. Branch Retinal Vein occlusion (BRVO)



* CRVO occurs in patients over 45 secondary to retinal vein thrombosis but in patients less than 45 may suggest a clotting disorder
  - ask him about thrombophilia, DVT, PE thromboses in unusal site (axillary vein)
  - examine both eyes for features of glaucoma.



Branch vein occlusion

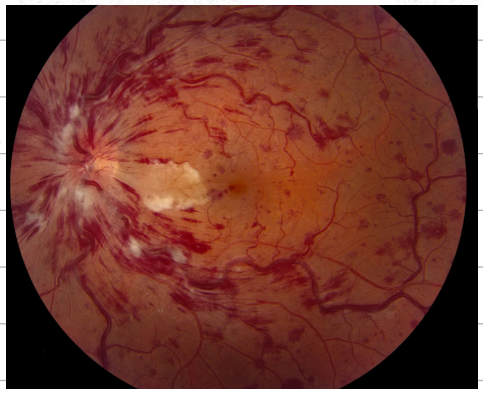


Central vein occlusion

clinical features of CRVO

signs:

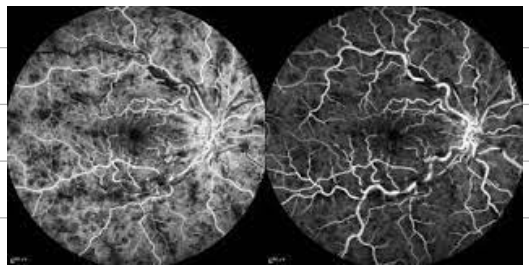
1. painless visual loss
2. retinal hemorrhages in 4 quadrants
3. dilated tortuous retinal veins
4. optic disc swelling
5. Macular edema
6. cotton wool spots (whitish lesion)
7. neovasculation of the iris, angle, retina or disc



classification of CRVO retinal disease (is based on the macular involvement and severity of ischemia)

1. Nonischaemic CRVO
2. ischaemic CRVO

* fluorescein angiograms more than 10 disc areas of ischaemia



clinical examinations

1. presence of Relative affered pupillary defect (RAPD)
2. visual acuity better than 6/60
3. multiple cotton wool spots
4. dense mid retinal hemorrhages
5. blood and thunder fundus

DDx
1. Ocular ischaemic syndrom
2. DR
3. optic disc swelling
4. radiation retinopathy

Investigations
1. Blood pressure / lipids
2. Fasting blood sugar
3. plasma protein electrophoresis
4. thrombophilia screen
5. ESR

Treatment
start with Low dose antiplatelets and discontinuation of oral contraceptives. Treat glaucoma, pt<50 with macular oedema → Laser / treat HTN

Cassification of BRVO retina disease

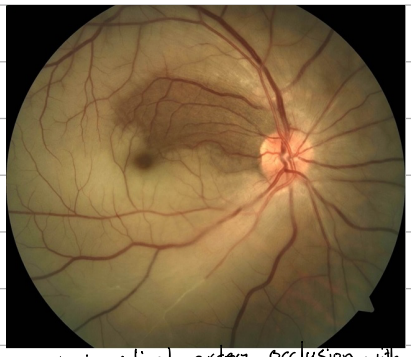
1. Nonischaemic < 5 disc
2. ischaemic > 5 disc area on fluorescein angiography

---

central Retinal Artery occlusion

symptoms: sudden, painless, unilateral and severe visual Loss

signs: retinal opacification, whitening, edema a cherry red spot at macula, RAPD with cilioretinal artery sparing



Central retinal artery occlusion with sparing of the fovea due to the presence of a ciliary artery supplying the macula.

*the branch retinal artery occlusion

the same symptom and signs except for branch distribution

emboli may be present.

Truma

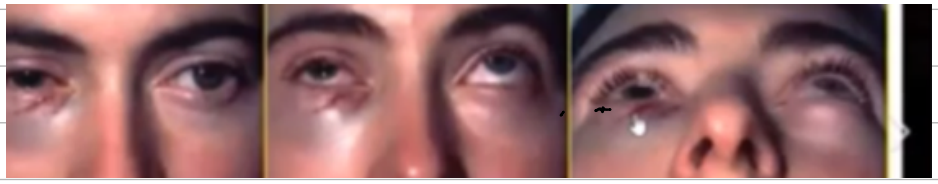
- penetrating: sharp object, high speed bullets, Like pen, pencil
- chemical ?
- perforating: has entrance and an exit point

*Blunt injuries: the object dosn't have sharp edges, will cause injury to the eye or surrounding structures, Like Rock, fist

* Cardio ocular reflex ⇒ if you have direct light on the eye or the muscles are stretched enough this can cause vagal stimulation and the pt will start to feel dizzy, hypotensive and vomit

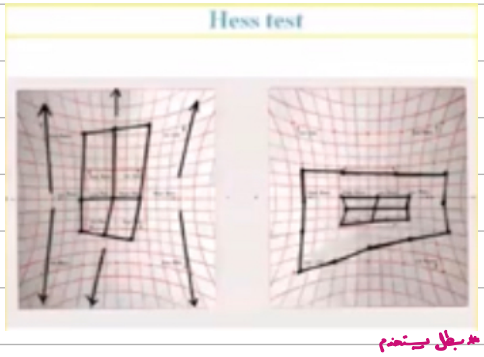
What's the indication for emergant surgery? for orbital fracture

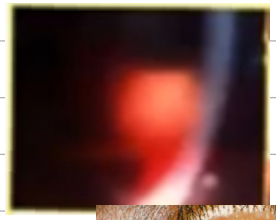
1. If the pt feels hypotensive when he looks up this is an indication for emergant surgery (faints)
2. presence of diplopia in primary (need to fix within 2-3 weeks (urgent not emergancy)
3. for cosmatic reasons



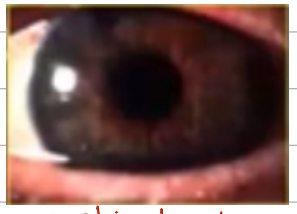
best way to investigate those pt is to do a CT scan

If the inferior wall open → oil drop sign (there is a tissue inside the inferior part)

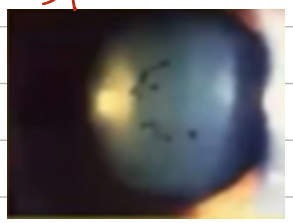




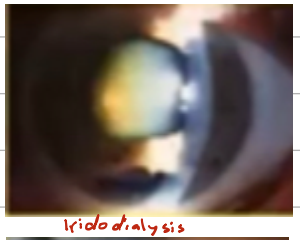
Hyphaema
↳ IOP



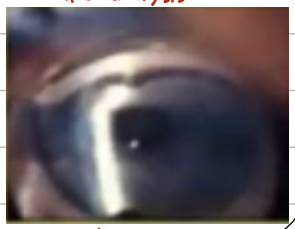
Sphincter tear



Vossius ring

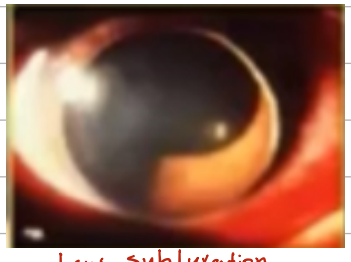


Iridodialysis



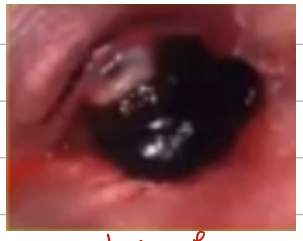
Angle recession → separation within the ciliary body

Complication of blunt trauma (anterior) →

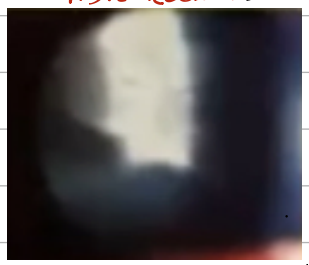


Lens subluxation

also it ass with other dis for example Marfan syndrom, Weill-Marchesani syndrom, aniridia and homocystinuria



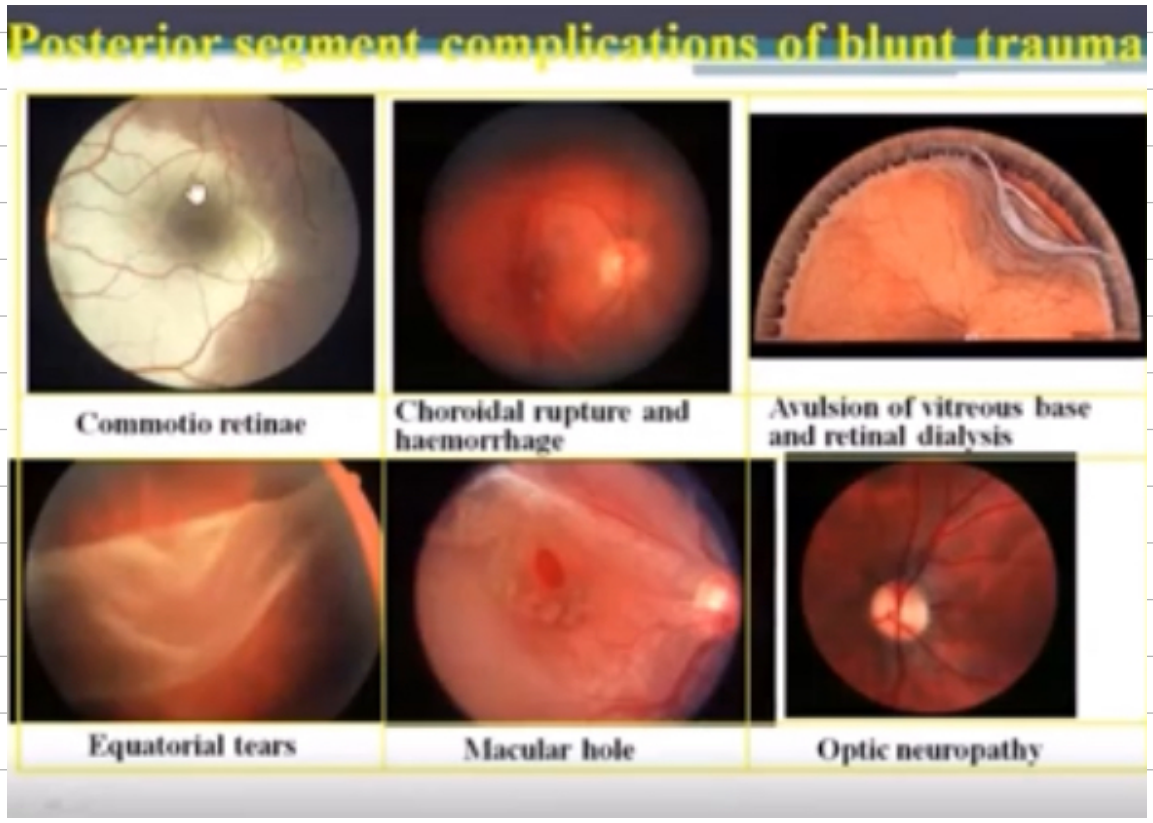
Rupture of globe



Cataract → child abuse cause it doesn't happen unless you have sever rocking of the nucleus inside the lens.

Counter-cup (that the injury is at one place but you have the effect of it in other place

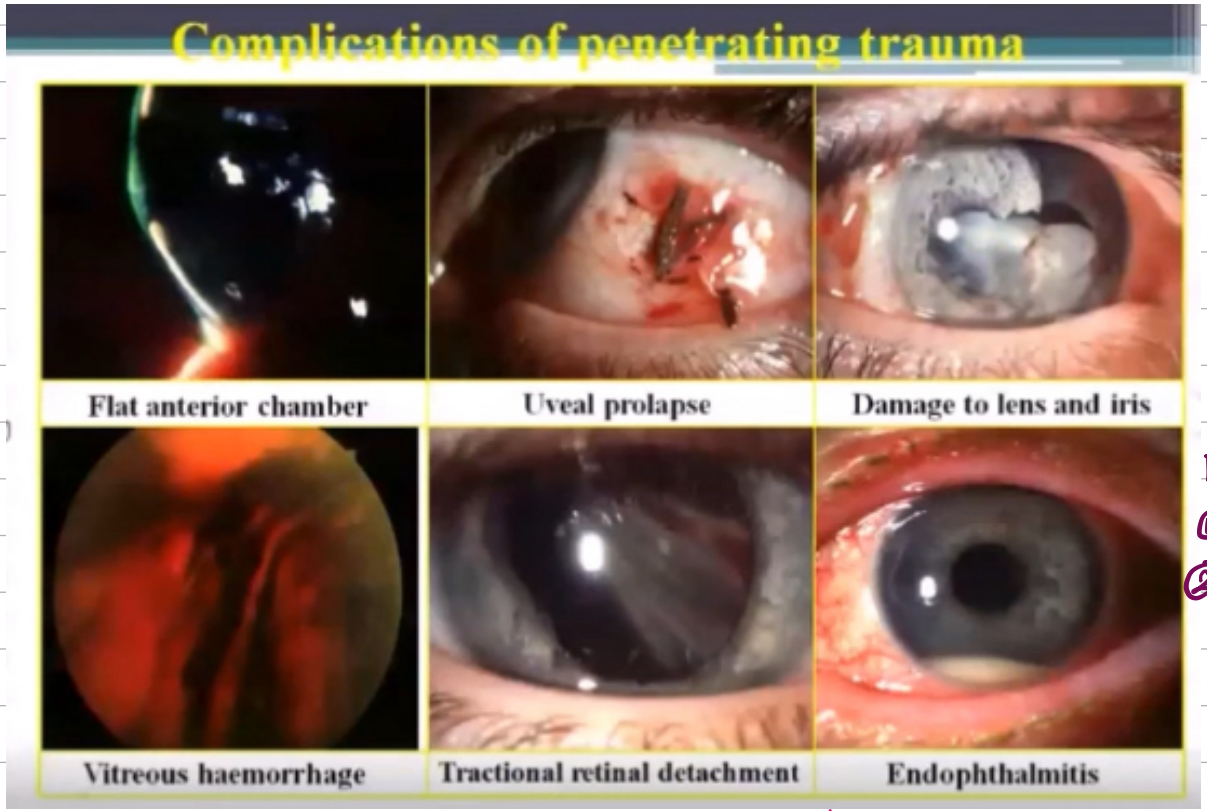
edema of the photoreceptors



*retinal dialysis different from retinal detachment:

- retinal detachment separation of the photoreceptors from the retinal pigment epithelium
- retinal dialysis tangential separete of total retinal (two layers) from the ciliary body + not an emergency

not vertical



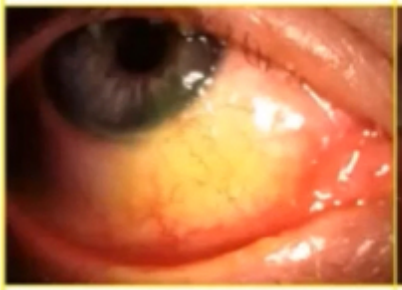
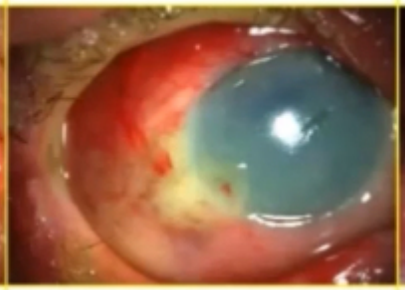
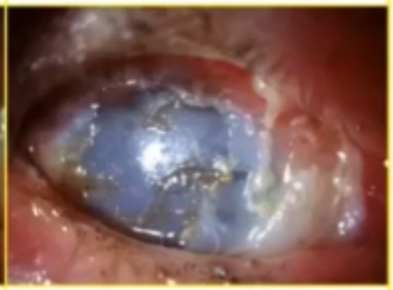
Dx:
① Empyema
② hypopyon

↳ bacterial inflammation of the eye (uvea)

(corrosive)

Grading of severity of chemical injuries

Grade I (excellent prognosis)
- Clear cornea
- Limbal ischaemia - nil

Grade II (good prognosis)	Grade III (guarded prognosis)	Grade IV (very poor prognosis)
		
· Cornea hazy but visible iris details · Limbal ischaemia < 1/3	· No iris details · Limbal ischaemia - 1/3 to 1/2	· Opaque cornea · Limbal ischaemia > 1/2

* What is your mangment for chemical injuries?

① wash the eye for 10-20 min (decreas the corrosive as much as I can) to restore normal PH

* the prognosis depends on how much limbal stem cells are affected by corrosive if it less than one third (good prognoses), if more than one third this is (bad)

-limbal stem cells those cells at limbal area that produced the epithelium of the cornea (irrigate)

② Topical steroids to reduce inflammation

③ Topical and systemic ascorbic acid to enhance collagen production

④ Topical citvit acid to inhibit neutrophil activity

⑤ Topical and systemic tetracycline to inhibit collagenase

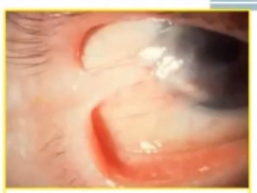
Keep in Mind

Irrigate, Irrigate Irrigate!

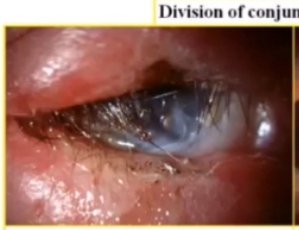
steroid eye drops, antibiotic eye drops

Lubricant and vit C for anti collagen degradation

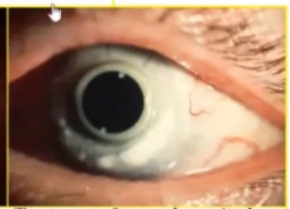
Surgical treatment of severe chemical injuries



Division of conjunctival bands



Correction of eyelid deformities

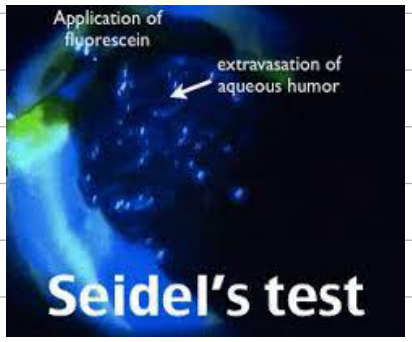


Treatment of corneal opacity by keratoplasty or keratoprosthesis

*If you suspect an open globe injury you need to evaluate the eye in the operating room. And if you suspect an open globe injury cover the eye with a shield and don't push on it

enter the eye لانها small metal fragments الناتجة عن الـ at high speed and leave little or no signs of injury. Metal is very toxic to retina and can kill the retinal cells if not detected

So, when we have any suspicion for penetrating injury → order thin slice CT scan



what is the seidel test?

This is method to see if a laceration has pentrated completely through the cornea and we useing fluorescein to look for leaking aqueous fluid.

Strabismus

*Diplopia ⇐ seeing a single two images for a single object.

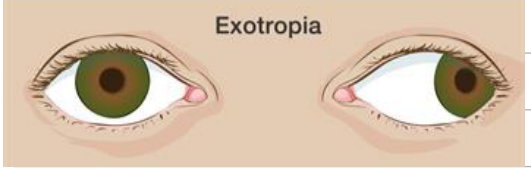
*Confusion ⇐ two seperate and different object appear to be at the same point.

exotropia

intermittent exo ⇒ starts late after 4 or 6 years

*Both eyes have normal vision or slightly myopic.

*corrected when the pt concentrate



esotropia

congenital

*before the age of 6m

*might be hypermetropia +1 - +3D or emmetropic or myopic

*advised to perform surgery as early as possible to prevent amblyopia and muscle contracture

accommodative

*high refractive error casuses this type of strabismus in the early life (2-3 years) & we need to correct the child's refractive error either making him emmetrope or slight myopia

good control → rarely the pt has exo deviation (when the pt is tired or sick) → given corrective glasses or slightly myopic correction (an extra -1.0 D on glasses

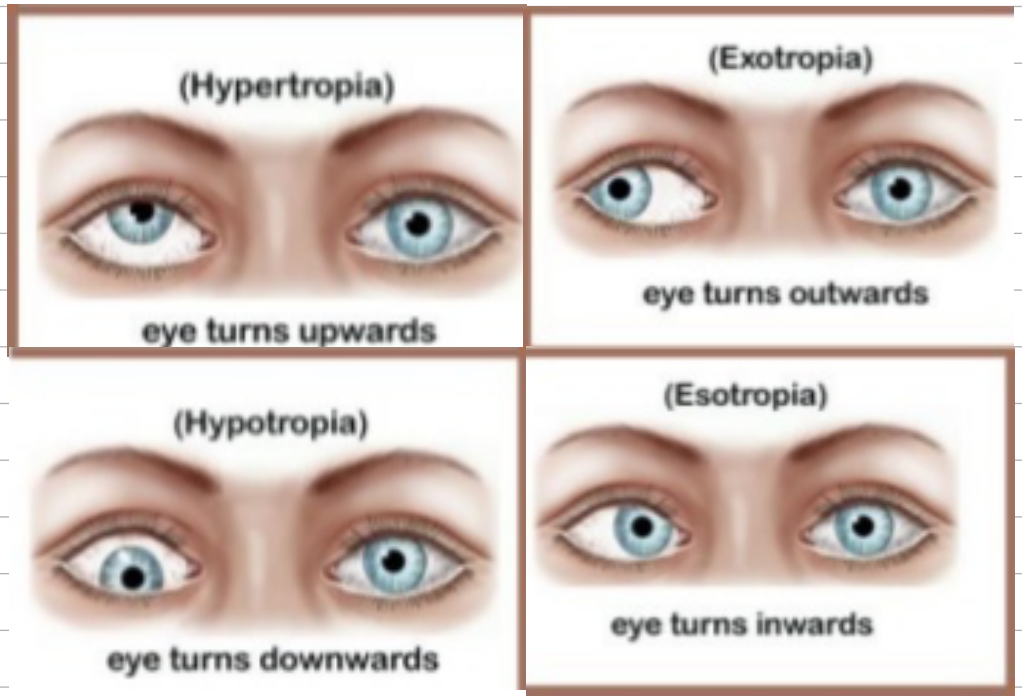
fair → when the pt has the problem being manifested (2-5) times a day

poor → the eyes are seen most of the day outwards

fair / poor → managed by recess or resect (strabismus surgery)

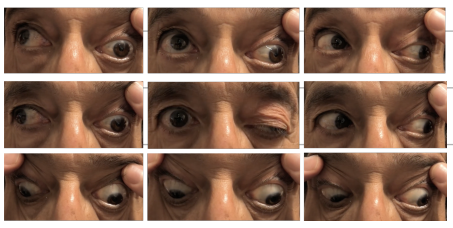
Accommodative esotropia

This type is more likely to get amblyopia than any other kind because the ocular preference very early in life (prefer one eye / neglecting the other one) so, coredion of refraction with or without monocular occlusion therapy is needed to regain normal vision to them.

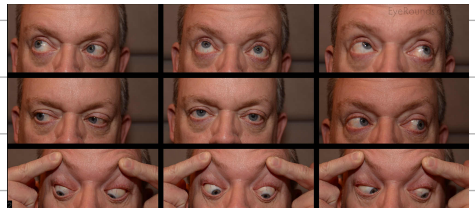


nerve palsy

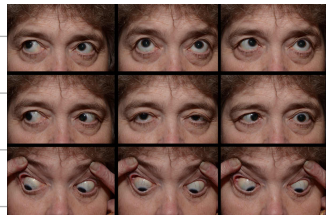
CNIII (oculomotor) failure of adduction, elevation and depression of the eye



CNIV (Trochlear) Limitation in depression and adduction



CNVI (abducens) failure of abduction



Eyelid Lesions

* most eyelid lumps are benign which arising from glands like chalazion and malignant Lesion arising from skin like BCC, malignant melanoma and SCC.
* There are three types of gland in the eyelids: Meibomian, Zeis and Moll. Blockage of any of these gland results in corrosponding focal collection

[1] cysts of moll → blocked apocrine sweat gland / solitary, dome shaped papules or nodules filled with clear fluid.

[2] Apocrine hidrocystomas → smooth cysts, adenomas of the secretory cells of moll rather than classic retention cysts (clinically look similar, bluish color)

[3] cysts of zeis → blocked sebaceous glands tend to filled with yellow oily secretions (solid and don't transilluminate)

[4] chalazion → focal granulomatous inflammation due to retained Meibomian gland secretions from a blocked duct [most common] chalazions present as painless nodules within the tarsal plate Associated with blepharitis and clinical signs [telangiectasia, erythema and lash crusting] with ocular surface discomfort (dryness, gritty sensation and epiphora

Tx → ① hot compress
② massage and eyelid margin hygiene at least twice/day
③ antibiotics → if there bacterial infection
④ Conservative treatment at least 1-2 months (incision and drainage)

[5] Hordeolums (styes) → are bacterial infections of any blocked glands → internal (Meibomian gland)
→ external (zeis or moll)

* ass with preseptal cellulitis

[6] Epidermal eyelid lesions → 2nd m.c

[7] Epidermal inclusion → arise from the infundibulum of the hair follicle due to occlusion.

1. slow-growing
2. firm
3. elevated
4. round
5. central pore
6. filled with keratin (sebaccous cysts)

Orbital cellulitis

drop in visual acuity, RAPD (Relative afferent pupillary defect), sluggish pupils, painful and limited eye movements, proptosis and chemosis → tertiary center emergency department for imaging + AB

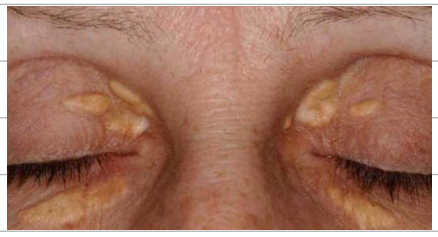
Differ from pre septal all above are negative

[8] Molluscum contagiosum → caused by poxvirus, immunosuppressed are more commonly affected

* characteristically 1-3 mm, white, pink or flesh colored nodules with central umbilication

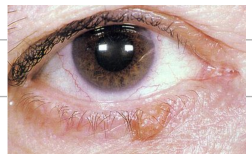
* Tx → ① spontaneously resolve
② cryotherapy or curettage
③ Locally destructive treatment modalities

[9] Xanthelasma → superficial dermis and subdermal, containing lipid-laden macrophages.



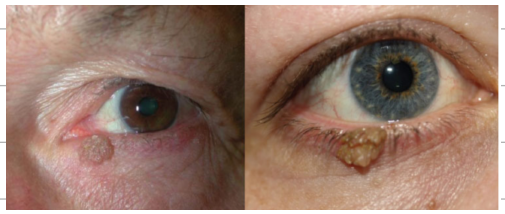
[16] Benign tumours → epidermal proliferations caused by group of various benign epithelial.

Ⓐ seborrheic keratosis → m.c lesion affects elderly patients, no risk of malignant transformation
well demarcated, waxy, pigmented lesion with stuck on appearance



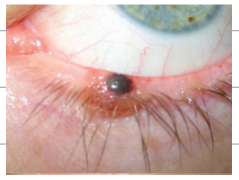
Ⓑ Verruca vulgaris (viral wart) → HPV (6, 11), non pigmented papules with digitations

T_x → Cryotherapy.



[11] Benign melanocytic lesions → benign and malignant.

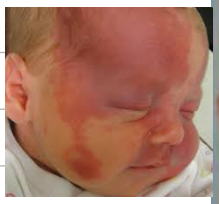
Naevi → flat or raised lesions that arise from melanocytes on eyelid.

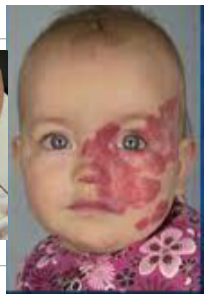


3 stages → Childhood → junctional naevus
→ second decade → elevated compound naevus
→ seventh decade → Lossing pigmentation → dermal naevi

[12] Vascular eyelid lesion

Ⓐ Infantile haemangiomas → strawberry or capillary haemangiomas / Red/pink appearance
resolve by the age of 10 years
associated with ptosis, refractive error and Amblyopia

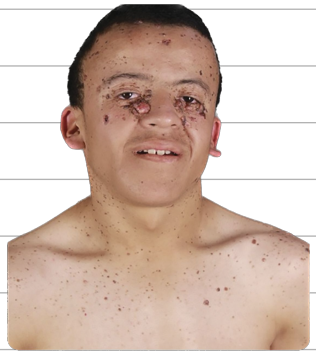




Ⓑ Port wine stains → Permanent capillary malformations
present from birth, dark red to blue in color
18% of children are affected with glaucoma.

*Recurrence of bengin eyelid lesion in the same place is highly suspicious of malignant transformation.

Gorlin syndrome of basal cell carcinoma →



Types of malignant eyelid lesion:-

① Basal cell carcinoma → m.c / 80-90% / in Lower eyelid or medial canthus / smooth, pearly edged nodule with telangiectasia.

* central tumor necrosis may occur and Leaving a central ulcer

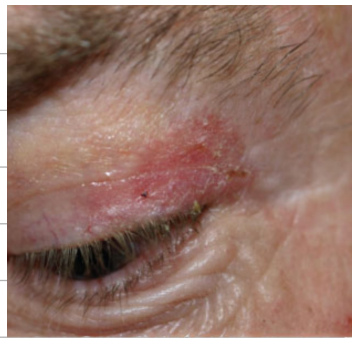
Tx → complete surgical excision with intraoperative margin control is the gold standard treatment.

② Actinic keratosis → common precancerous skin lesion that has potential to develop into an SCC, on sun-damaged skin.

scaly, hyperkeratotic plaques with a sandpaper like texture

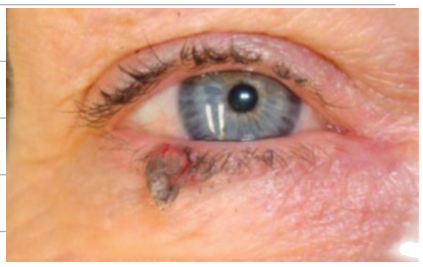
Tx → cryotherapy /

when Located on eyelid margin → surgical excision



③ Keratoacanthoma → low grade SCC → need Complete excision

* dome-shape with a central crater filld with keratin + may be associated with surrounding inflammatory changes



④ Malignant melanoma → more common in the Lower Lid.

irregular borders or multiple colors or associated with ulcerating and bleeding.

invasive squamous cell carcinoma with central ulceration →