



Ocular Emergencies

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Ocular Emergencies

■ General Emergencies:

- Corneal ulcer
- Uveitis
- Acute angle closure glaucoma
- Orbital cellulitis
- Endophthalmitis
- Retinal detachment

■ Orbital/Ocular trauma:

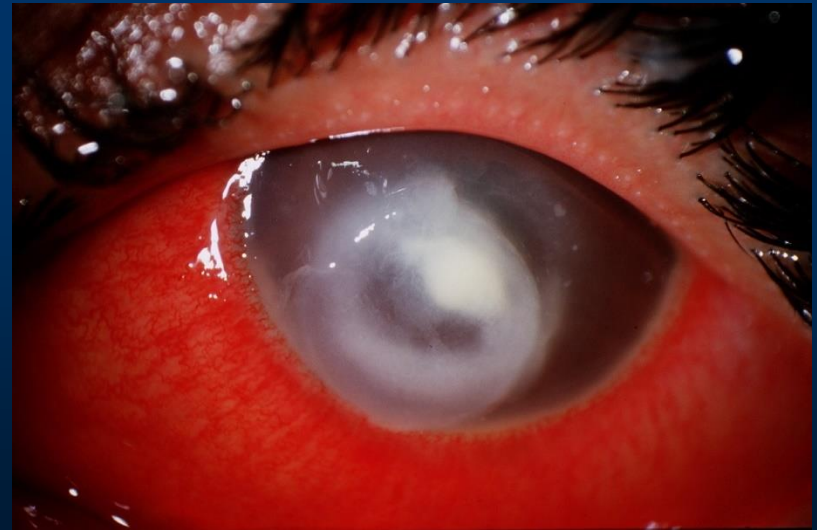
- Corneal abrasion
- Corneal and conjunctival foreign bodies
- Hyphema
- Ruptured globe
- Orbital wall fracture
- Lid Laceration
- Chemical injury

Corneal Ulcer

- Corneal ulcer occur secondary to lid and conjunctival inflammation but it is often secondary to trauma or contact lens wear
- Bacterial, viral, fungal or parasitic

Corneal Ulcer

- Ocular pain, redness and discharge with decrease vision and corneal opacity.



Corneal Ulcer

■ Management:

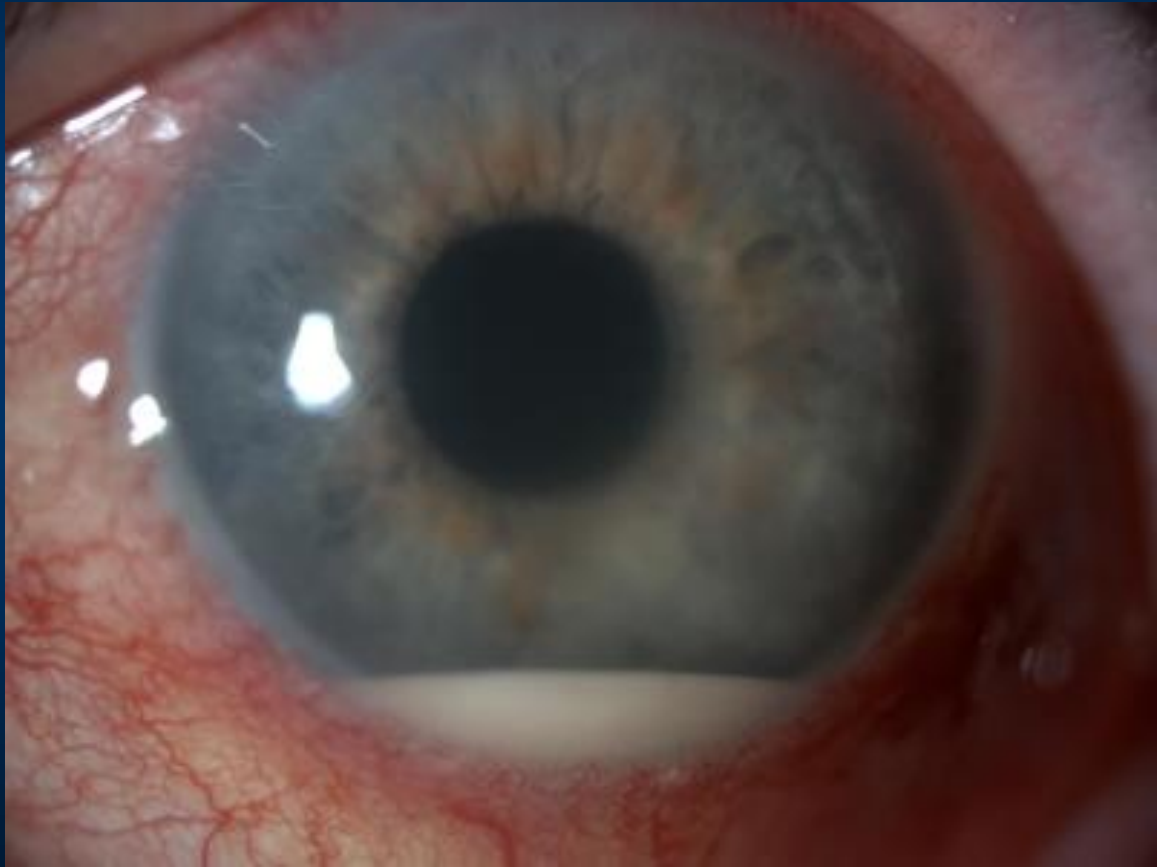
1. Prompt diagnosis of the etiology by doing corneal scraping.
2. Treatment with appropriate antimicrobial therapy is essential to minimize visual loss.
3. Then treat the inflammatory process
4. Promote healing and treat the primary cause if present (e.g. lid deformity, dryness)

Contact lens wearer

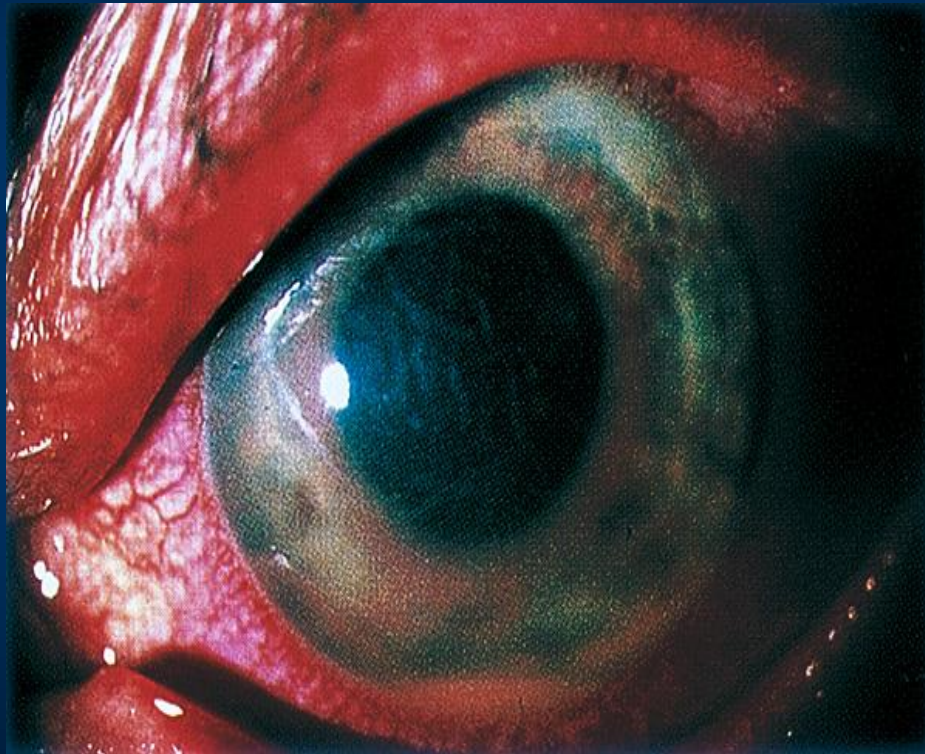
- Any redness occur for patients who wear contact lens should be managed with extreme caution
- Remove lens
- Rule out corneal infection (i.e corneal ulcer)
- gram negative organisms, fungi and Acanthamoeba are common causative organisms
- Do not patch
- Close Follow up

Uveitis

- Inflammation of the uveal tissue (iris, ciliary body, or choroid), retina, blood vessels, optic disc, and vitreous can be involved.
- Etiology
 - Idiopathic
 - Inflammatory diseases
 - HLA B27, Ankylosing spondylitis, IBD, Reiter's syndrome, Psoriatic arthritis
 - Sarcoidosis, Behcet's, Vogt-Koyanagi-Harada Syndrome
 - Infectious
 - Herpes virus
 - Toxoplasmosis
 - Tuberculosis
 - Syphilis



Uveitis



Uveitis



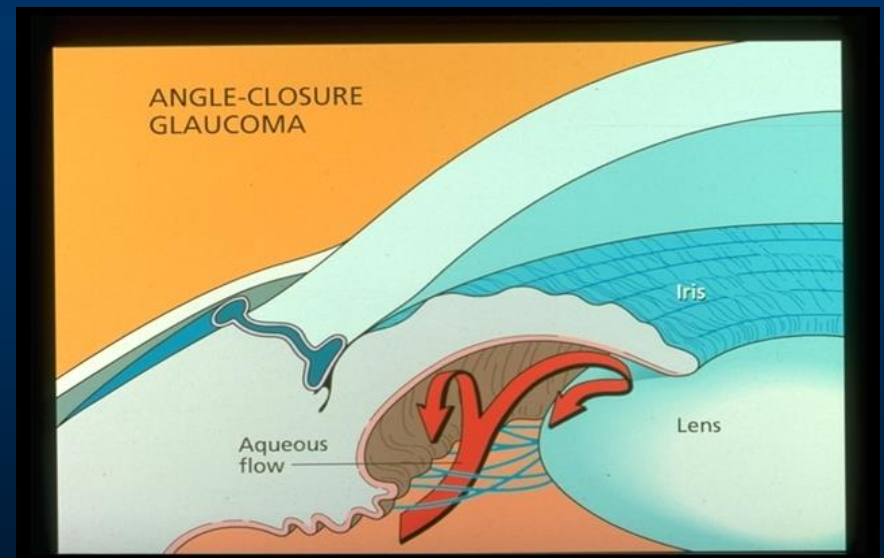
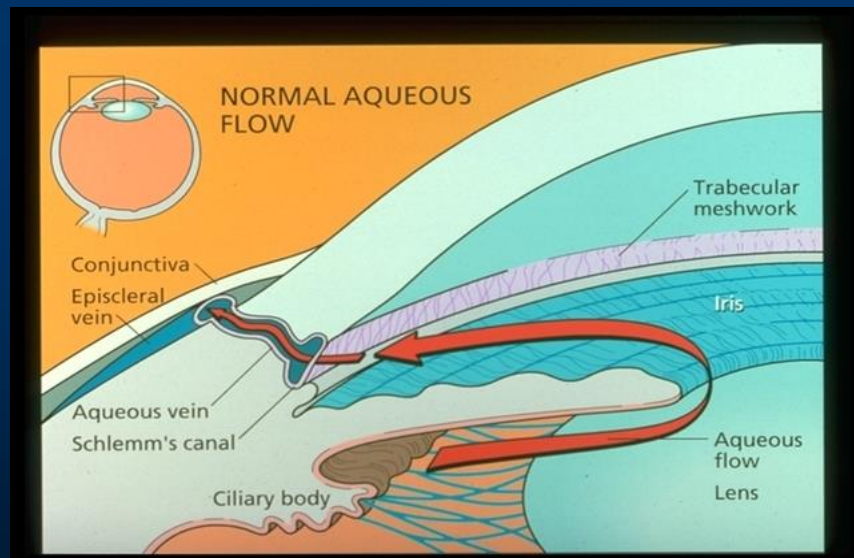
Uveitis

■ Management

- Identify possible cause
- Topical steroid
- Topical cycloplegic
- Systemic immunosuppressive medication
 - Steroid
 - Cyclosporine
 - Methotrexate
 - Azathioprine
 - Cyclophosphamide
- Immunomodulating agents
 - Infliximab (Anti TNF)

Acute Angle Closure Glaucoma

- Result from peripheral iris blocking the outflow of fluid

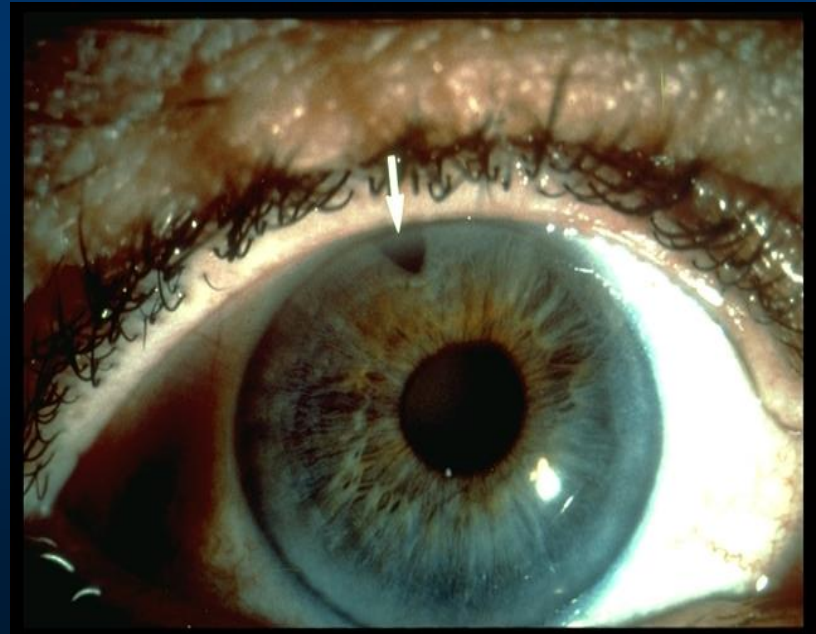
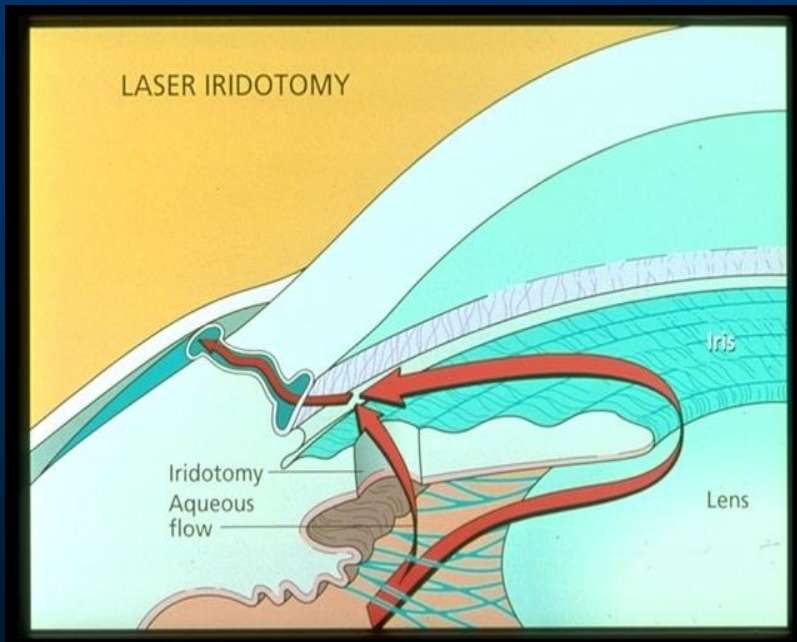


Acute Angle Closure Glaucoma

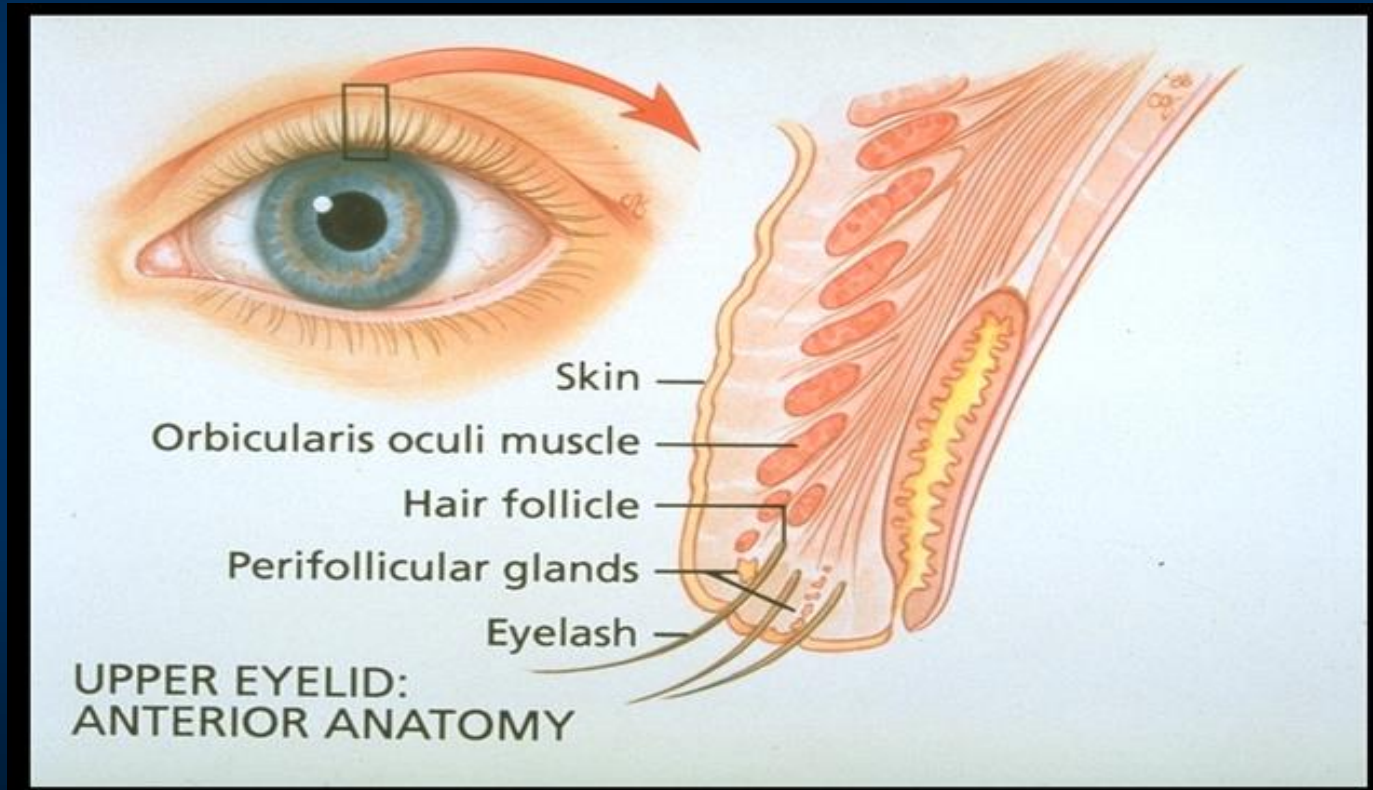
- Present with pain, redness, mid-dilated pupil with decrease vision and coloured haloes around lights
- Severe headache or nausea and vomiting
- Intraocular pressure is elevated
- Can cause severe visual loss due to optic nerve damage
- Medical Tx and peripheral laser iridotomy will be curative in most cases

Acute Angle Closure Glaucoma

- Medical Tx and peripheral laser iridotomy will be curative in most cases



Preseptal Cellulitis



Preseptal Cellulitis

- Lid swelling and erythema
- Visual acuity ,motility, pupils, and globe are normal



Preseptal Cellulitis

■ Etiology

- Skin wound
- Laceration
- Retained foreign body from trauma
- Vascular extension, or extension from sinuses or another infectious site (e.g., dacryocystitis, chalazion)
- Organisms
 - Staph aureus – Streptococci- H.influenzae



Preseptal Cellulitis

■ Management:

- Warm compresses
- Systemic antibiotics
- CT sinuses and orbit if not better or +ve history of trauma

Orbital Cellulitis

- Pain
- Decreased vision
- Impaired ocular motility/double vision
- Afferent pupillary defect
- Conjunctival chemosis and injection
- Proptosis
- Optic nerve swelling

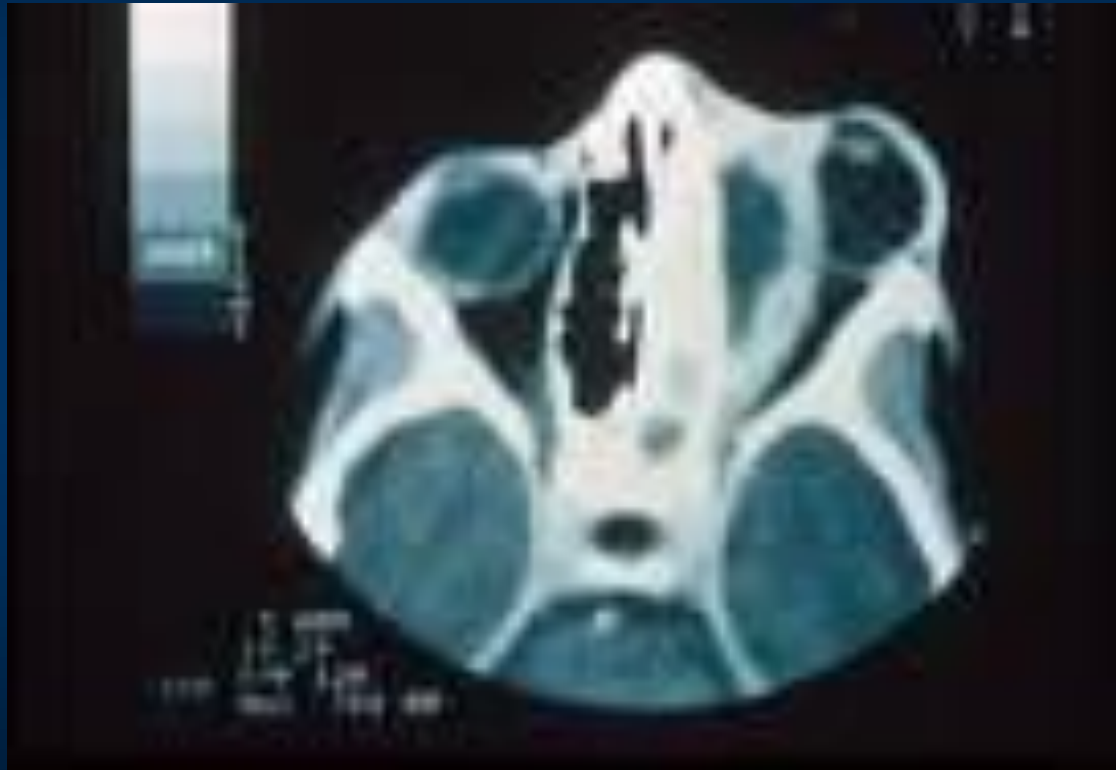


Orbital Cellulitis

■ Management:

- Admission
- Intravenous antibiotics
- Nasopharynx and blood cultures
- Surgery maybe necessary

Orbital Cellulitis



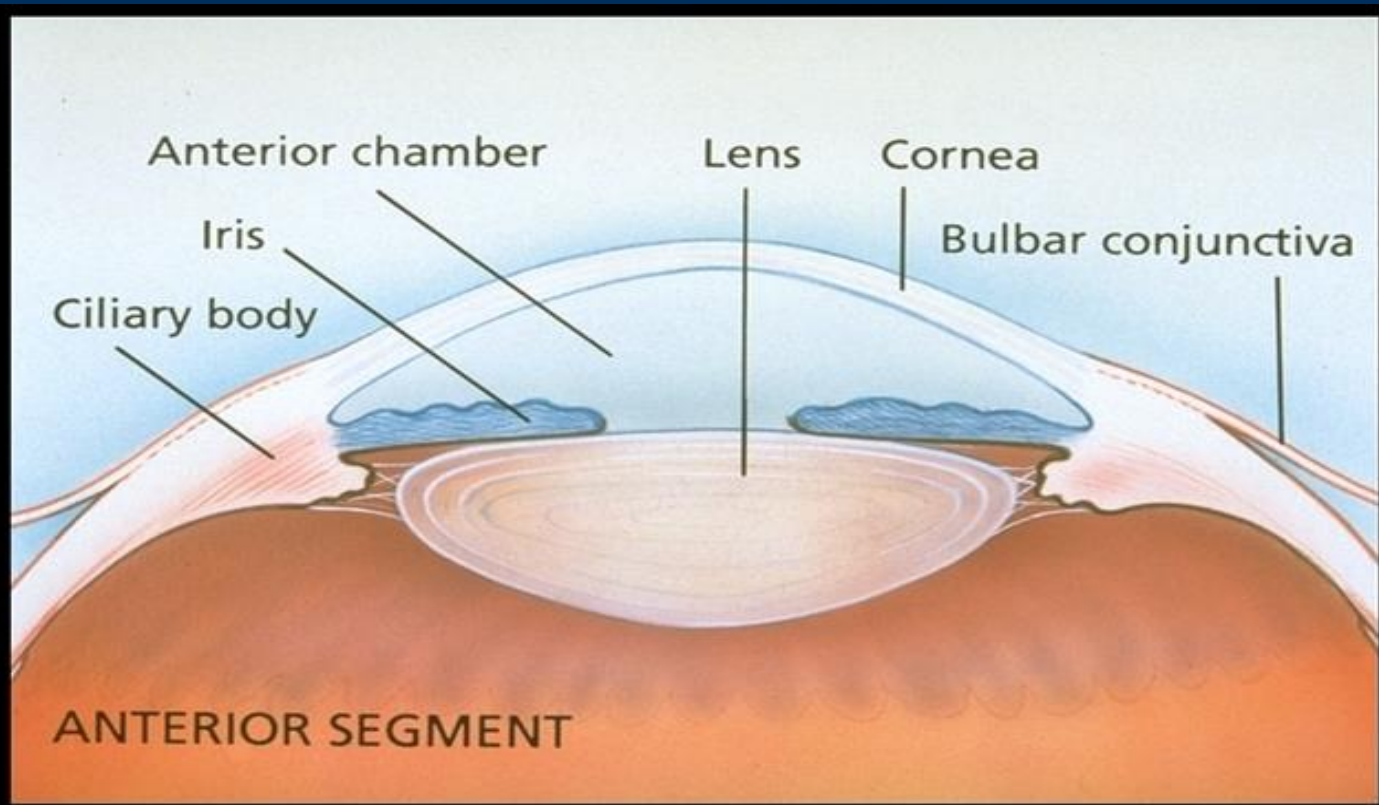
Endophthalmitis

- Potentially devastating complication of any intraocular surgery
- Any patient in the early postoperative period (within 6 weeks of surgery) c/o pain or decrease vision should be evaluated immediately



Endophthalmitis

- Management
 - Vitreous sample for culture
 - Intravitreal antibiotics injection plus topical antibiotics

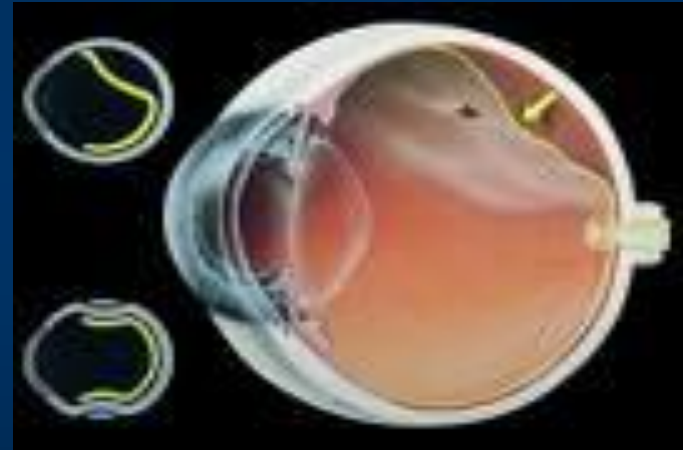


Retinal Detachment

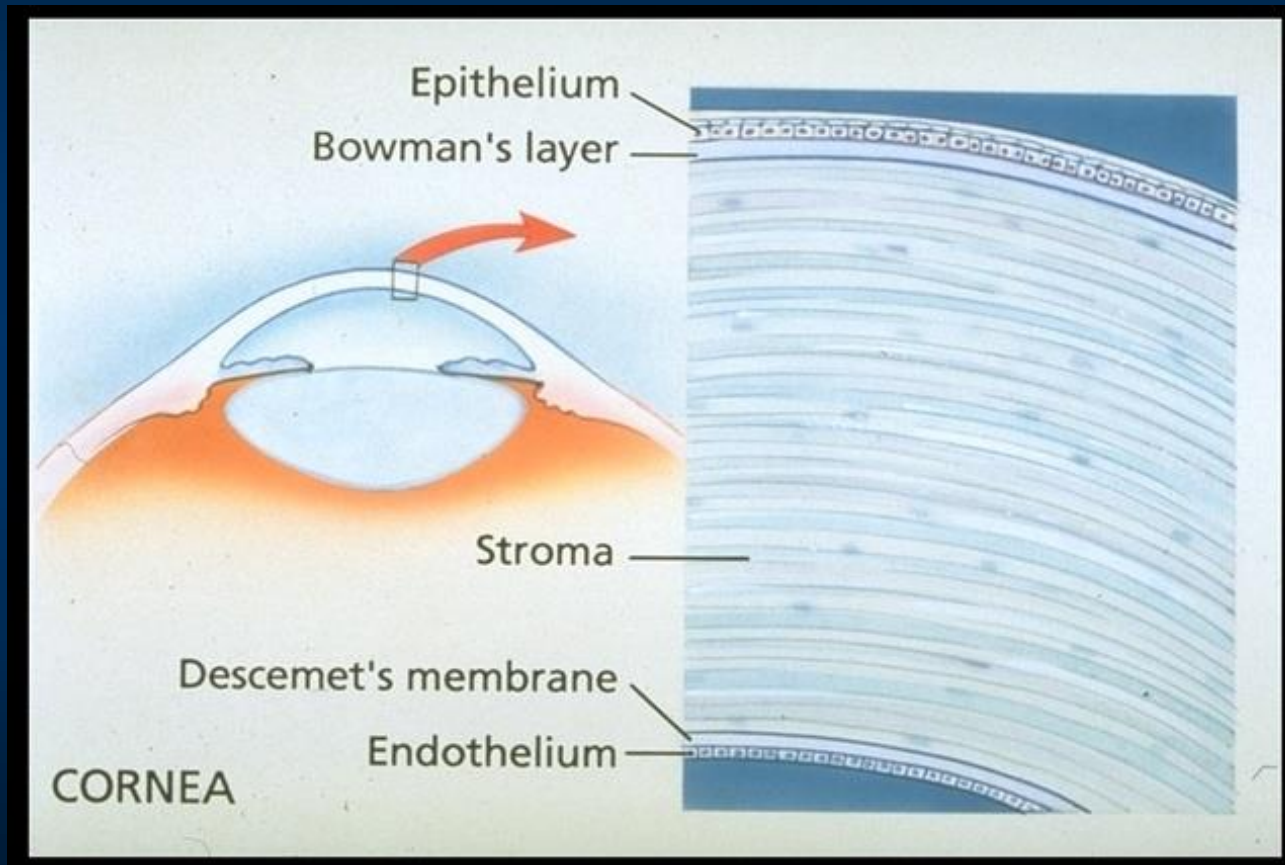
■ Symptoms

- ◆ Flashes, floaters, a curtain or shadow moving over the field of vision
- ◆ Peripheral and/ or central visual loss

Retinal Detachment

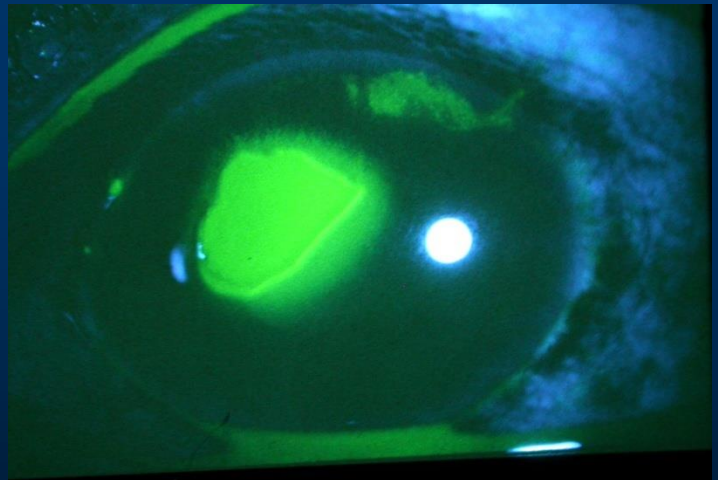
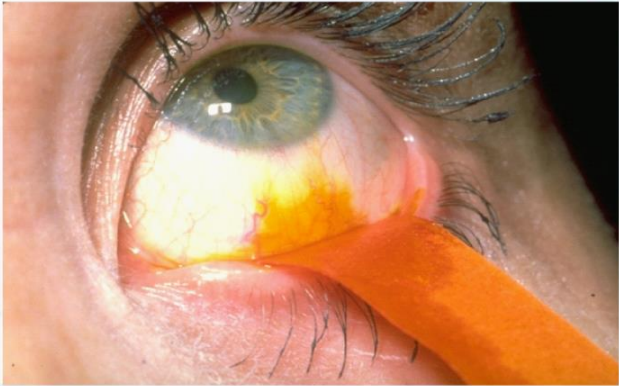
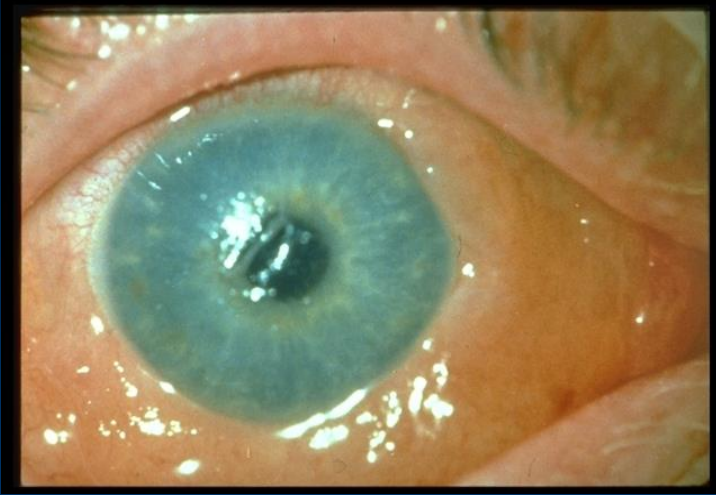


Corneal Abrasion



Corneal Abrasions

- History of scratching the eye
- Symptoms:
 - Foreign body sensation
 - Pain
 - Tearing
 - Photophobia



Corneal Abrasions

■ Treatment:

- ◆ Topical antibiotic
- ◆ Pressure patch over the eye
- ◆ Refer to ophthalmologist



Chemical Injuries

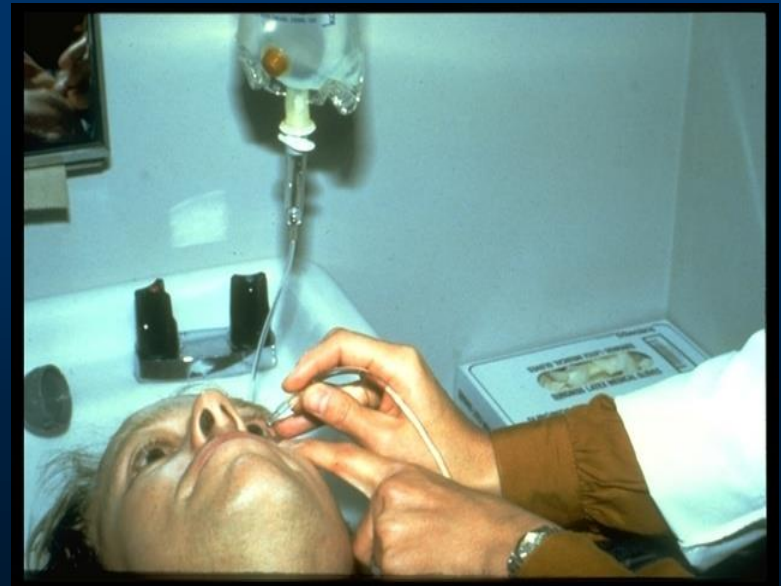
- A vision-threatening emergency
- The offending chemical may be in the form of a solid, liquid, powder, mist, or vapor.
- Can occur in the home, most commonly from detergents, disinfectants, solvents, cosmetics, drain cleaners.....

Chemical Injuries

- Can range in severity from mild irritation to complete destruction of the ocular surface
- Management:
 - Irrigate with clean water
 - Instill topical anesthetic
 - Check for and remove foreign bodies

Chemical Injuries

- Immediate irrigation essential, preferably with saline or Ringer's lactate solution, for at least 30 minutes



Chemicals Injuries

- Irrigation should be continued until neutral pH is reached (i.e., 7.0)
- Instill topical antibiotic
- Frequent lubrications
- Oral pain medication
- Enhance healing



Corneal and Conjunctival Foreign Bodies

- History of trauma
- Foreign body sensation-Tearing



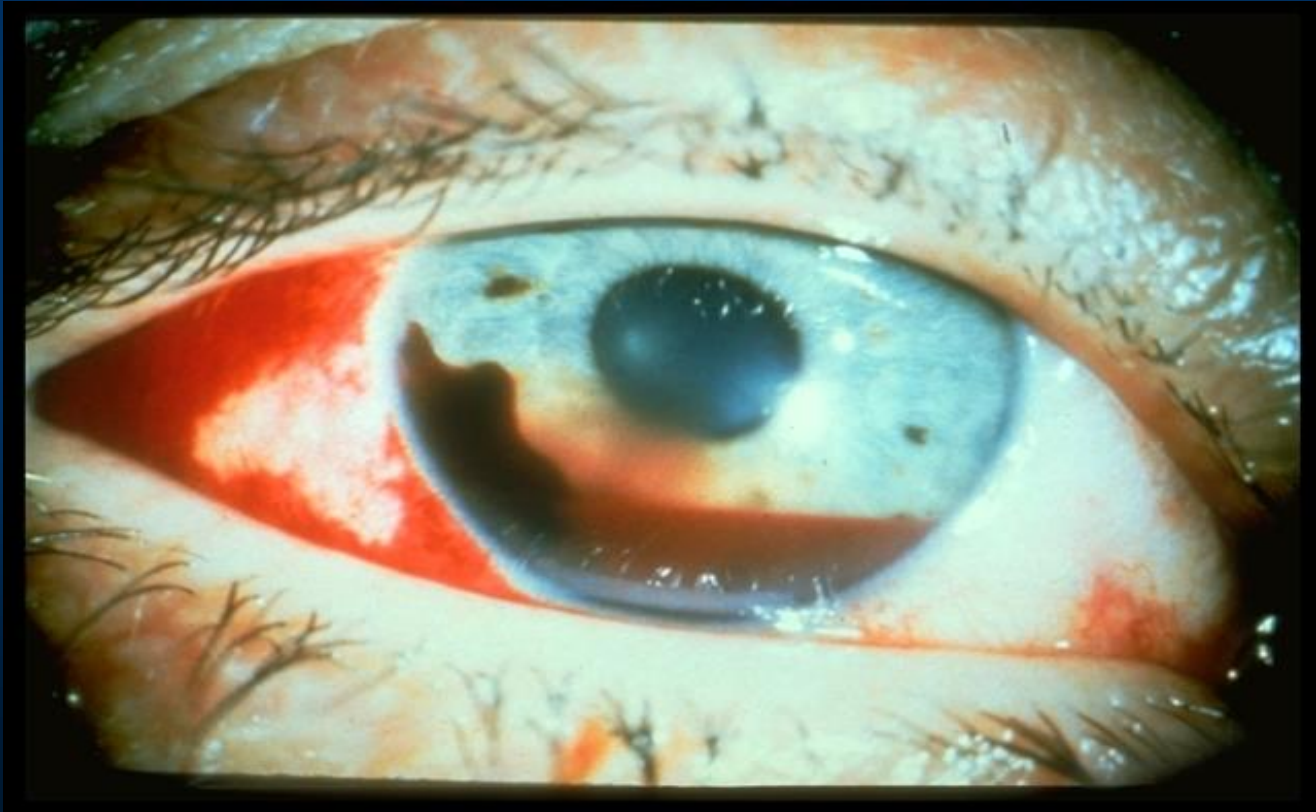
Corneal and Conjunctival Foreign Bodies

■ Management

- Instill topical anesthetic
- Removal of the foreign body
- Topical antibiotic
- Treat corneal abrasion

Hyphema

- Can occur with blunt or penetrating injury
- Blood in the anterior chamber

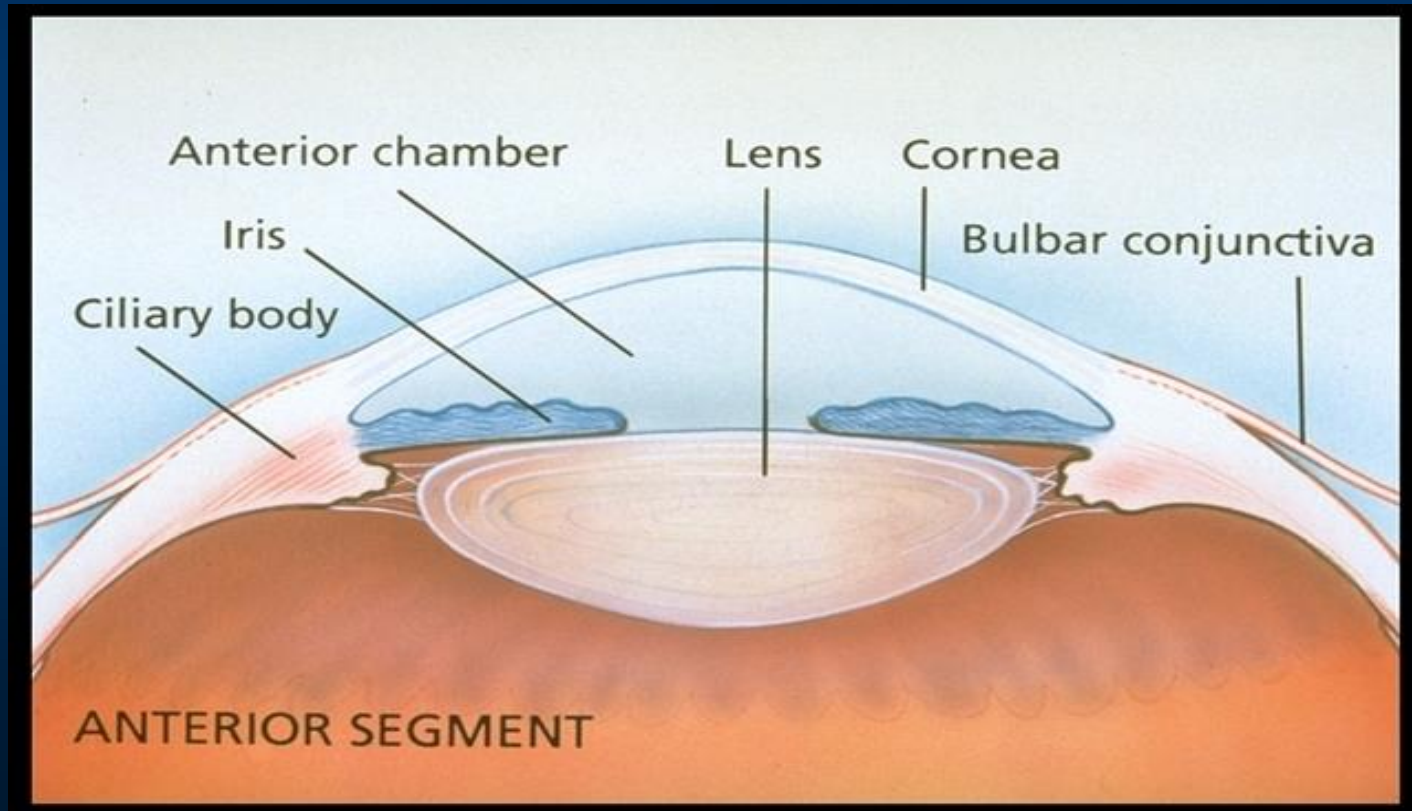


Hyphema

- Can lead to high intraocular pressure
- Detailed history (Sickle cell)
- Management
 - Bed rest
 - Topical steroid
 - Topical cycloplegic
 - Antifibrinolysis agents (Tranexamic acid)
 - Surgical evacuation

Ruptured Globe

- Suspect a ruptured globe if:
 - Severe blunt trauma
 - Sharp object

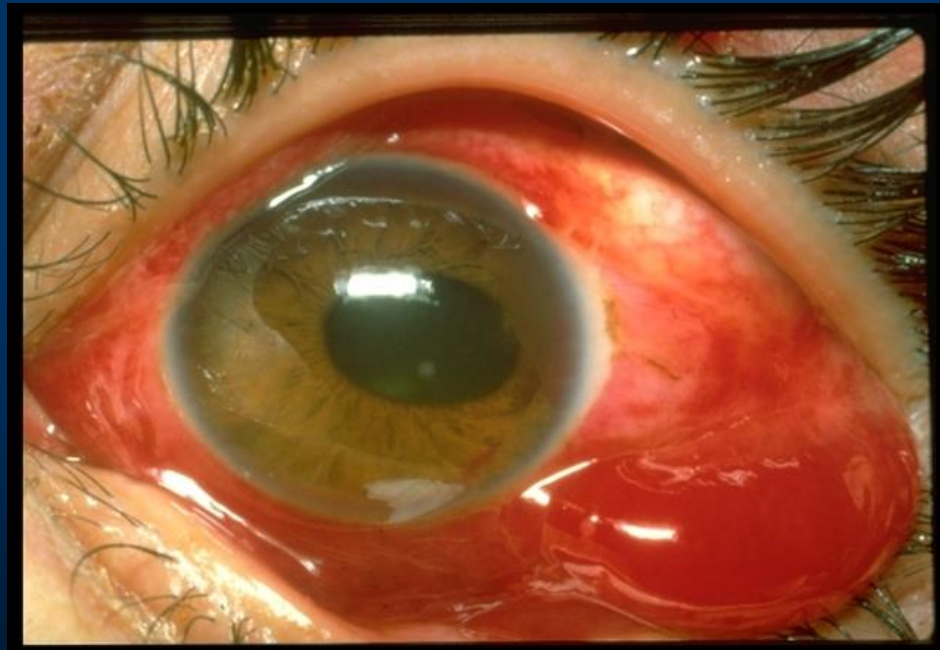


Ruptured globe

- Suspect a ruptured globe if:
 - Bullous subconjunctival hemorrhage
 - Uveal prolapse (Iris or ciliary body)
 - Irregular pupil
 - Hyphema
 - Vitreous hemorrhage
 - Lens opacity
 - Lowered intraocular pressure

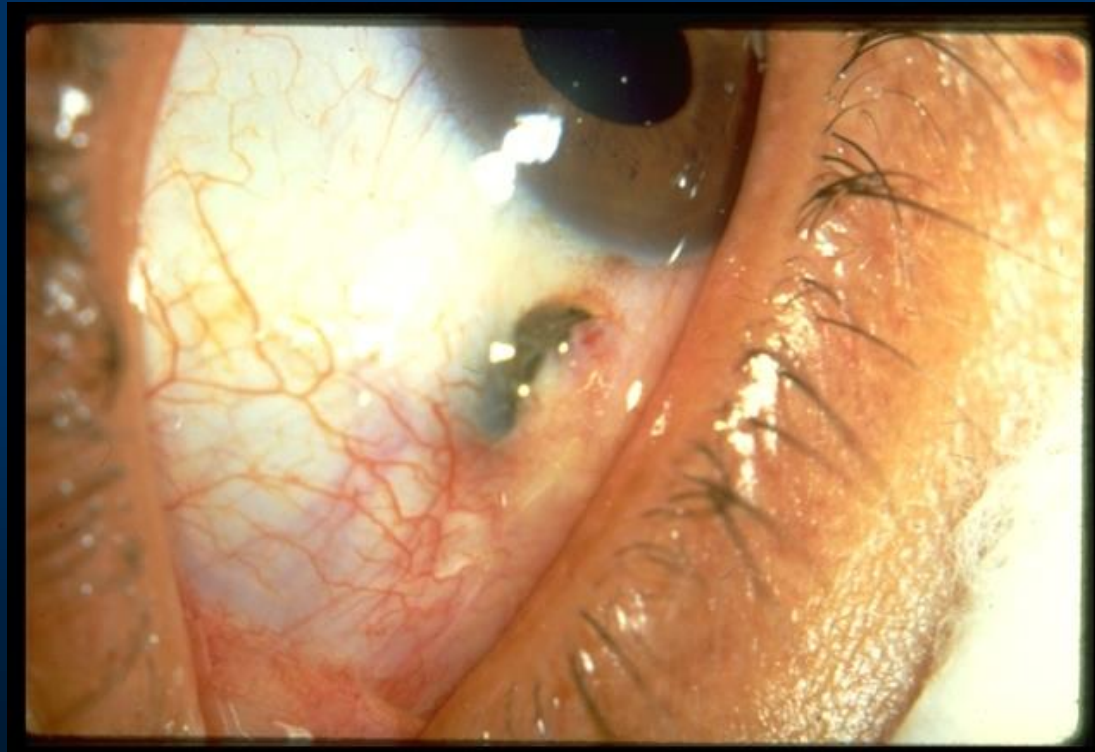
Ruptured Globe

- Bullous subconjunctival hemorrhage



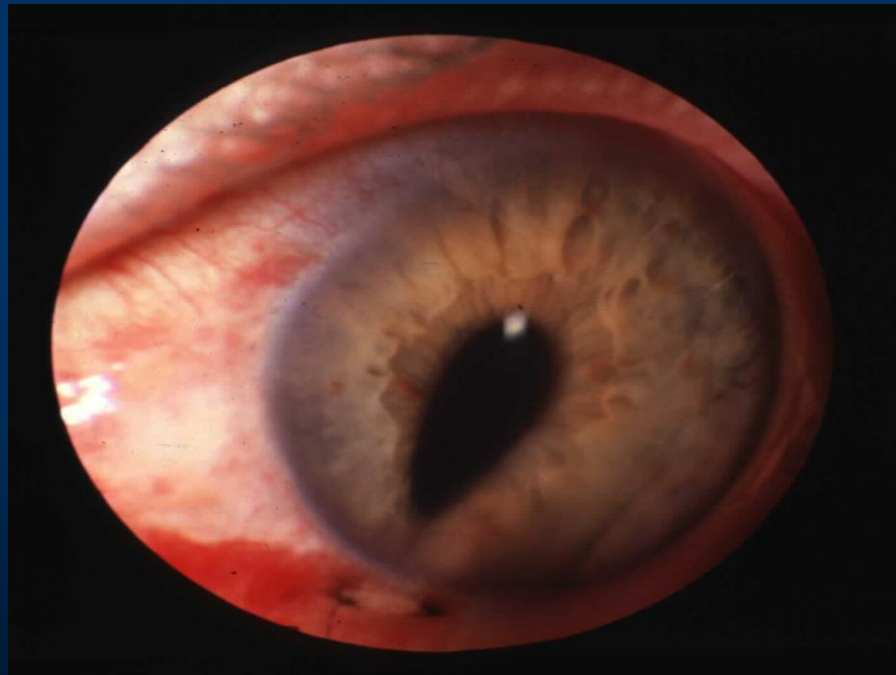
Ruptured Globe

- Uveal prolapse (Iris or ciliary body)



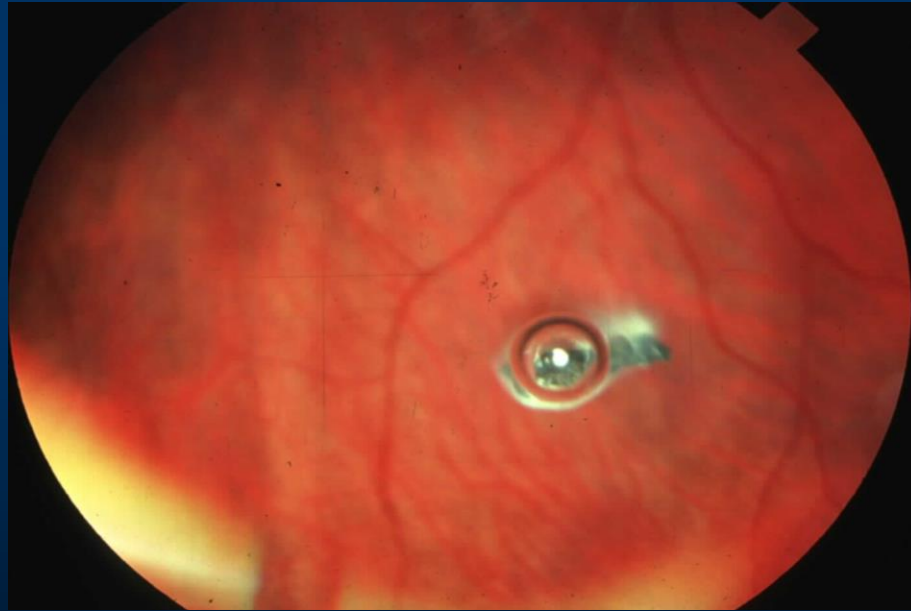
Ruptured Globe

- Irregular pupil



Ruptured Globe

- Intraocular foreign body



If globe ruptured or laceration is suspected

- Stop examination
- Shield the eye
- Give tetanus prophylaxis
- Refer immediately to ophthalmologist

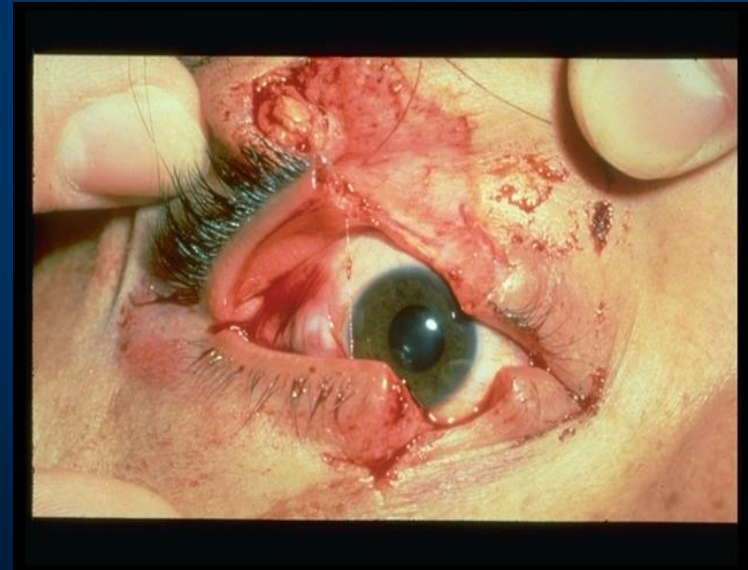
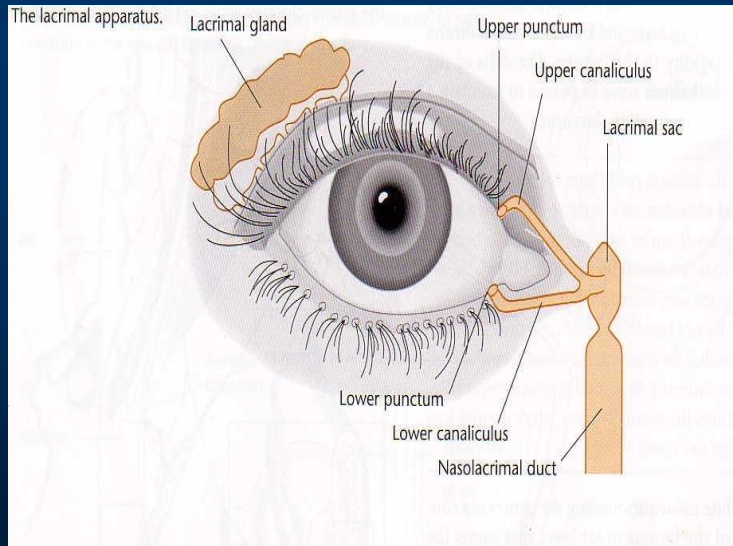
Orbital Fractures

- Assess ocular motility
- Assess sensation over cheek and lip
- Palpate for bony abnormality



Lid Laceration

- Can result from sharp or blunt trauma
- Rule out associated ocular injury



Break Time