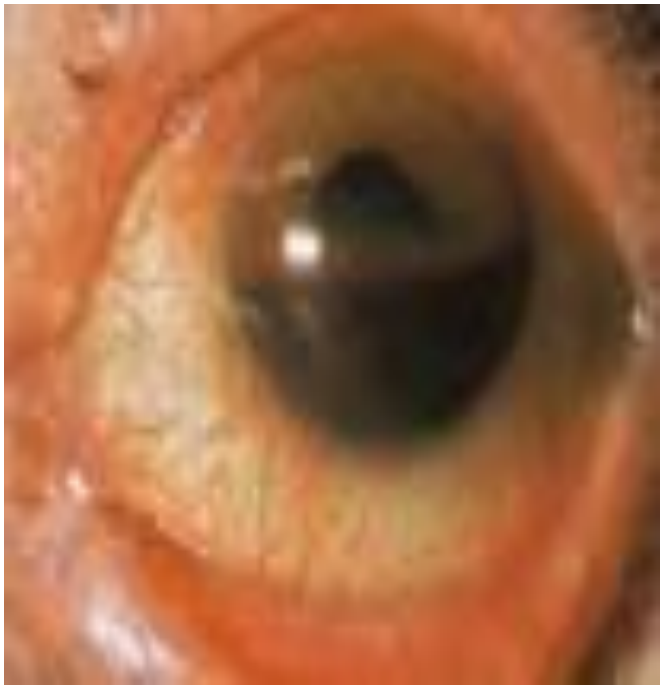
Ophthalmology SAQ
By: 430 Ophthalmology team

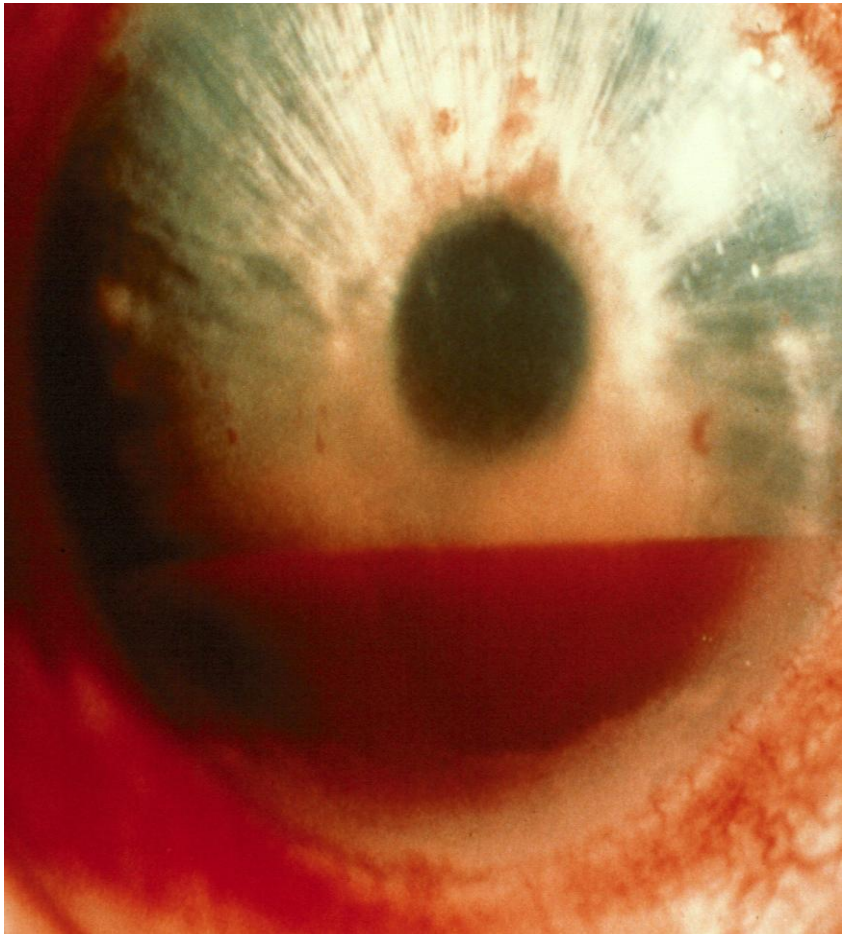
Ocular emergencies and red eyes

NOTE: this presentation is aimed to collect and organize the common ER and red eye cases from previous files. Due to lack of time they were not revised , only collected and organized for more convenience.
Good Luck.

Hyphema

- After trauma.
- Dx? Hyphema.
- Management?
  Bed rest(to prevent rebleeding)
  - Topical steroid
  - Topical cycloplegic
  - Antifibrinolysis agents (Tranexamic
  - acid)
  - Surgical evacuation





- Patient came to the E.R with history of blunt trauma

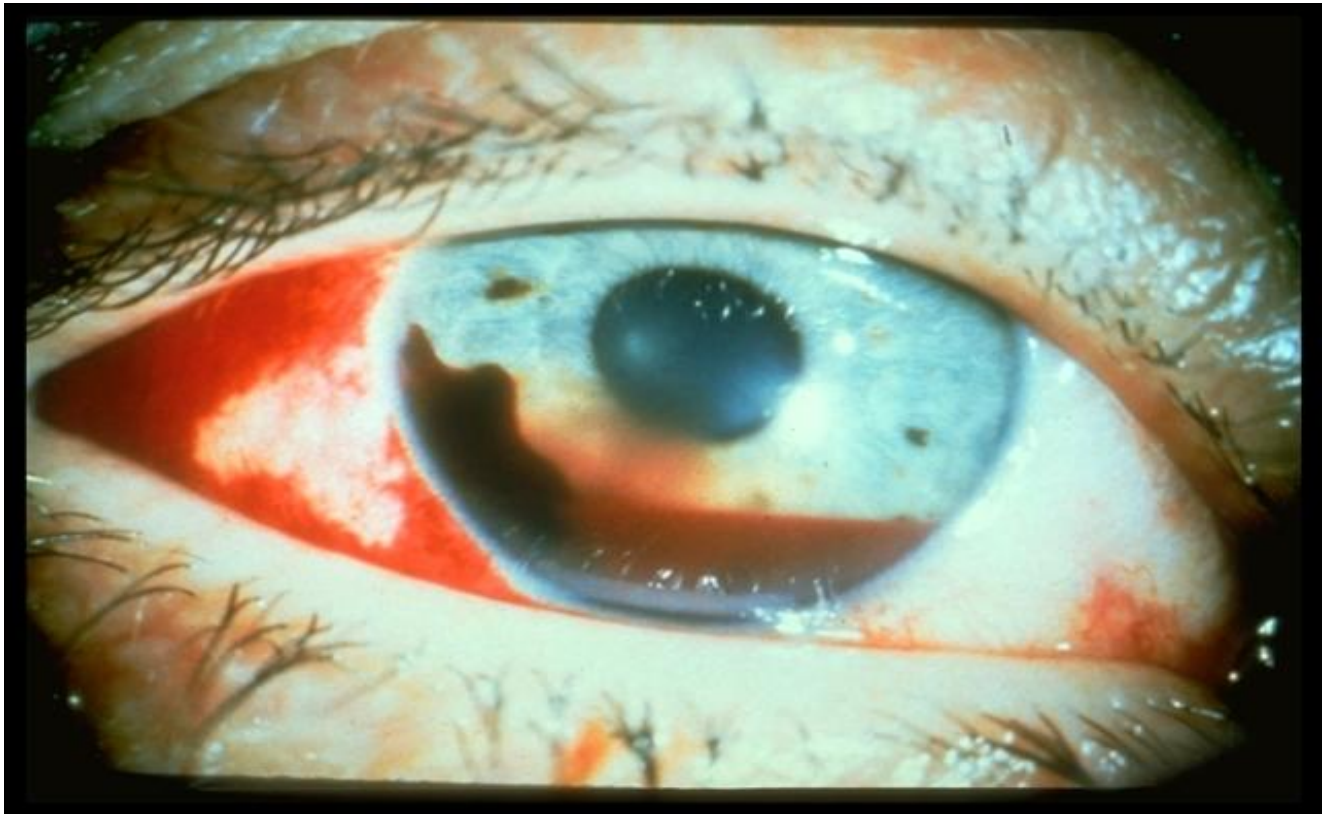
- Q. what's your diagnosis ??

A. Hyphema (anterior chamber hemorrhage)

- Q. What is your management??

A. Bed rest to prevent rebleeding

- topical steroids & topical cycloplegics
- systemic antifibrinolytic agents



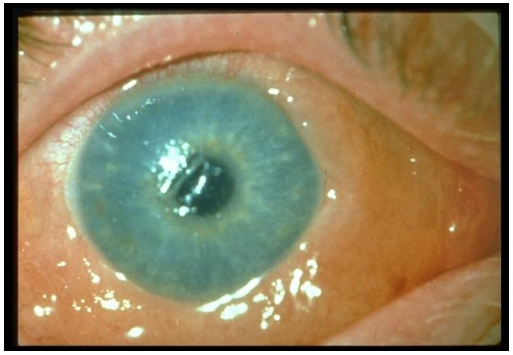
Corneal Abrasion

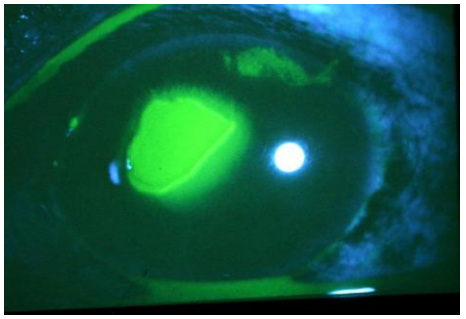
- **Patient came to E.R complaining of pain and red eyes and gave history of trauma to the eye by his finger nail**

- **Q. what's your diagnosis ??**

A. Corneal abrasion

- **Q. what's the complication mention one ??**
- **A. Corneal scarring**



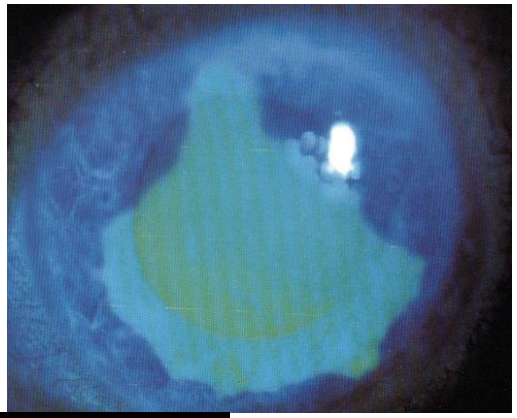


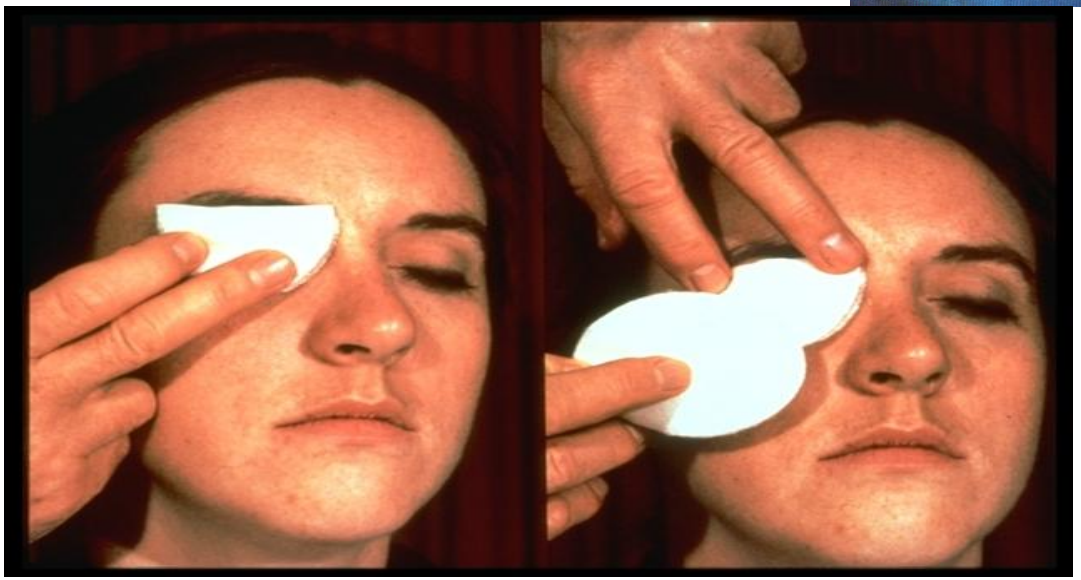
Management of corneal abrasion

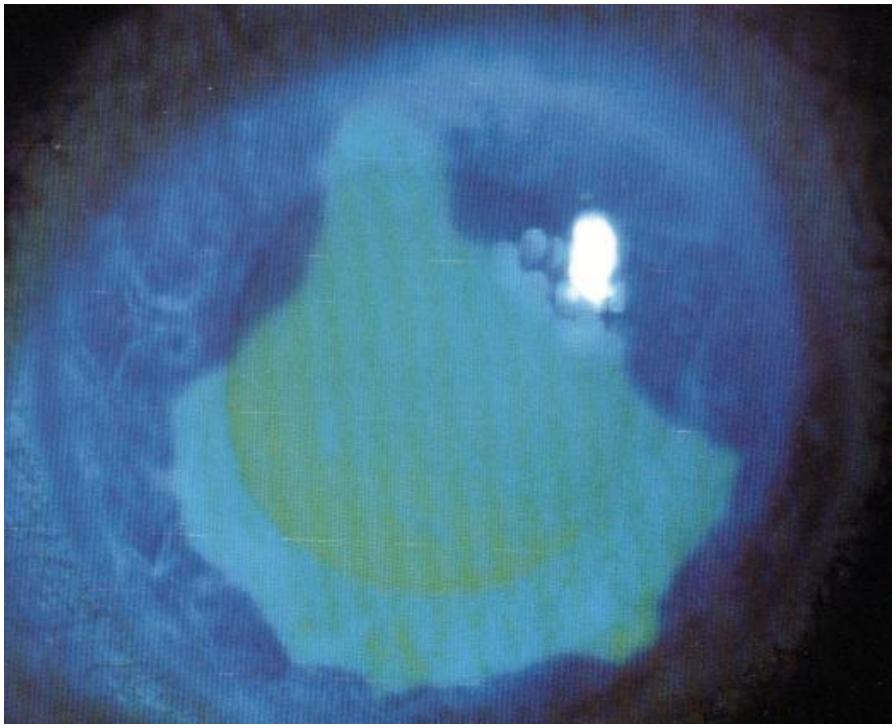
Q: Management?

A:

Topical antibiotic (drops or ointment),,
consider topical NSAID, cycloplegic,,
Patch: not sure if we can use it after nail! Infection!







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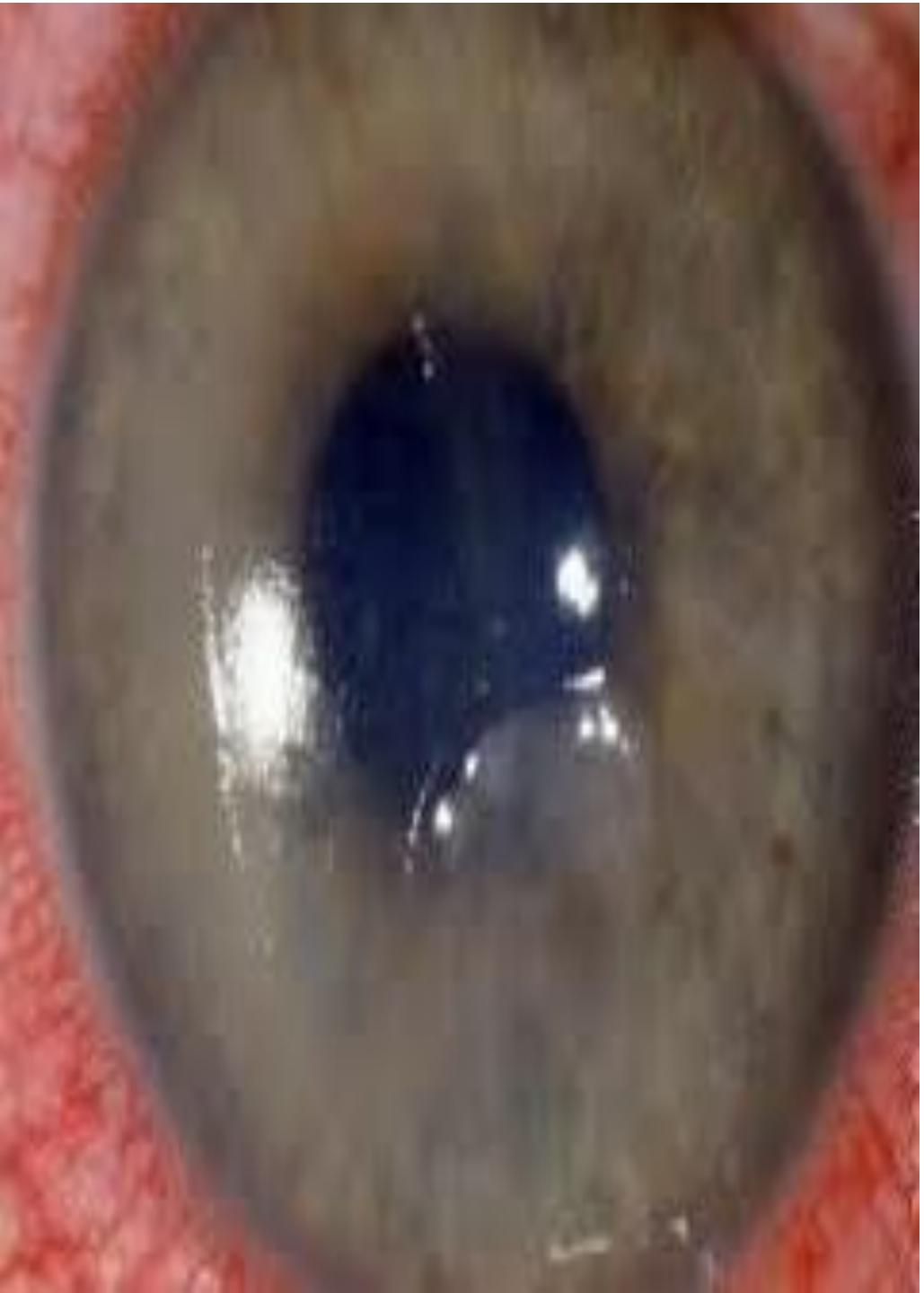


Hx of corneal abrasion

1- Rx ? Patch & cover

2- complication?

-recurrent corneal erosions

-Scar

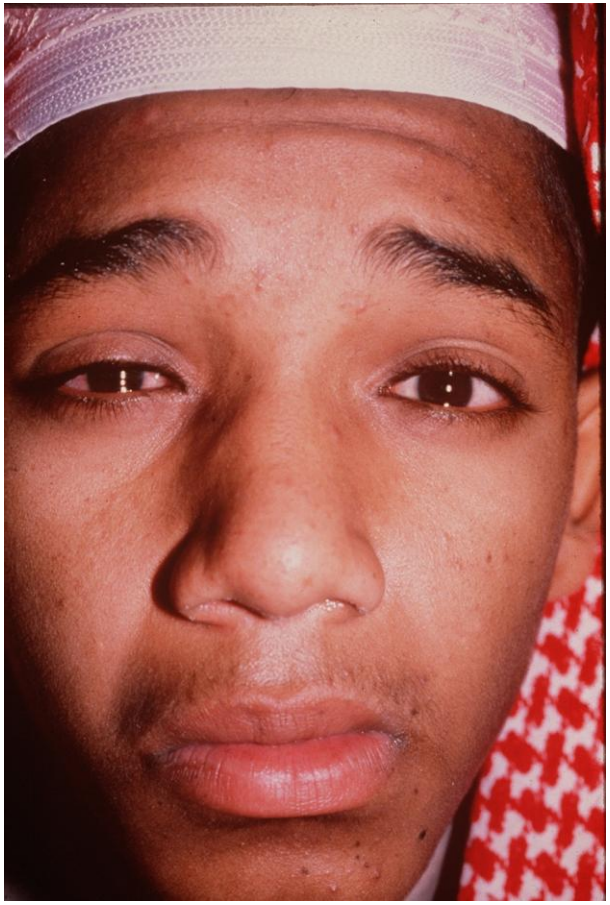
-Blepharospasm

-Eye red

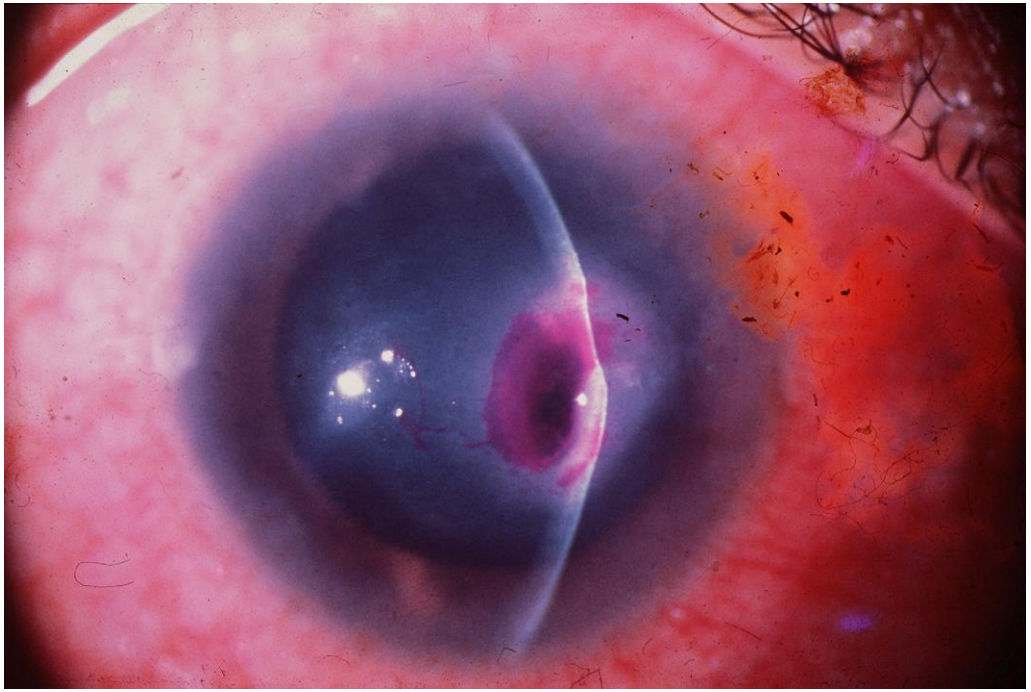
-Eye pain

-Photophobia

Corneal Ulcer



The right eye is abnormal.
there is rednees.
The bulbul fissure is narrower in the right than the left.



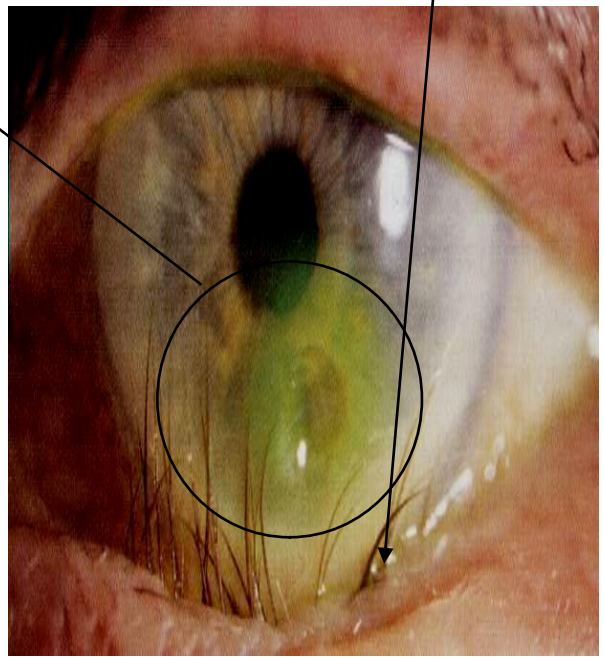
The right eye is stained with rose bengal stain.
Tx: take swab for culture and sensitivity. Give antiviral never give steroids.

These notes are taken from 430 team.

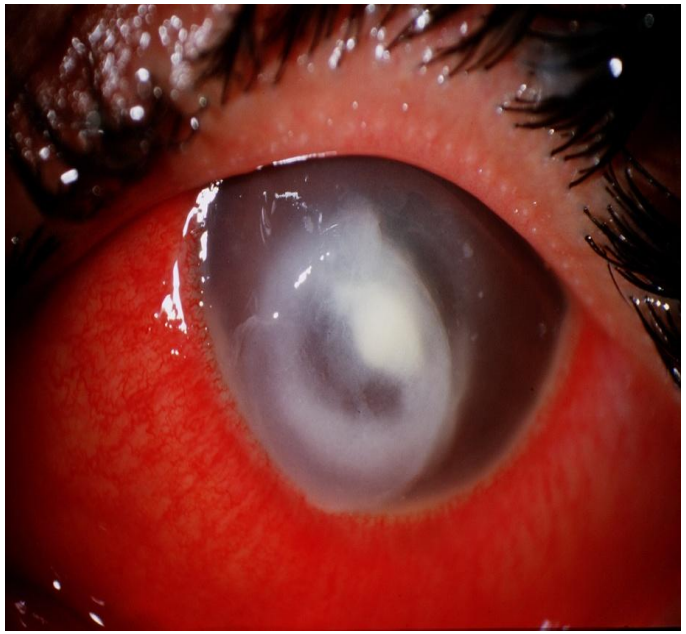
- Corneal Ulcer Stained by Flurocene + Entropion & 2ry Trichiasis
- Tx: Tx Entropion 1st
- Scraping the ulcer for a sample
- Embirical Broad spectrum

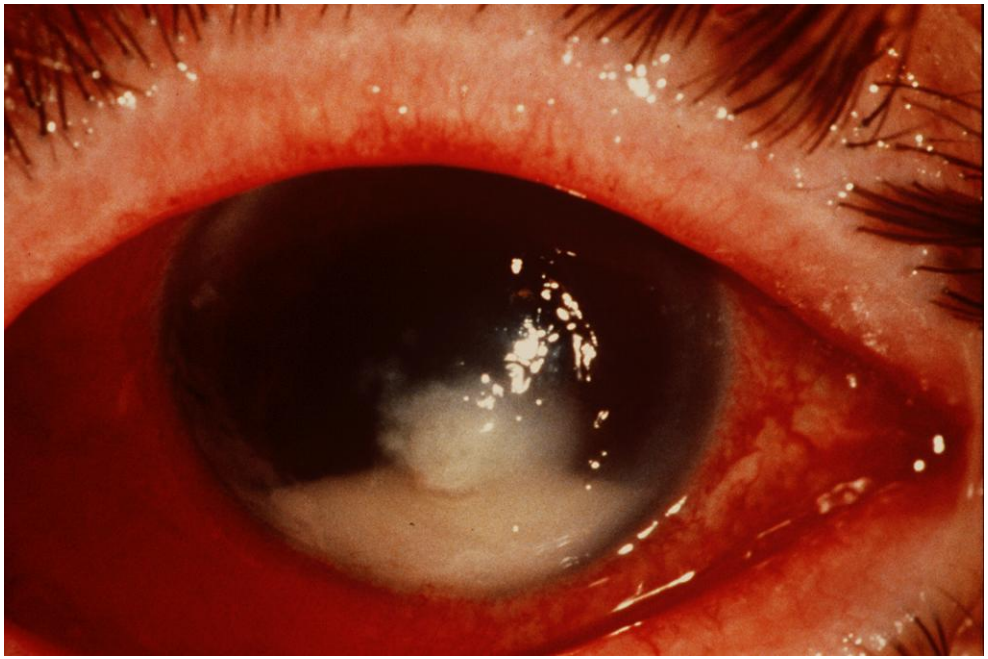
Antibiotics (Cipro) (Topical) Because the cornea is avascular

-NEVER GIVE STEROIDS in corneal Ulcer with infection



- Diagnosis?
  Corneal ulcer
  bacterial are more common.
- Treatment?
  Topical antibiotics
  every hour.
- Complications?
  - Decreased vision.
  - Corneal perforation.
  - Iritis.
  - Endophthalmitis.





Contact Lens

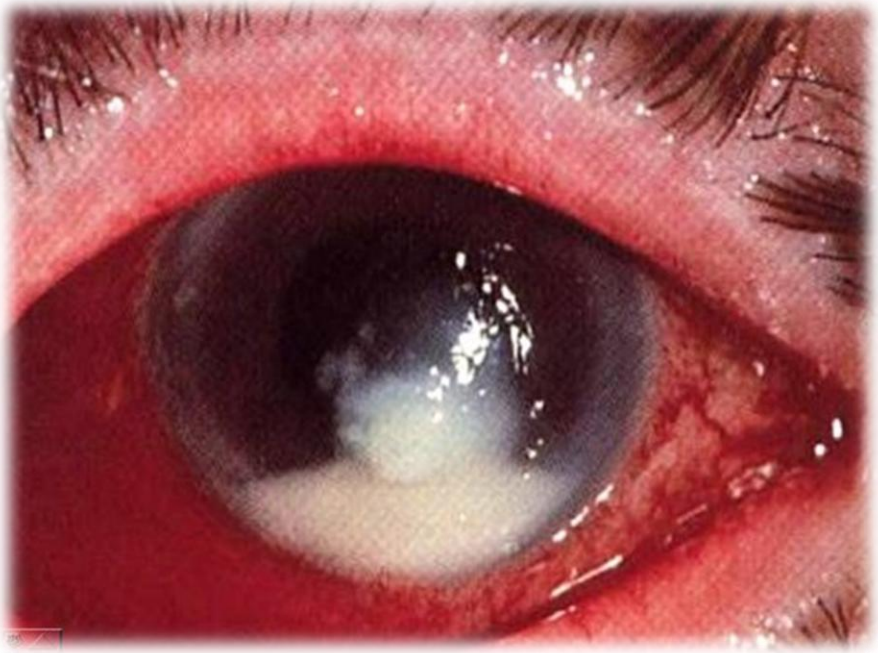
1-Diagnosis: corneal ulcer

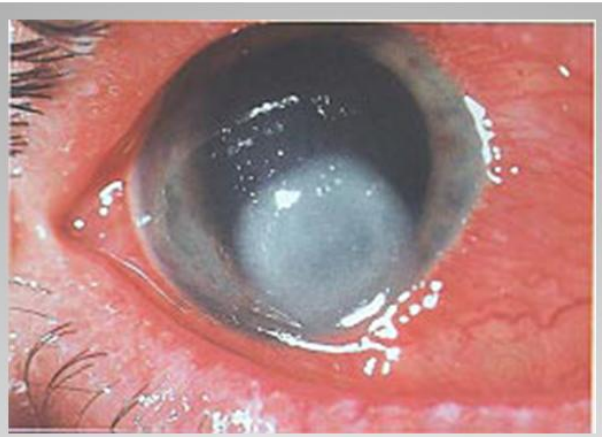
2-treatment : remove contact lens ,take culture, antibiotic

Hypopion + Marked Conjucival njection = CORNEAL ULCER

Flurocene to confirm & Corneal Scrap (Sample).

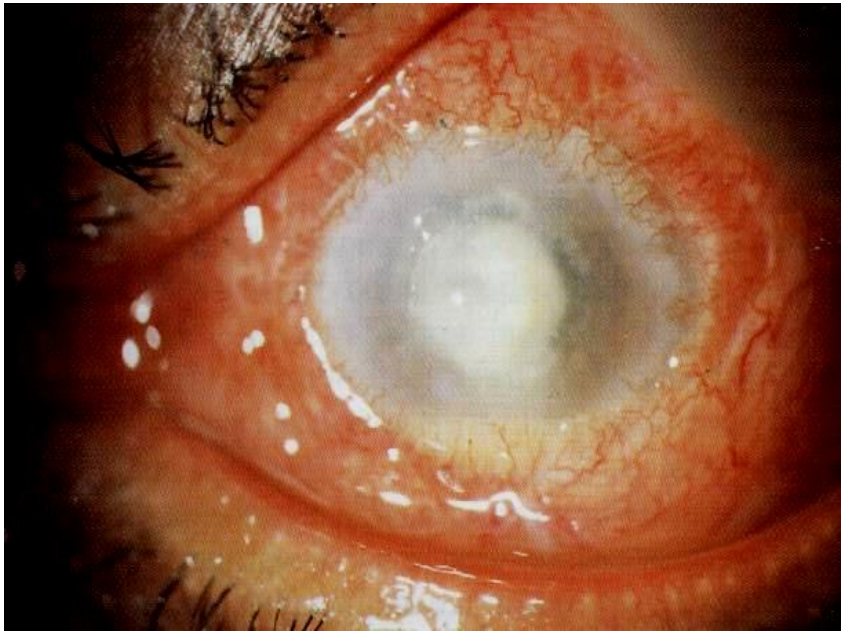
Tx: Antibiotics (Topical) + Cycloplegics & Patch (Don’t patch without antibiotics)



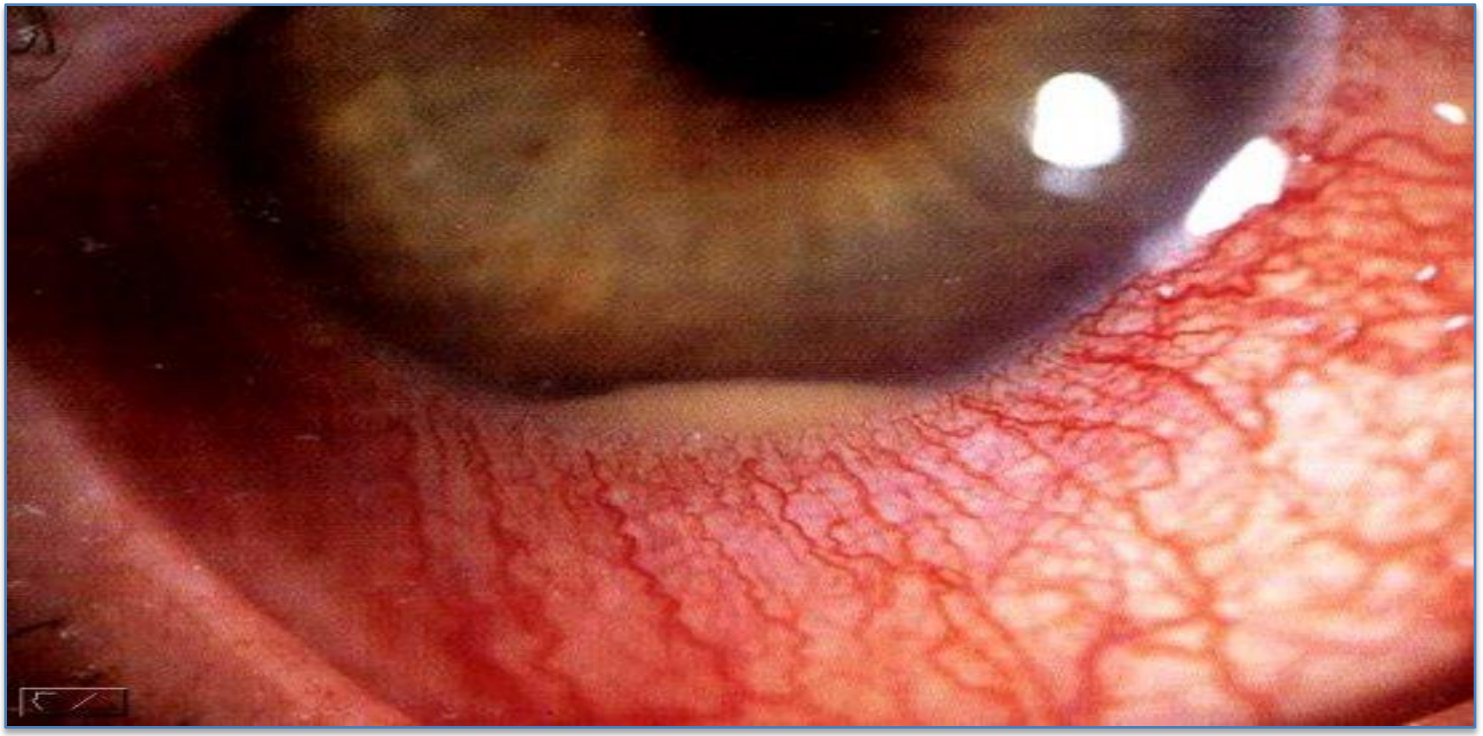


A. This patient has Hx of wearing contact lenses, what is your diagnosis?
B. How would you manage this patient?

A. Corneal ulcer
B. Remove the lenses and culture first then topical antibiotics every hour



- Corneal Ulcer : Marked conjuctival Injection & Hypopion. → Exposure Keratitis.



A contact lens user came to E.R
with painful decreased V.A ? أتوقع؟>>

1.Dx ?
Corneal ulcer

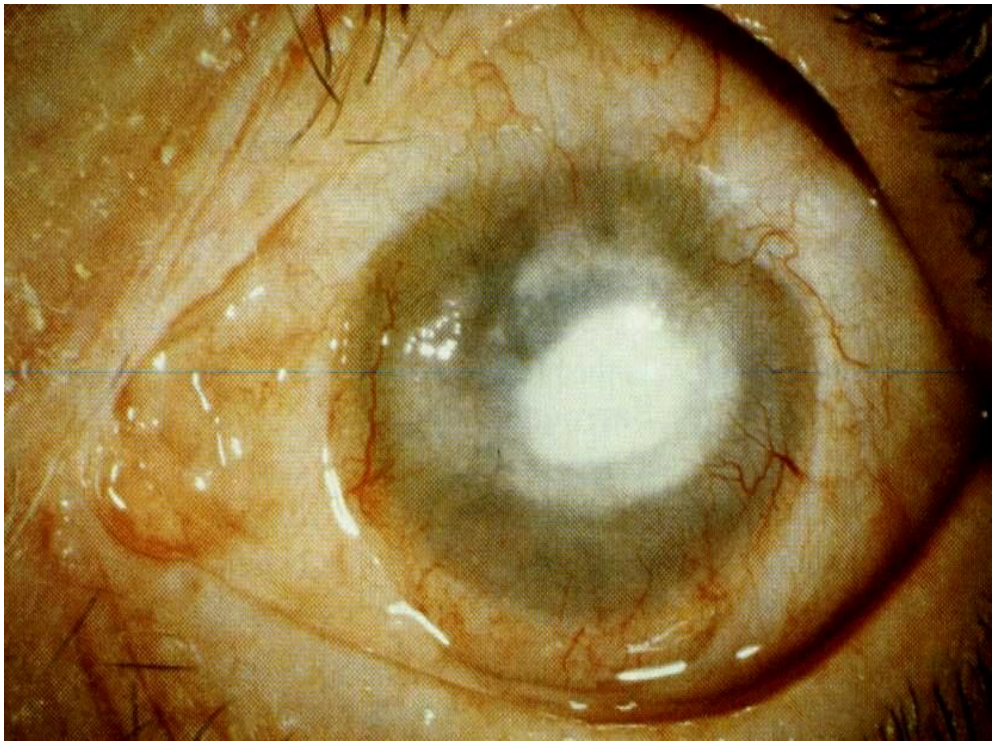
2. Mx ?
Removal of contact lens,
corneal scraping for culture & sensitivity, start topical
broad spectrum antibiotics & avoid steroids

A. Patient came to the ER with Hx of finger nail trauma (can't remember the exact question but it was something like that) how would you manage this patient?
B. What is the complication (write only one)?

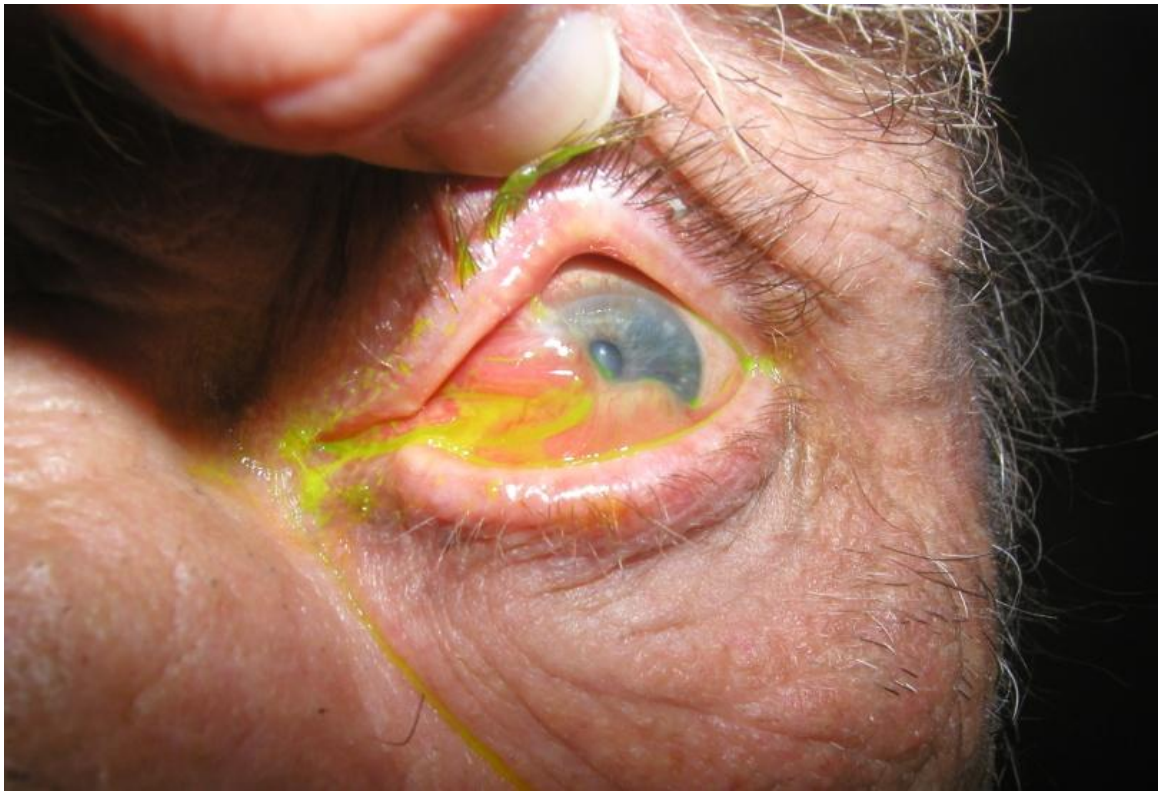
A. Topical antibiotic , NEVER patch this lesion
B. scarring, secondary iritis

C1 .. 426
Dr.no0p

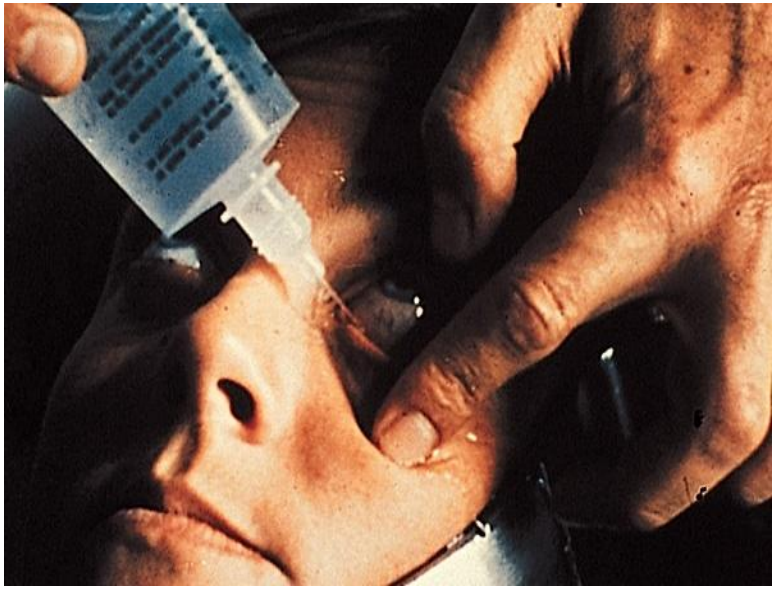
- Corneal Scar.
- If the conjunctiva white → inactive.
- If Red → Active.
- Flurocene to conferm.

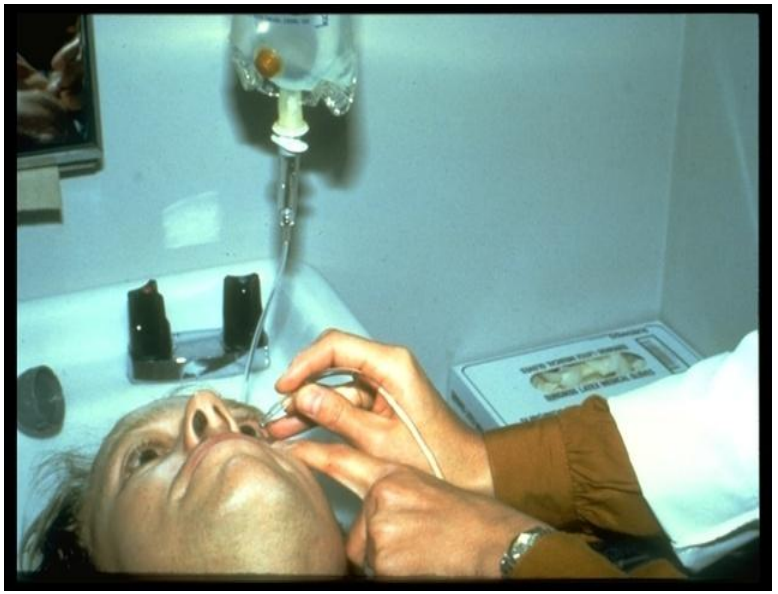


Chemical Injuries

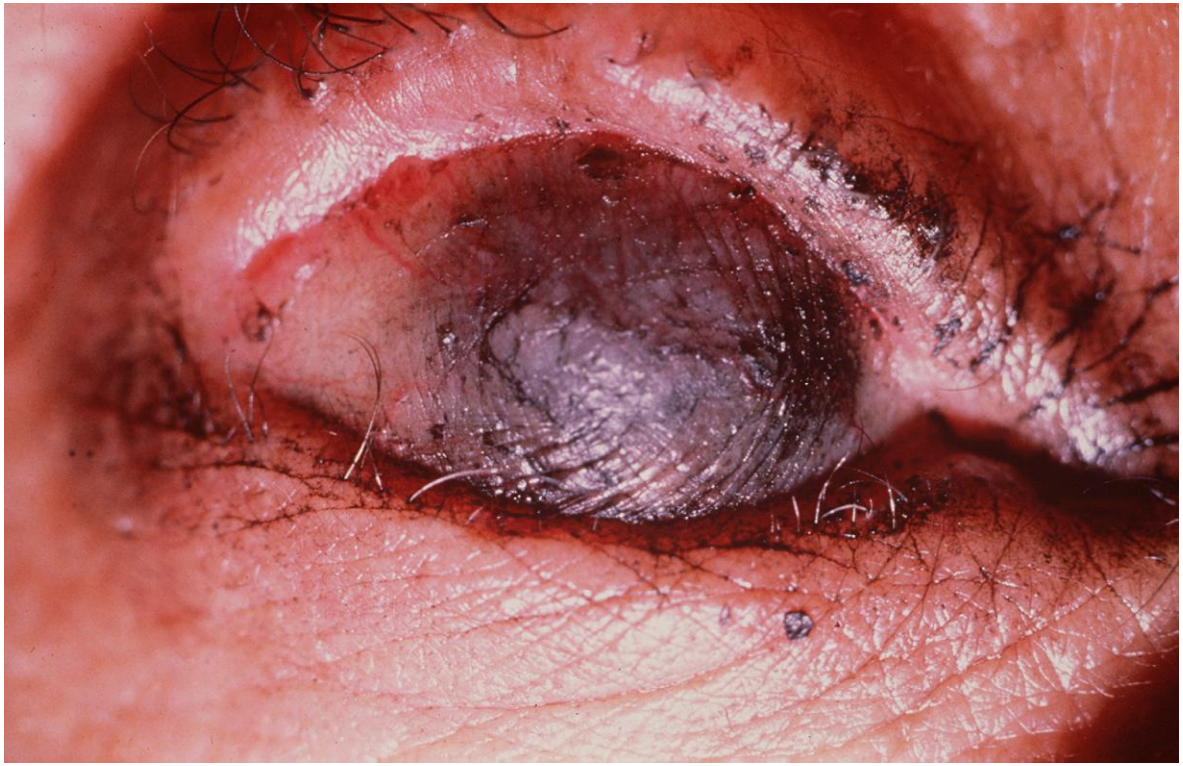


Irrigation in chemical injuries

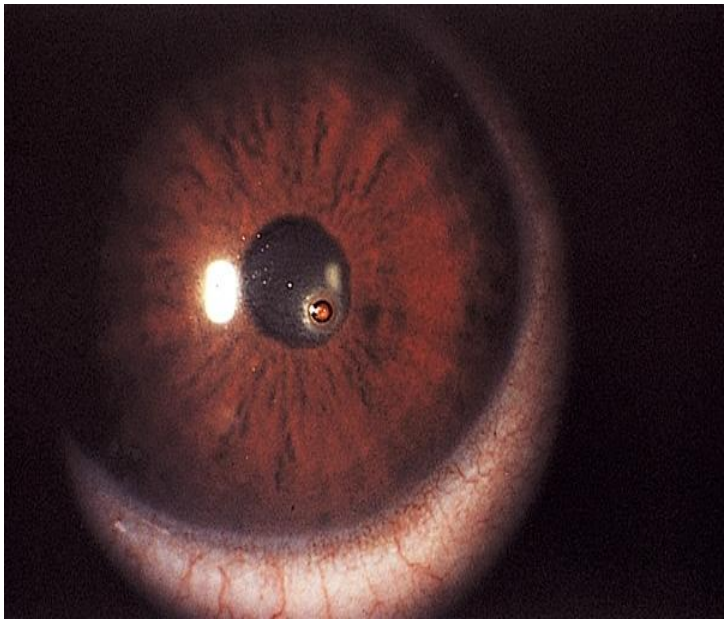


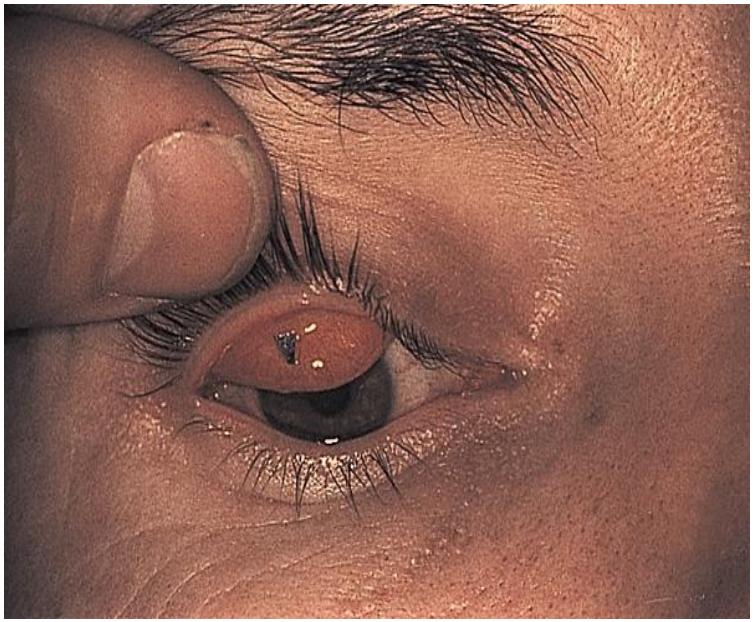


Frozen eye

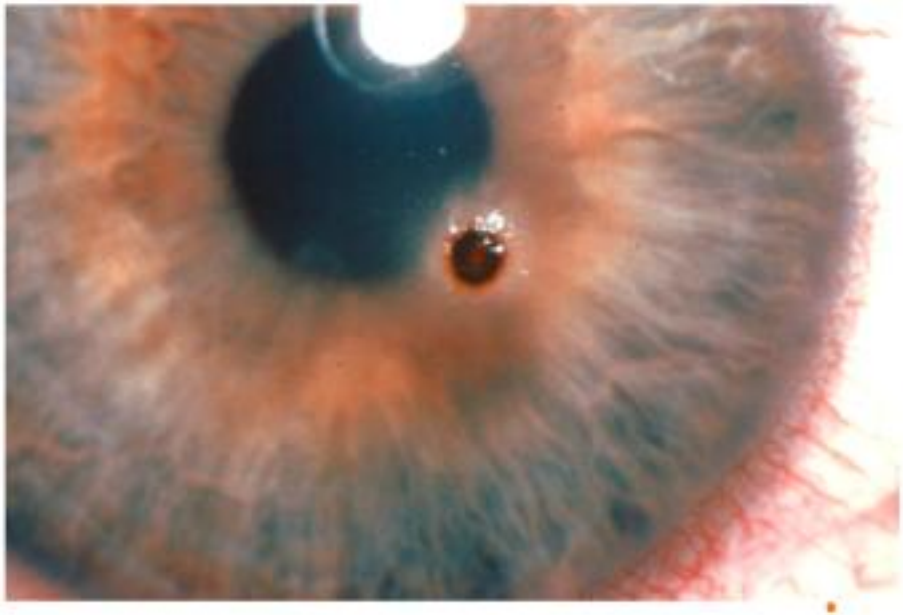


Corneal and Conjunctival Foreign Bodies





- Q: What is the diagnosis?



A: Foreign body in the eye (cornea).

Q: What is your managment?

A:

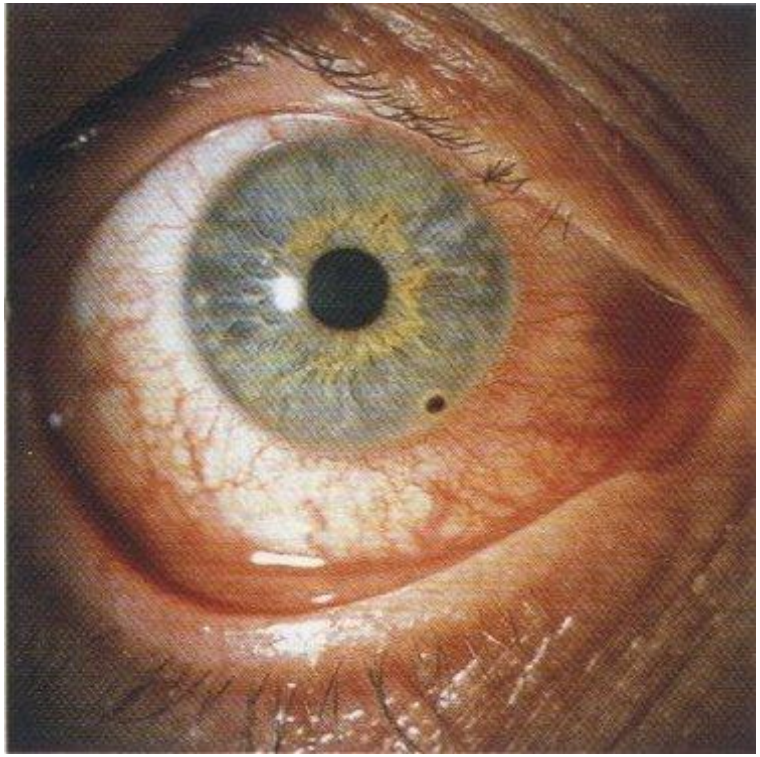
- Remove the foreign body under local anesthesia
- Topical antibiotic.
- consider topical NSAID, cycloplegic.

Q2

- A worker came to the ER with this eye, the most likely dx is?

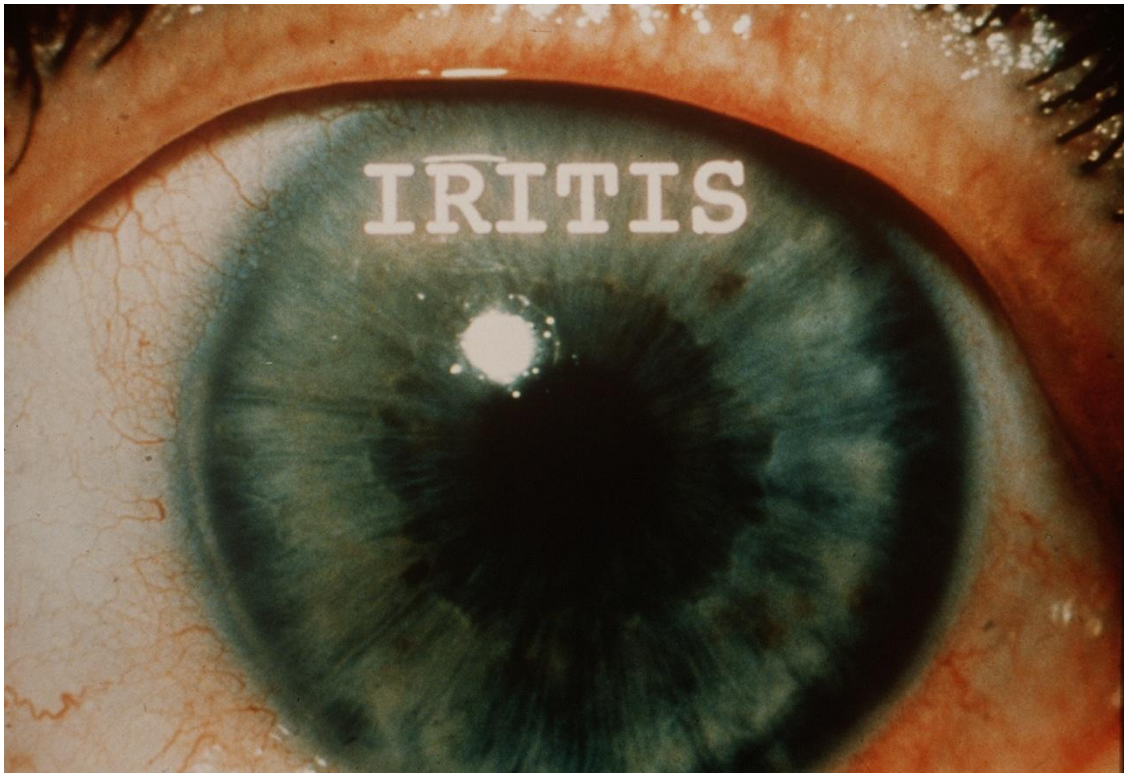
- Cataract
- Foreign body
- Nevus
- Blod clut

The magical word “**worker**”

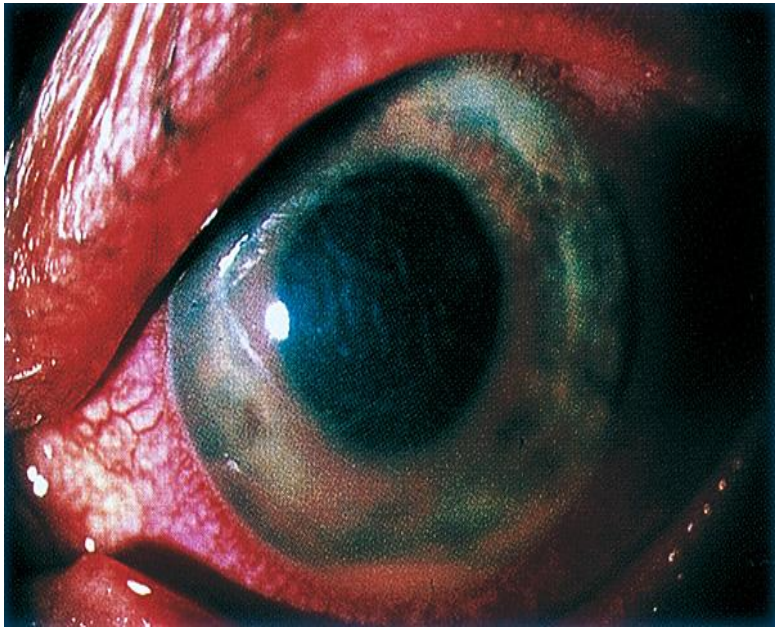


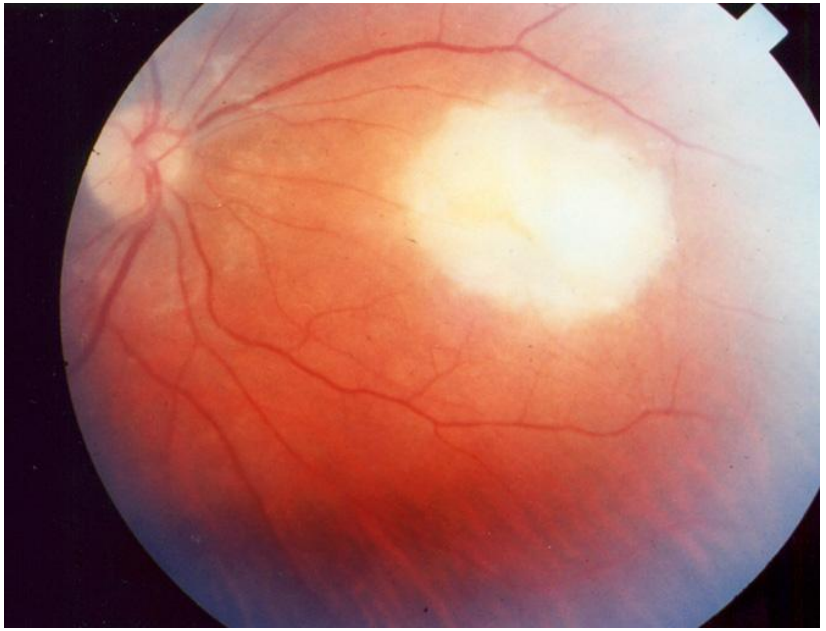
The same exact pic. ☺

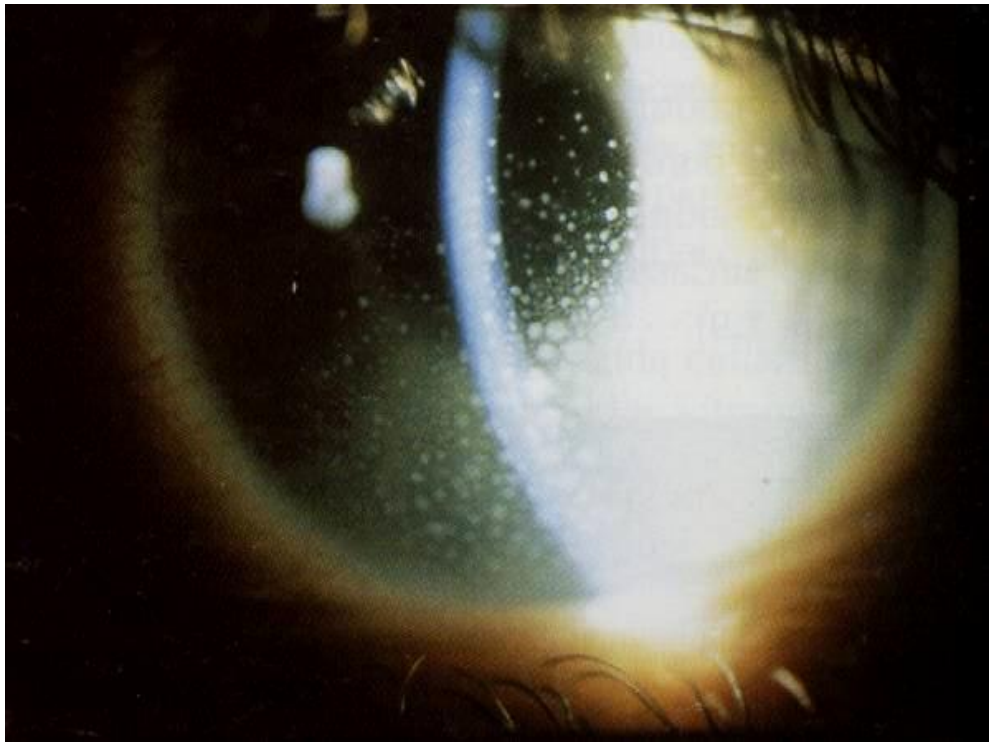
Uveitis


IRITIS

Uveitis



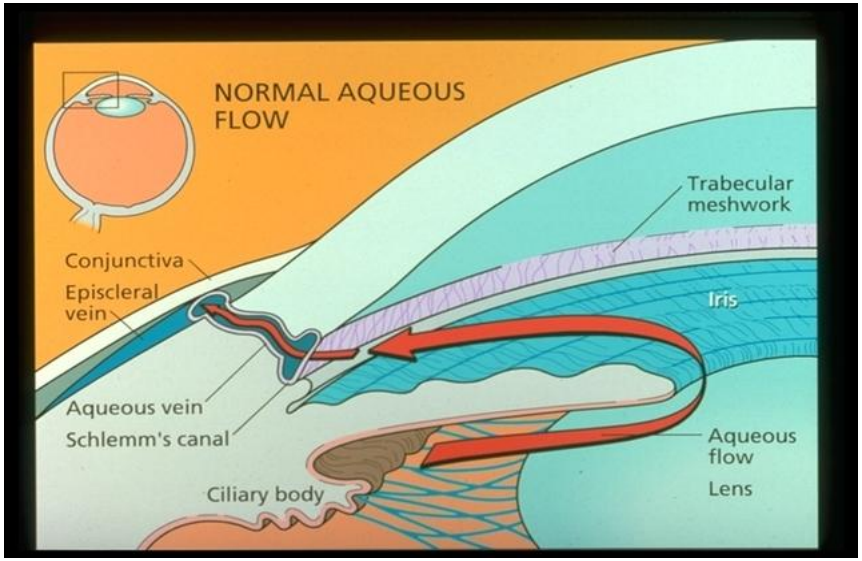


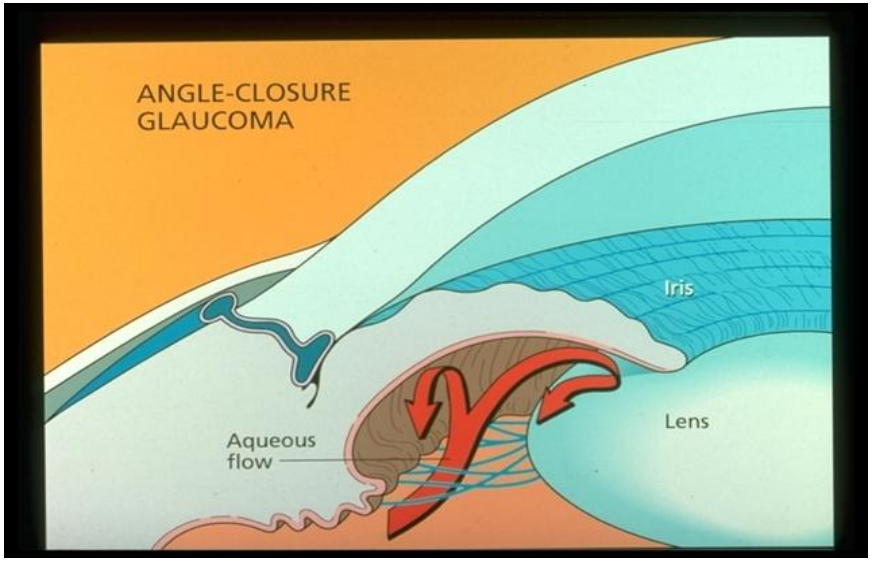


- Slit lamp Examination Showing Keratic Precipitates in the posterior corneal surface. (UVEITIS).

Acute angle closure glaucoma

Acute angle closure glaucoma

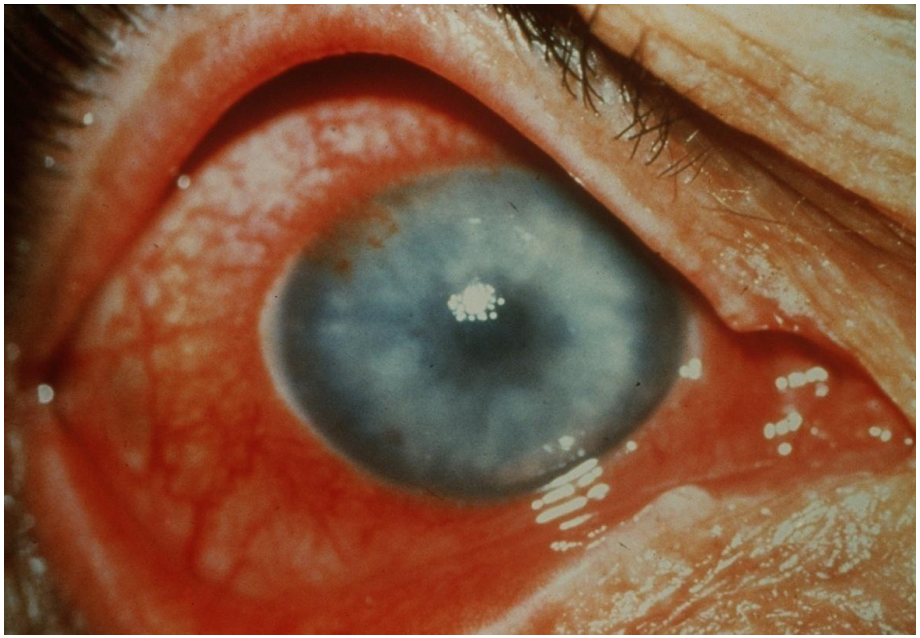




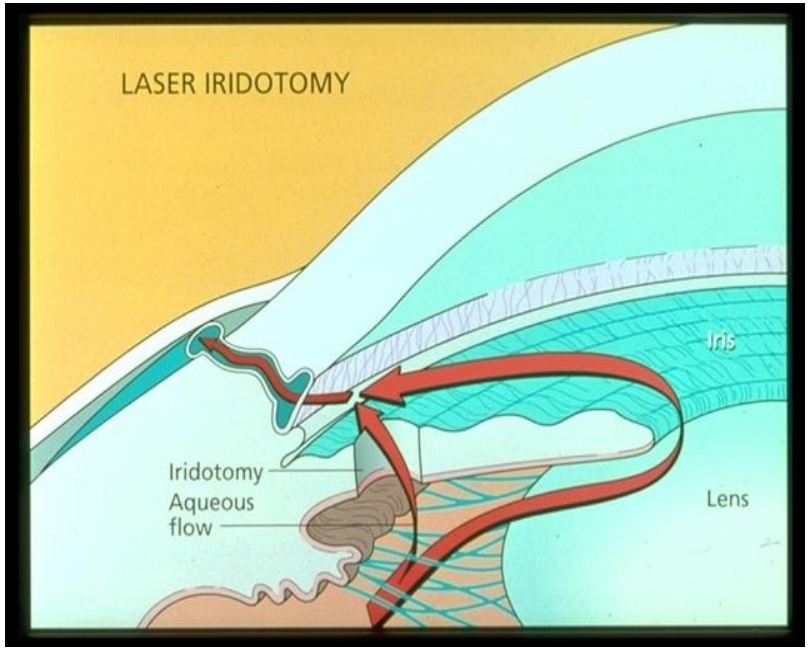
Cloudy vision

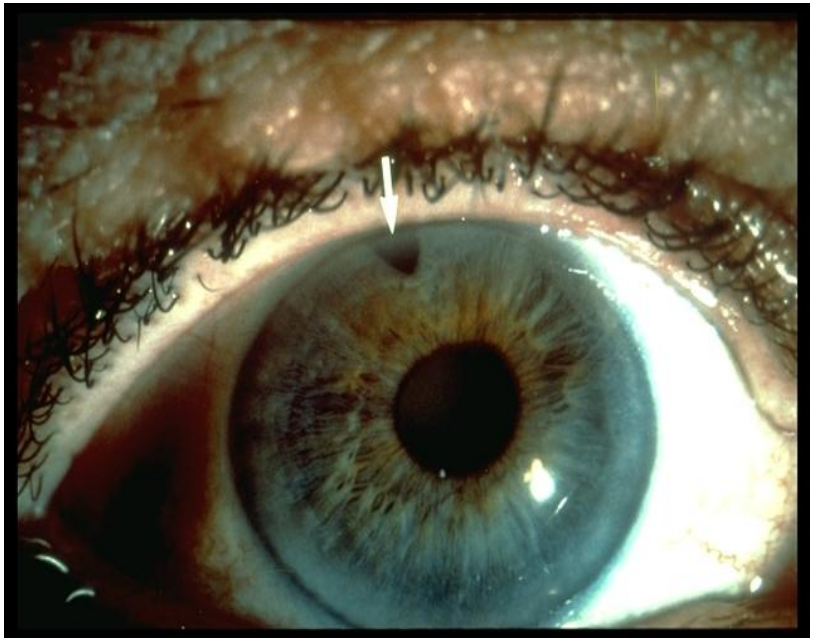
With eye pain and headache :

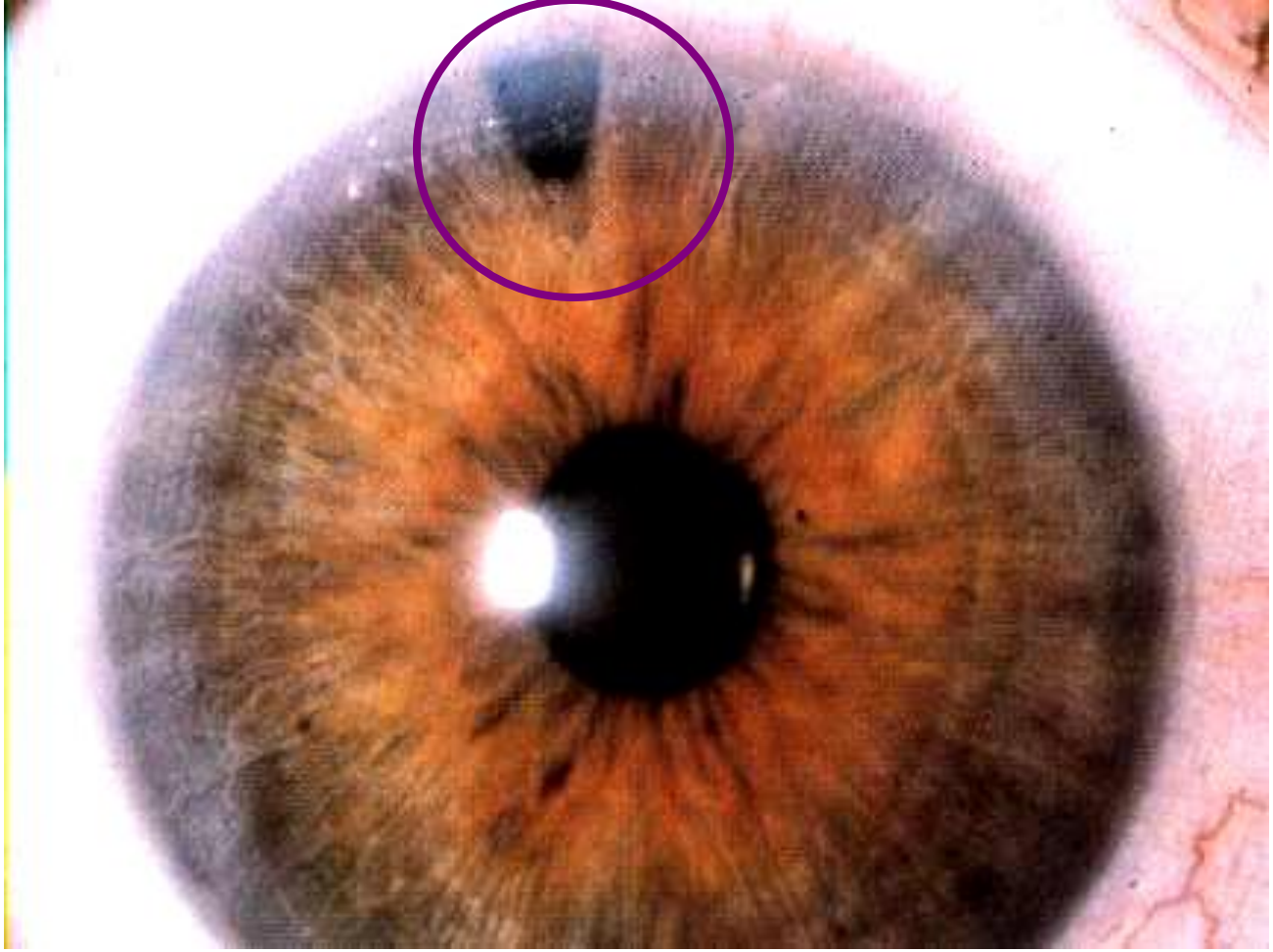
- ACG , Secondary glaucoma to rubeosis , etc.
- Optic neuritis
- Endophthalmitis



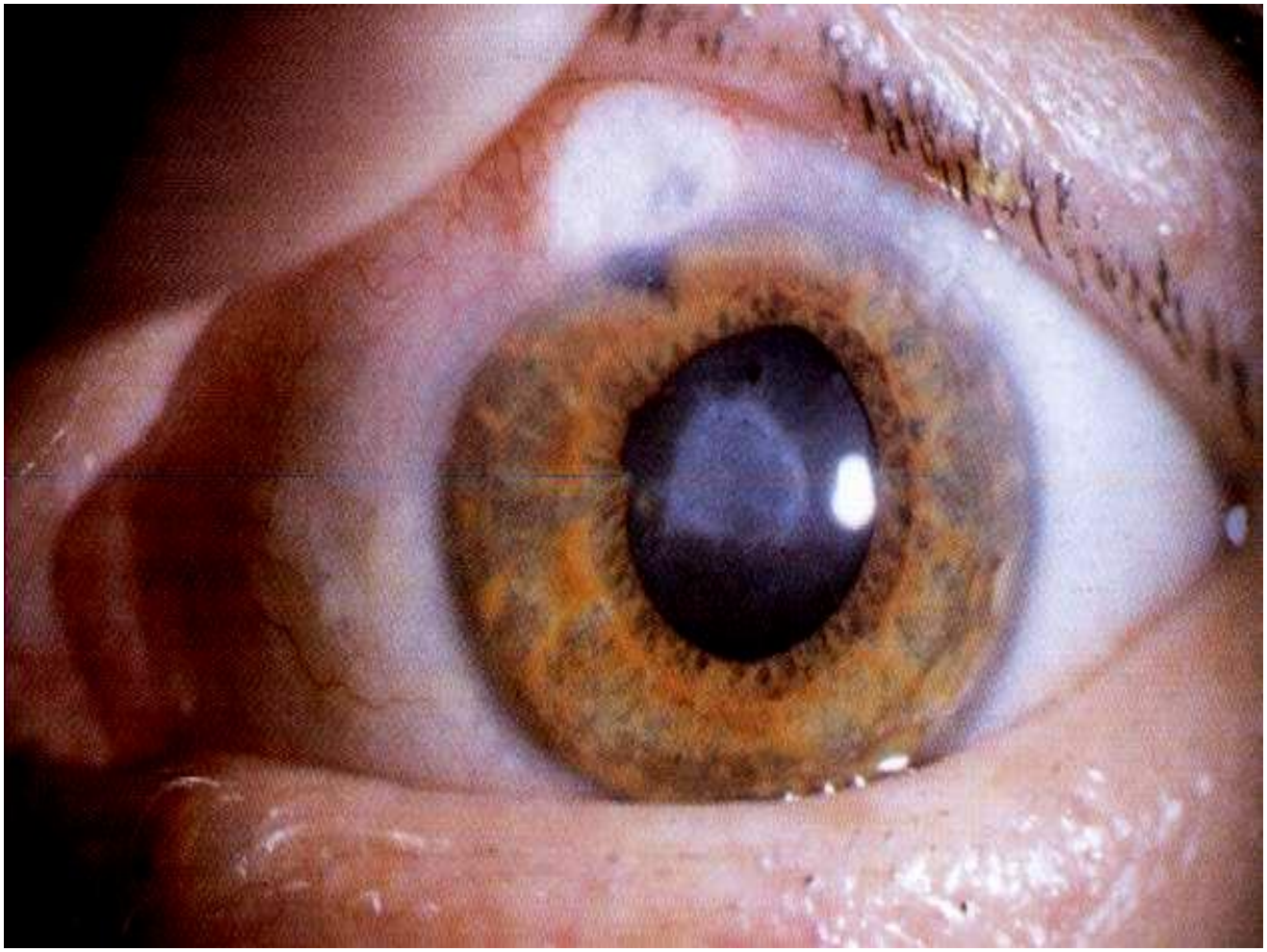
Laser iridotomy in acute angle closure glaucoma





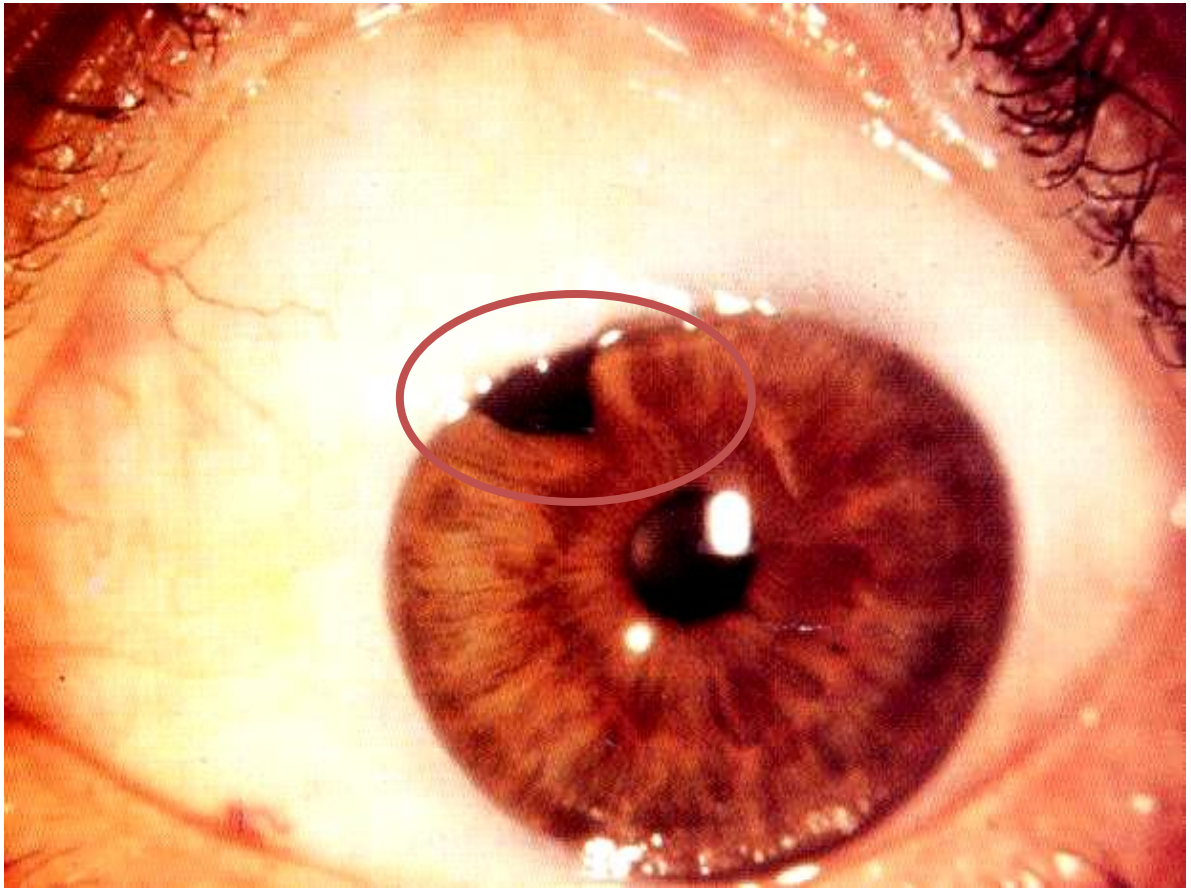


- Post-Peripheral Iridectomy.

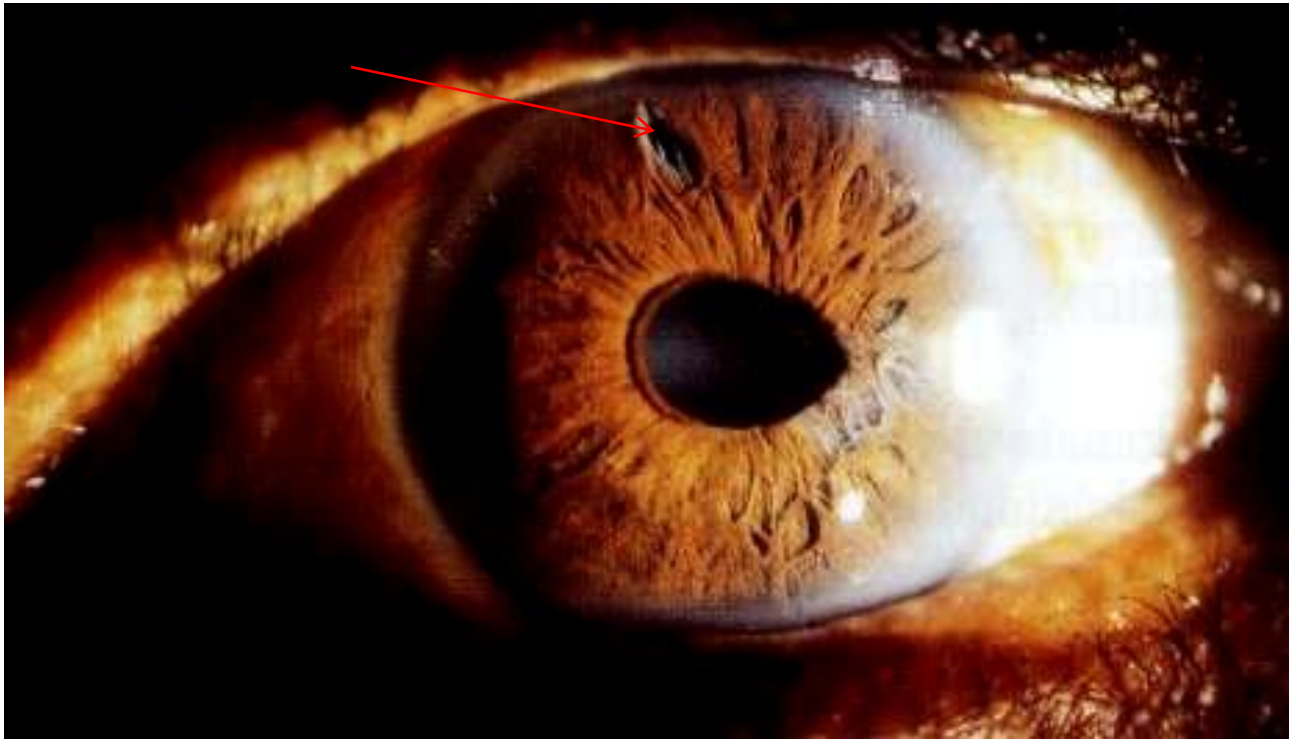


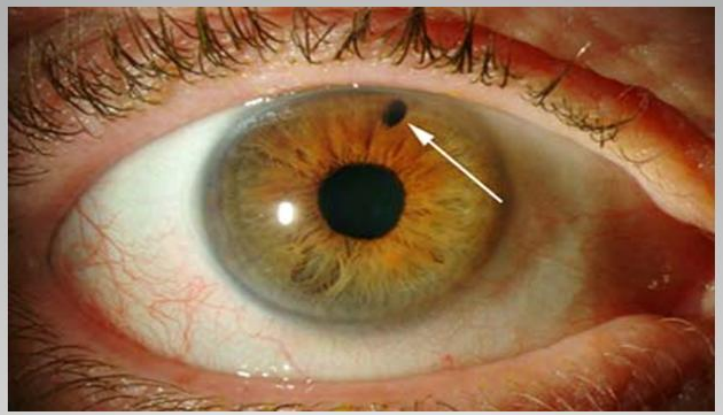
- Post-Iridectomy

- Iridectomy



1-Identify : peripheral iridotomy
2-indication: acute closure angel glaucoma
Note the ECLIPSE sign. (Sign of a shallow Ant. Chamber)
قوس ضوء على اليمين + قوس ظل على اليسار



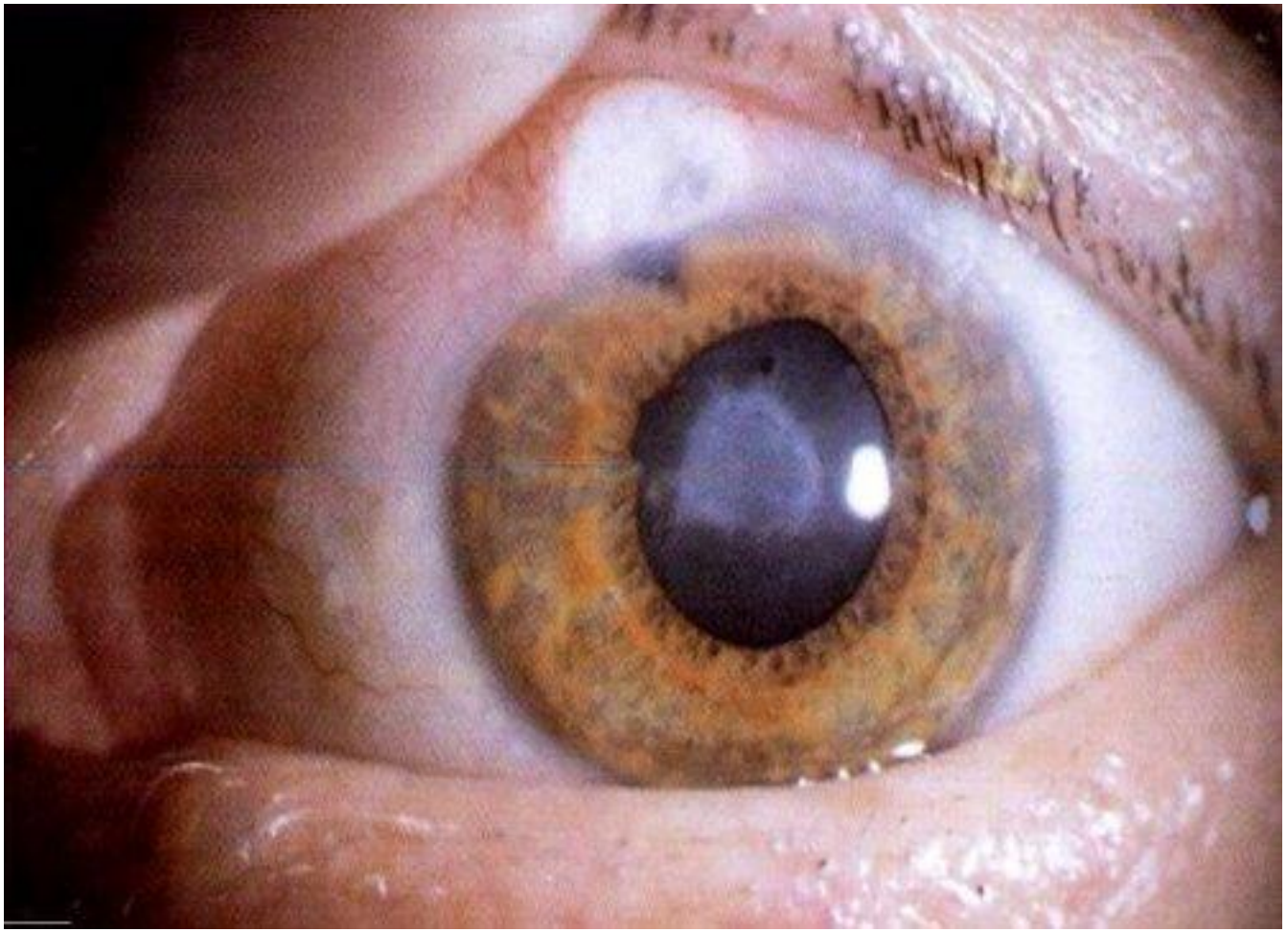


A. Patient has Hx of iris operation, name this operation?
B. What is the indication for this operation?

A. Laser Peripheral Iridotomy
B. Acute closed angle glaucoma

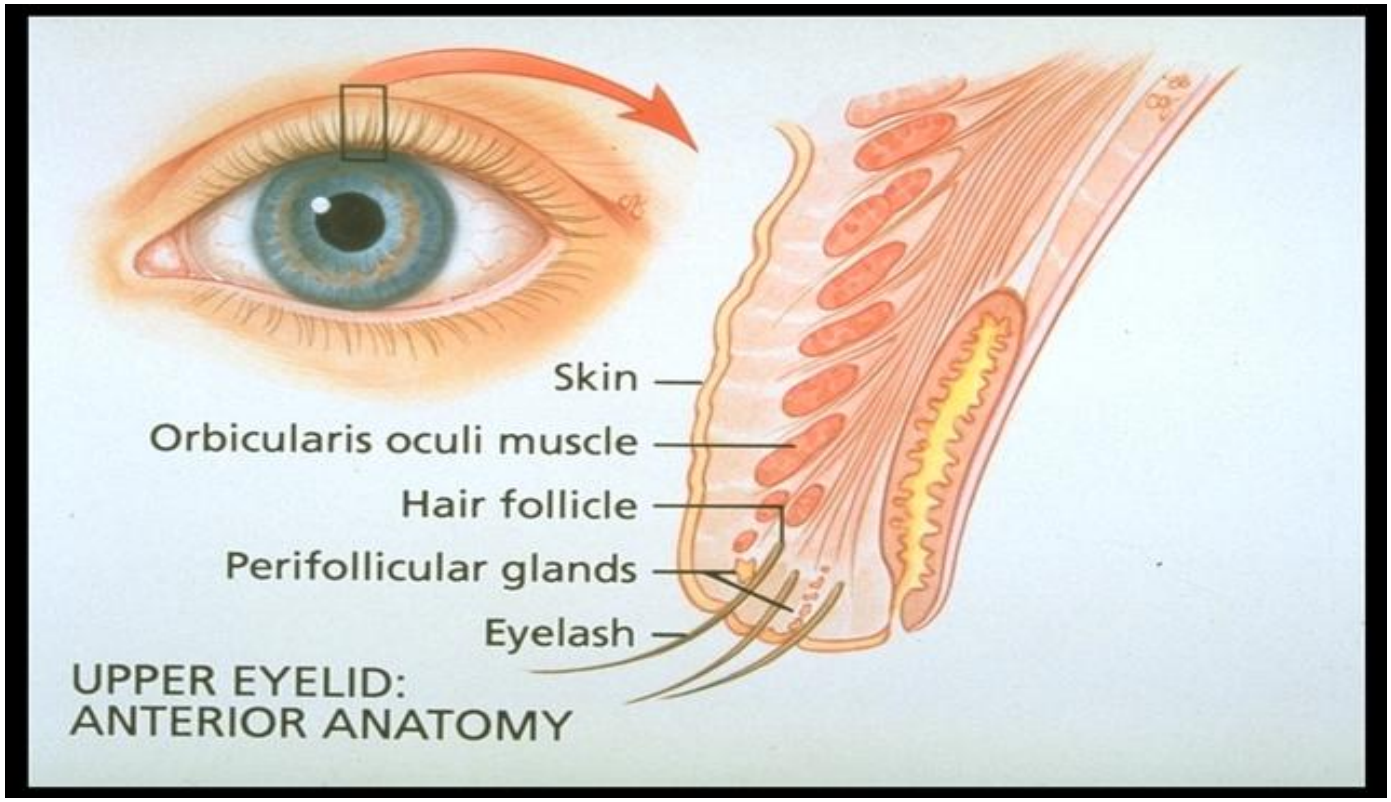
12

Iridotomy

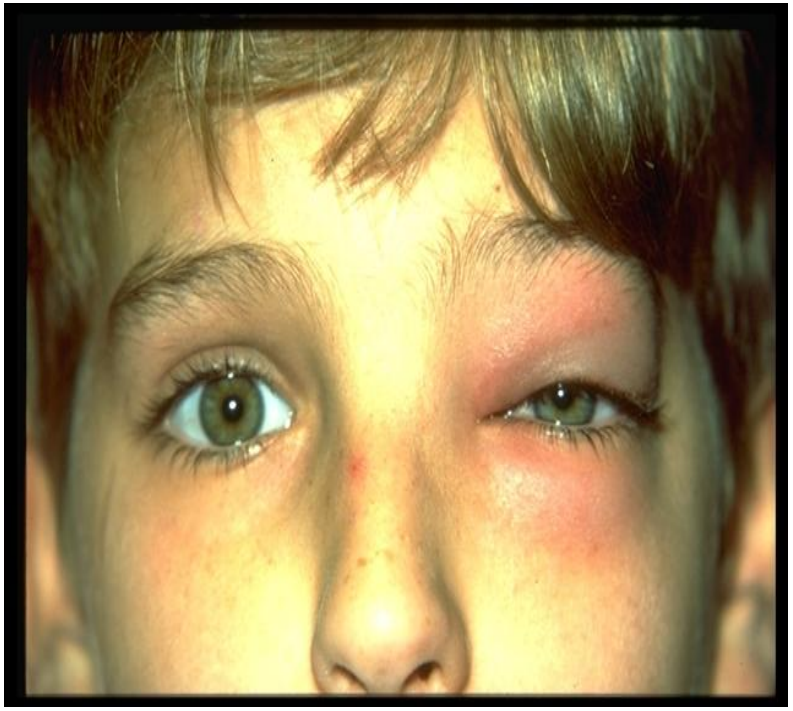


Preseptal and orbital cellulitis

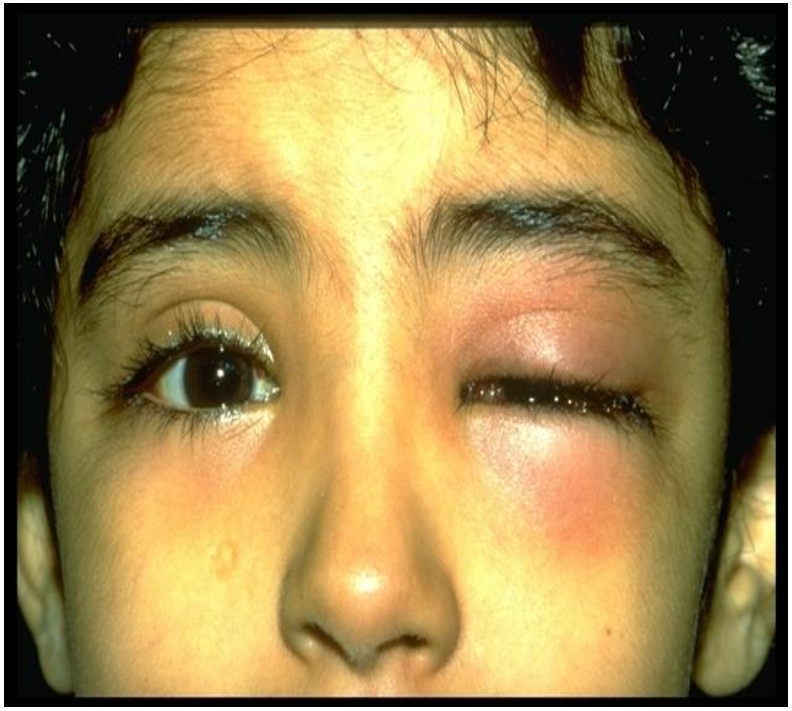
Anatomy of the eyelid



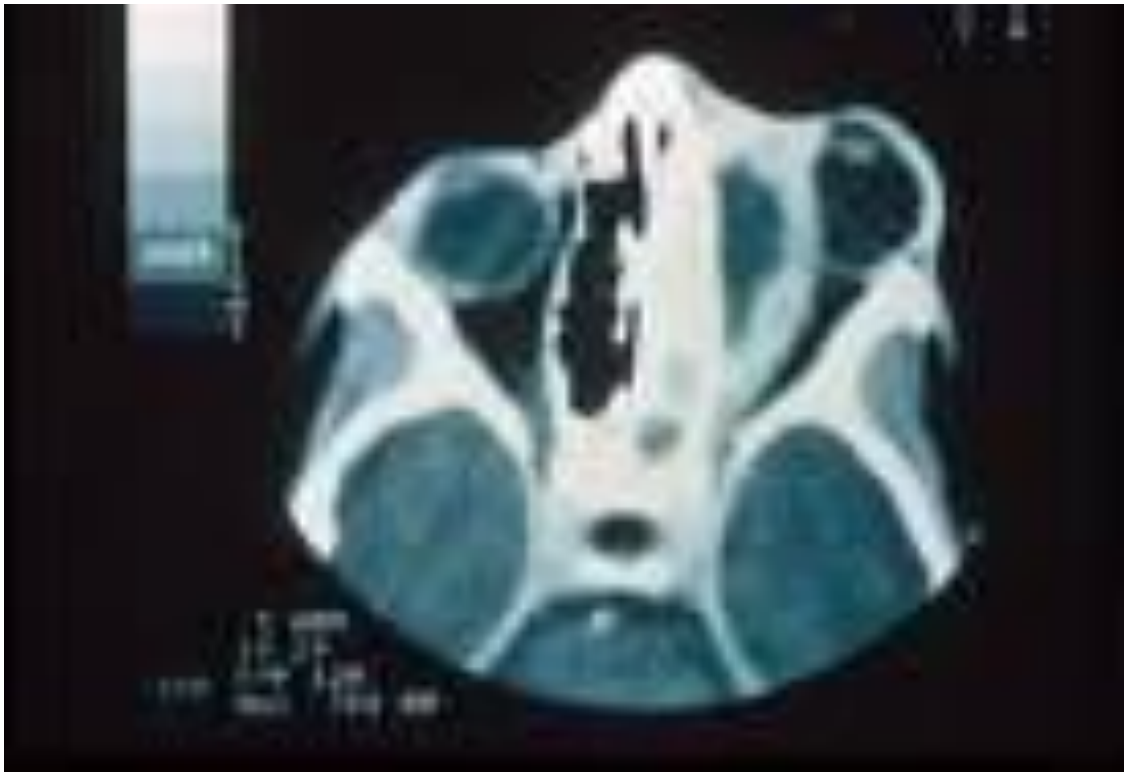
Preseptal cellulitis



orbital cellulitis

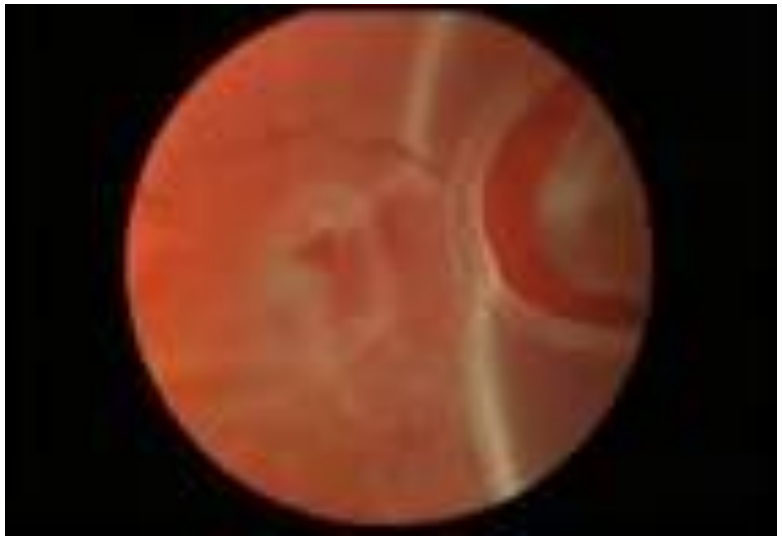


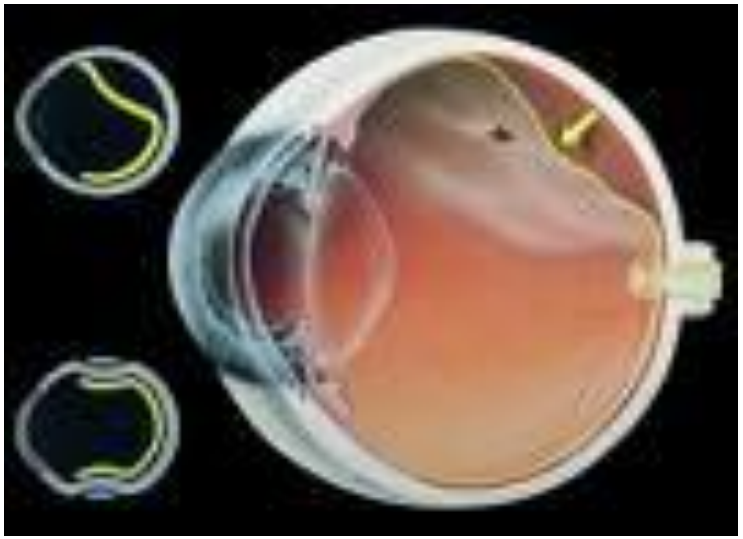
CT scan showing a subperiosteal abscess associated with orbital cellulitis



Retinal detachment

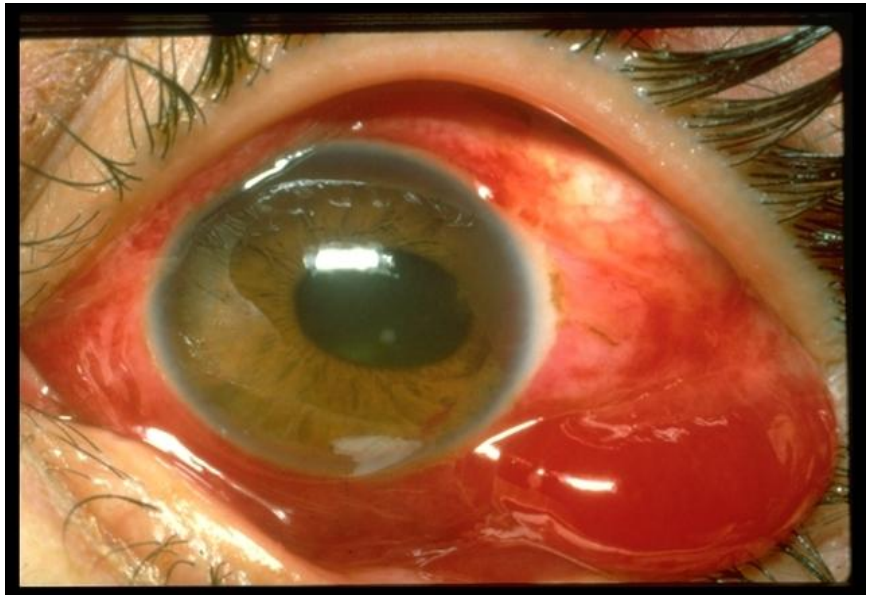
Retinal detachment



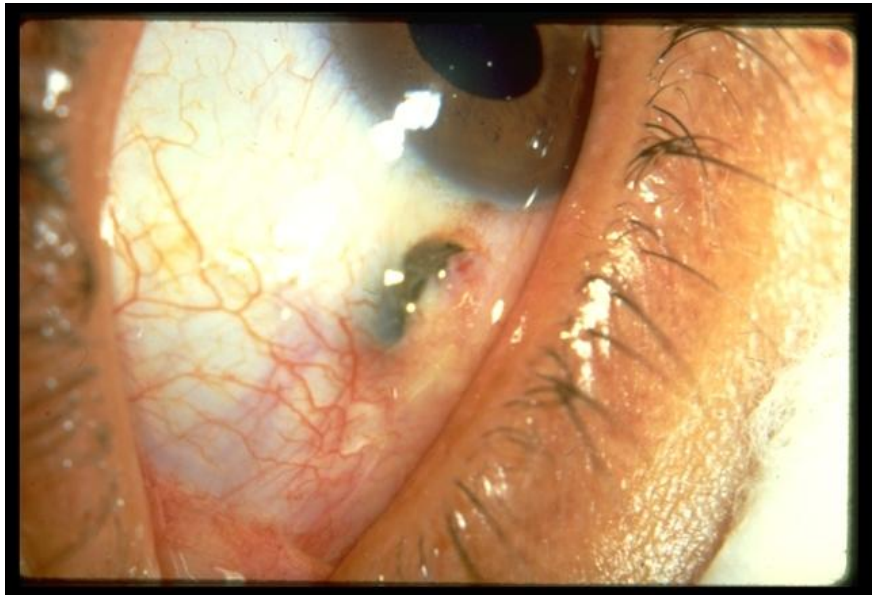


Ruptured Globe

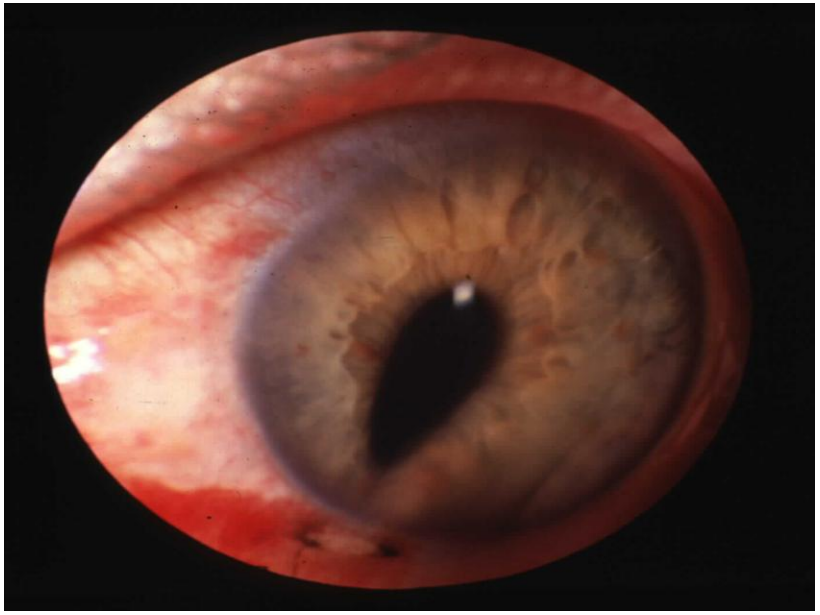
Ruptured globe
Bullous subconjunctival hemorrhage



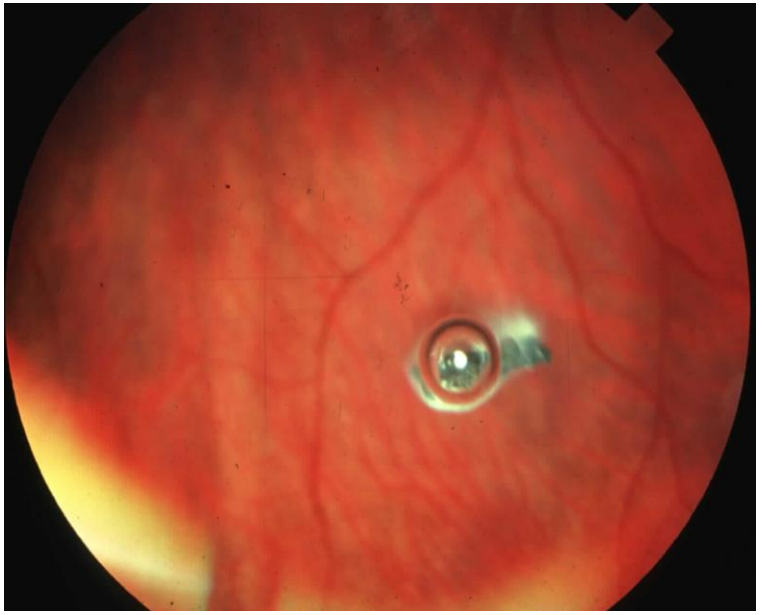
Uveal prolapse (Iris/ciliary body)



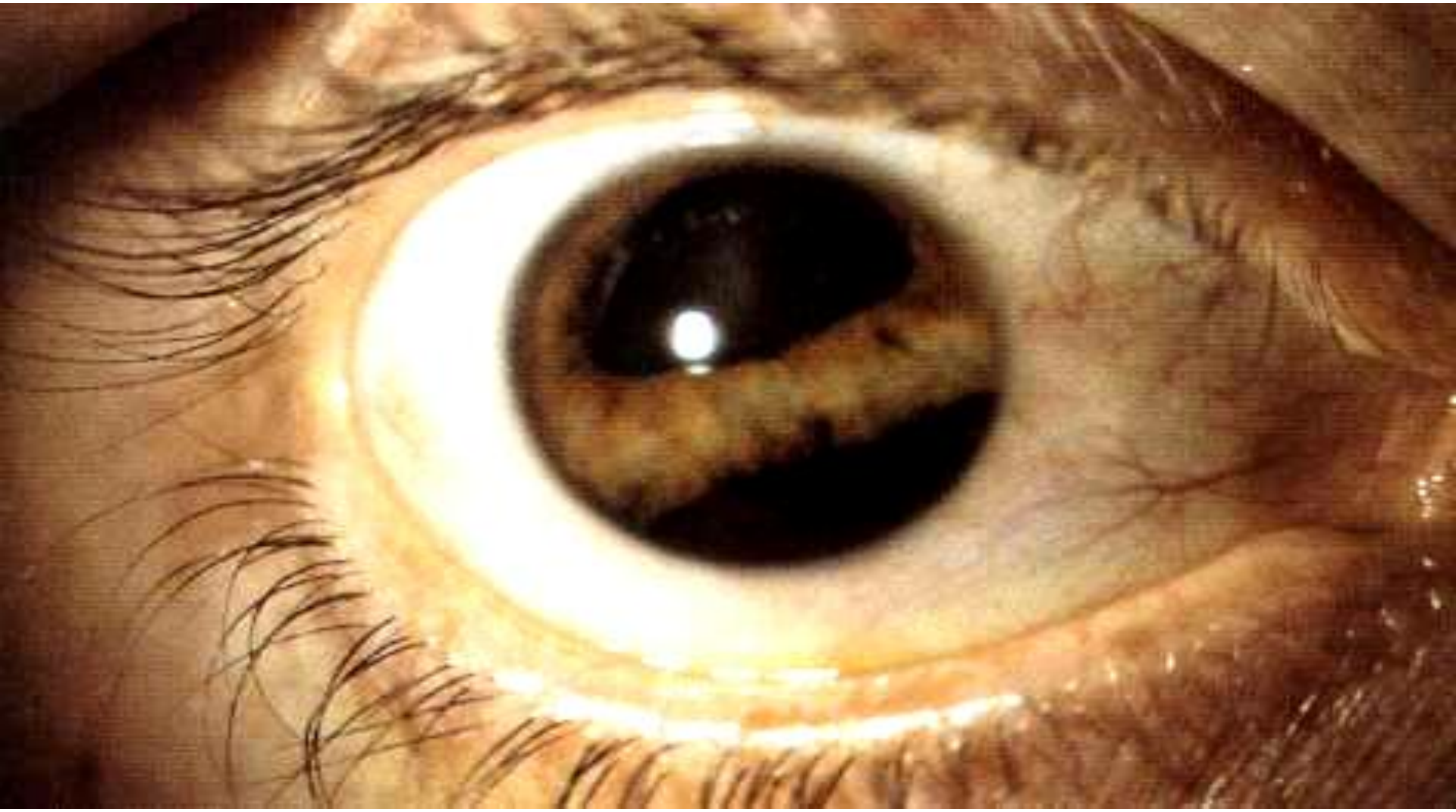
Ruptured globe: irregular pupil



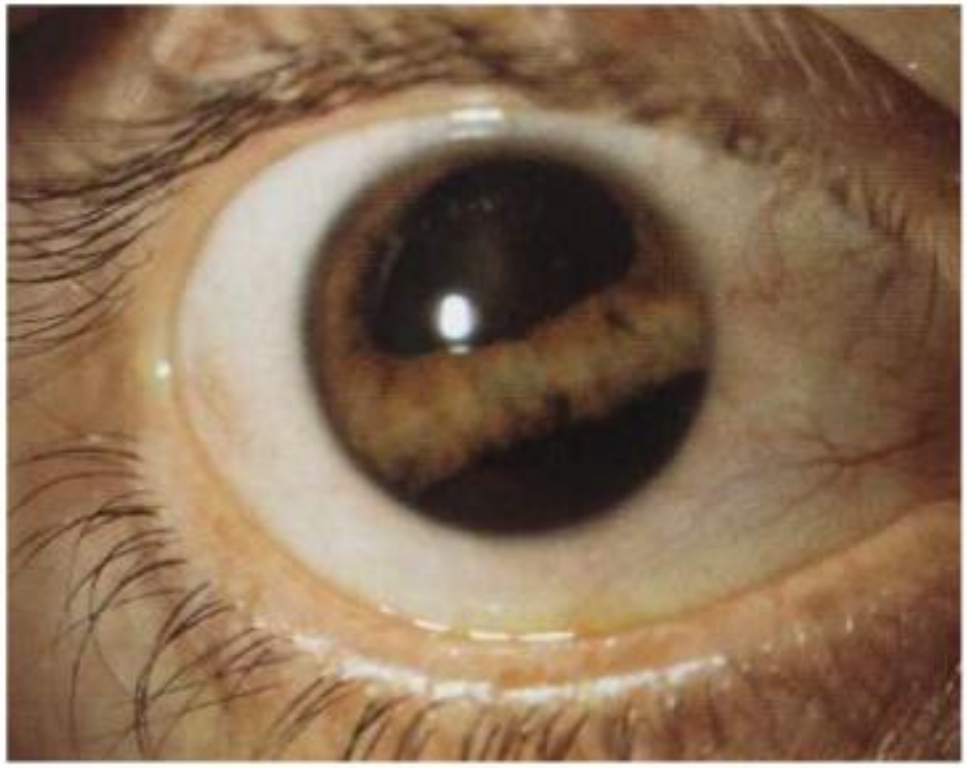
Ruptured globe: Intraocular foreign body



Iridodialysis

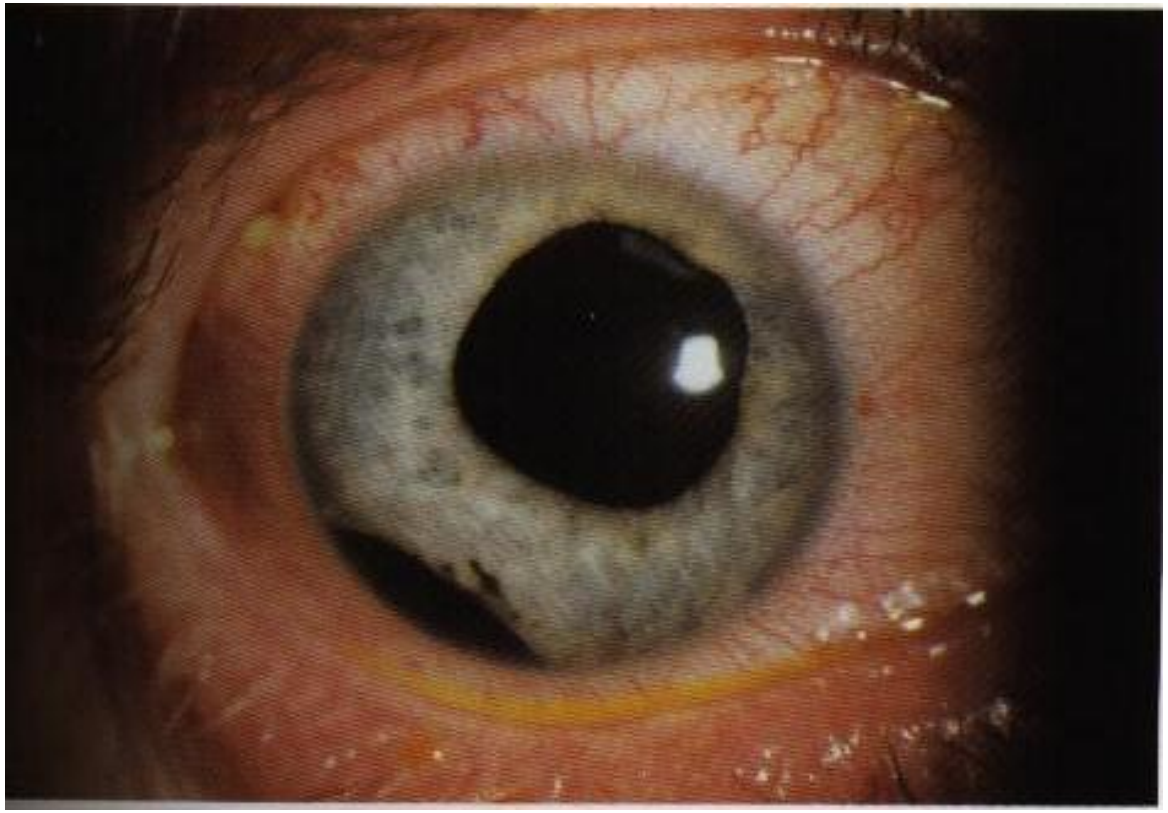


- Iridodialysis. (Trauma)
- Blurred Vision
- Mono-ocular Diplopia? Cataract?



Dx?
Iridodialysis

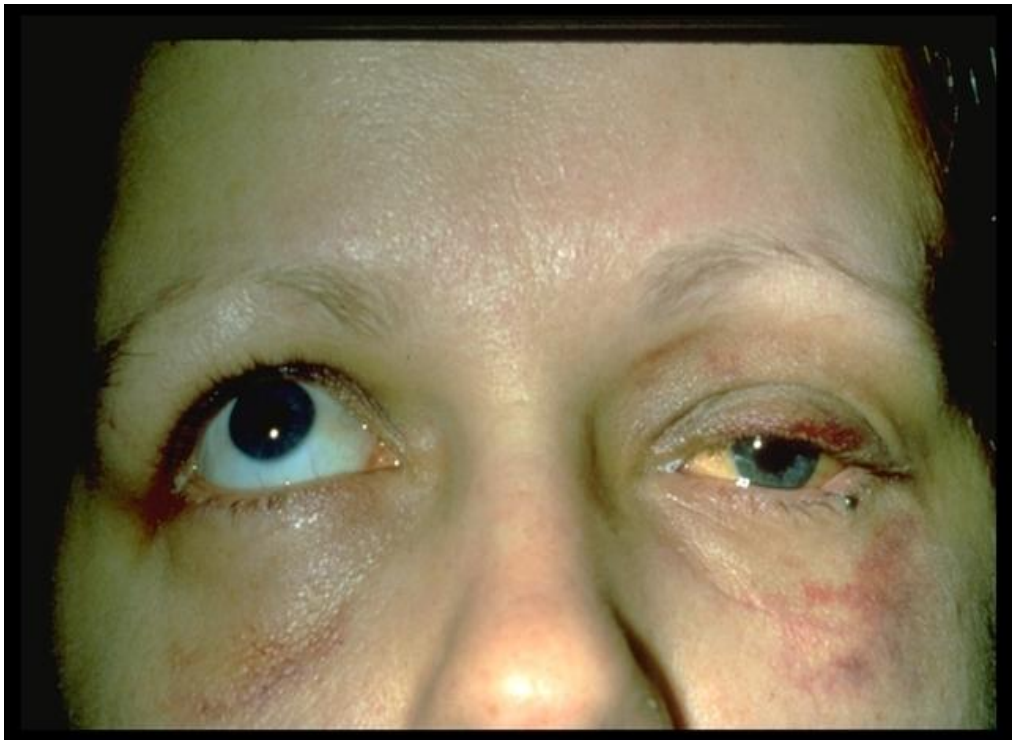
causes?
- trauma
- iatrogenic (cataract surgery)

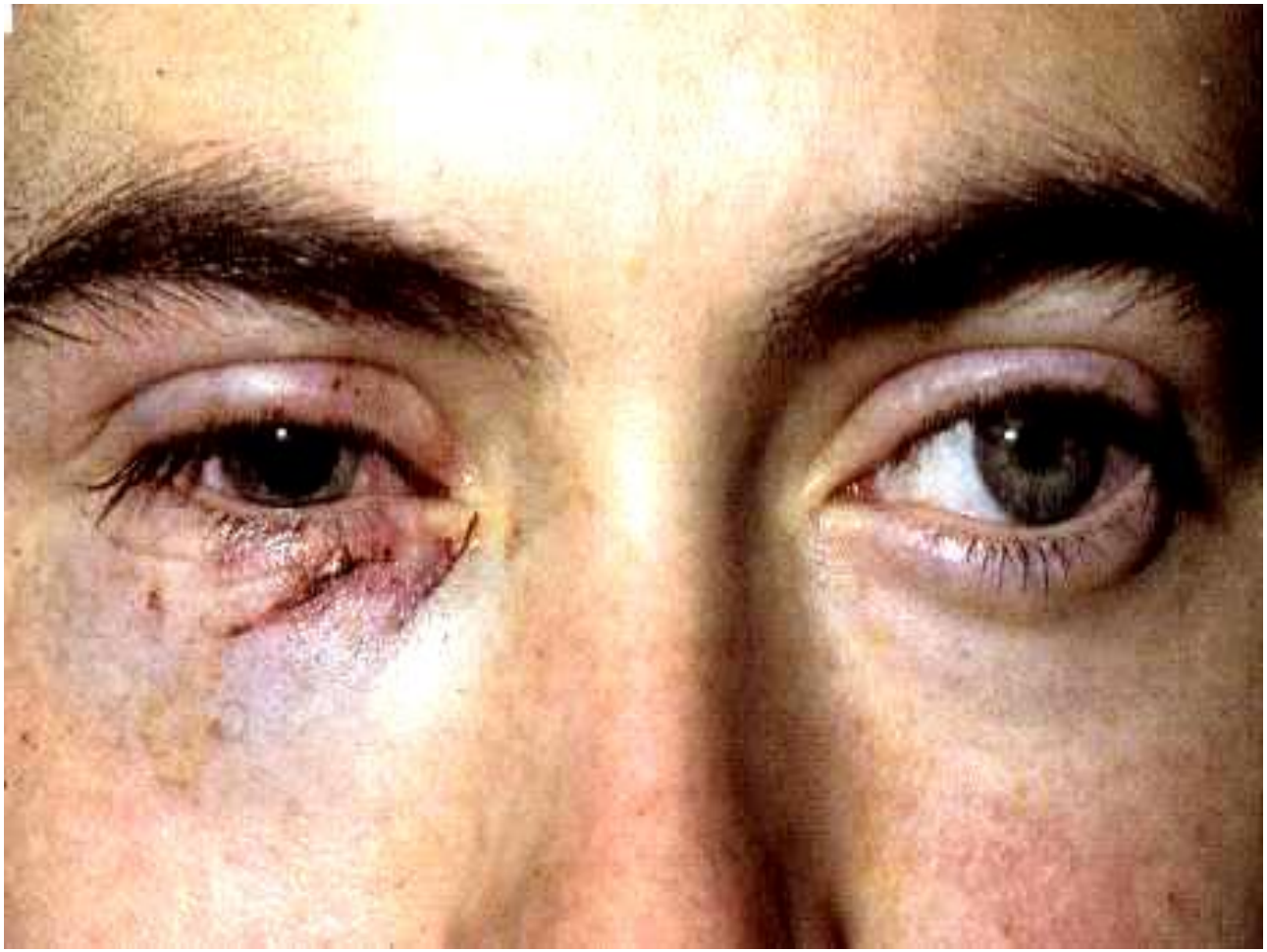


- Iridodialysis. (Traumatic)

Orbital Fractures

Orbital fractures



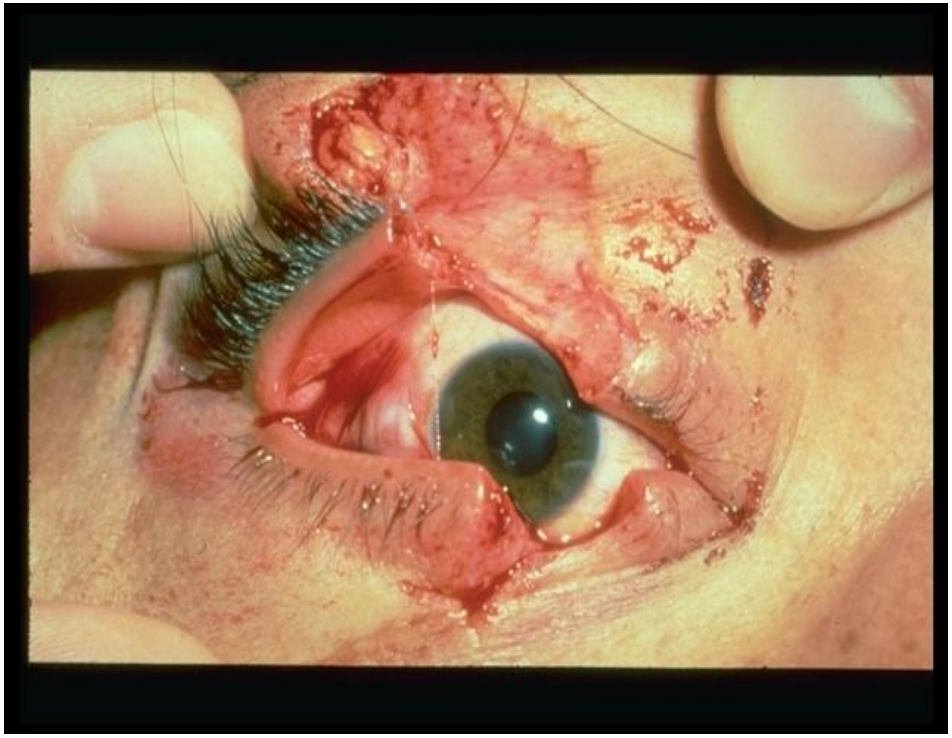


- Blow-out fracture

- Blow-out Fracture:
- Ptosis.
- Hematoma.
- Blurred vision.
- Dipopia on looking up (Due to Entrapment of the inferior Rectus)
- Enophthalmos.
- Tx:
- Systemic Antibiotics.& Surgery if Fracture more than 50% of orbital floor & Diplopia not improving or if enophthalmus more than 2mm.

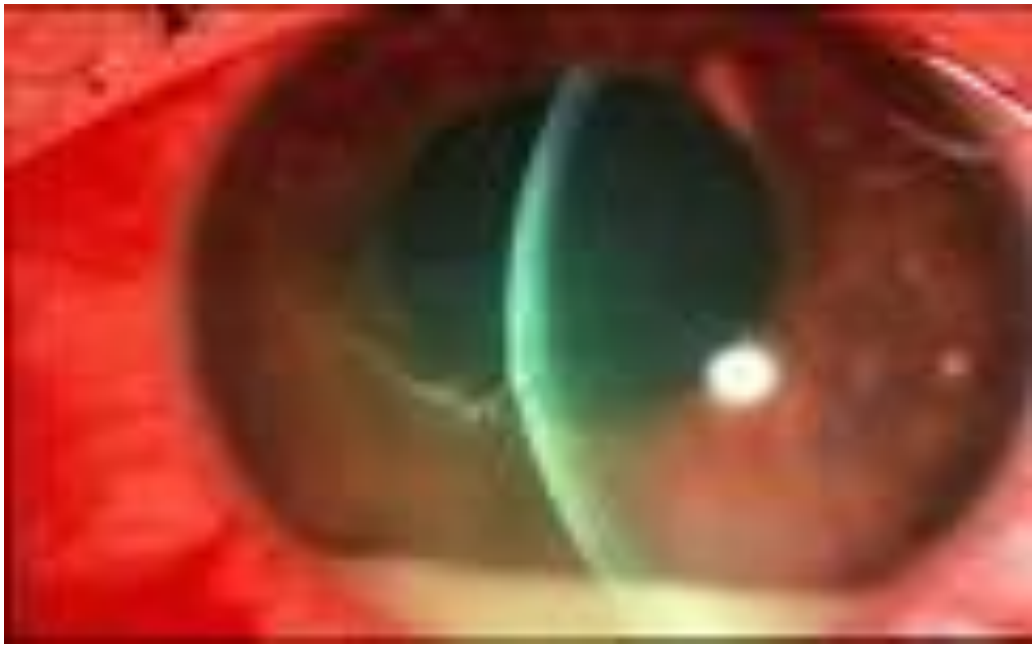
Lid Laceration

Lid laceration

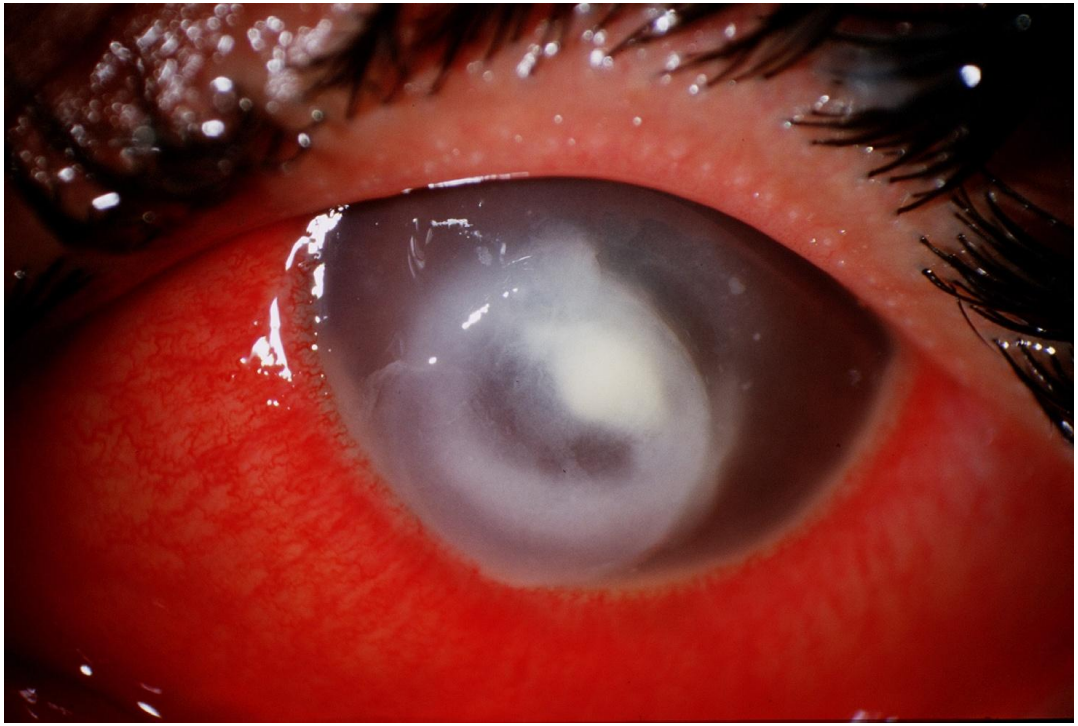


Endophthalmitis

Endophthalmitis



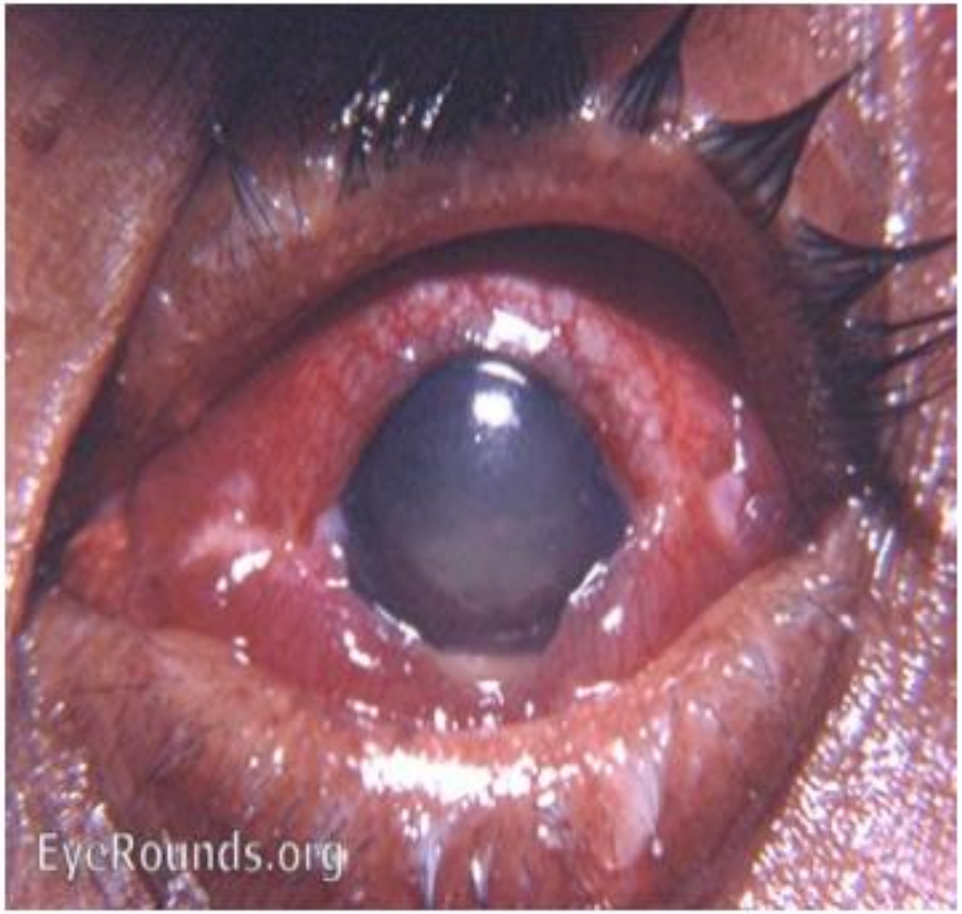
Infectious keratitis

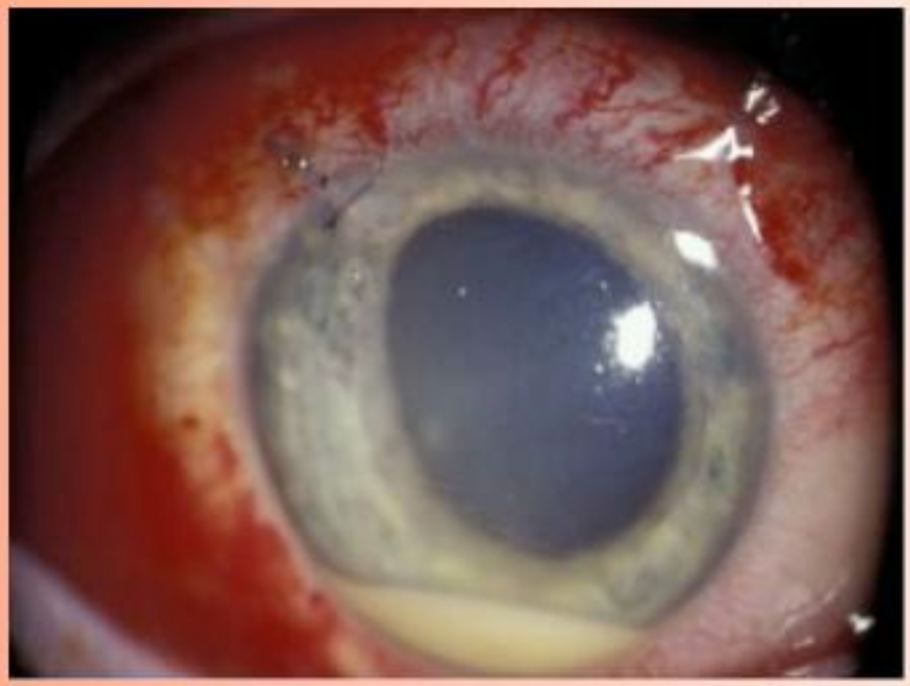


Post cataract surgery patient came with red , painful eye with decrease vision

What is the diagnosis

Management





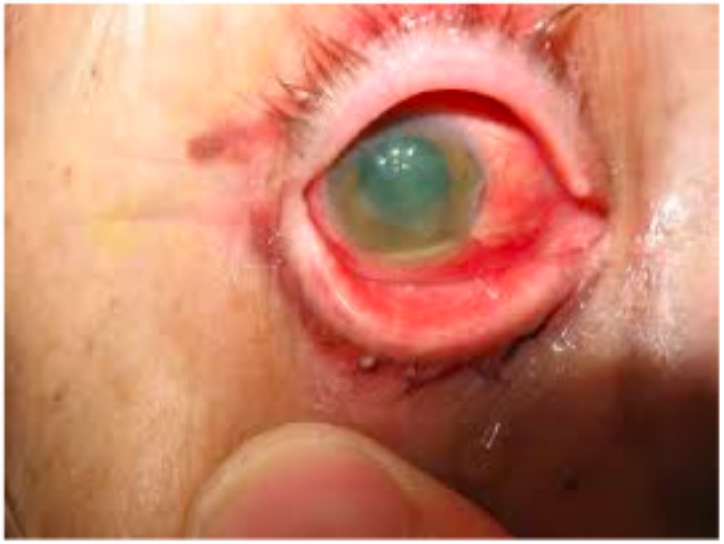
This patient presented with red painful eye post cataract surgery.
(this is the picture we got in the exam)
A/What is the diagnosis?

Endophthalmitis

A/How do manage?

Intravitreal Antibiotics+ intravitreal sample for culture

Q: An old gentleman had a complicated cataract surgery, on the second postoperative day he presented with this picture: what is the most likely complication?



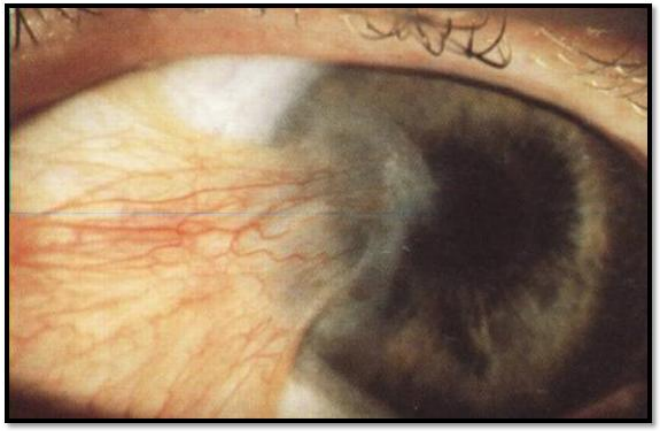
- A: Endophthalmitis
- Q: How would you manage such a case?
- A: Admission, start empirical Intra-vitreal antibiotics, culture to check the causative organism,, vitrectomy as a last resort,,

- A patient with a history of cataract surgery

- Q. What is the diagnosis?
- A. Endophthalmitis in the right eye.

- Q. How would you manage this patient?
- A. Administer intravitreal antibiotics.

Pterygium



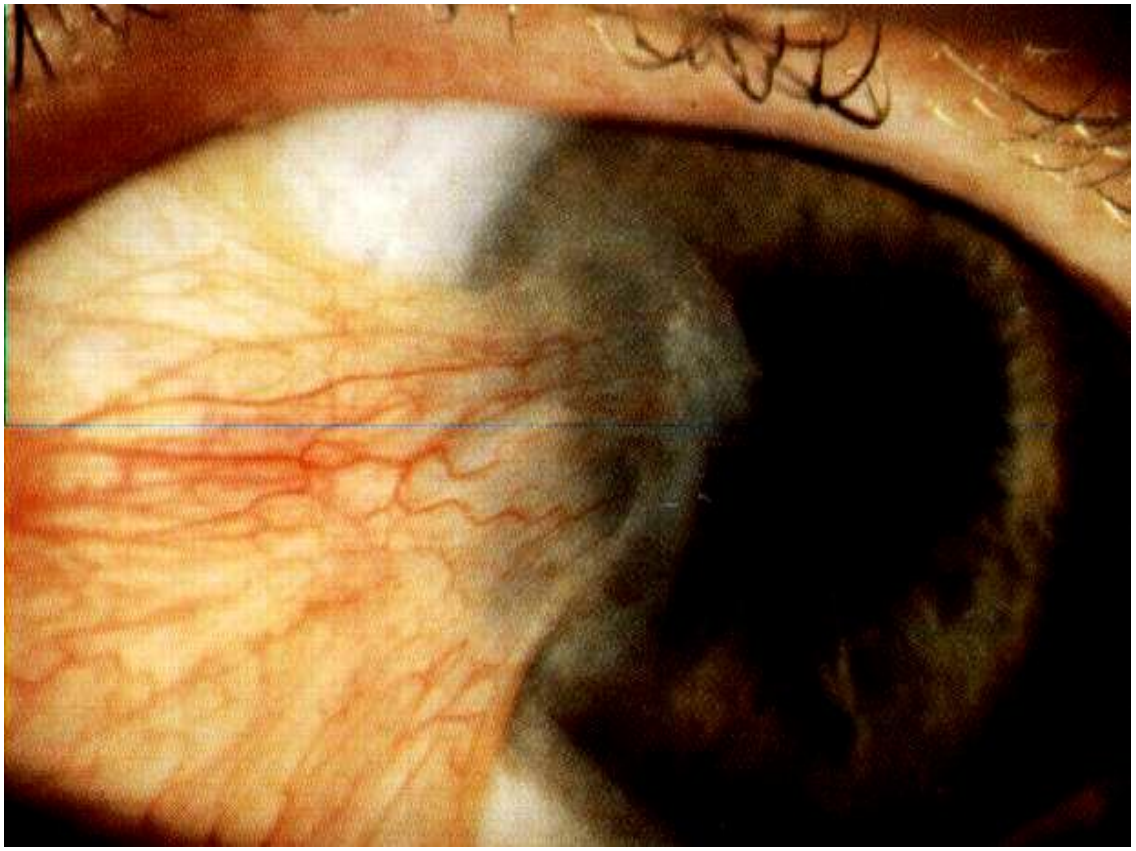
19) This patient had:

a. Corneal ulcer.

b. Arcus Senilis.

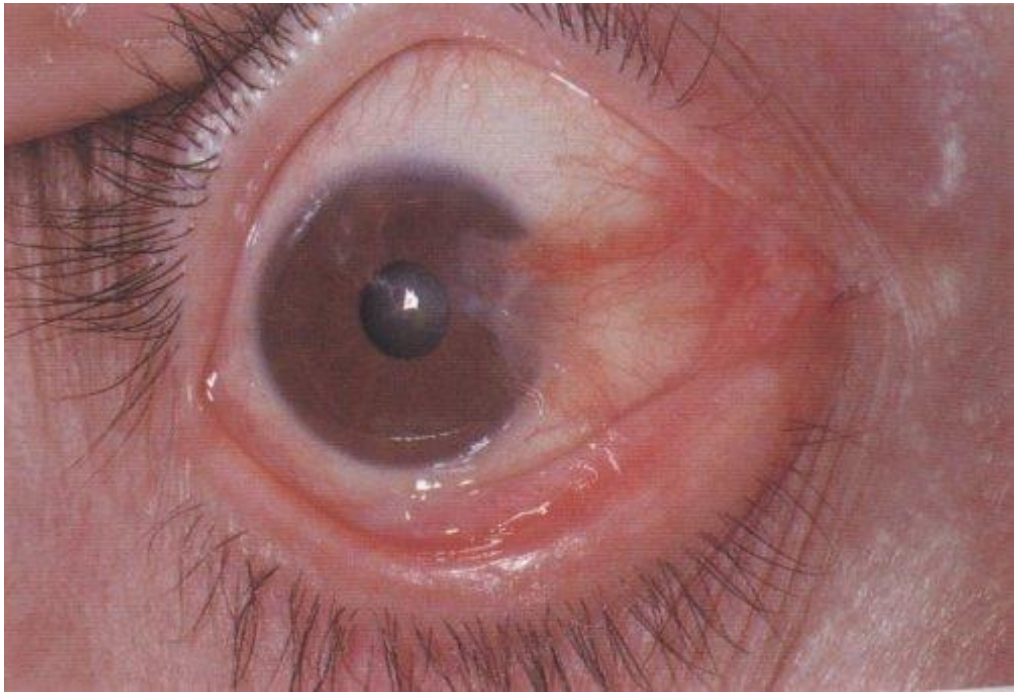
c. Pterygium.

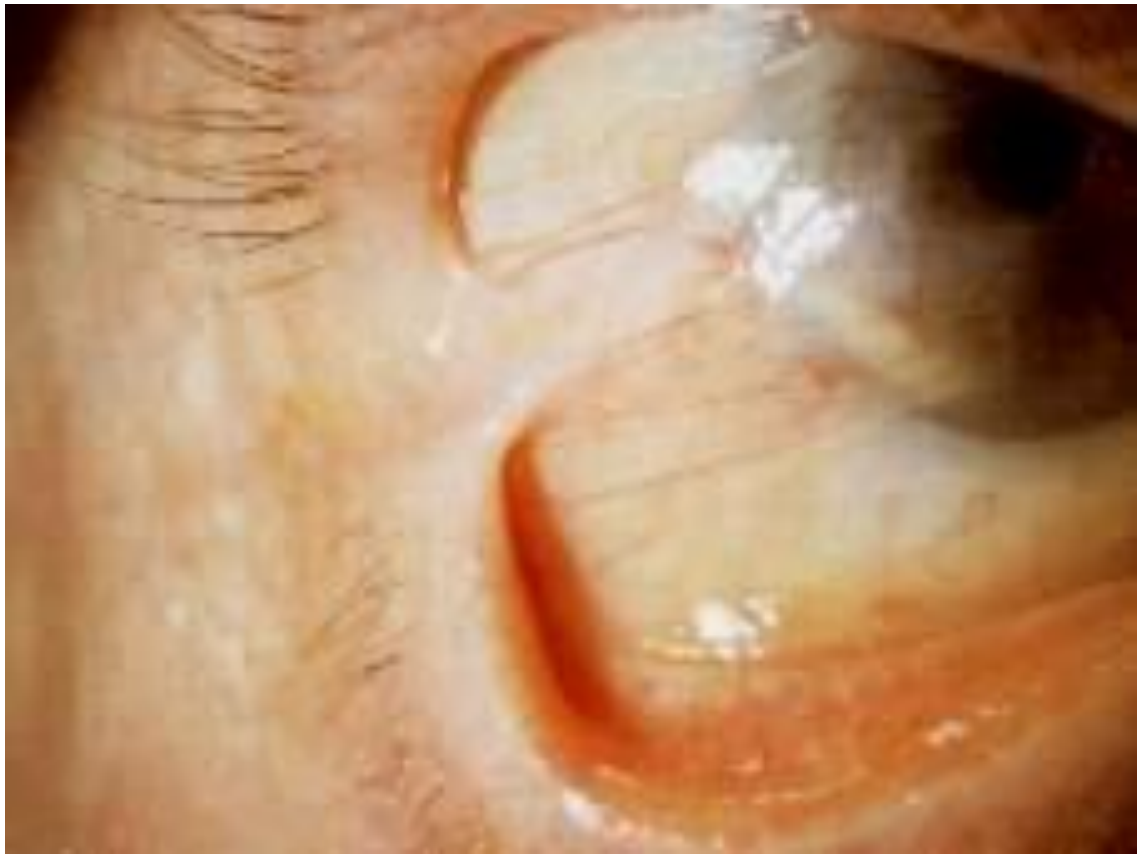
d. Conjunctival nevus.



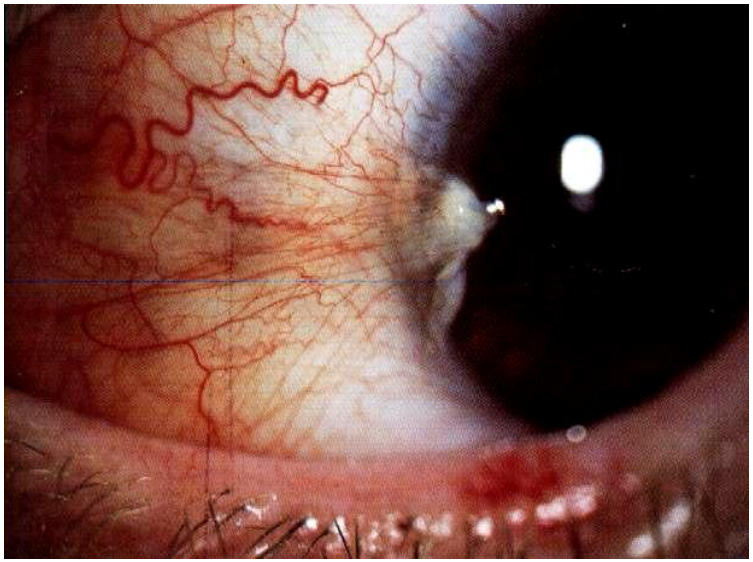
- Ptyrigium.

- Tx if Extending to the cornea (Excision)





- Pterygium



- Ptergium with Corneal Involvement.
- Indications for Surgery:

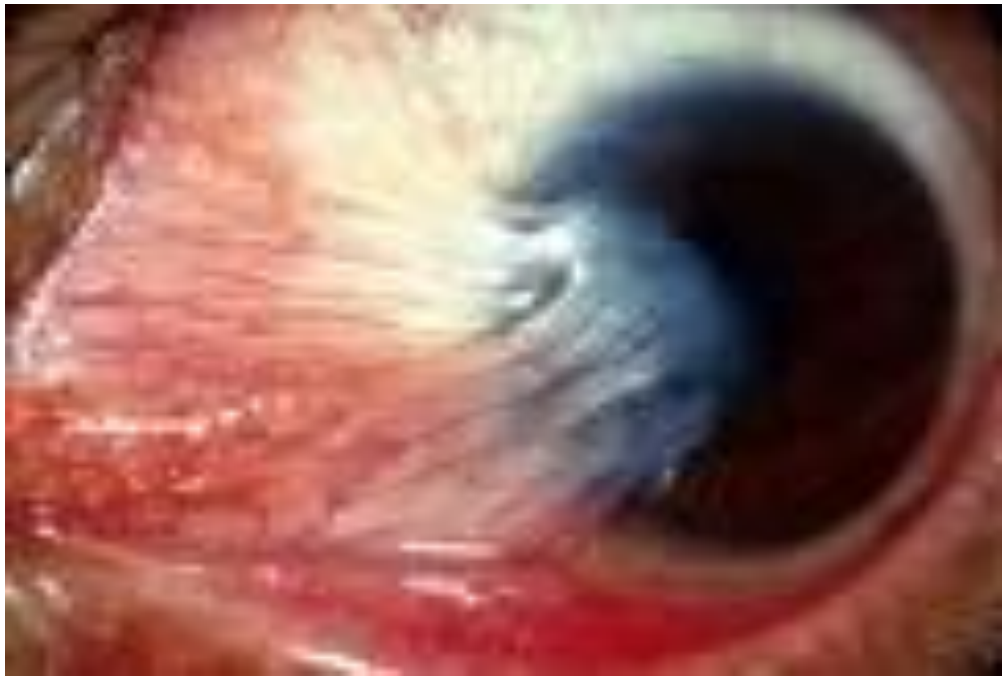
1- Decreased Vision.

2- Cosmetic.

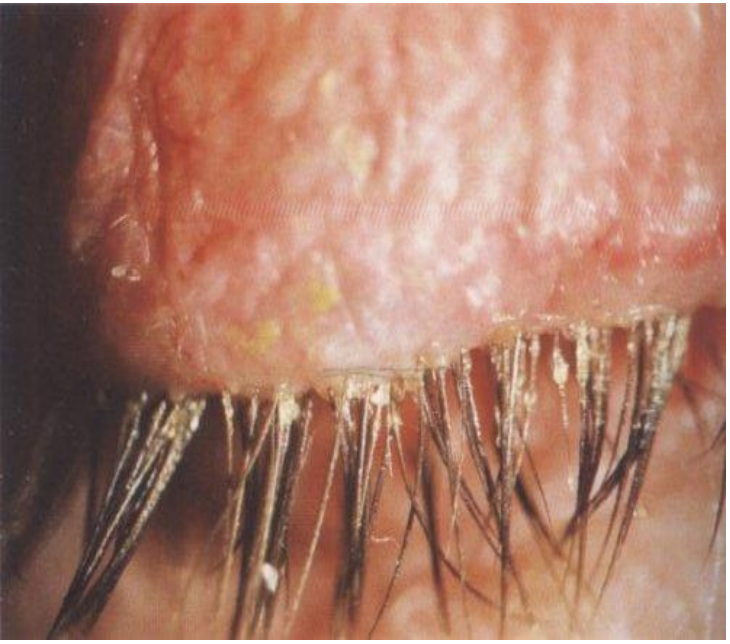
3- May predispose to Keratopathy.

4- Astigmatism.

5- Decrease function of extraocular muscles.



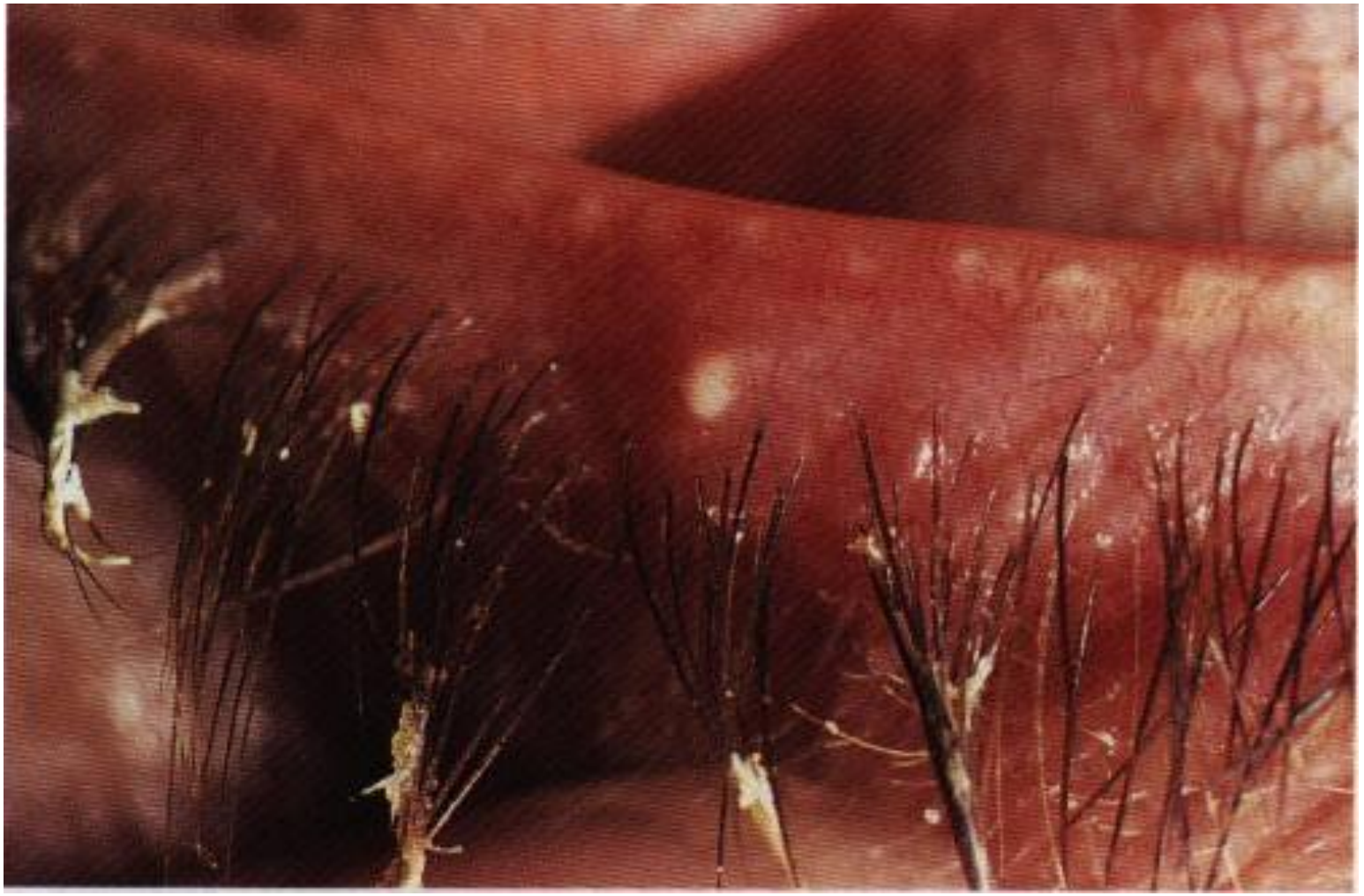
Blepharitis



Pt complaining of redness and itch and foreign body sensation since one week

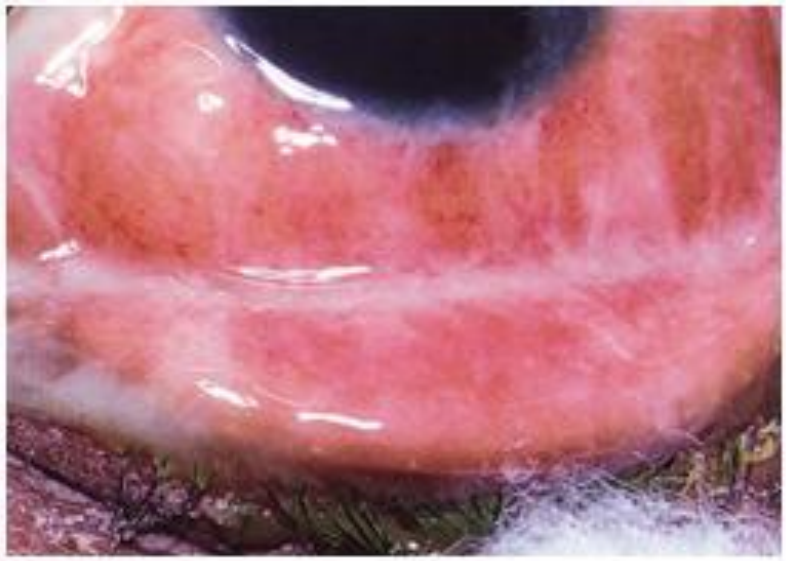
Q. What is the diagnosis ??
A. Acute belphyritis

Q. What is your management ??
1) Lid hygiene.
2) Antibiotic ointment.
3) Hot compressors

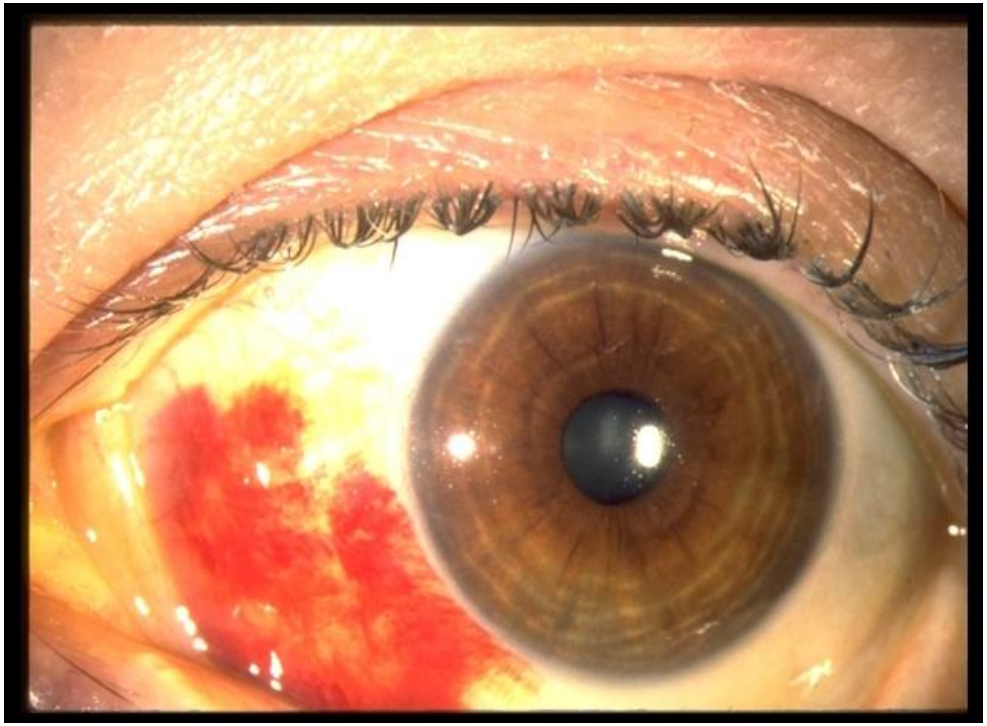


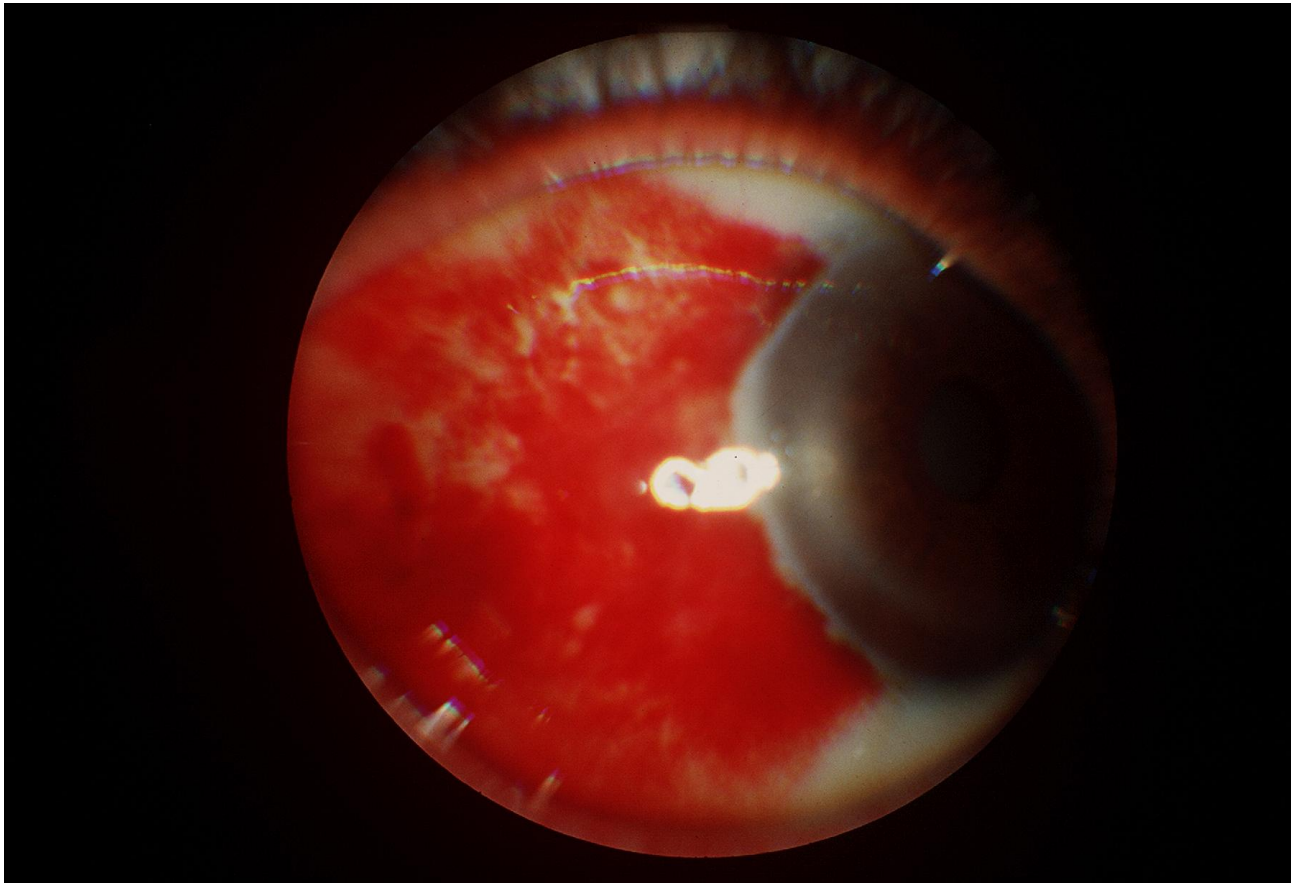
- Anterior Blepharitis with Localized folliclitis.

Blepharitis

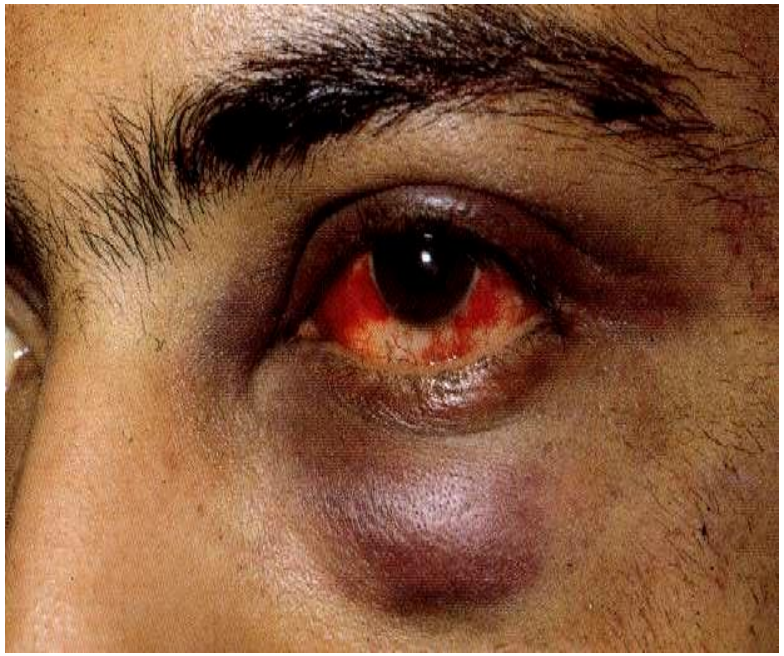


Subconjunctival Hemorrhage





Hx of Trauma (Punch)



- Sub-conjuctival Hemorrhage.
- Asses visual acuity & eye movement. If ok → Reassure the patients (Usually resolve in 2-3 weeks)
- If Visual acuity or eye movement not ok → consider blow-out fracture

- **Unfortunately I couldn't find the exact picture but it was similar to this:**

  - **A patient with a history of sudden painless redness in the eye**

- **Q. What is the diagnosis?**
- **A. Subconjuctival hemorrhage.**

- **Q. Mention 2 causes of this condition.**
- **A. Trauma, blood coagulopathies, anti-coagulants (OCP), cough, valsalva maneuver, old age, idiopathic.**

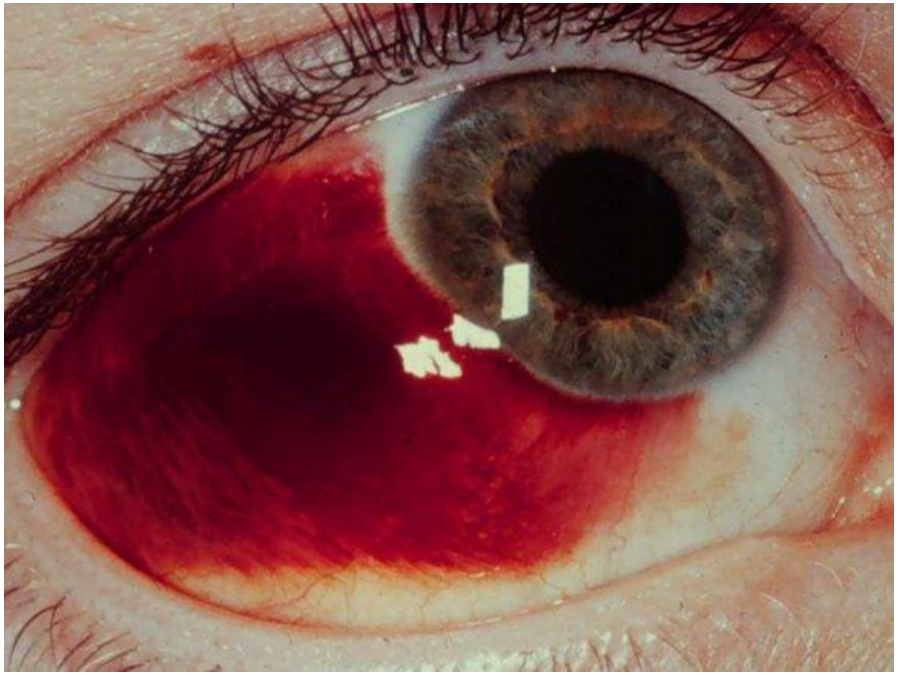
- Q: What is the diagnosis?

A: Subconjuctival Hemorrhage.

Q: Mention 2 causes of this condition.

A:

- Trauma.
- Old age.
- HTN.



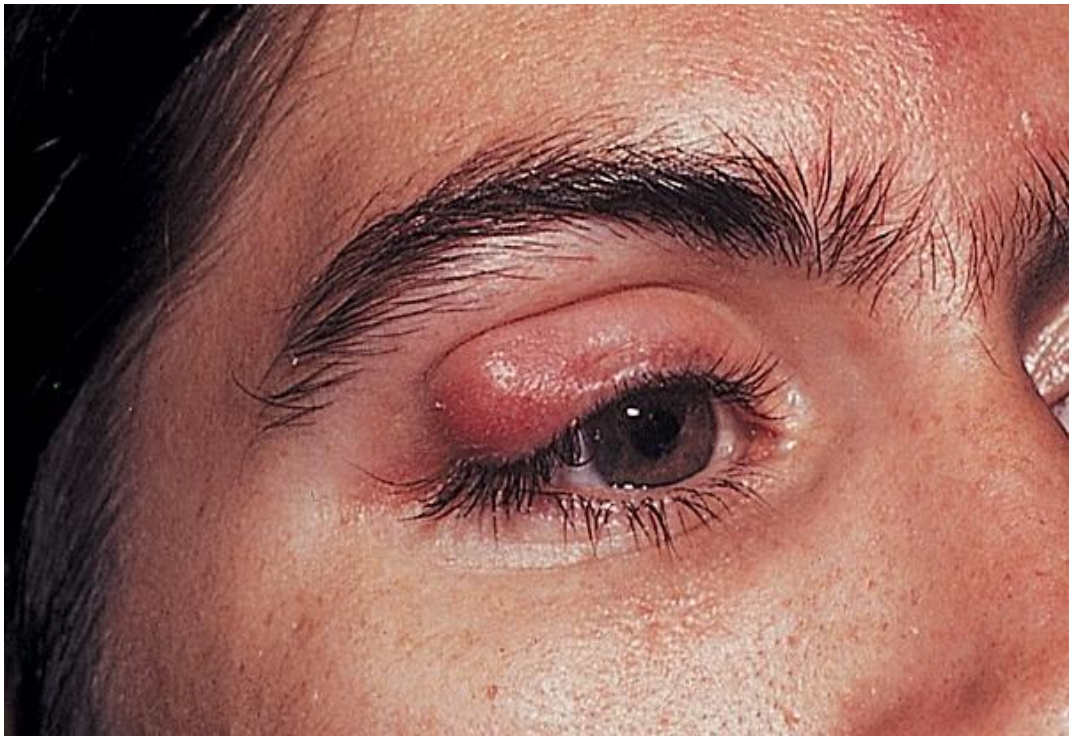
Q. what's your diagnosis ??

A. Sub-conjunctival hemorrhage in right eye

Q. Name 2 causes for this condition ??

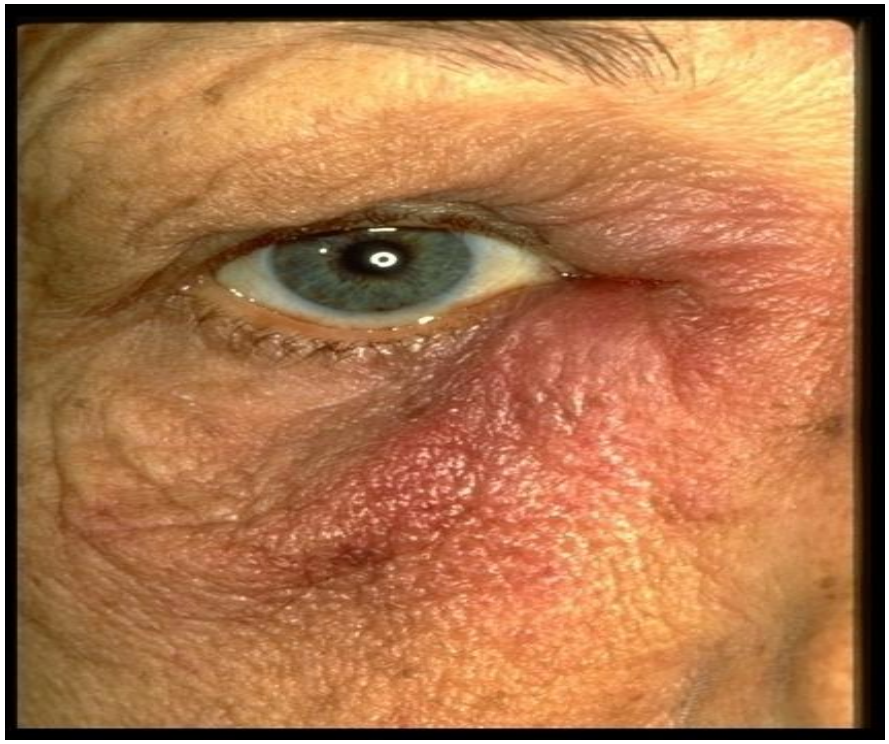
A. Trauma – bleeding disorder – old age – spontaneous

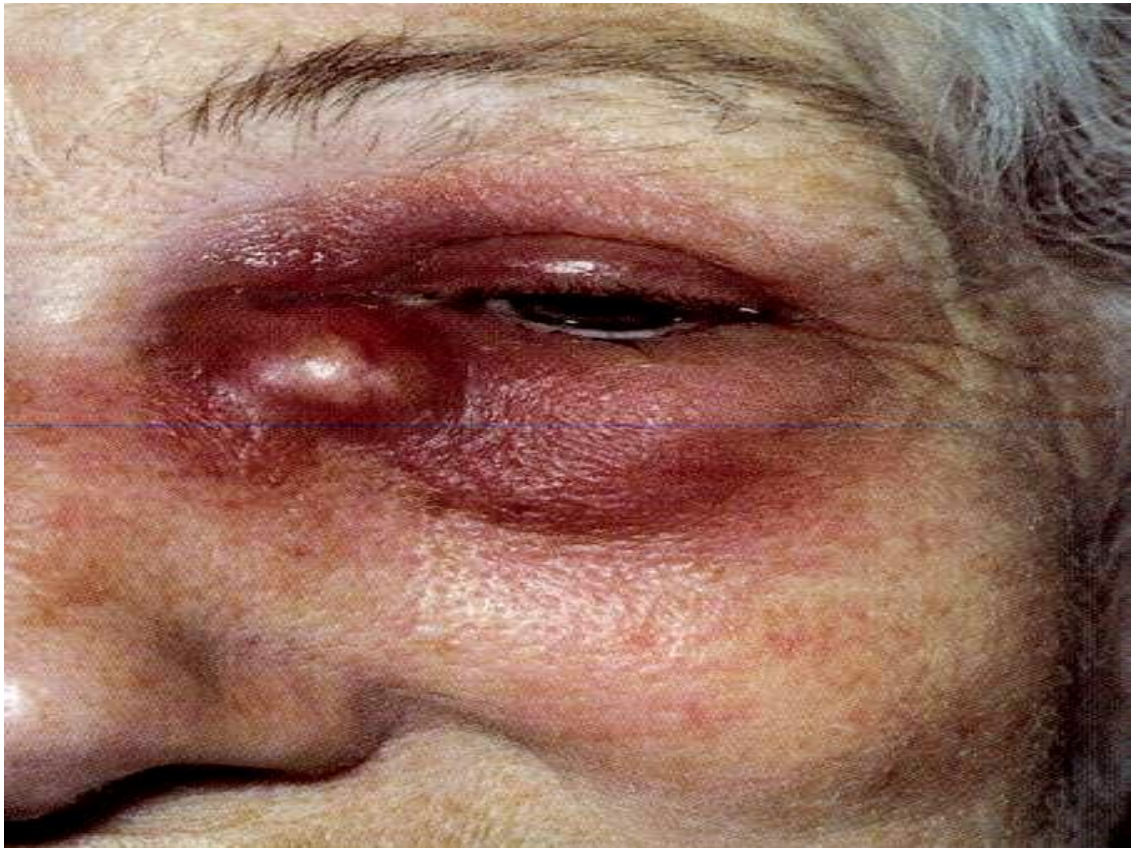
Chalazion



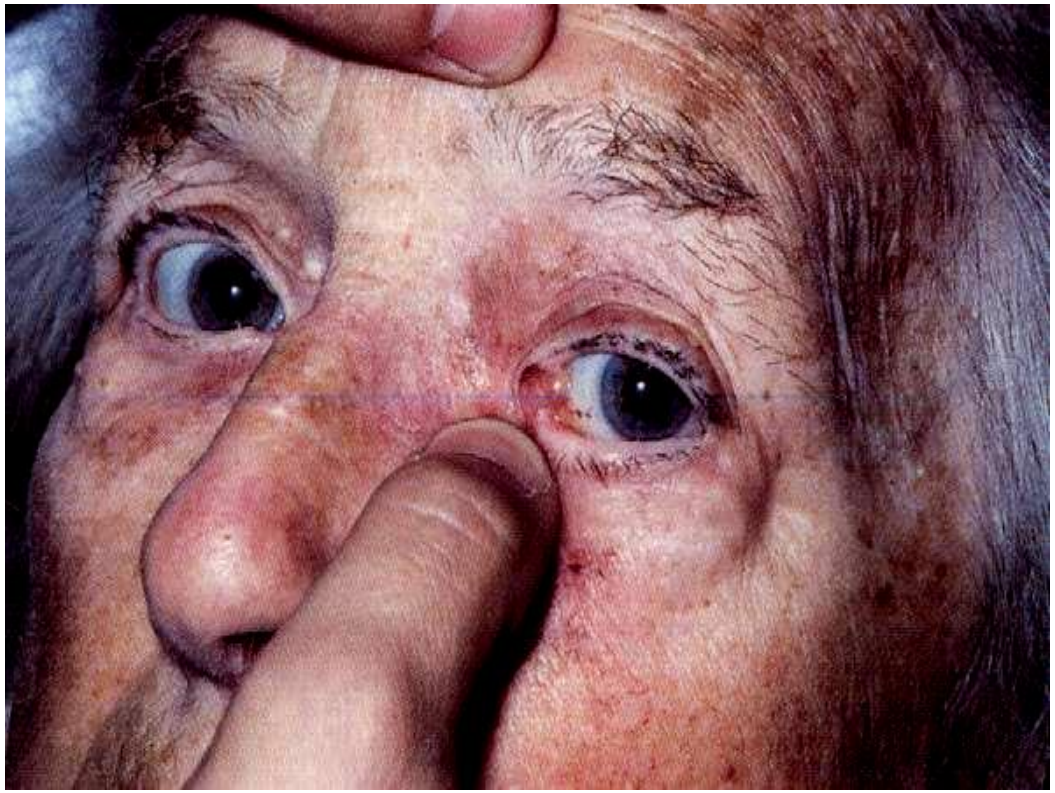
Dacryocystitis

Nasolacrimal duct obstruction





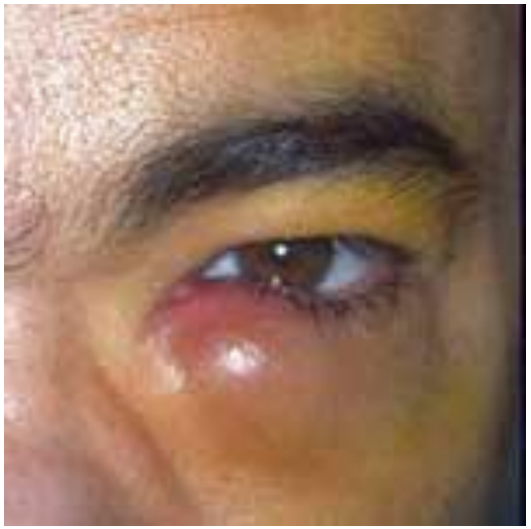
- Acute Dacryocystitis.
- Tx: Antibiotic (Systemic & Local)
- Drainage
- DCR (Dacriocystorhinostomy) after elemination of the acute phase.

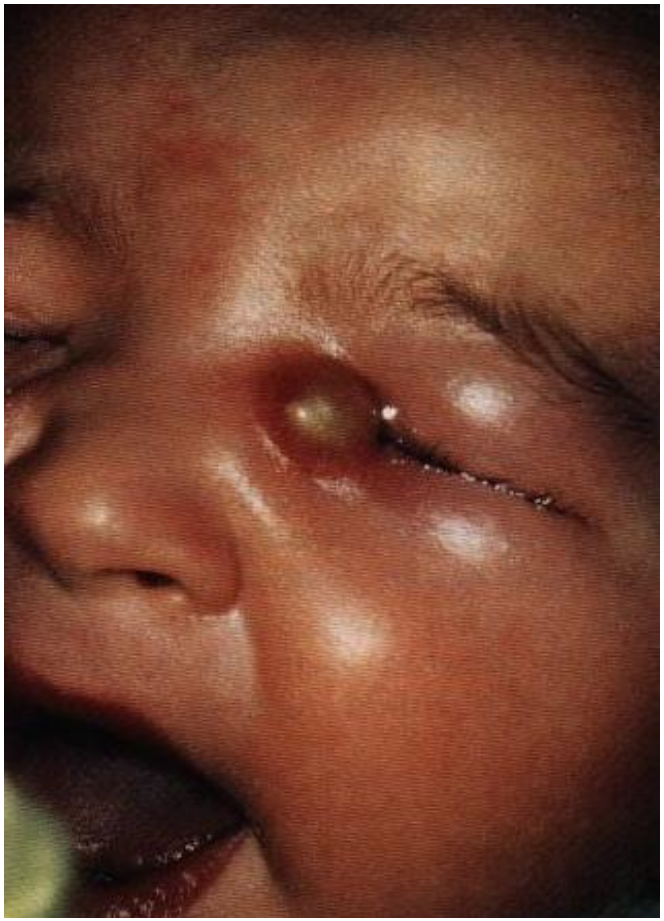


- Chronic Dacryocystitis. (Pus come out with pressure on the sac)

Dacrocystitis

Systemic Antibiotics
Inscision & drainage





2 year old child that has fever and pain

Q. What's your diagnosis ??
A. Acute dacryocystitis in left eye 2ry to delayed canalization of Nasolacrimal Duct.

Q. What's your management ??
A. Systemic antibiotics & Stab incision (drain)

Conjunctivitis

Conjunctiva

- Identify the area of maximum Injection.
- Usually starts Unilateral then become Bilateral.
- Conjunctivitis:

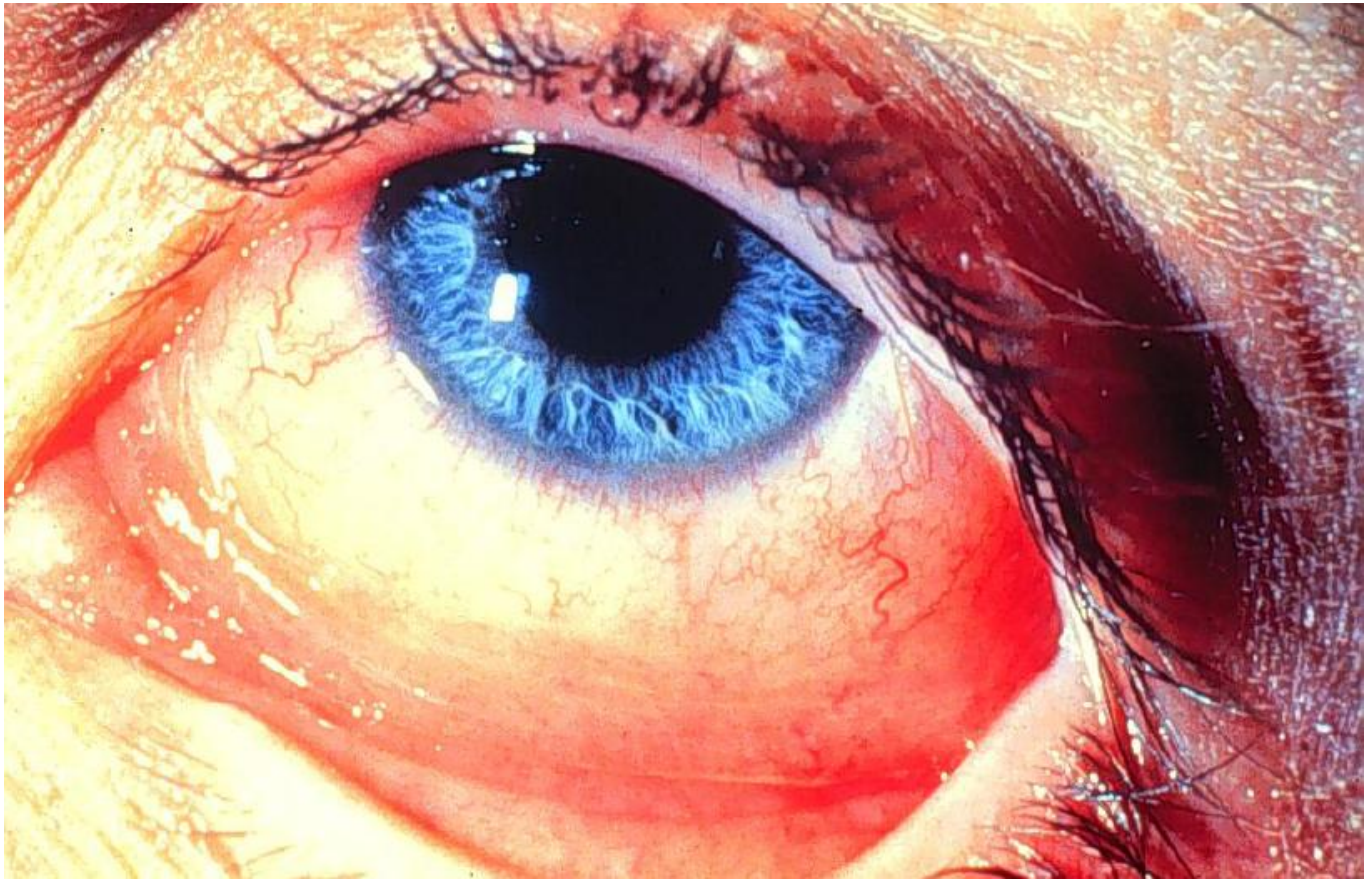
- Bacterial : Purulent or Mucoid Discharge.
- Viral Watery Discharge.
- Allergic: Watery then Mucoid, Asymptomatic or itching.
- Follicular conjunctivitis is Caused by:

1- Viral : Preauricular L.N. involvement.

2- Active Trachoma : Most common.

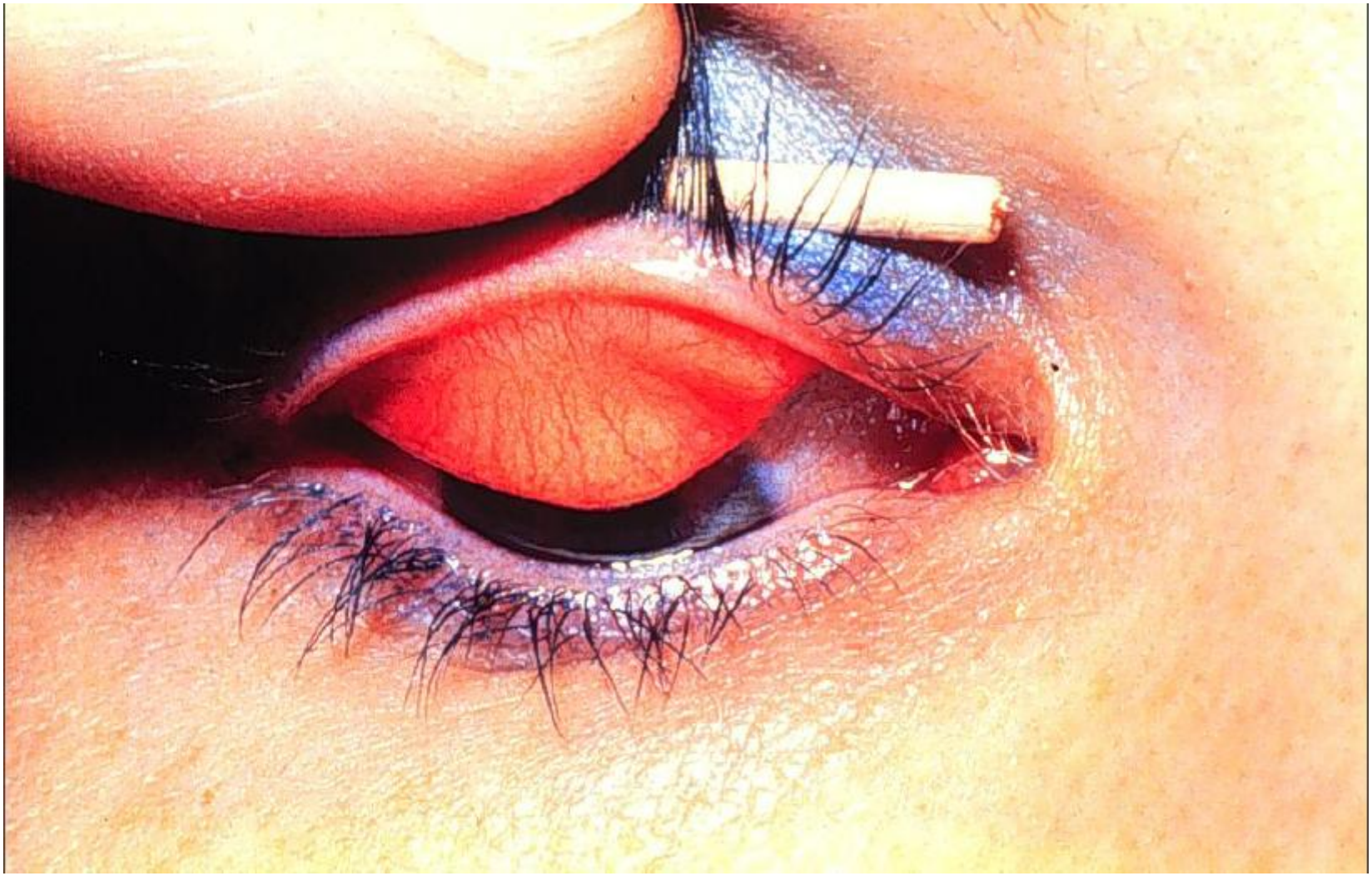
3- Medication side effect.

Viral conjunctivitis

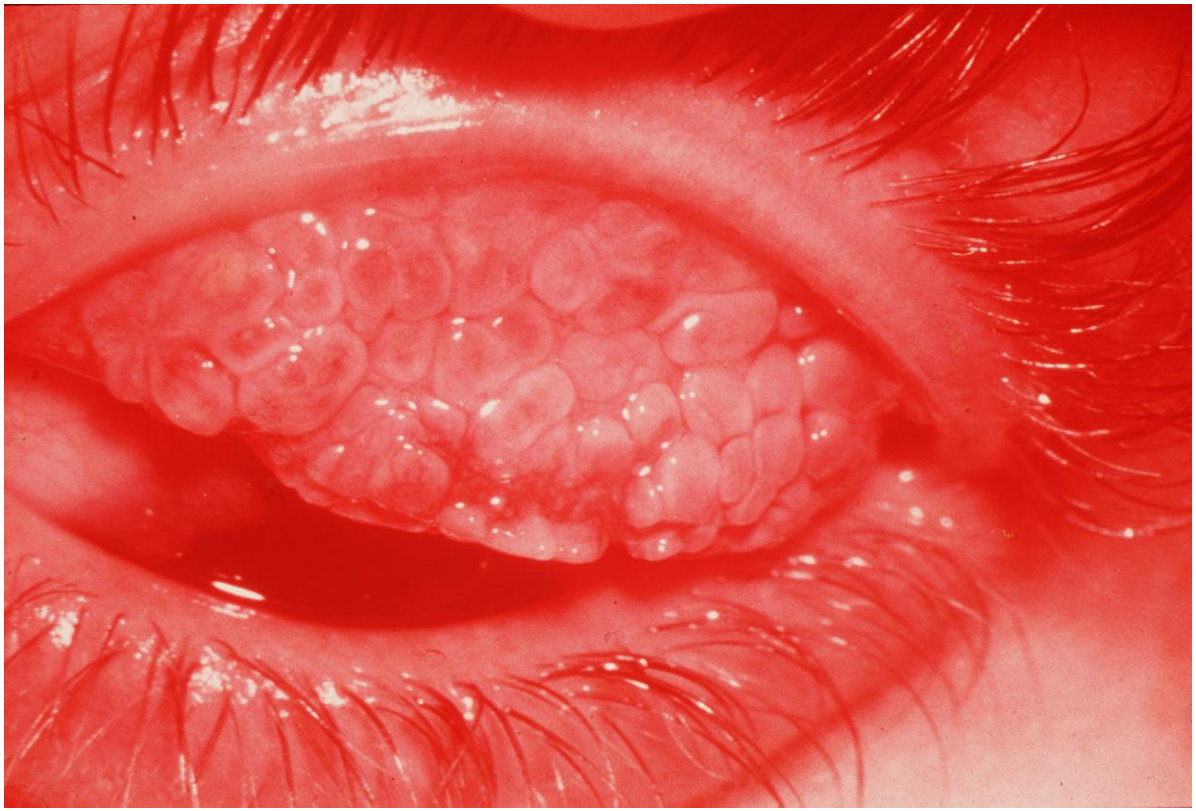


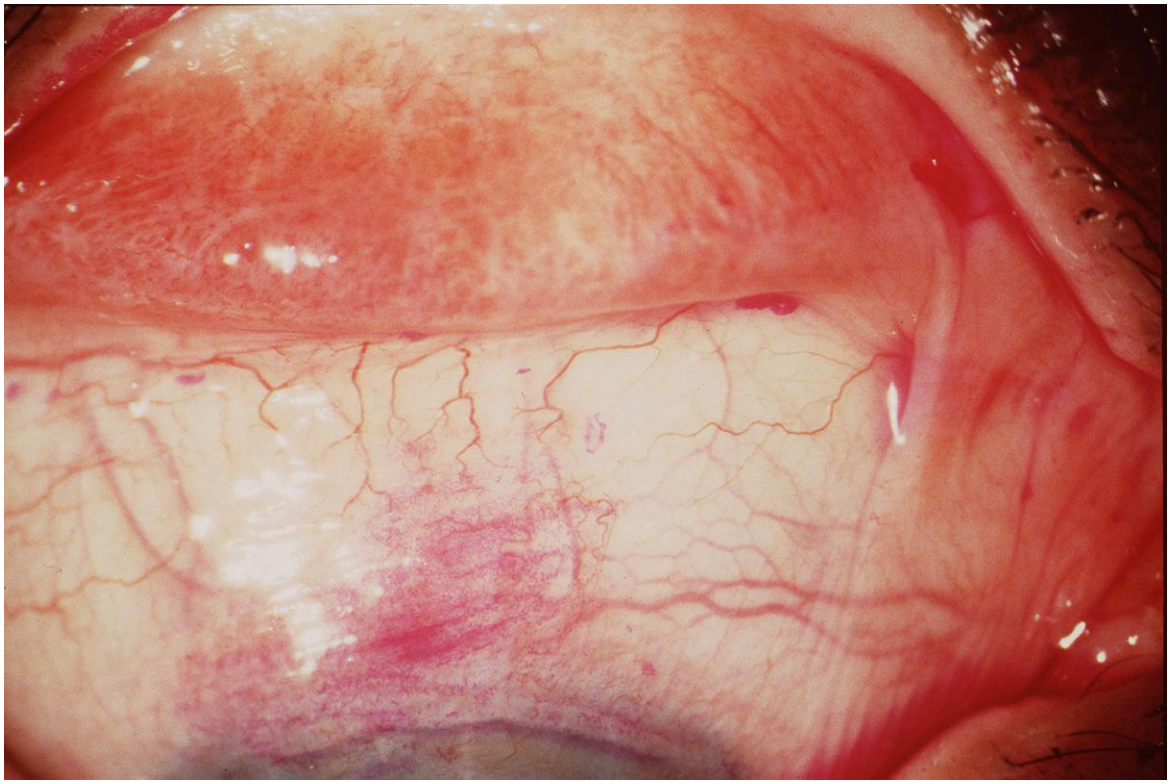
Watery discharge

Bacterial conjunctivitis

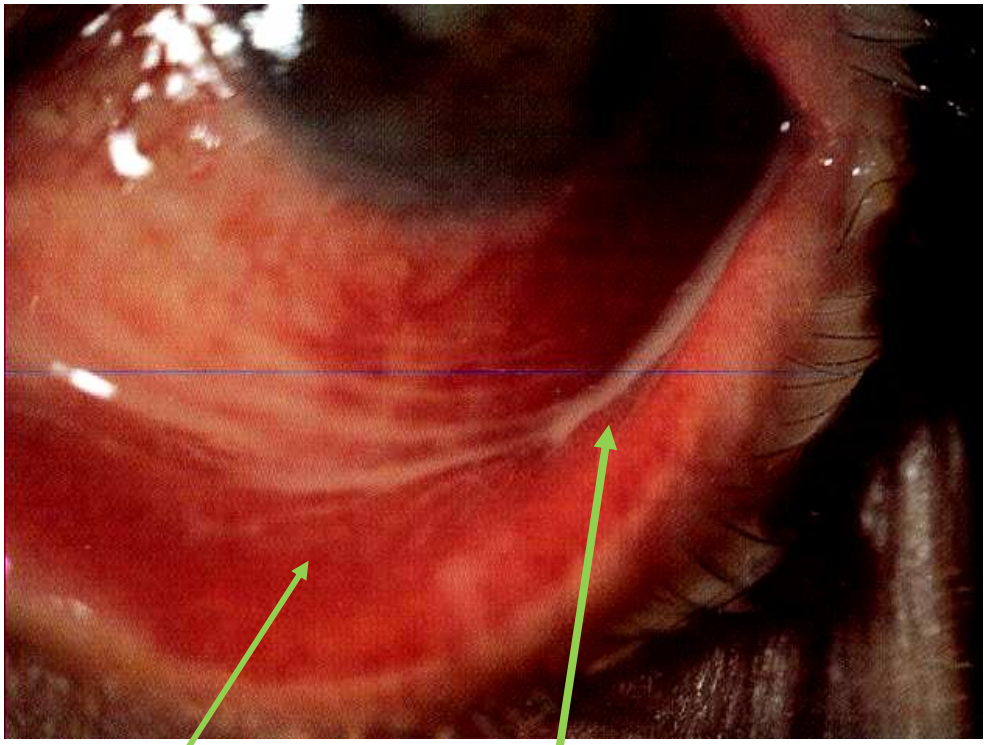


Allergic Conjunctivitis



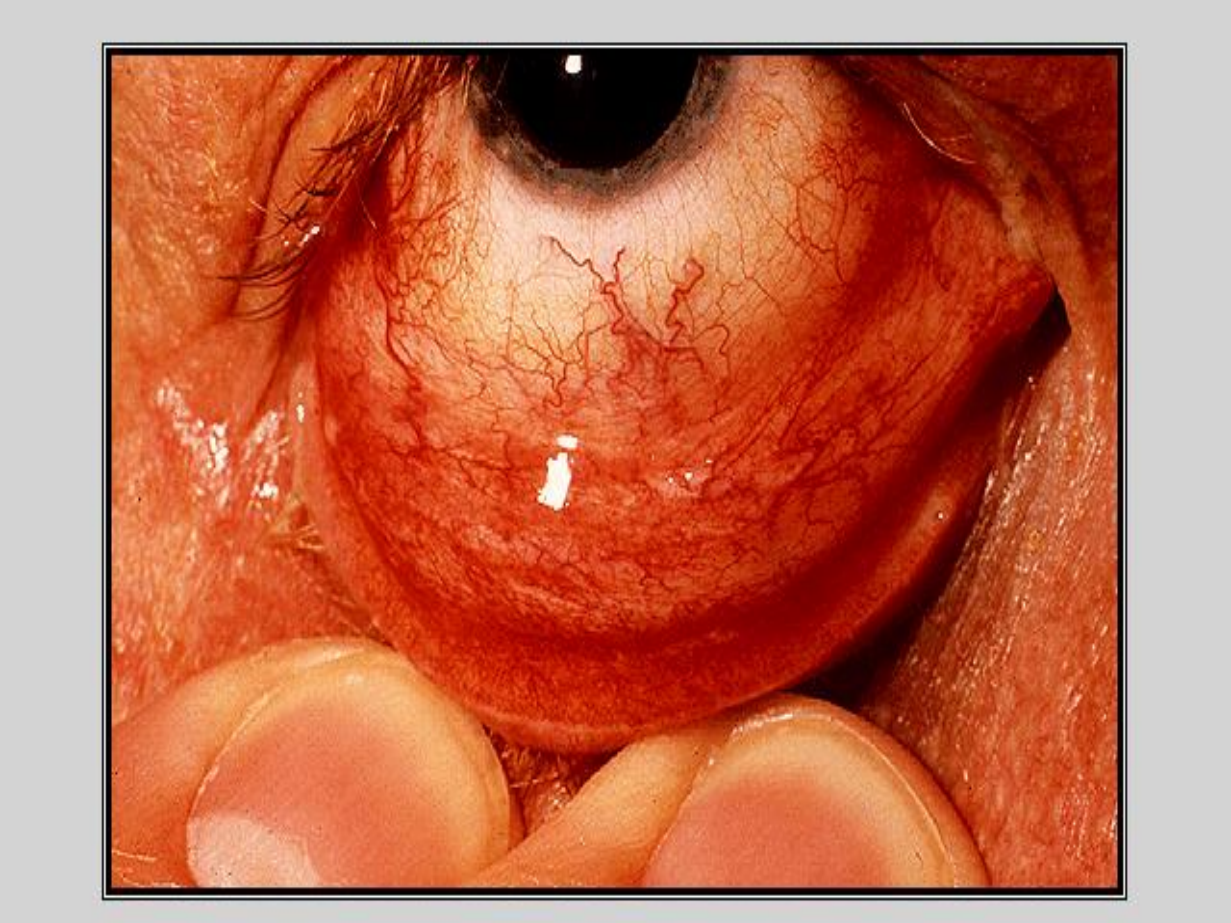


Conjunctival scar after trachoma



- Bacterial Conjunctivitis:

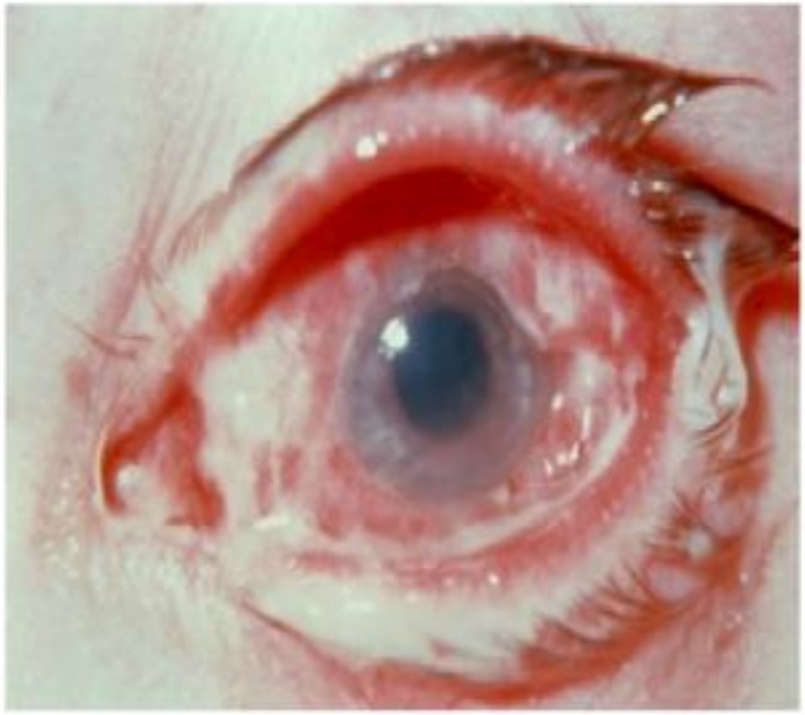
- Red conjunctiva & Mucopurulent.



- Viral Conjunctivitis:

- Watery & L.N.?

- Q: A man came to the ER with a Hx of redness and pain in one eye for <u>one day</u>, from the picture, what is the most likely diagnosis?



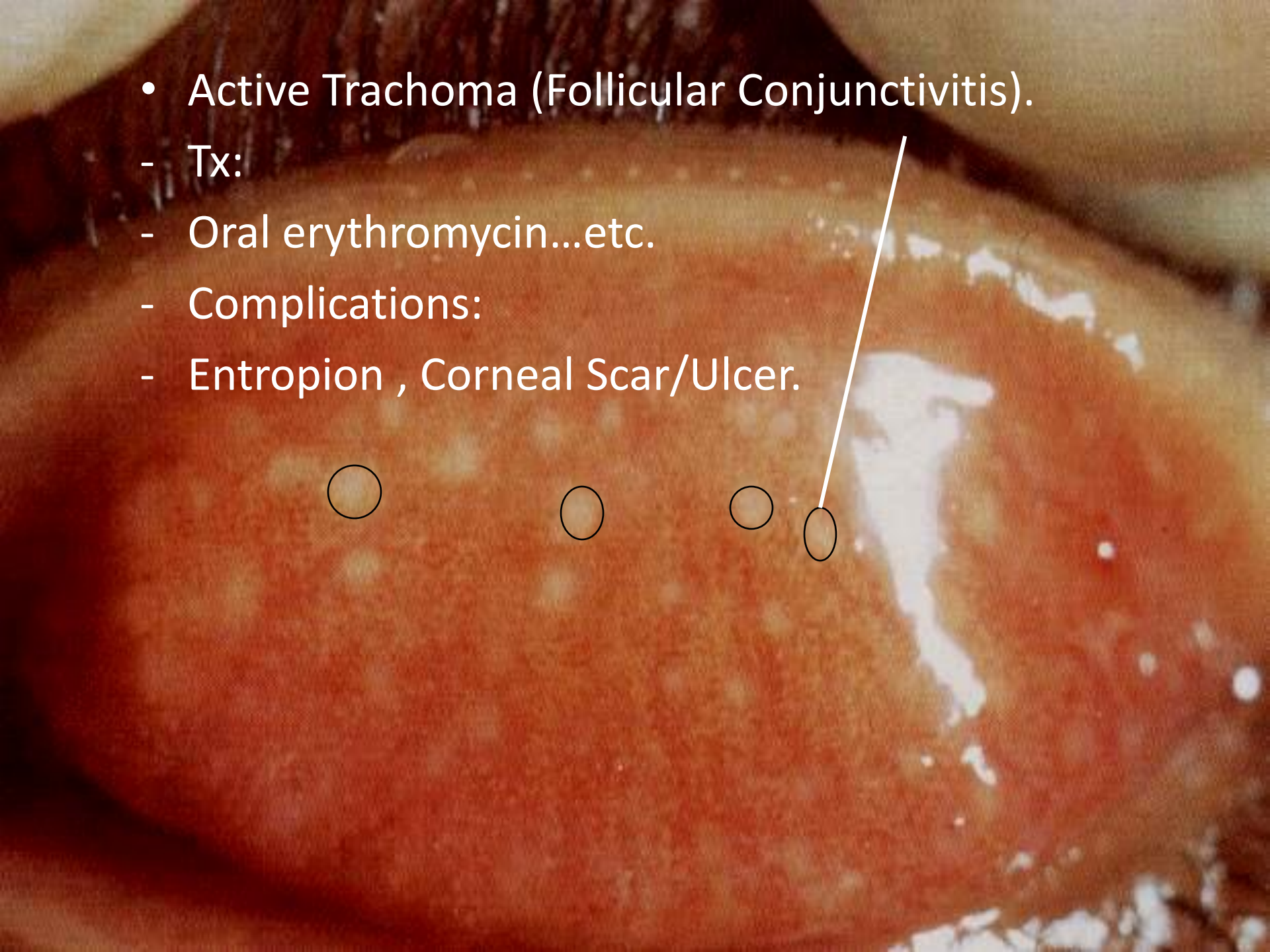
Not sure of the answer

A: Some answered corneal ulcer complicated by bacterial conjunctivitis, most likely psuedomonas 'since less than 24h'

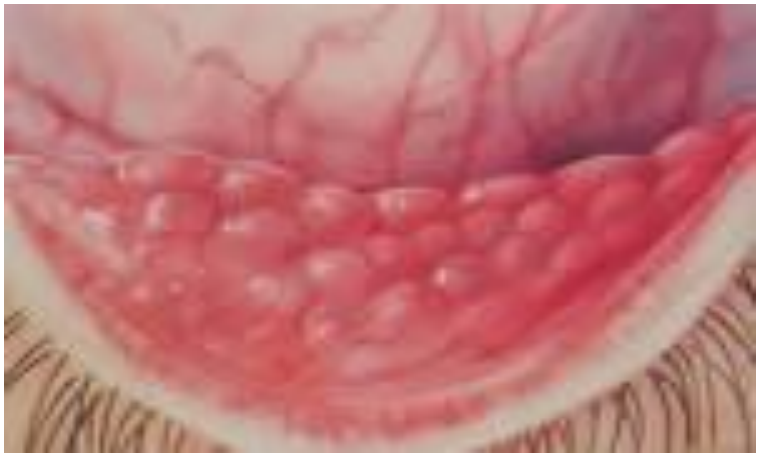
Q: How would you manage such a case?

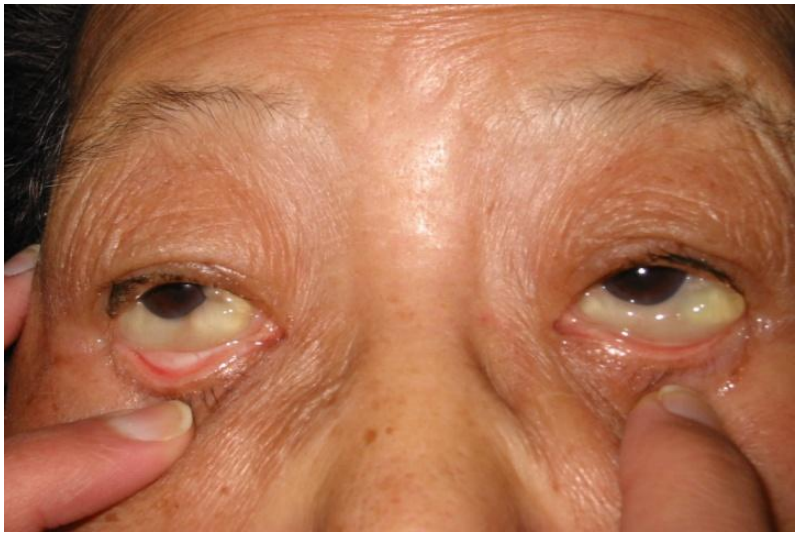
A:

Take off the contact lenses if he's using them
Topical broad spectrum antibiotics
Cycloplegics
Topical analgesic NSAID's

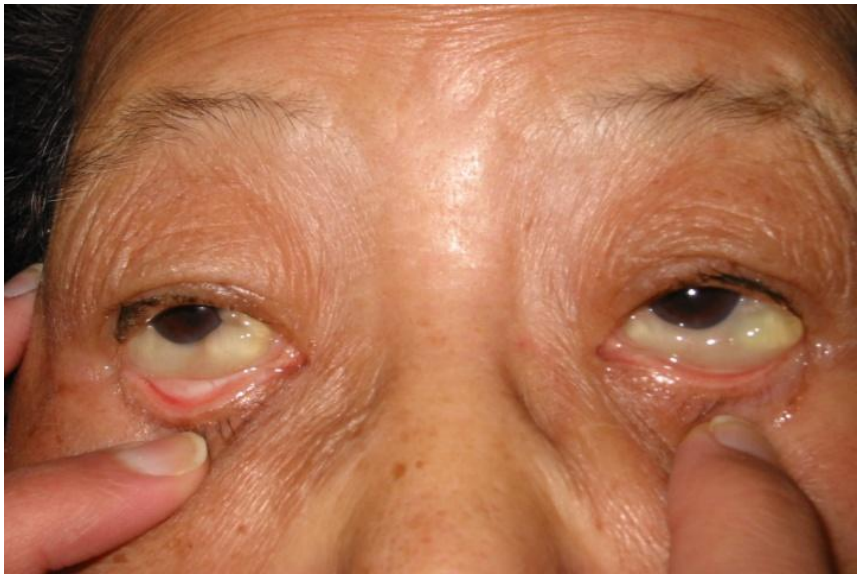

• Active Trachoma (Follicular Conjunctivitis).
- Tx:
- Oral erythromycin…etc.
- Complications:
- Entropion , Corneal Scar/Ulcer.

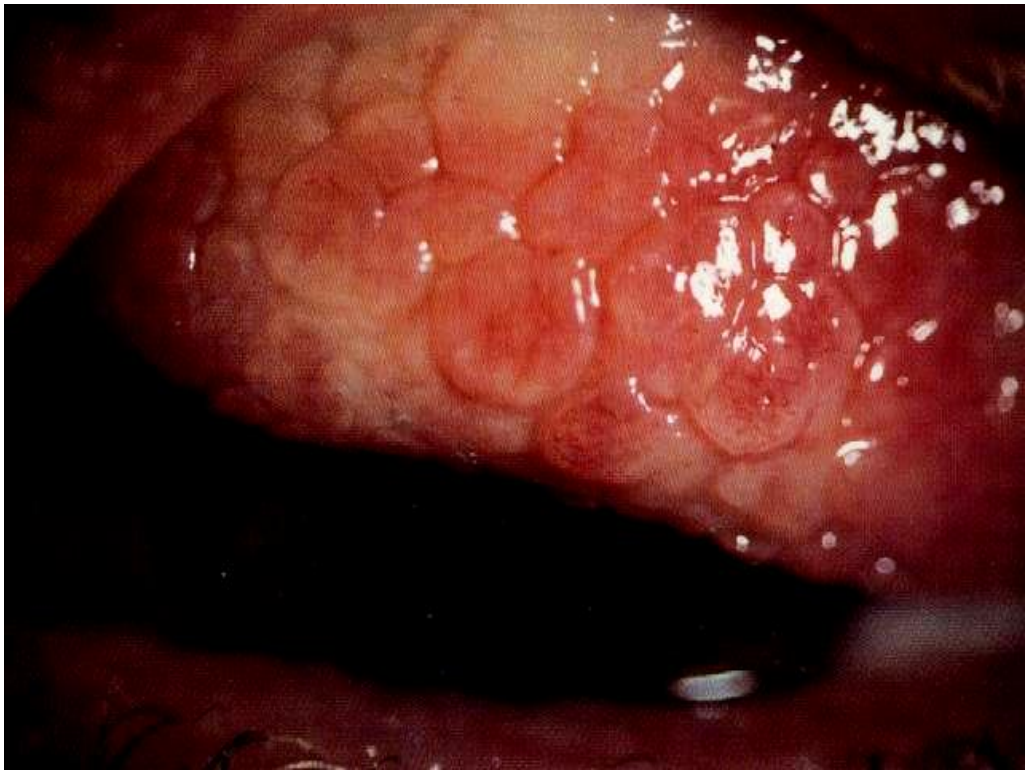
Viral conjunctivitis





Allergic conjunctivitis





- Cobble-Stone Appearance (Giant Papilla): Severe Vernal K.C. (Papillary).
- If mild → no Tx.
- If severe → Short term steroids then Antihistamines + Mast cell Stabilizer

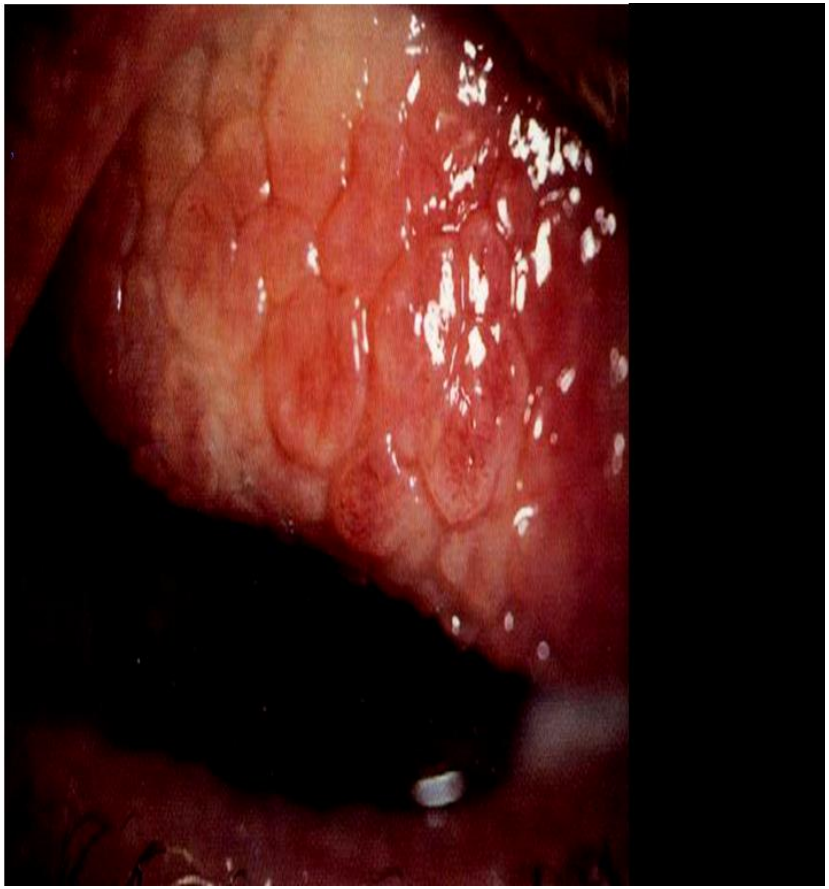
10 year old present with this finding all true except :

A- mucoid discharge

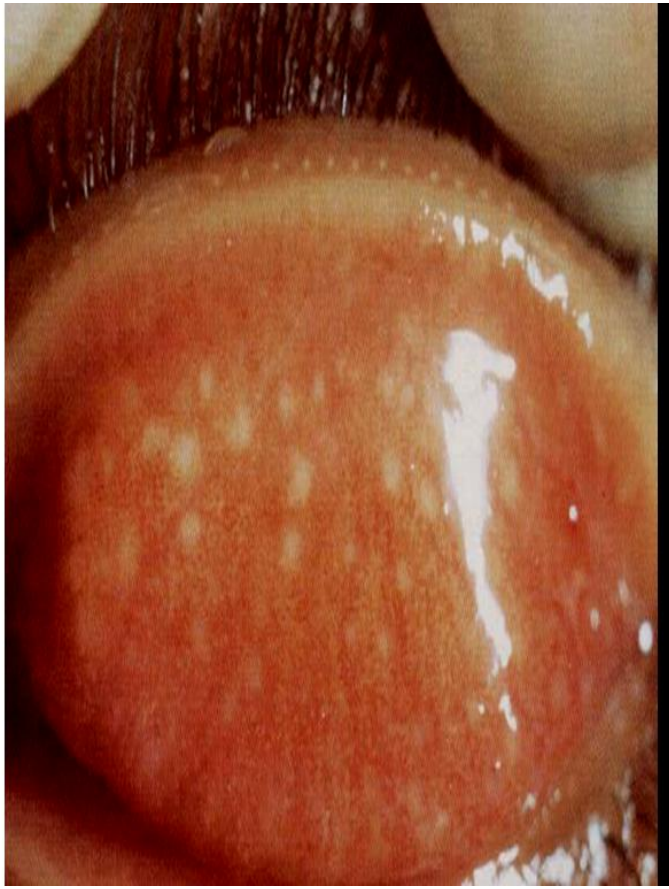
B- not associated with keratoconus

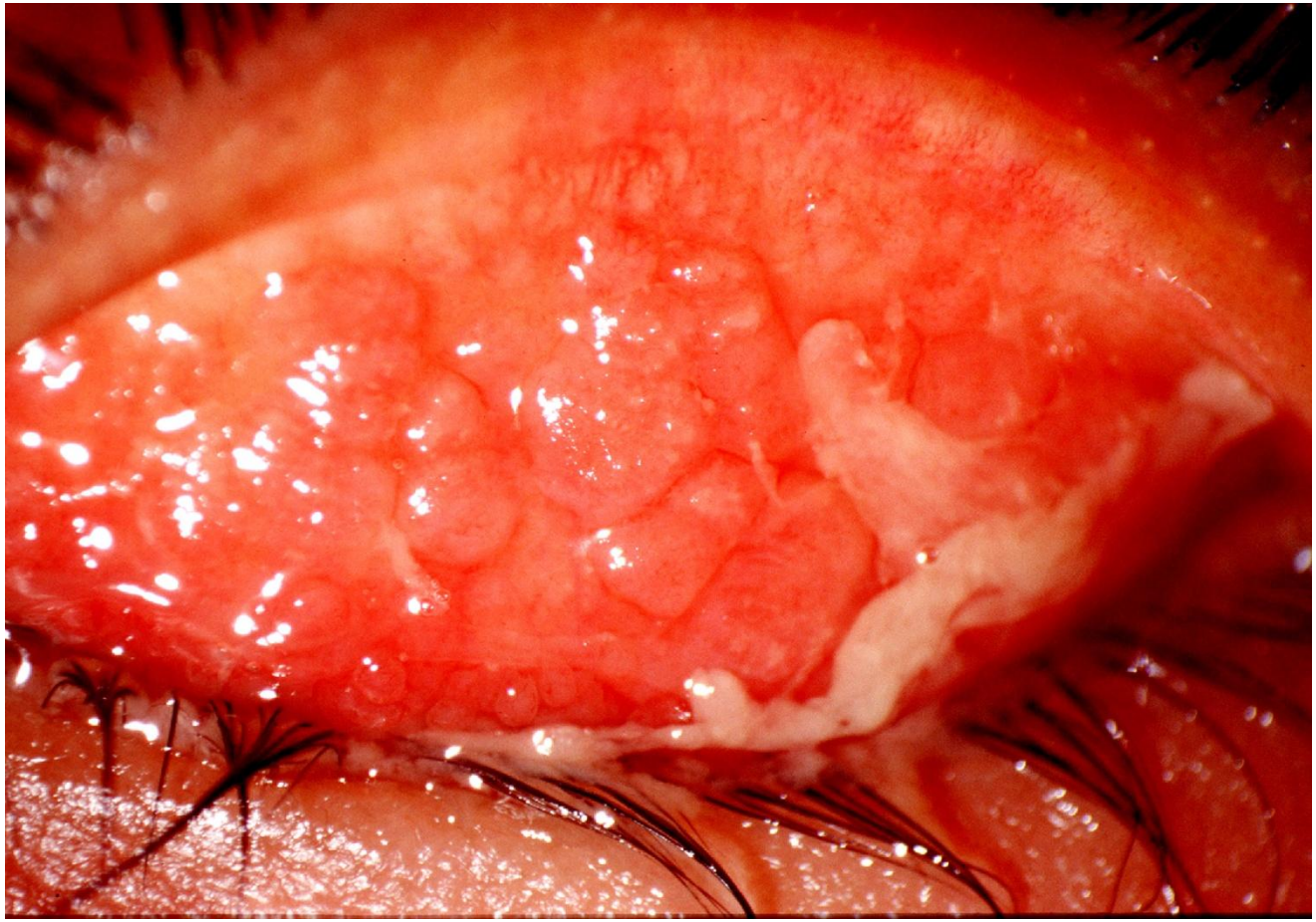
C- itching is main complaint

D- esionophilic collection



Follicular Conjunctivitis seen in all except:
A- Trachoma
B- Viral
C-Allergic
D- ?? لكن هو الجواب الصحيح





Q1. What is the diagnosis ?

1: VKC

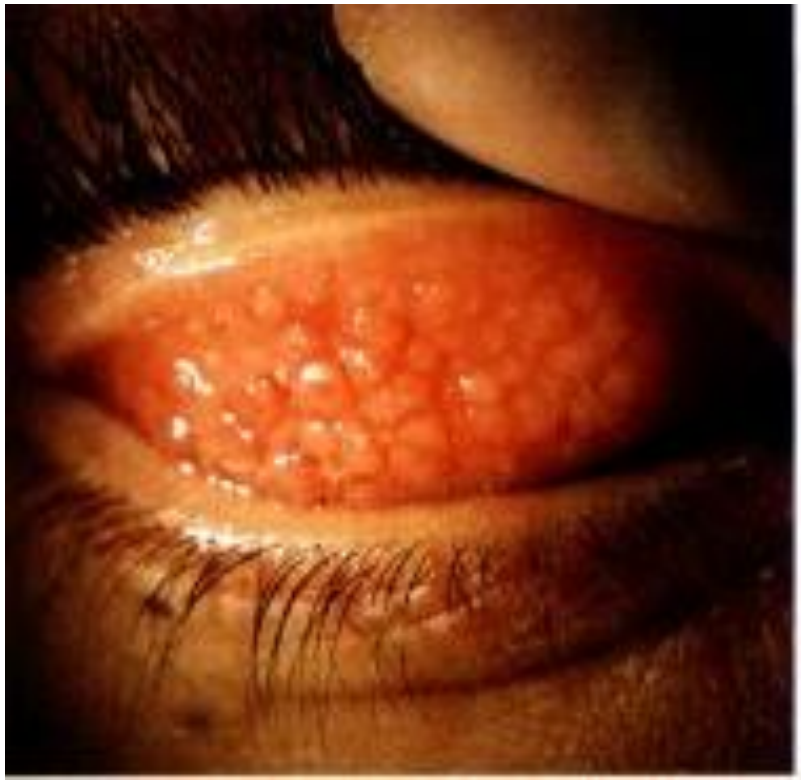
Q2. What is the treatment ?

2:Mast Cell Stabilizer

Q4

- According to this condition, which is correct?

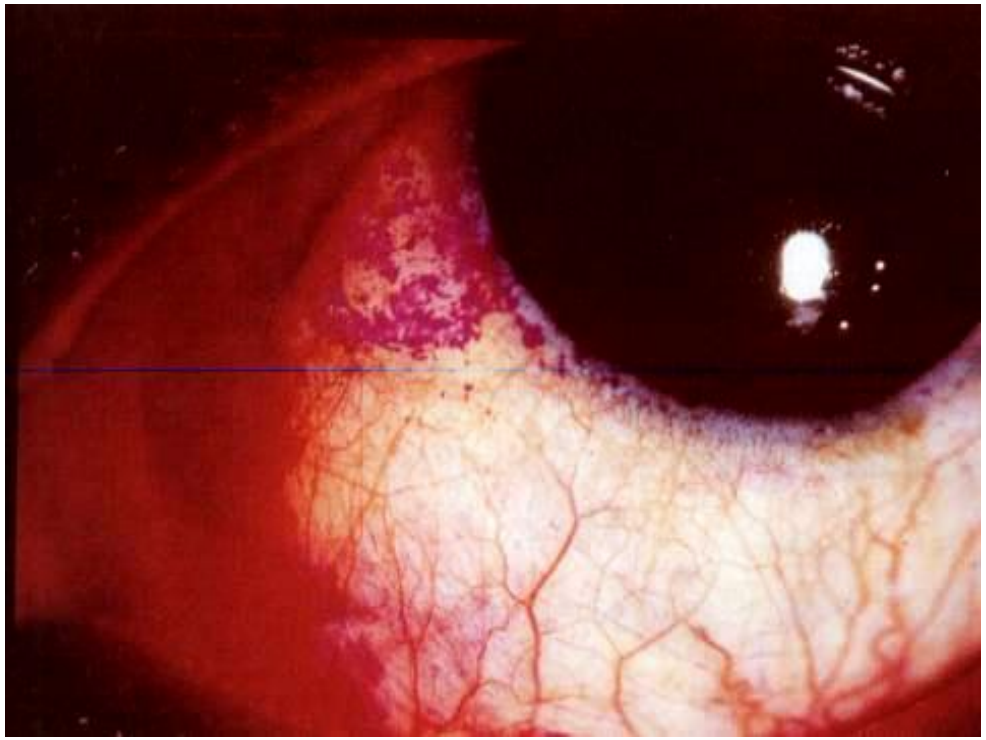
- This lesion is in the bulbar conj.
- Rx is AB
- Caused by staph.aures
- Redness, pain, photophobia are ass. Symp.



It was this exact pic. It was taken from KANSKI p.22 but the quality of the pic in the exam was so bad that most of us had a problem in answering this Q, hopefully this wont happen 2 u

BTW this is a gaint papilae (VKC)

Keratoconjunctivitis Sicca



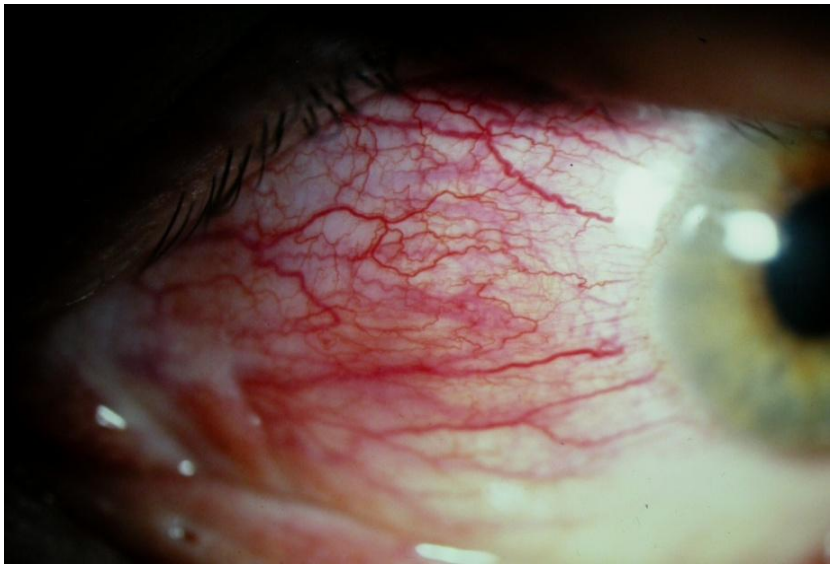
- Rose Bengal Stain : Kerato conjectivitis Sicca = Dry Eye Syndrome
- Why Not to use Flurocene?: Becaue it is hydrophilic & the epithelium will take hydrophobic (rose Bengal) so,

-Dentritic : if infected →rose Bengal ?

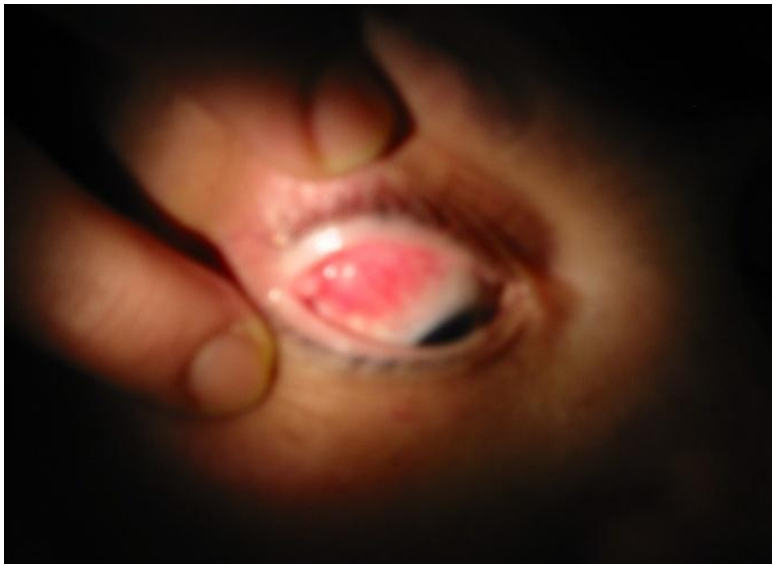
-If desquamated → Flurocene

Episcleritis & Scleritis

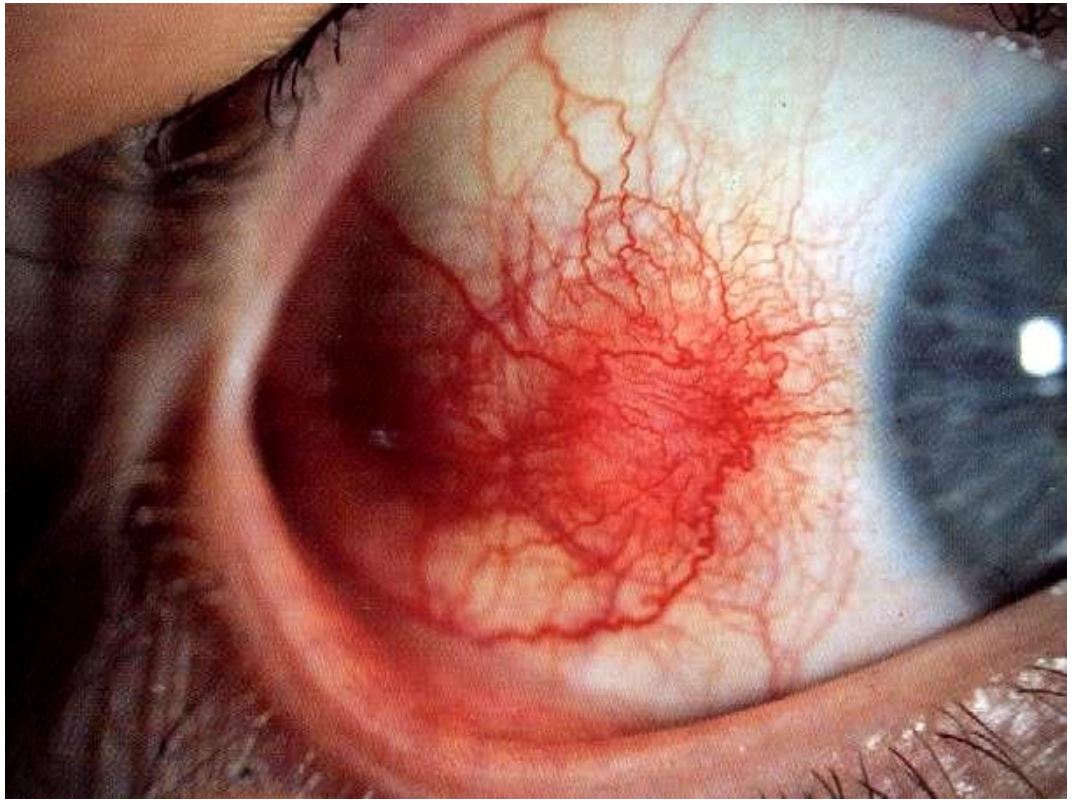
Episcleritis



scleritis



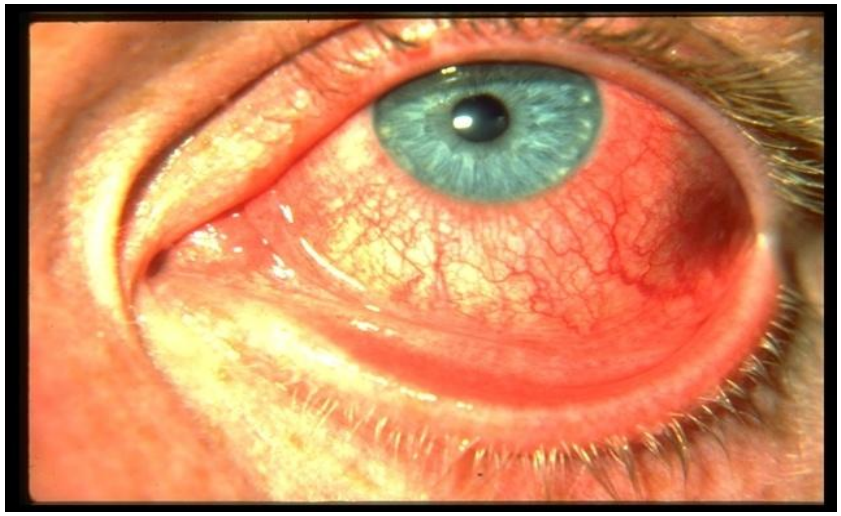
- Episcleritis.

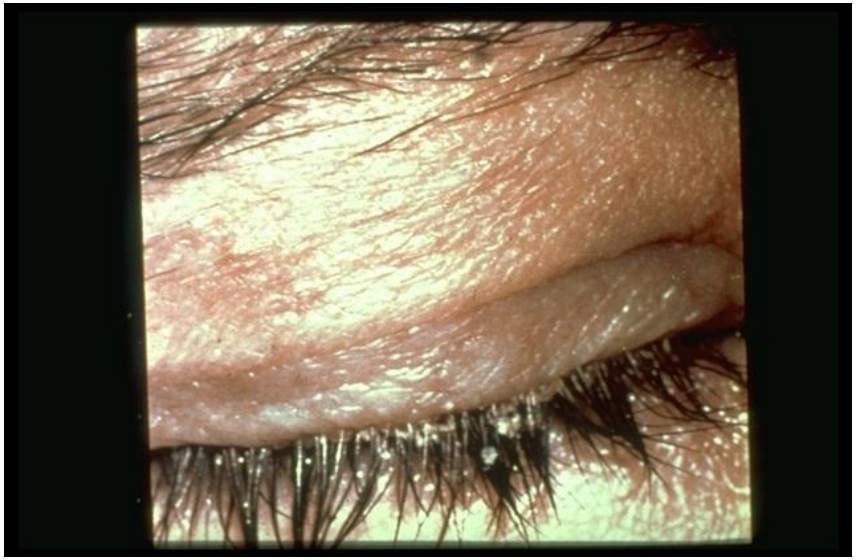


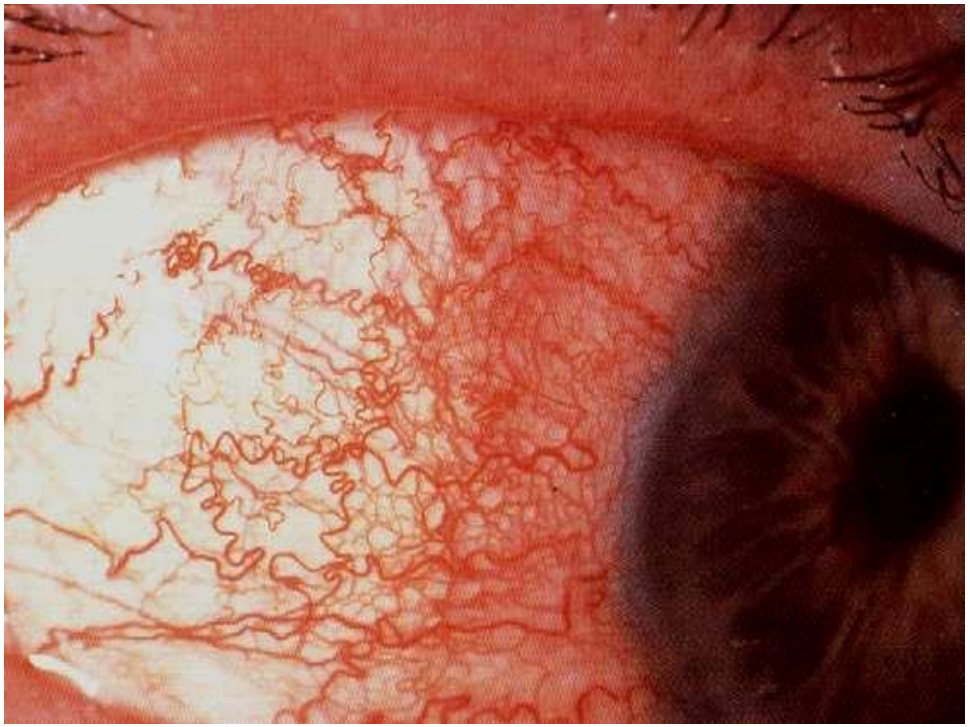
A. What is the diagnosis?
B. Give me 3 or 2 causes (can't remember) << I'm not sure of this Q ?

A. Preretinal hemorrhage or BRVO <<< I'm not sure of it
B.

Red eye





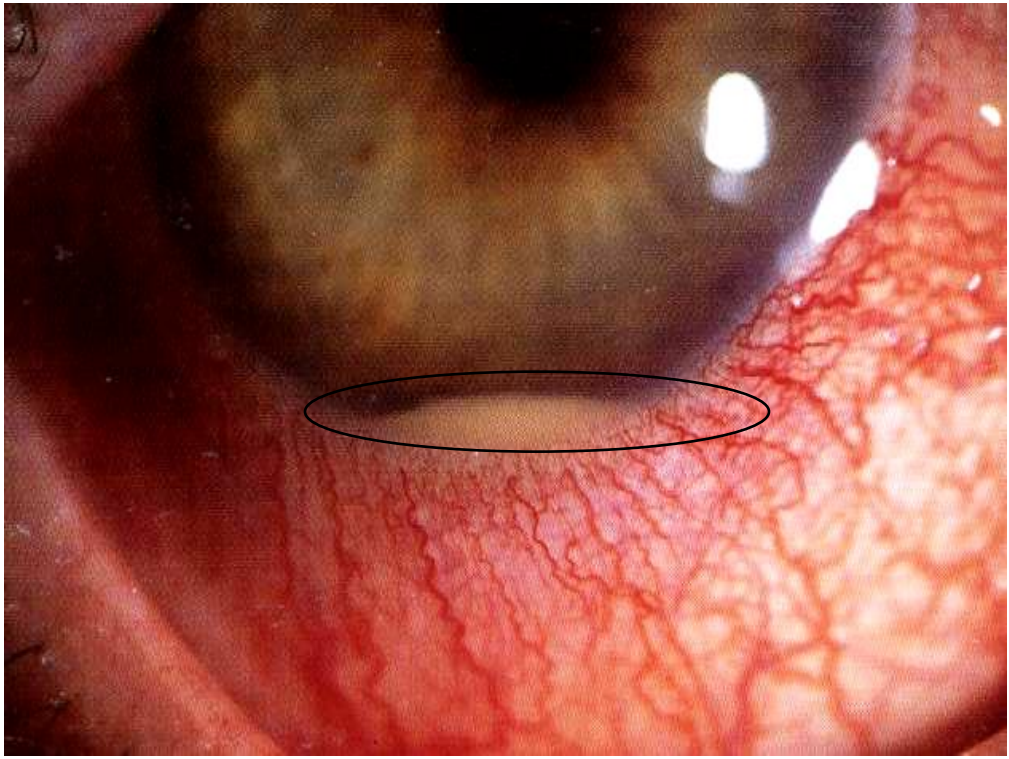


- Injection Around the Limbus.
- DDx:
  - Anterior Uveitis (Iritis)
  - Keratitis.
  - Acute Angle closure Glaucoma.

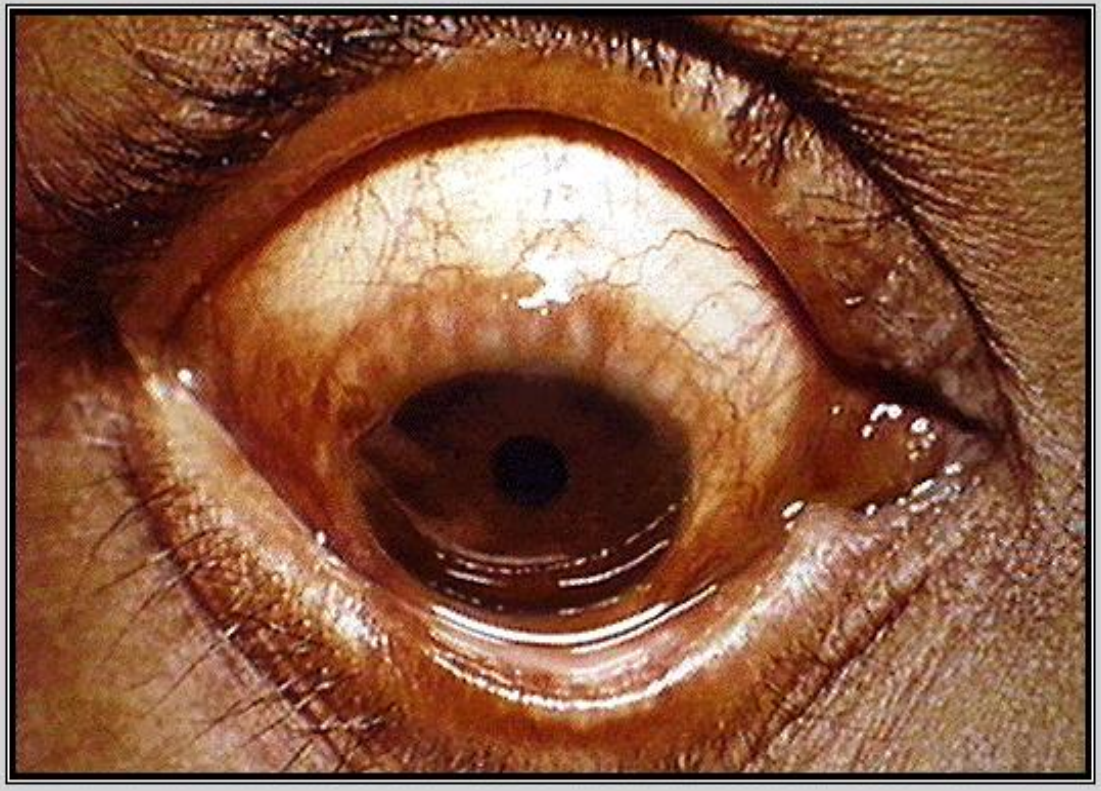
- Injection around the limbus.
- Iritis: Pain, photophobia, blurred vision, Redness.
- Tx: Topcal Steroids.
- If posterior uveitis : Systemic Steroids.
- Iritis =Iridocyclitis =Anterior Uveitis.

- NOTE THE HYPOION (Pus or cells in the Ant. Chamber) Which requires Tx.
- In uveitis we will see in the Ant. Chamber:

1- Cells.
2- Flare.
3- Keratic precipitate.



- Allergic Seasonal Conjunctivitis + Tranta's Spots → Vernal Keratoconjuctevitis.
- Itching, Watery then Mucoid.
- We used to give local steroids But now we give Antihistamines.



This pt. present to ER with periocular pain, headache & decrease visual acuity

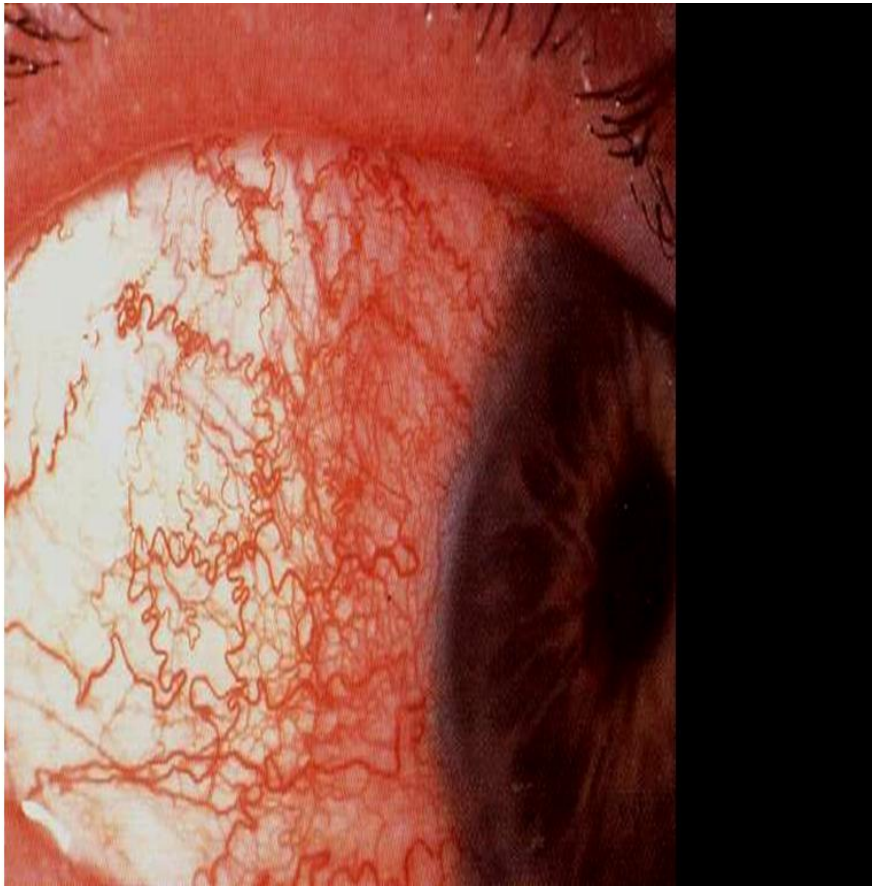
Whish is true :

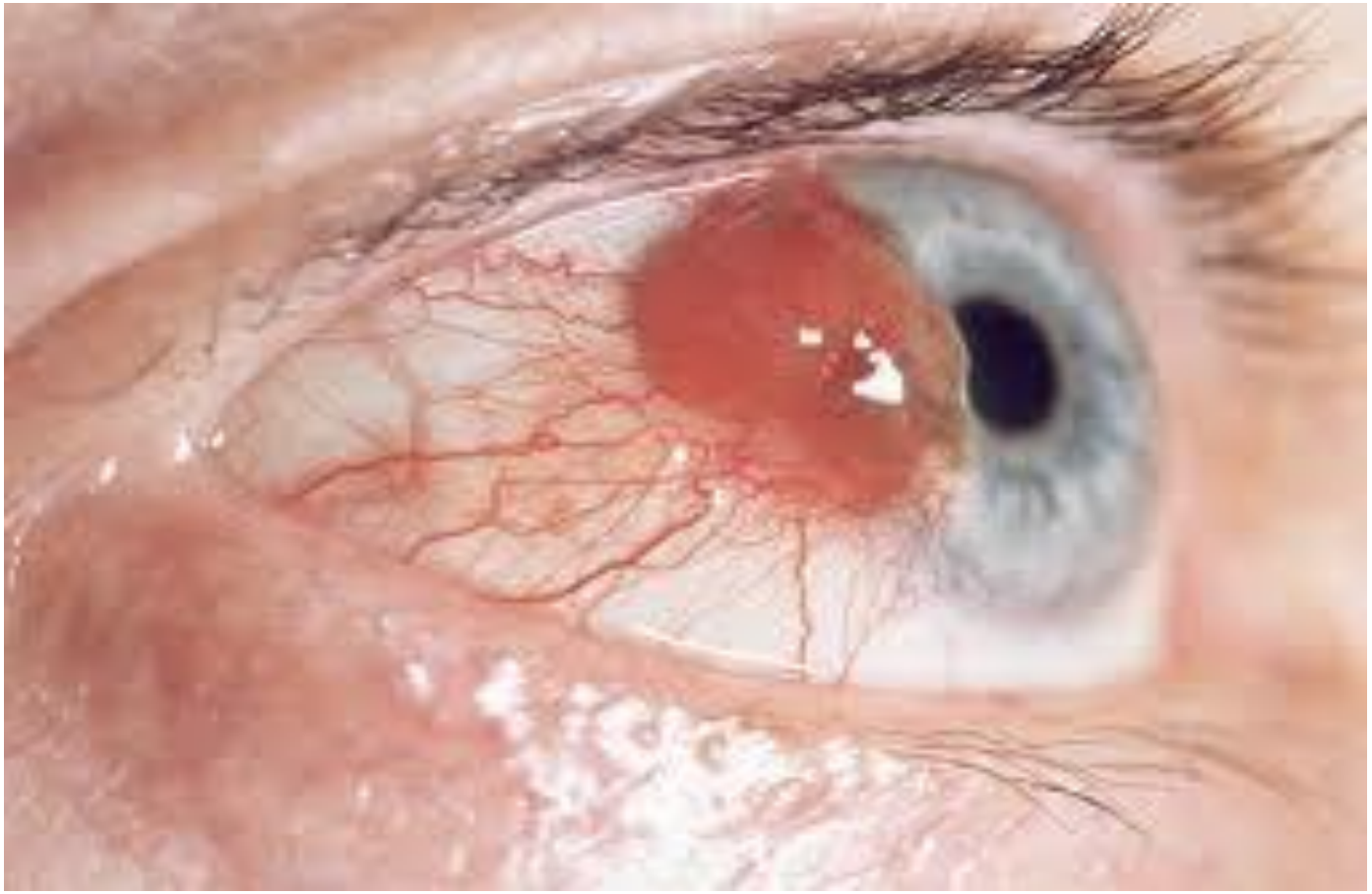
A- topical & systemic treatment

B- cornea is ok

C- ocular pressure is 21

D- deep anterior champer



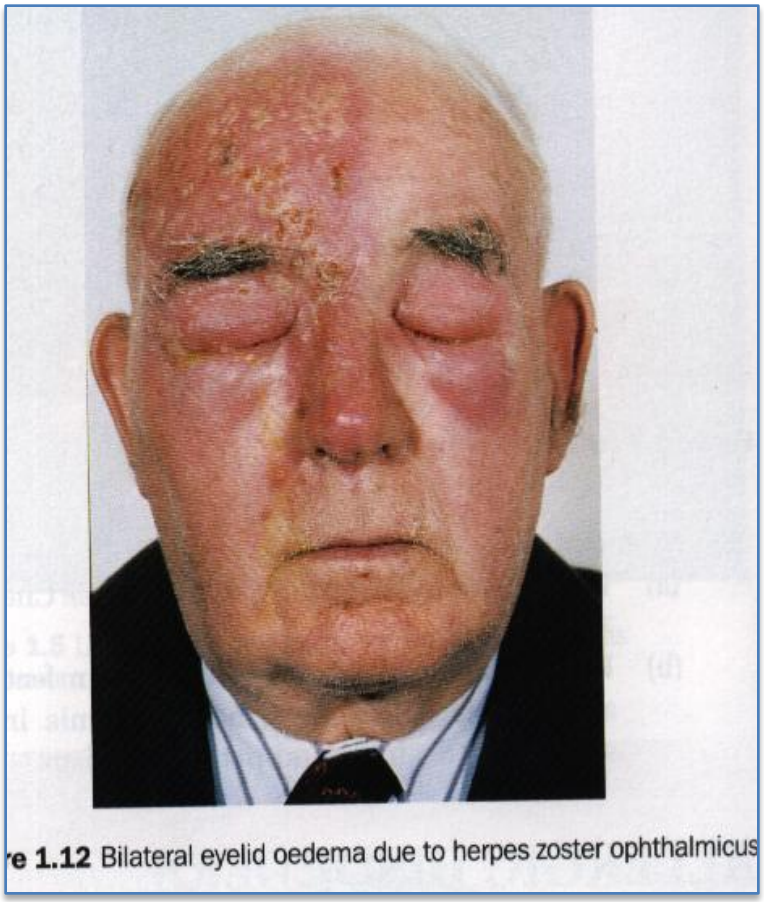


60-year-old male with redness OD for 6 months.

A) What is the diagnosis?

B) Mention 2 modalities for treatment?

Herpes Zoster



e 1.12 Bilateral eyelid oedema due to herpes zoster ophthalmicus

1. What is this sign & indicates for what ?

Hutchinson's sign.
If tip of the nose is involved, usually eye will be involved too
(coz of involvemnt of nasociliary n.)

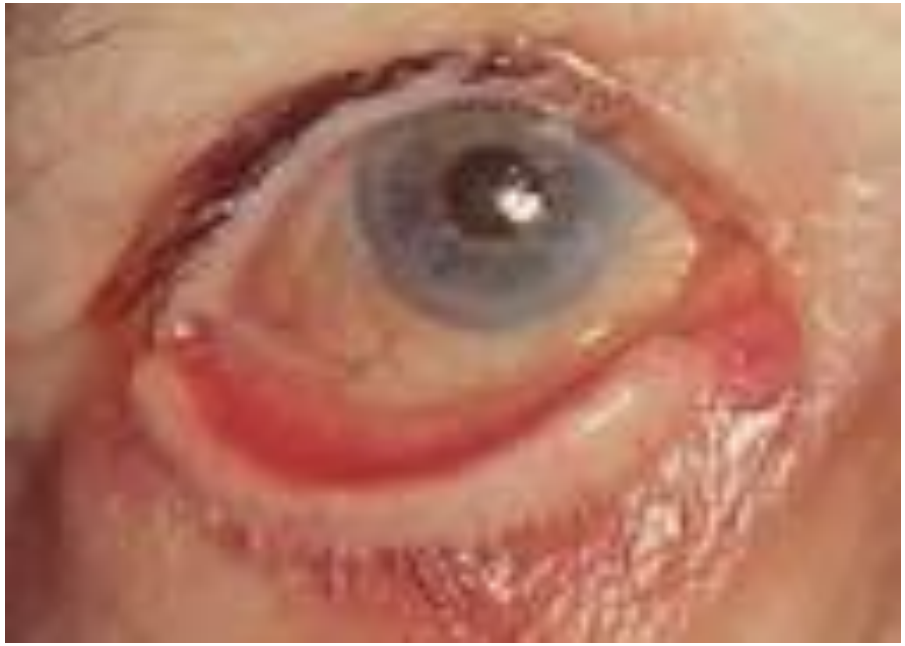
2. Dx ?

Herpes zoster ophthalmicus

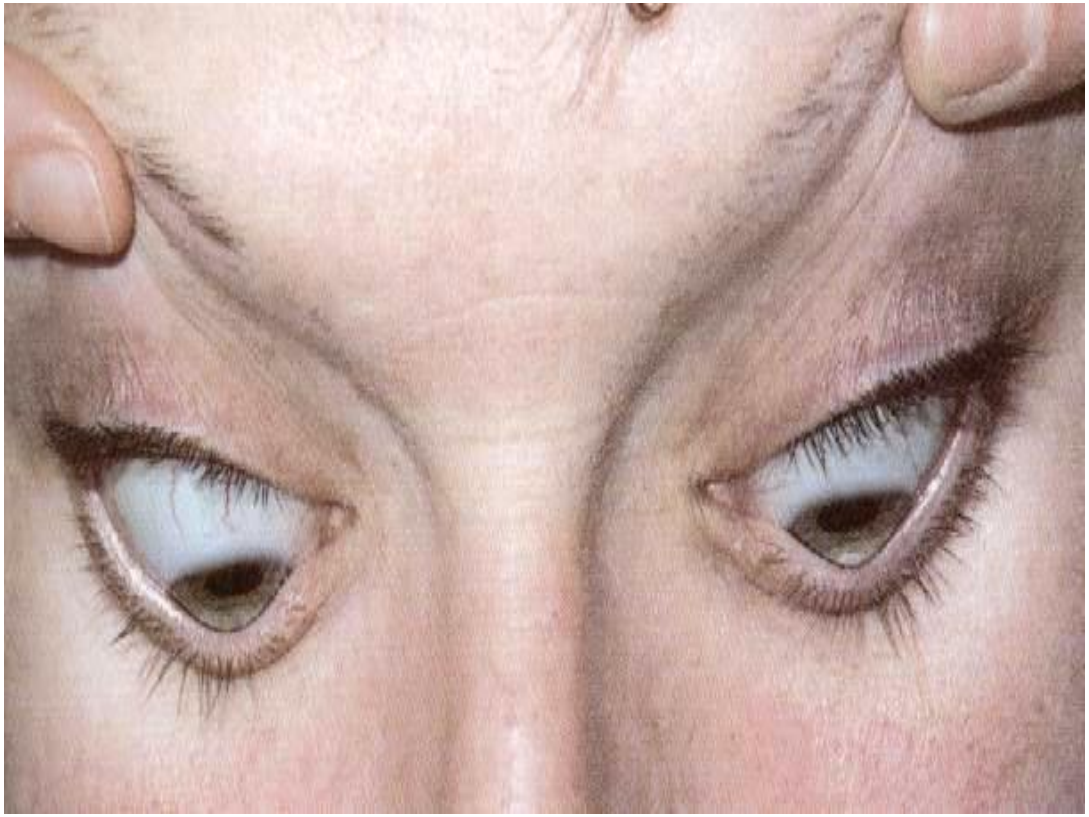
3.mention 2 complication?
Keratitis – uveitis –blindness

Others

Ectropian

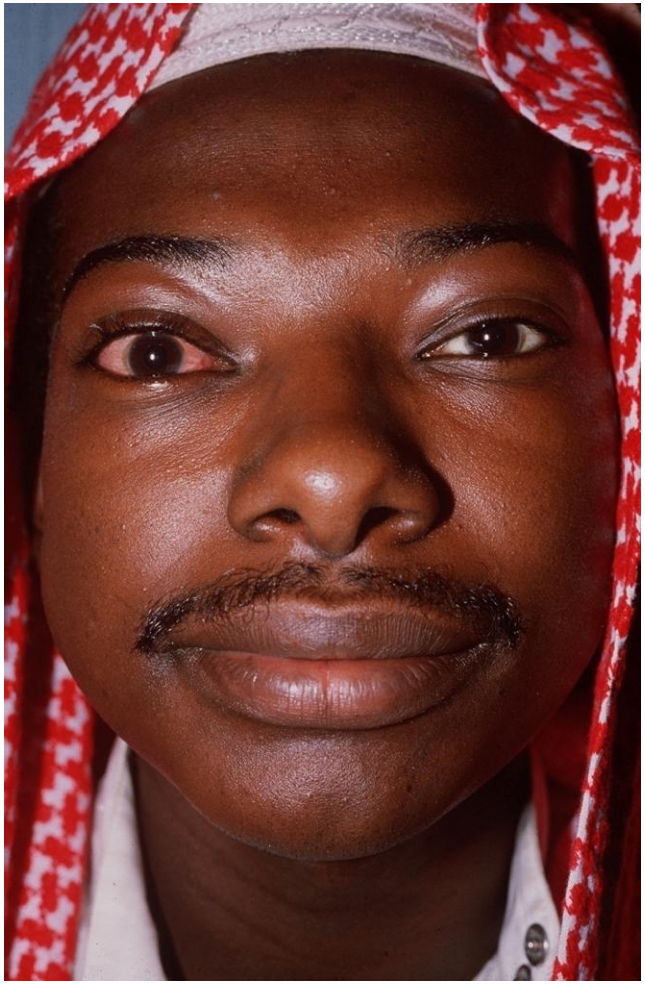


Trichiasis

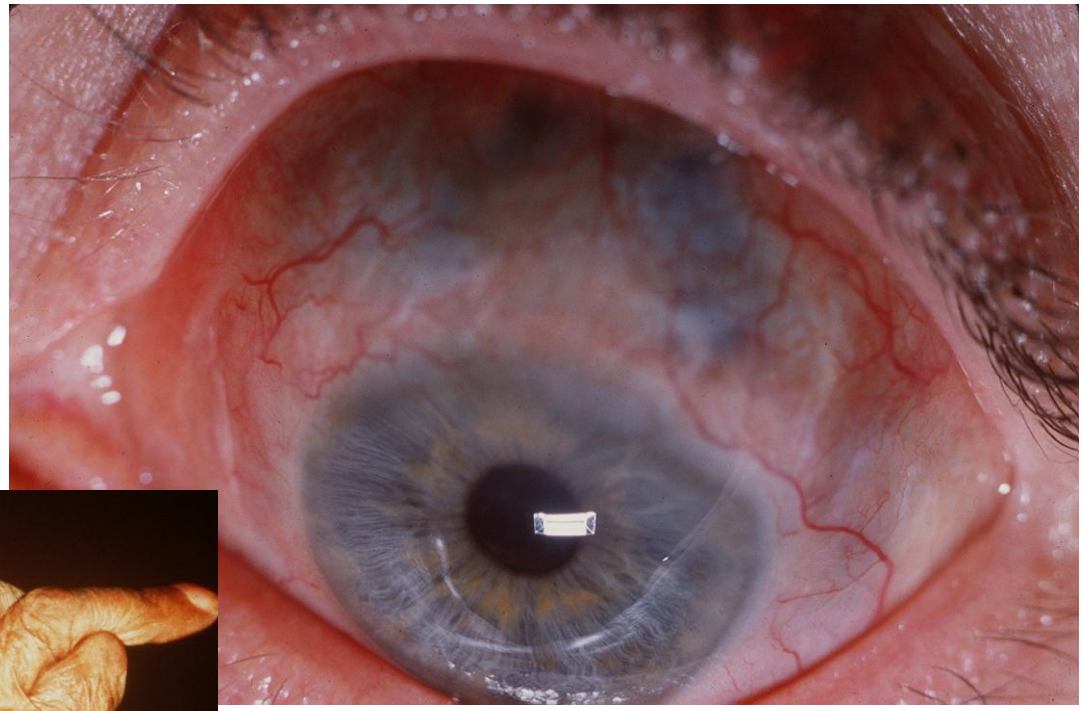


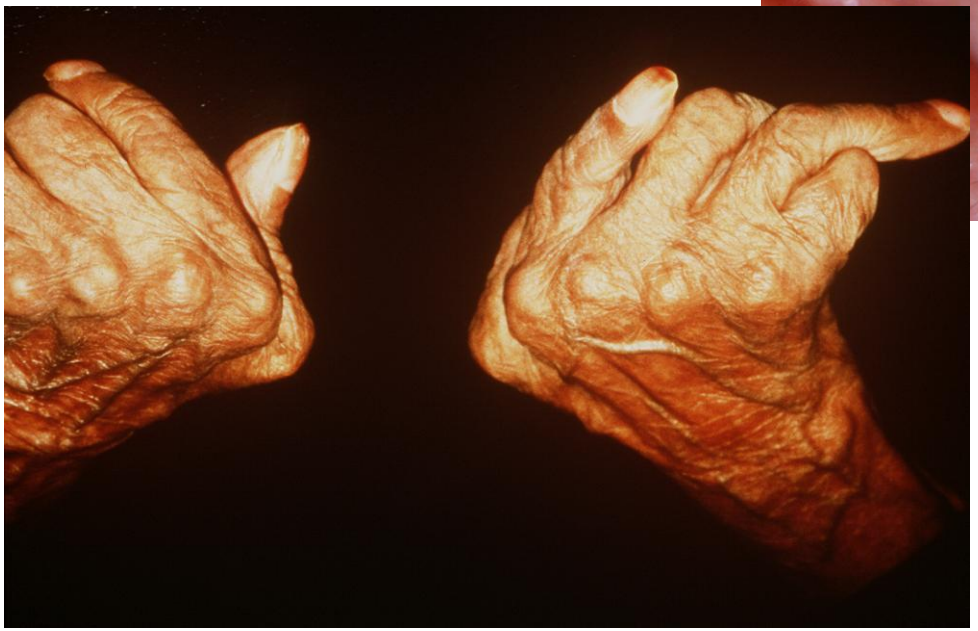
- Manson’s Sign.
- KERATOCONUS.
- Mopes. Steep?
- Associated with V.K.C.& Atopic Dermatitis.
- Tx: Hard Contact lens or KERATOPLASTY.
- N.B. LASEK is CONTRAINDICATED.

Exposure keratitis

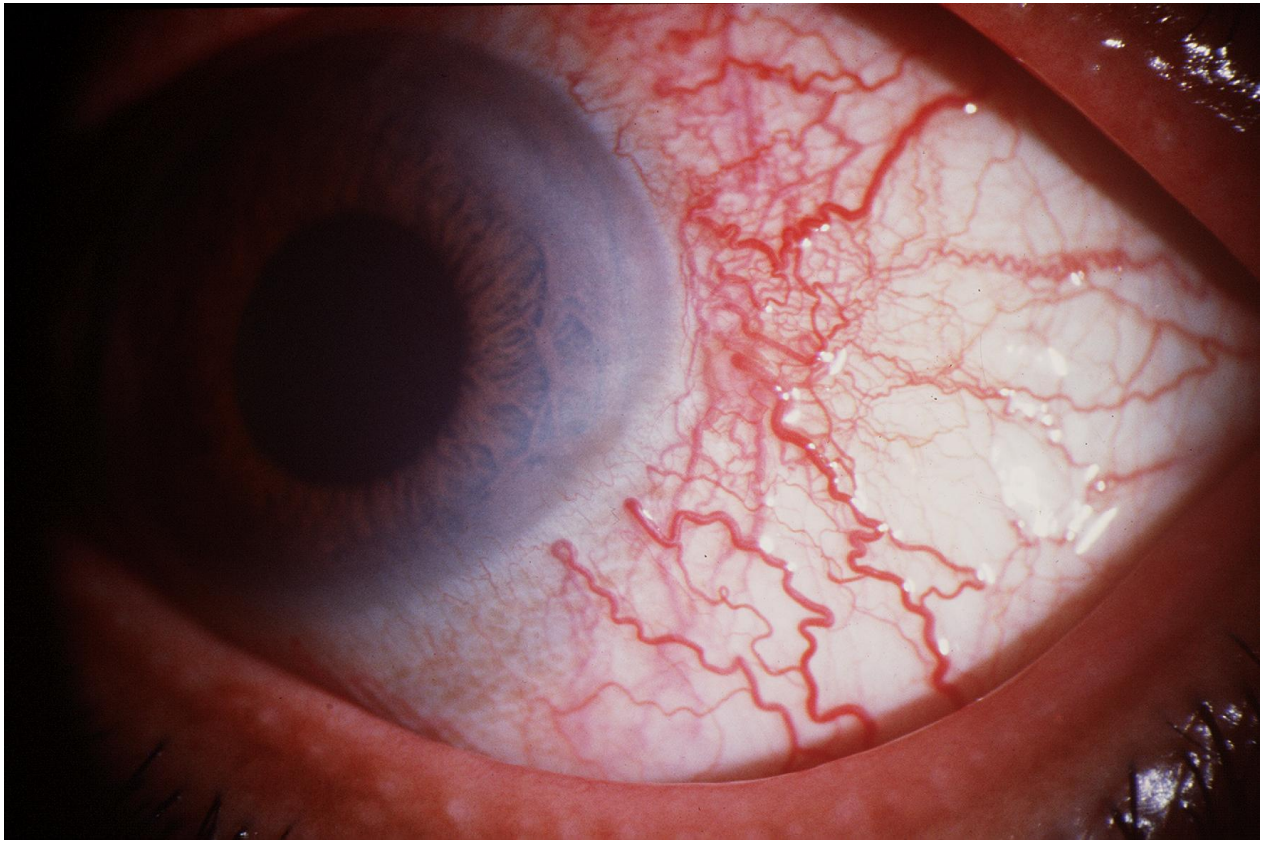


Thinning of sclera because of RA

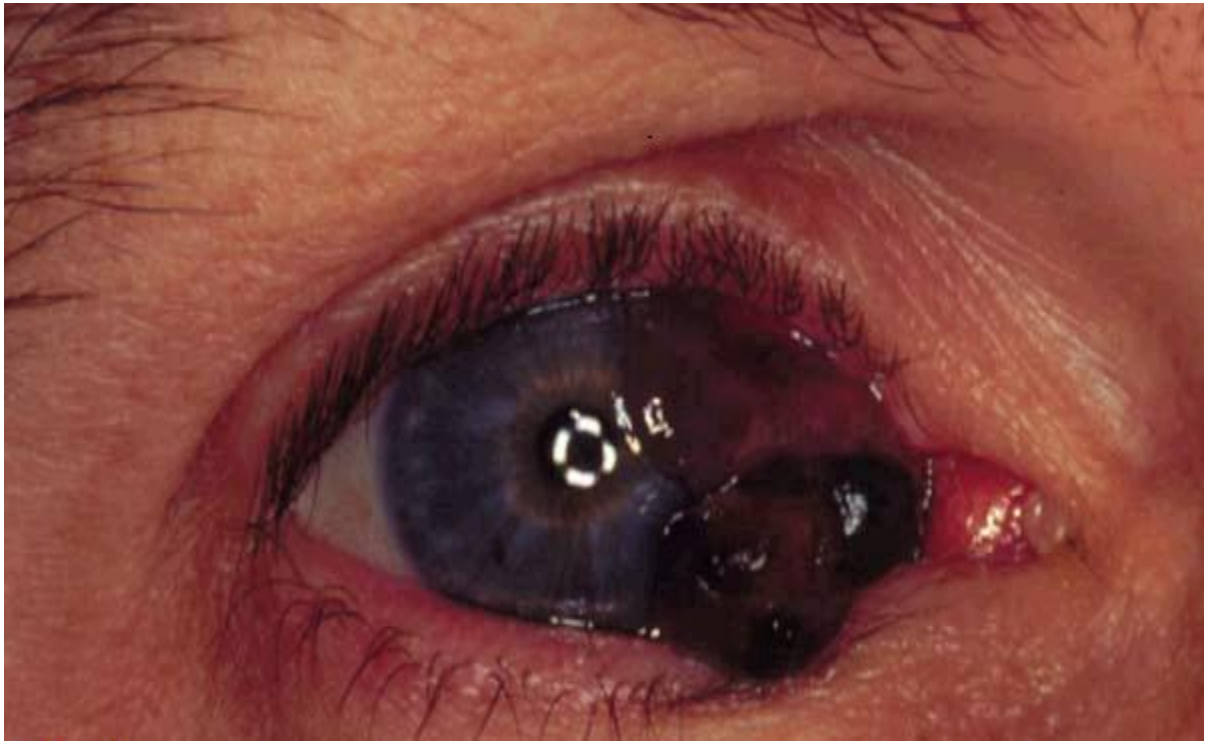




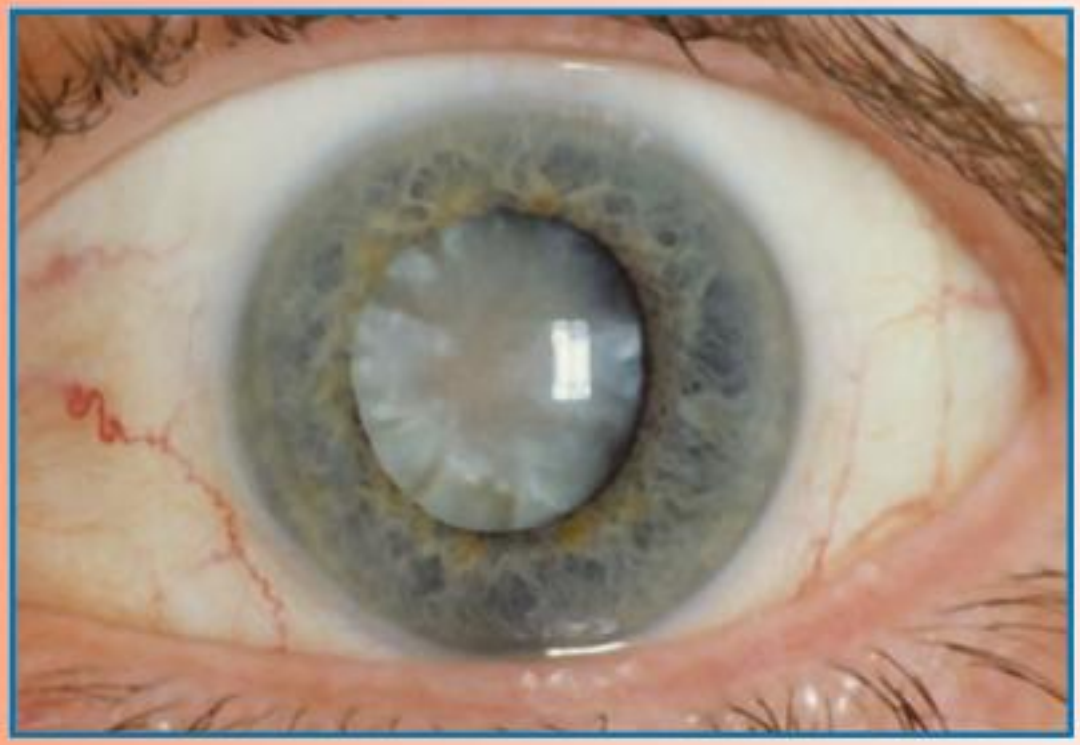
Large cavernous sinus-carotid fistula



Conjunctival tumor



I don’t know what is this !!



Mention 2 complications of surgery for this condition.

Endophlamitis- hemorrhage- vitreous loss

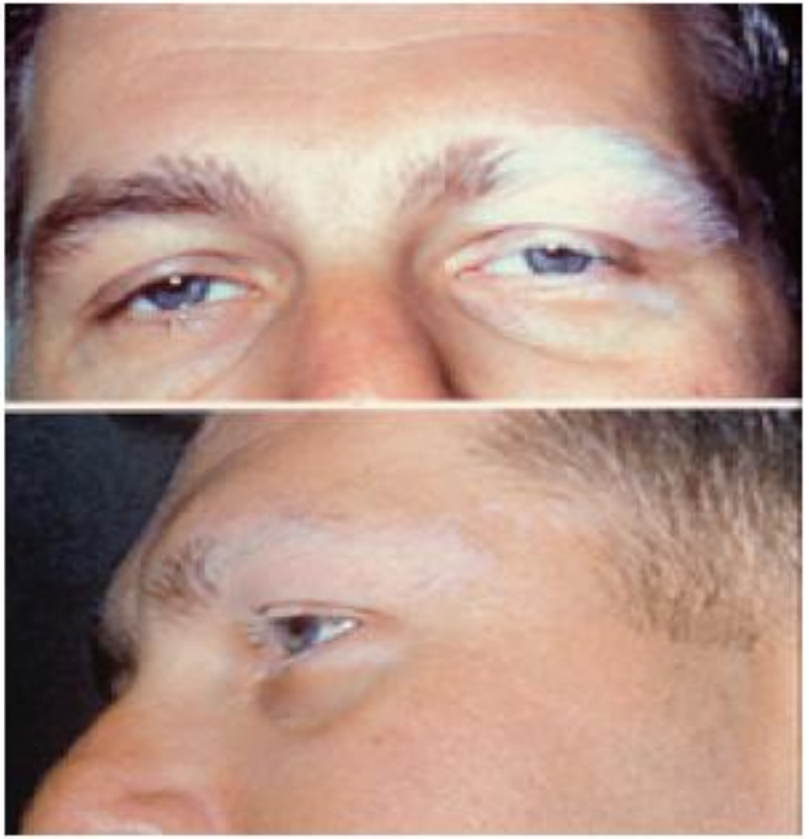
Mention 2 indications for surgery.

Phacomorphic glaucoma-Phacolytic glaucoma- occupation requiring sharp vision (Pilot)

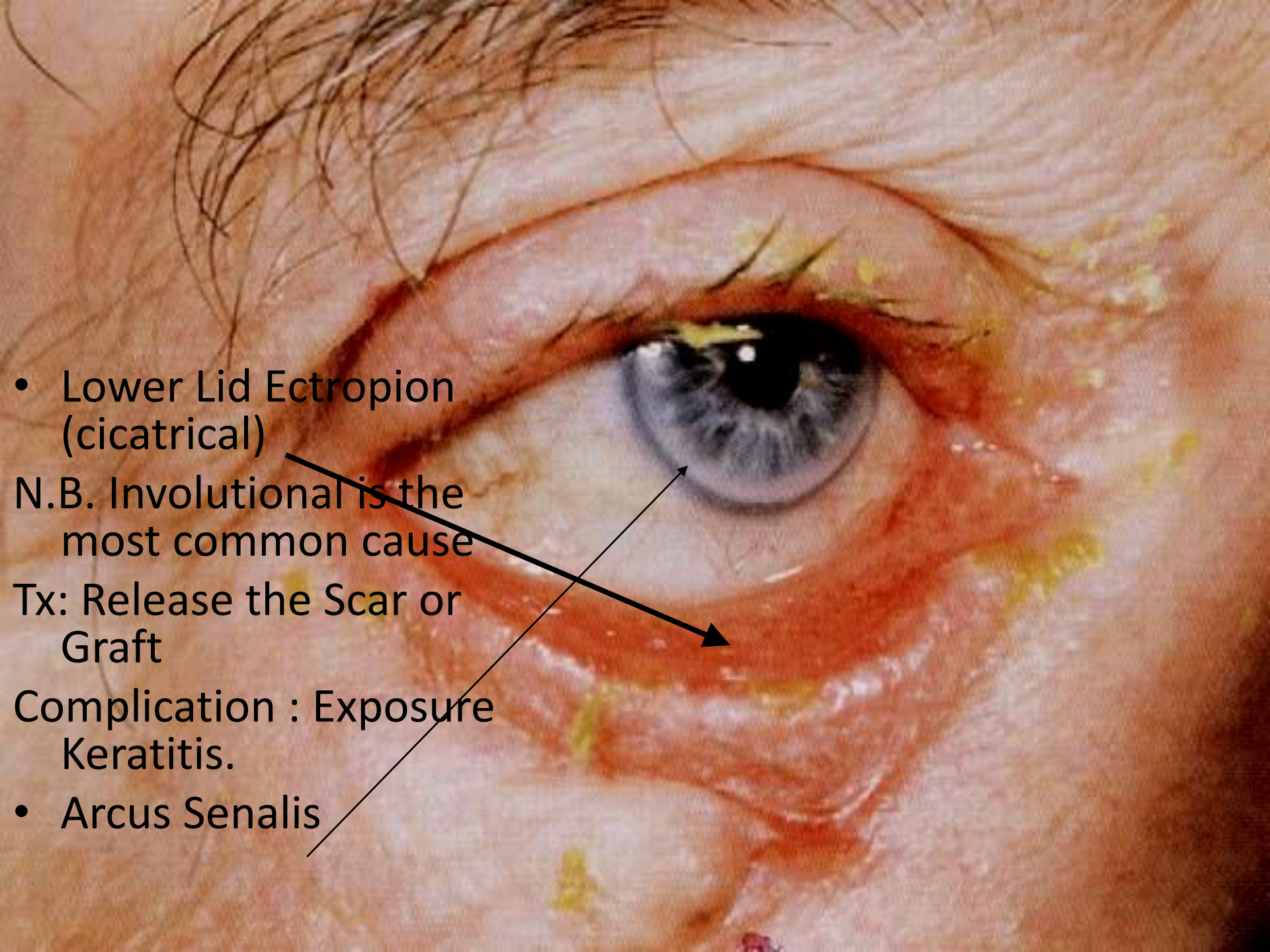
Patient visit uvitis clinic

Diagnosis

Name 2 other manifestations



It wasn't clear in the exam , BE CAREFUL



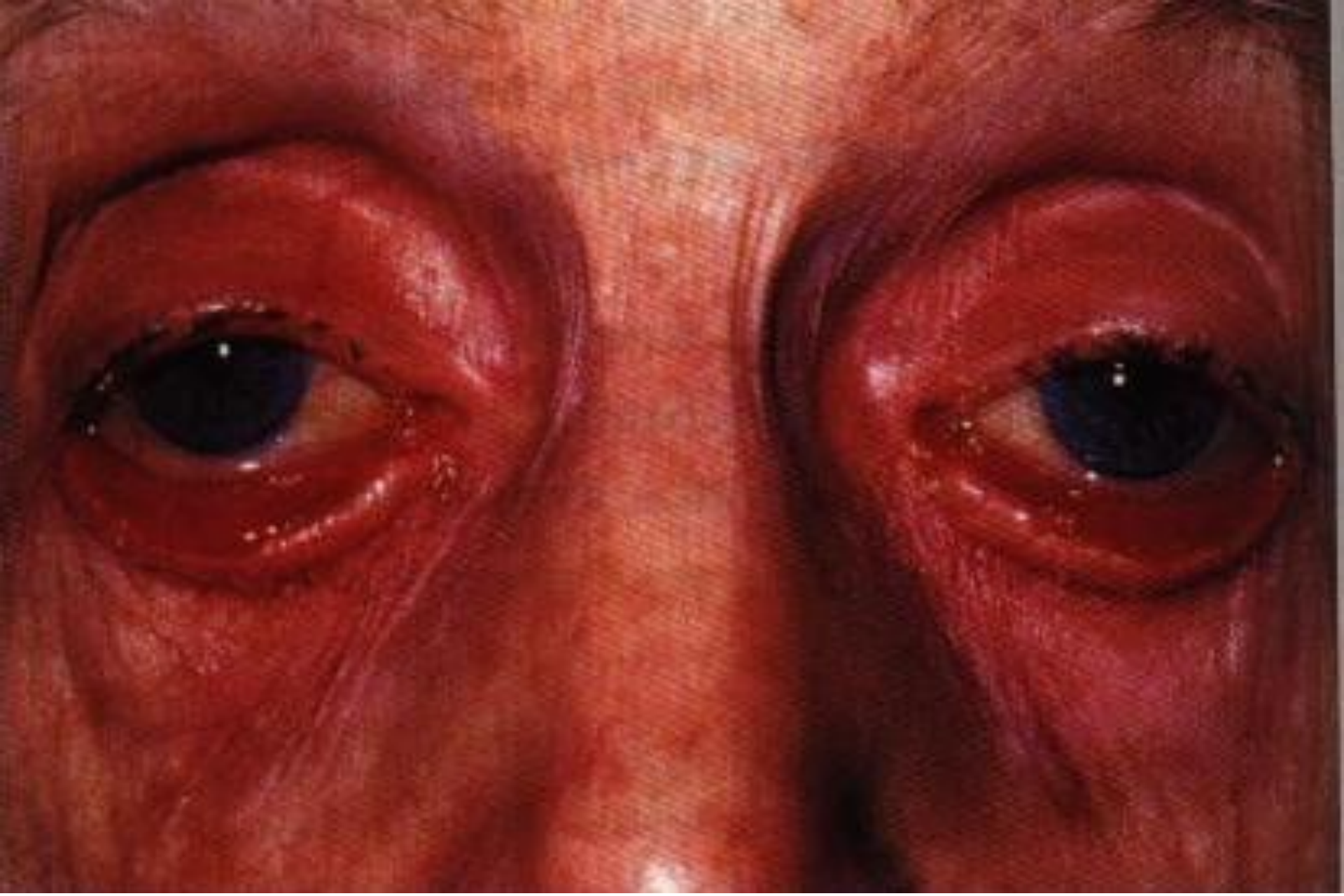
- Lower Lid Ectropion (cicatrical)

N.B. Involutional is the most common cause

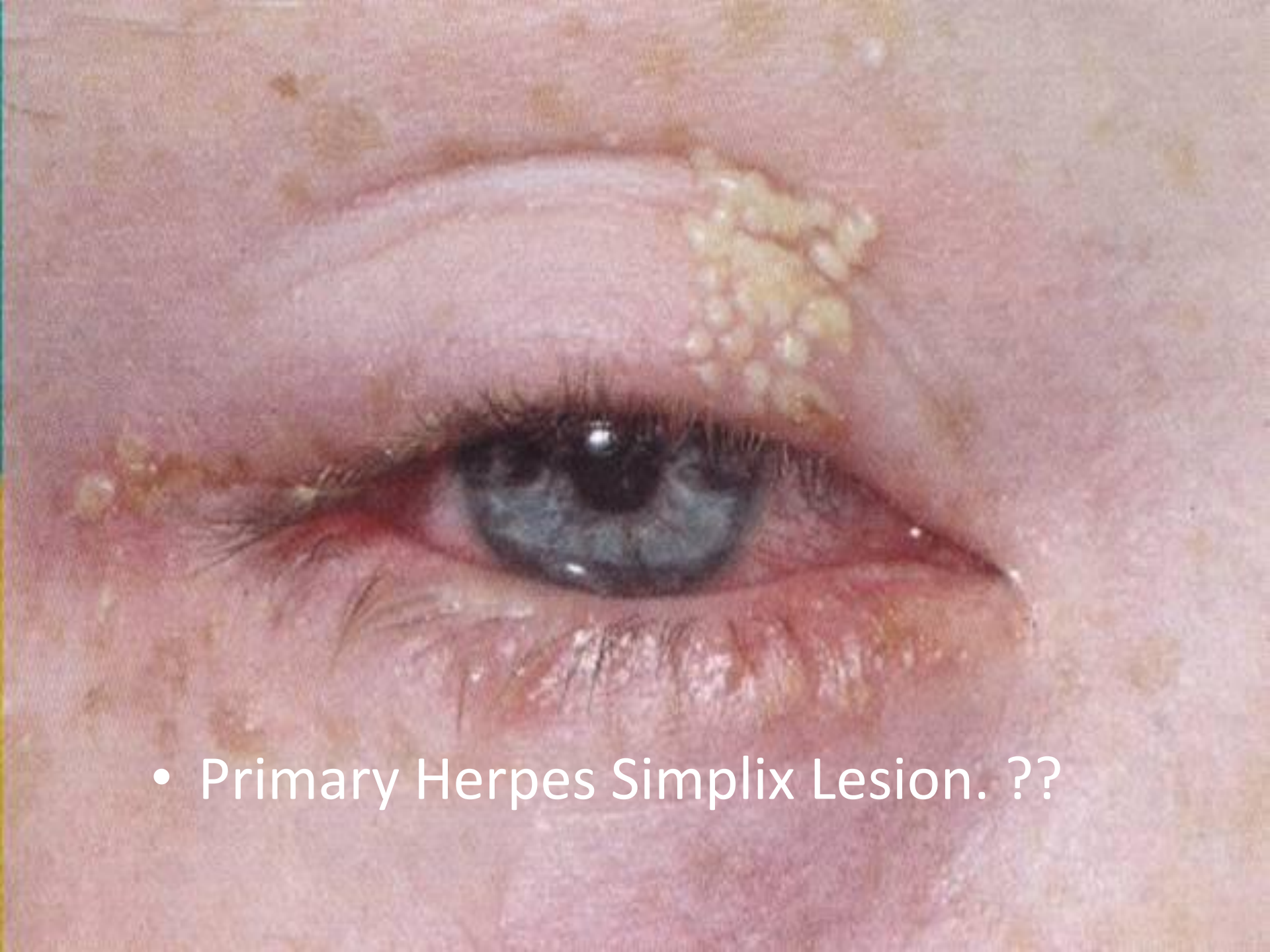
Tx: Release the Scar or Graft

Complication : Exposure Keratitis.

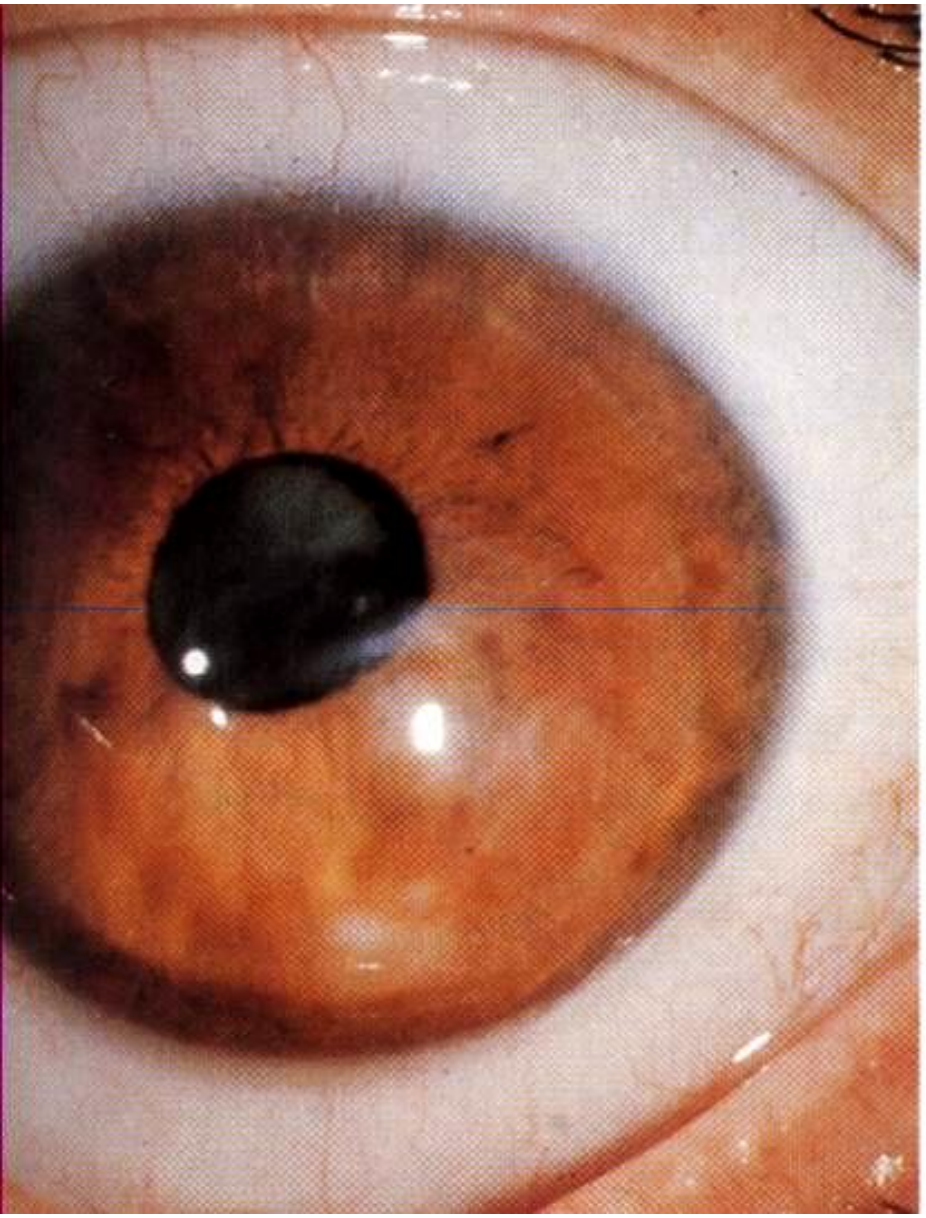
- Arcus Senalis



- Bilateral Ectropion.

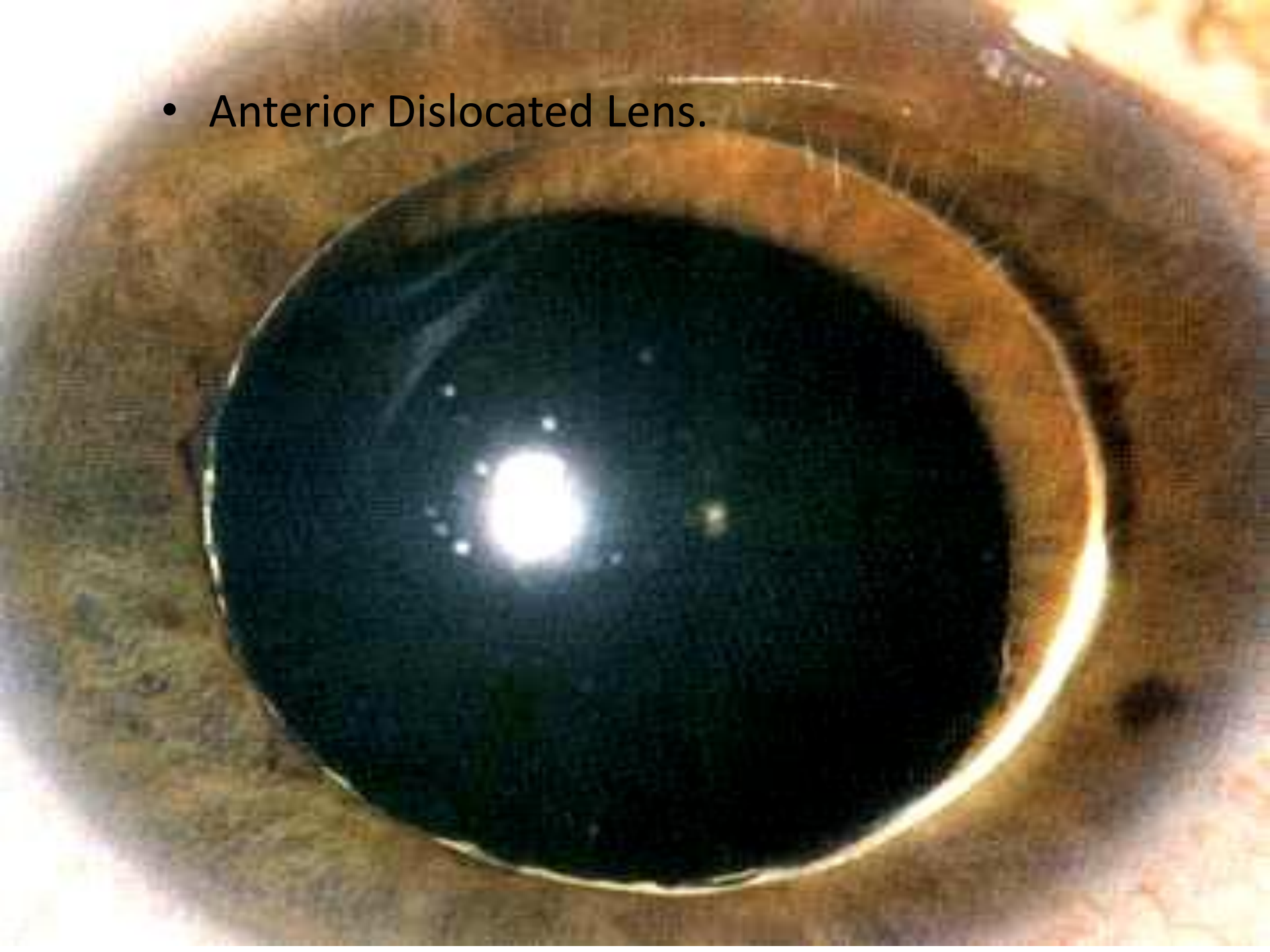


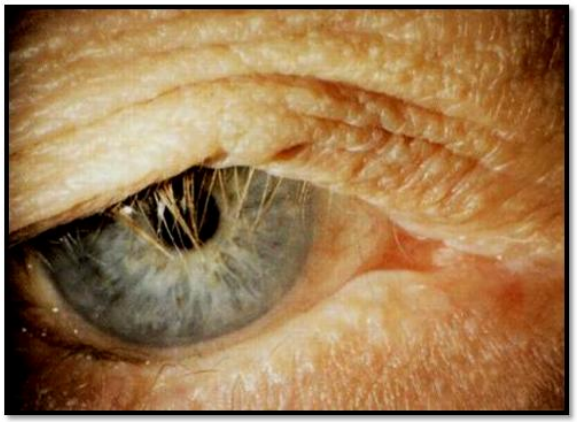
- Primary Herpes Simplix Lesion. ??



- Deep Ant. Chamber.

- Anterior Dislocated Lens.





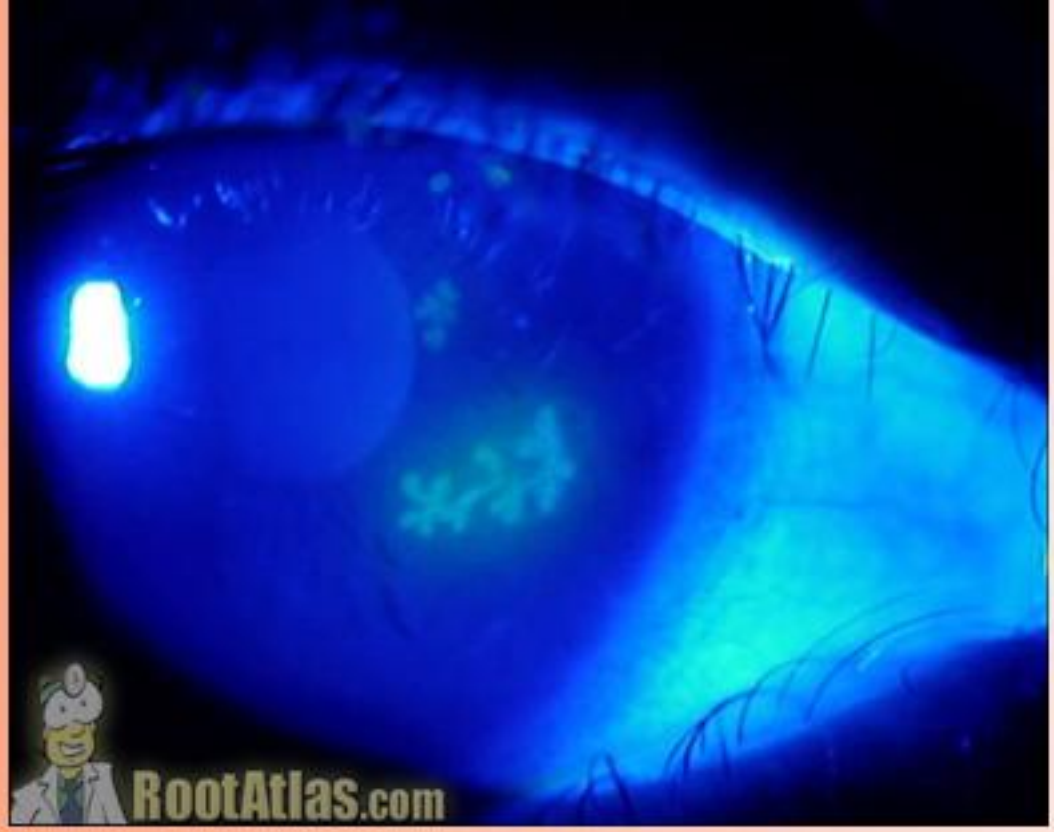
18) The most common cause of this condition is:

a. DM.

b. Senile.

c. Trachoma.

d. Congenital.



A/ What is the diagnosis?

Herpetic Keratitis

B/ What is the treatment?

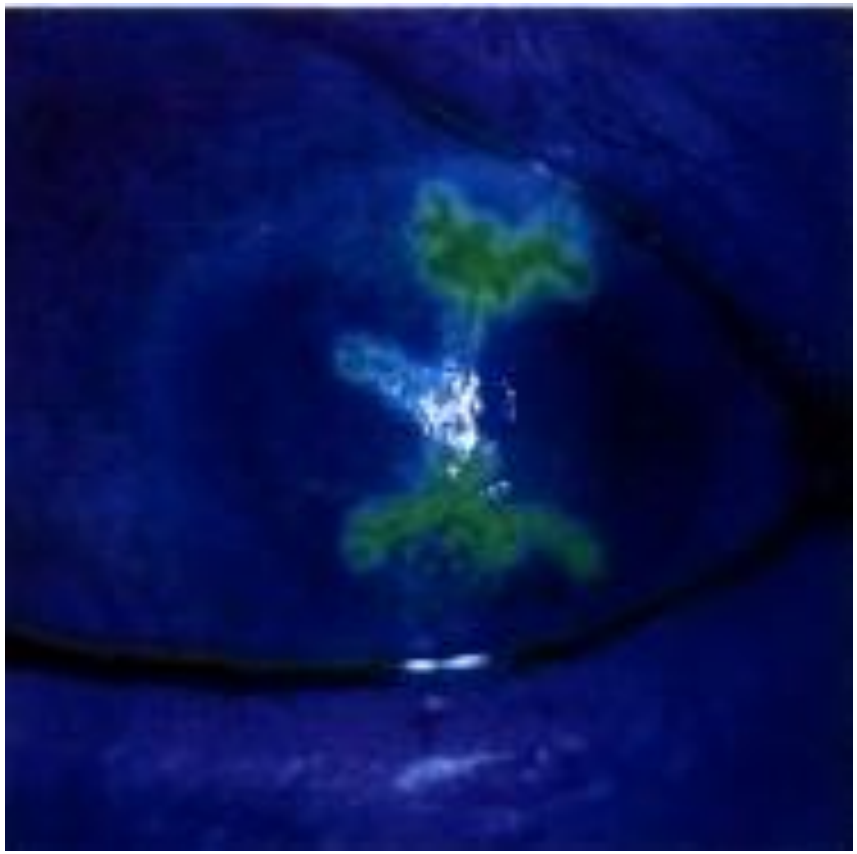
Topical Antiviral (acyclovir)

Q5

- According 2 this condition, what is the right answer?

- This is a geographic ulcer
- Rx is AB
- It could be recurrent
- U need 2 patch the eye

Some students picked the first choice which is wrong, cuz geographic ulcer although it has the same appearance but it's much bigger



This is a good pic and the pic we had in the exam was even BETTER ☺

The next three slides are included in Dr. Alfaran lecture but we don’t know the diagnosis.