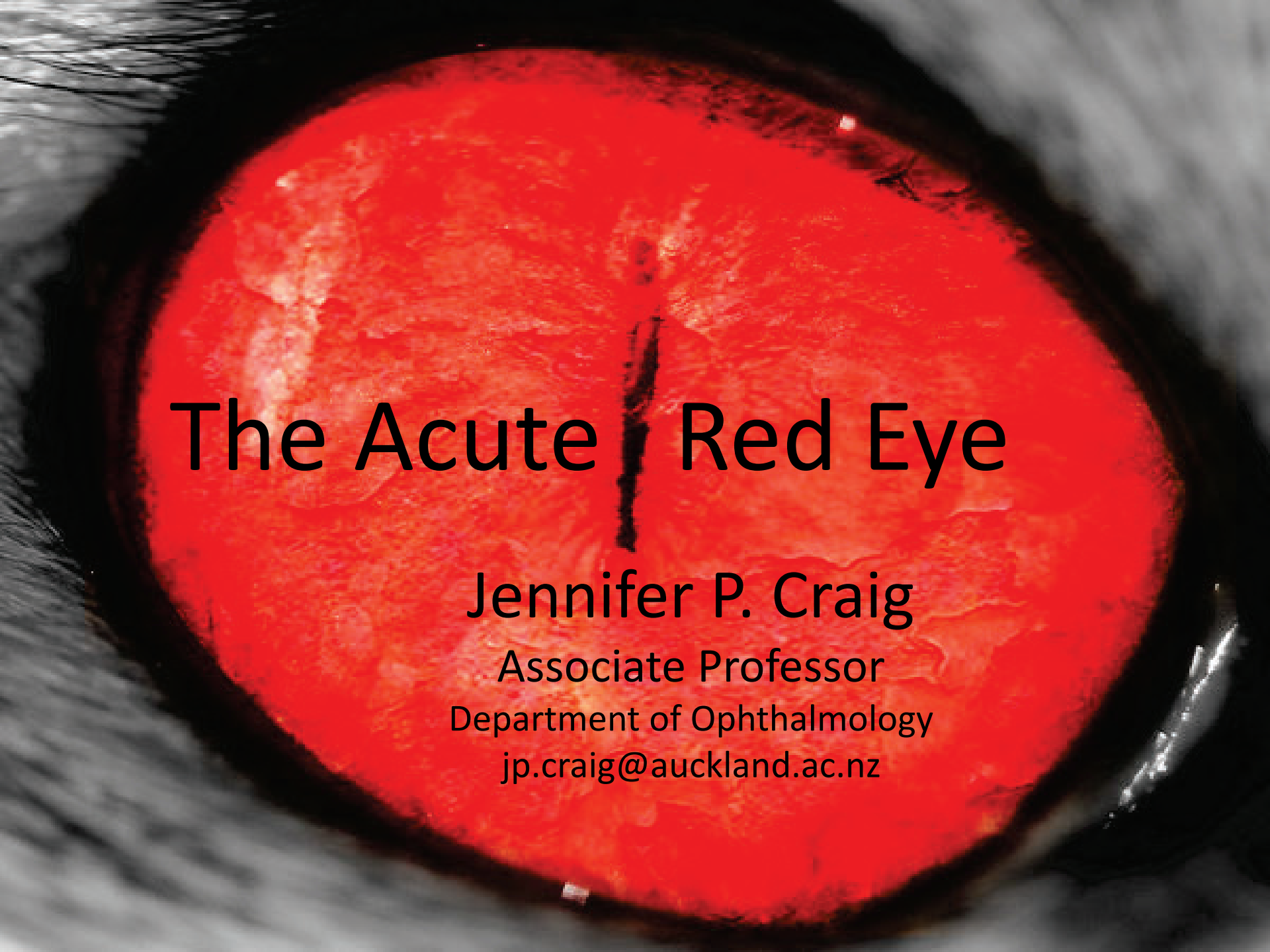

The Acute Red Eye

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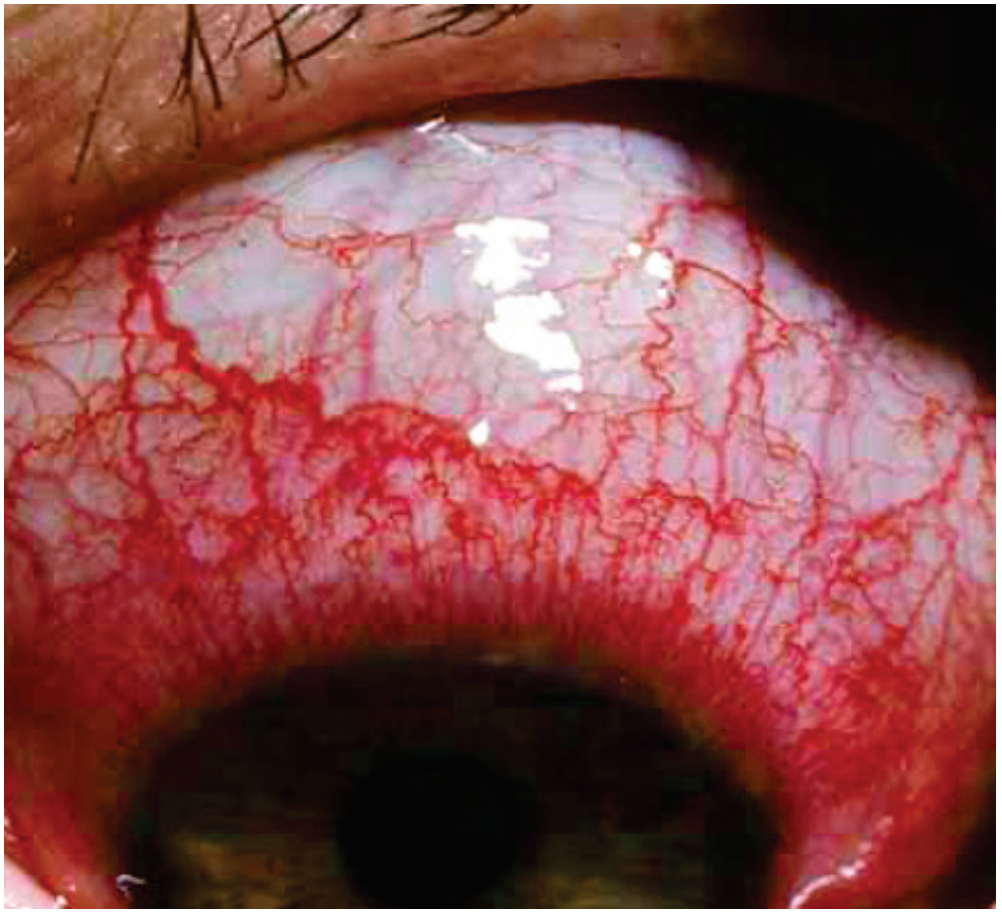
Question 1 – acute red eye

- 34 year old male
- Eye ‘a bit sore’
- Sensitive to light
- Vision slightly blurry

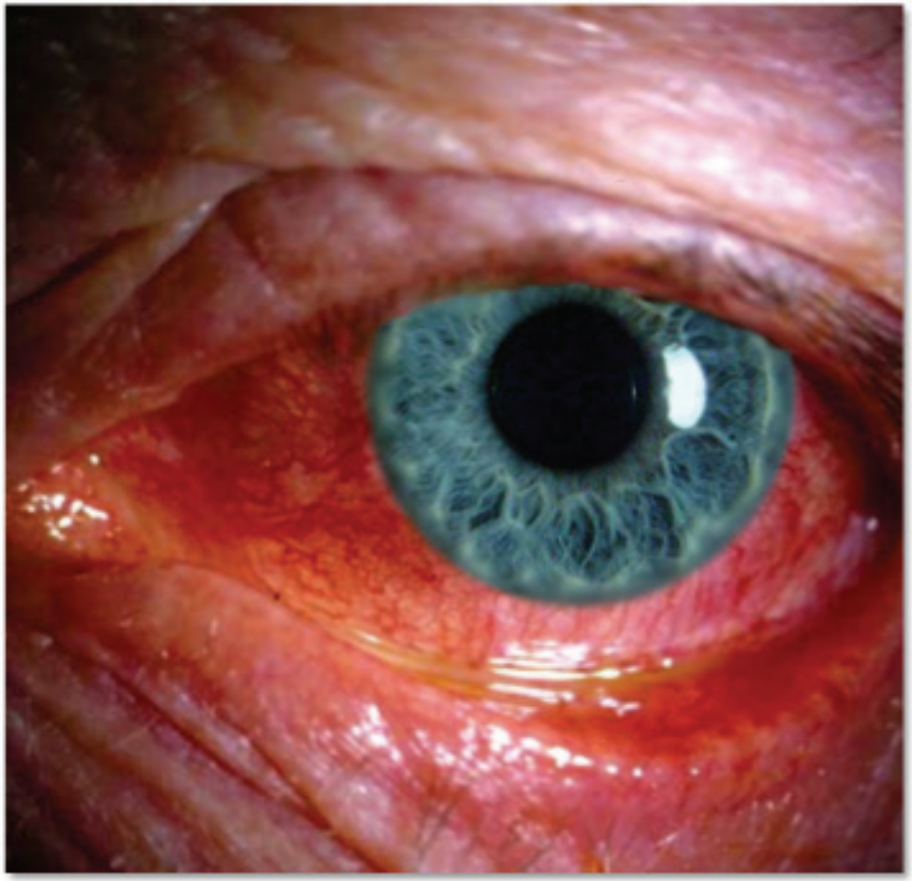
Sight threatening or self limiting?



Question 2 – acute red eye

- 78 year old female
- Sore (uncomfortable) since this morning
- Couldn't open eyes easily first thing
- Intermittent blurring of vision

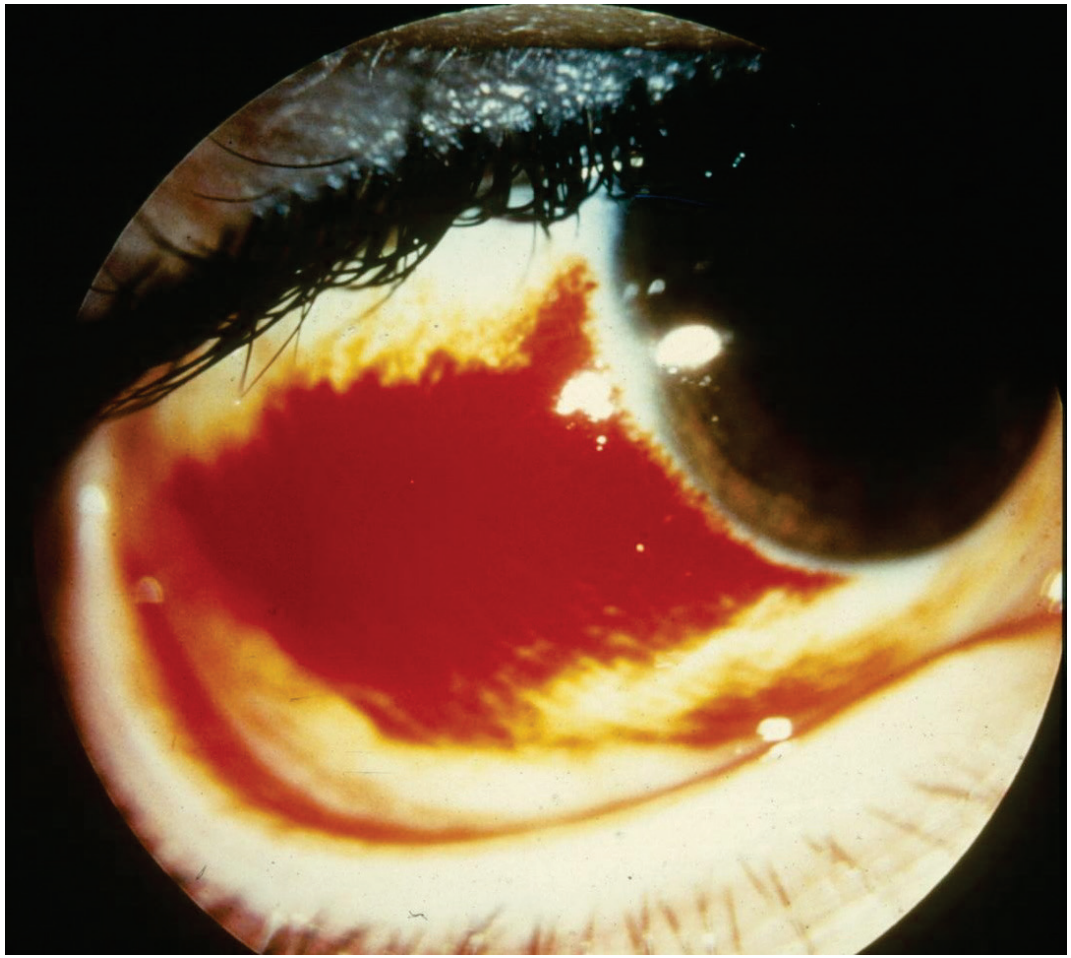
Sight threatening
or self limiting?



Question 3 – acute red eye

- 29 year old male
- Concerned about red eye that appeared suddenly
- Not painful

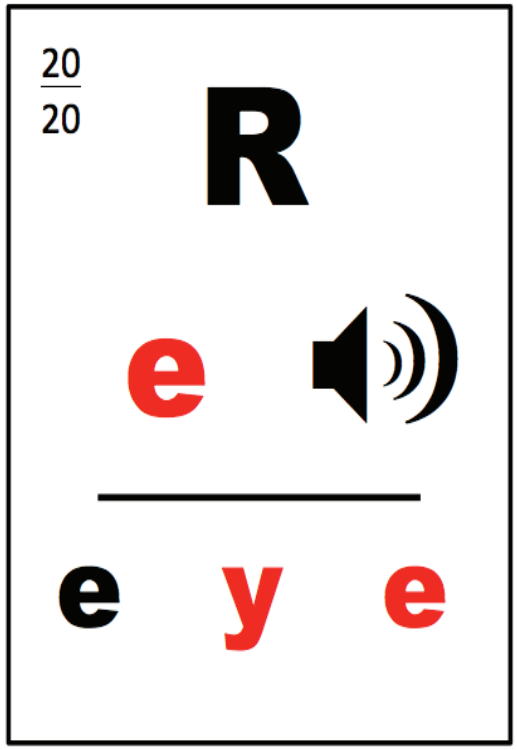
Sight threatening or self limiting?



Sight threatening or self limiting?

Acute Red Eye
Differential Diagnosis

- Conjunctivitis
- Keratitis
- Uveitis/Iritis
- Acute Angle Closure Glaucoma
- Scleritis
- Episcleritis
- Subconjunctival Haemorrhage
- Ocular Trauma



Acute Red Eye
Differential Diagnosis

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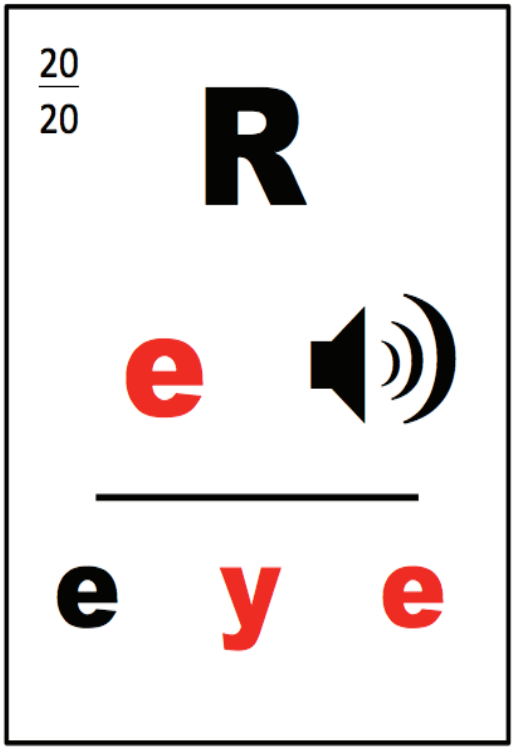


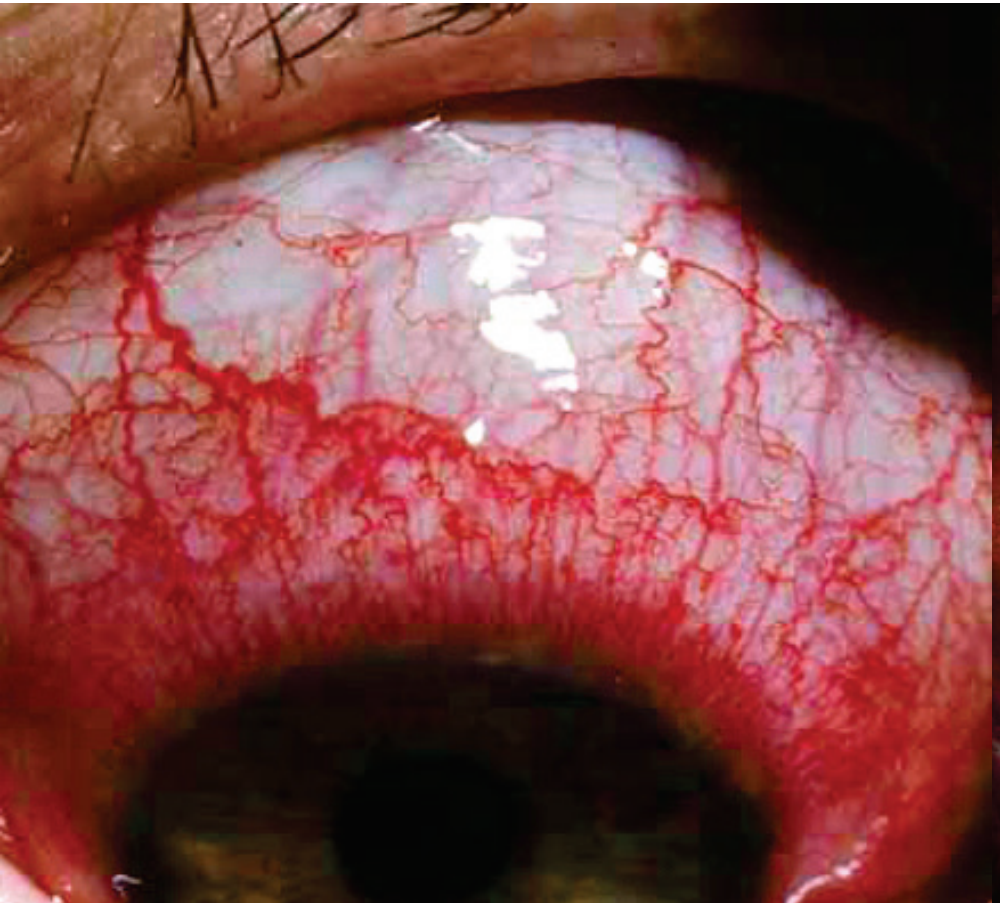
Conjunctivitis

History
Past ocular disease ≈
Vision ✗
Pain and severity ✗
Photophobia ✗
Ocular discharge ✓
Systemic symptoms ≈

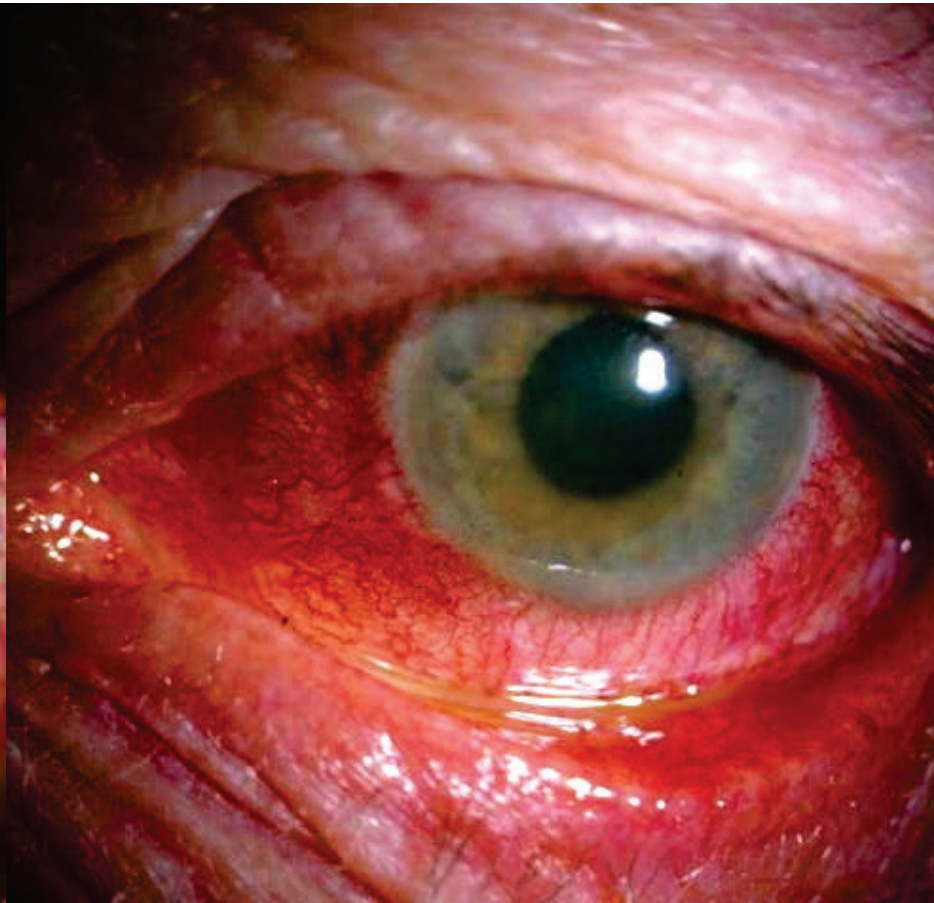
Signs
Vision ✗
Discharge ✓
Redness and distribution: **Bulbar and palpebral**
Corneal clarity ✗
Pupil size and mobility ✗
Intraocular pressure ✗

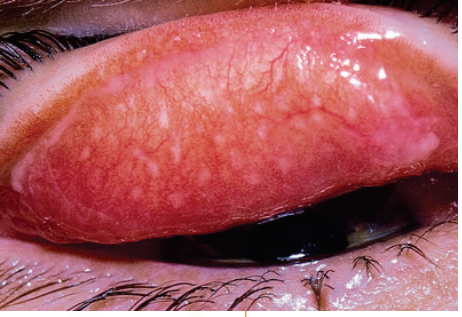
Distribution of redness

Circum-corneal / ciliary

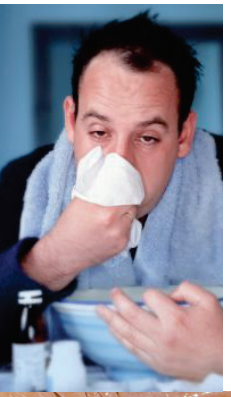


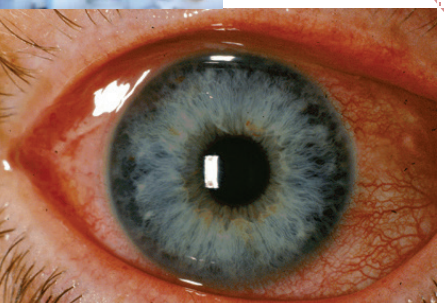
Bulbar / palpebral

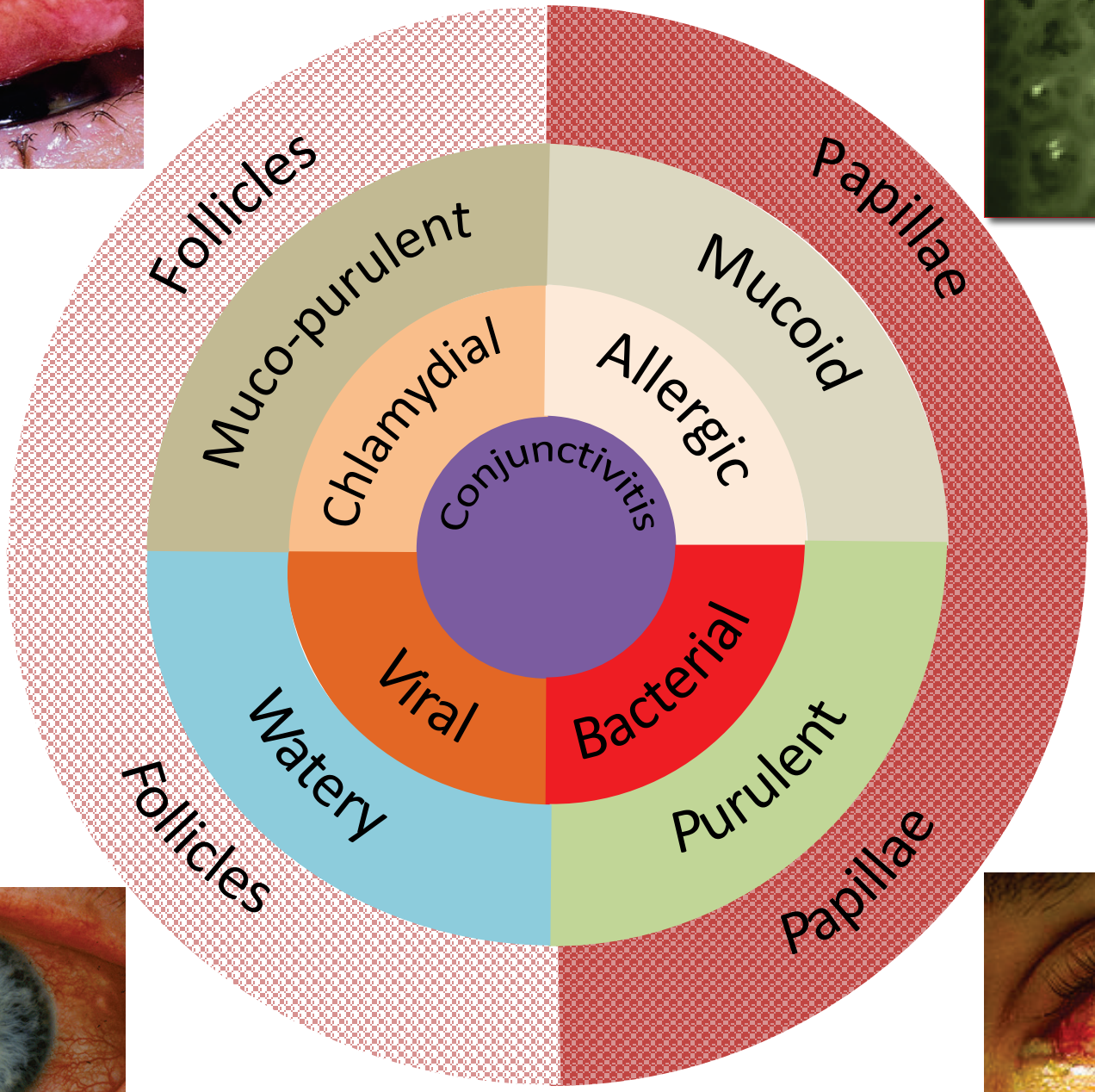


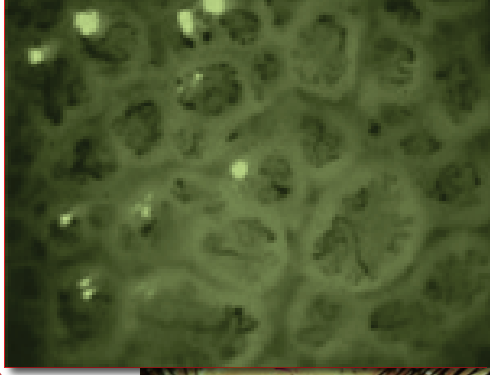


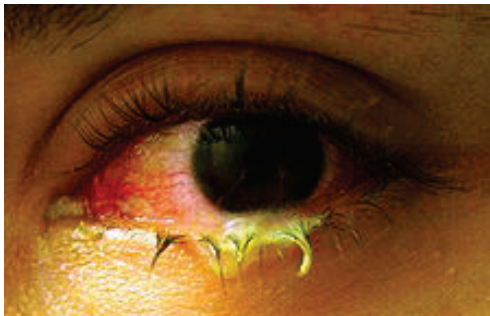

Urethritis



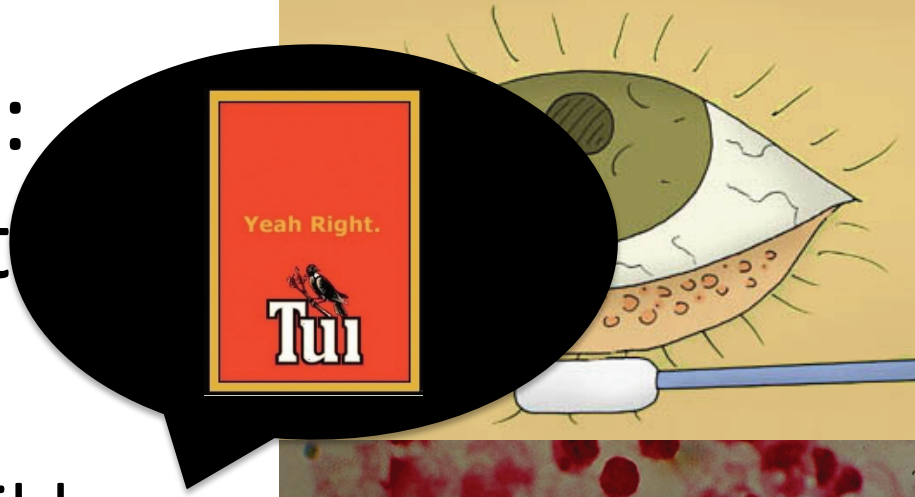



Follicles
Papillae
Muco-purulent
Mucoid
Chlamydial
Allergic
Conjunctivitis
Viral
Bacterial
Watery
Purulent
Follicles
Papillae

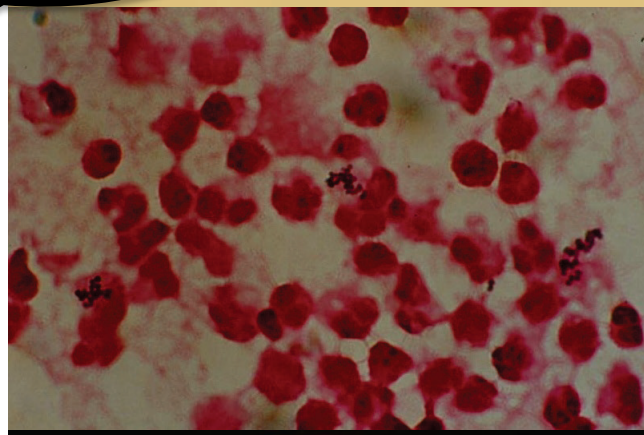


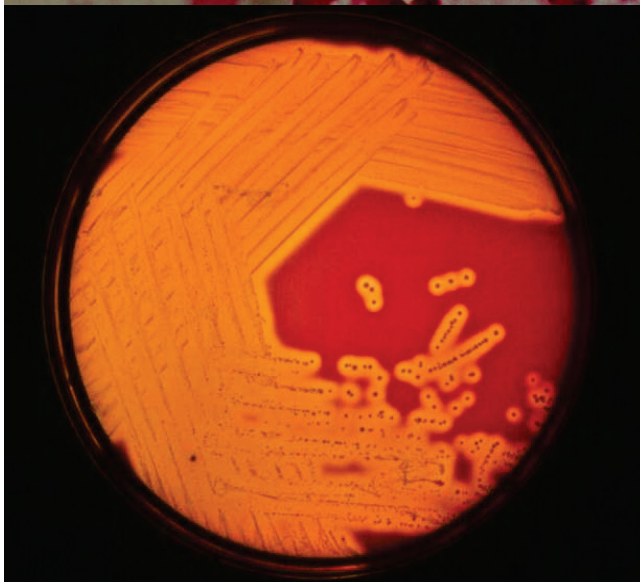


Conjunctivitis: Management



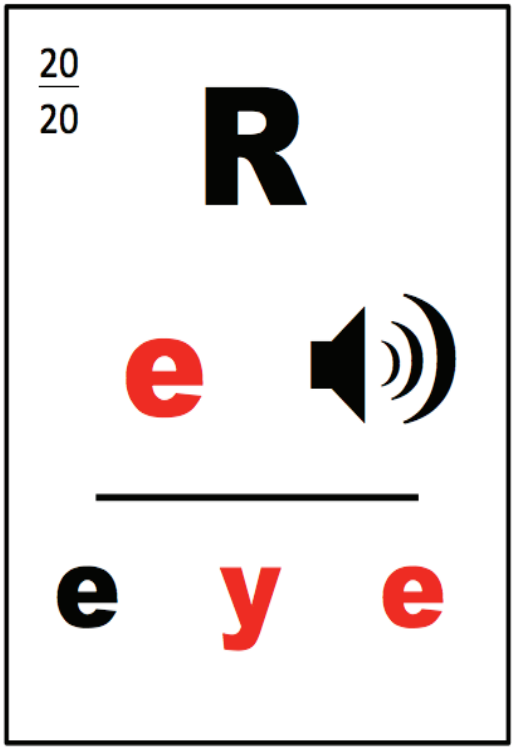
- Largely self-limiting
- Swab and identify responsible organism
  - Bacterial
    - Chloramphenicol
    - Fucithalmic
  - Viral
    - No specific treatment
  - Chlamydial
    - Systemic tetracycline



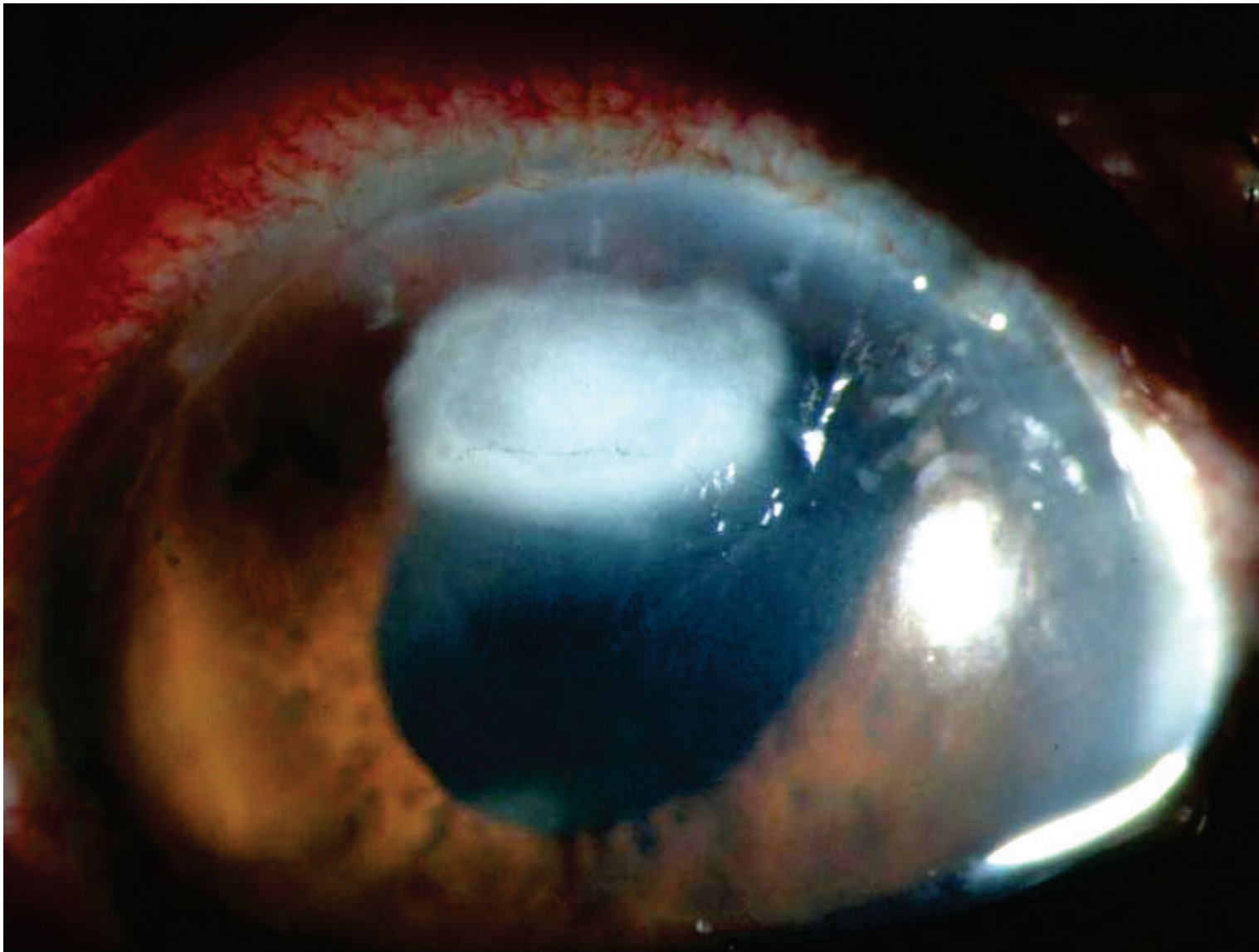


Acute Red Eye
Differential Diagnosis

- Conjunctivitis
- Keratitis
- Uveitis/Iritis
- Acute Angle Closure Glaucoma
- Scleritis
- Episcleritis
- Subconjunctival Haemorrhage
- Ocular Trauma



Keratitis



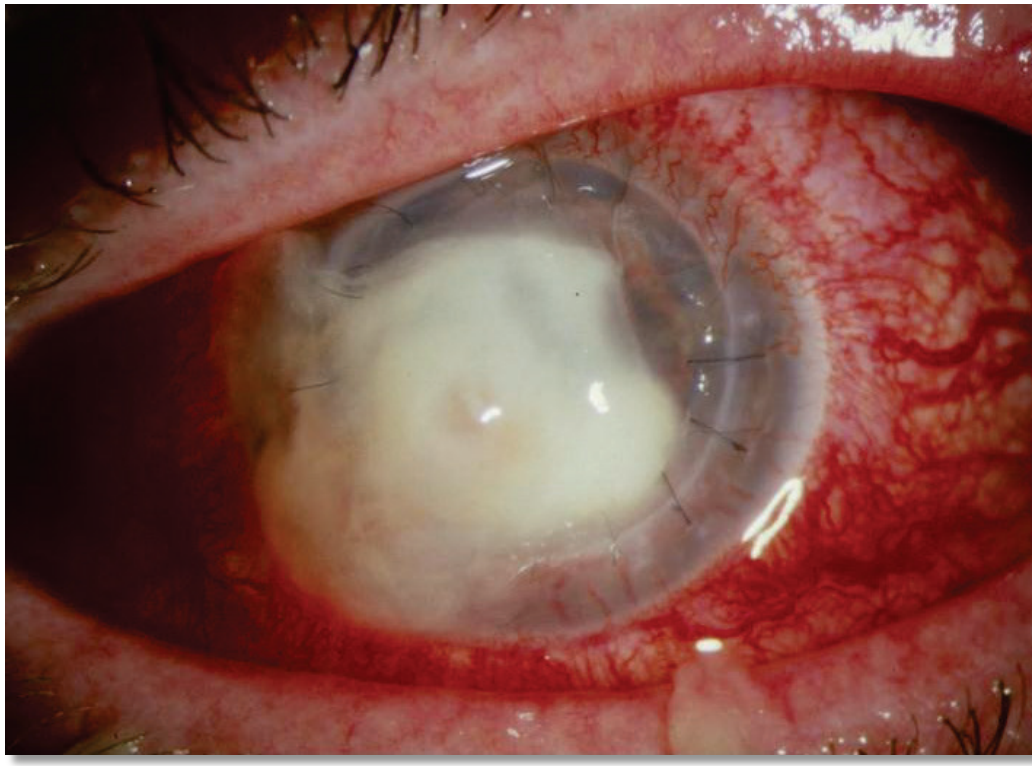
Keratitis

History
Past ocular disease ≈
Vision ↓
Pain and severity: ++ to +++
Photophobia ✓
Ocular discharge ✗
Systemic symptoms ✗

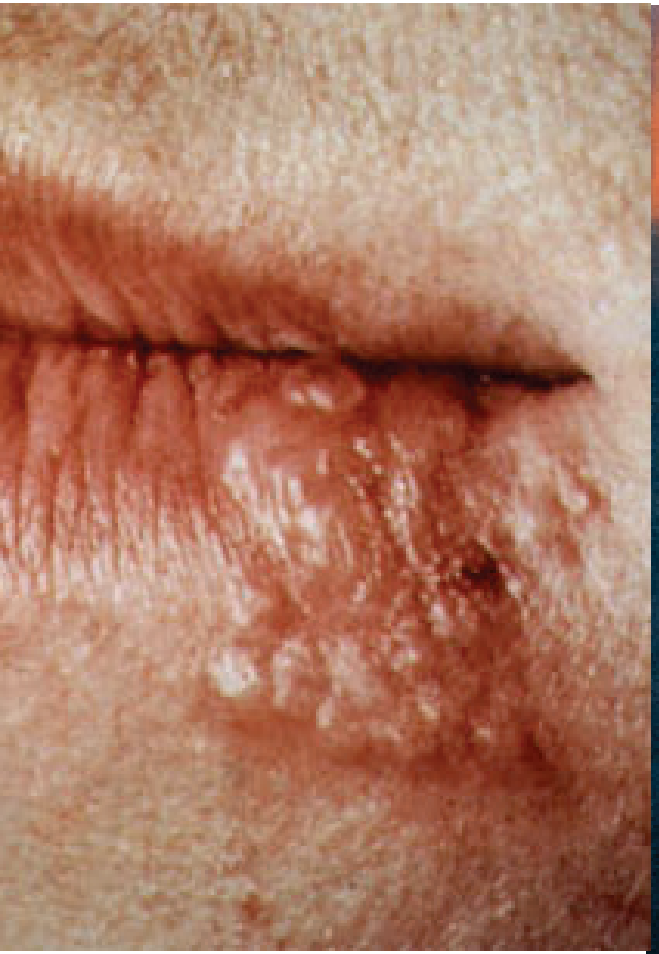
Signs
Vision ↓
Discharge ✗
Redness and distribution: **Ciliary**
Corneal clarity ↓
Pupil size and mobility ✗
Intraocular pressure ✗

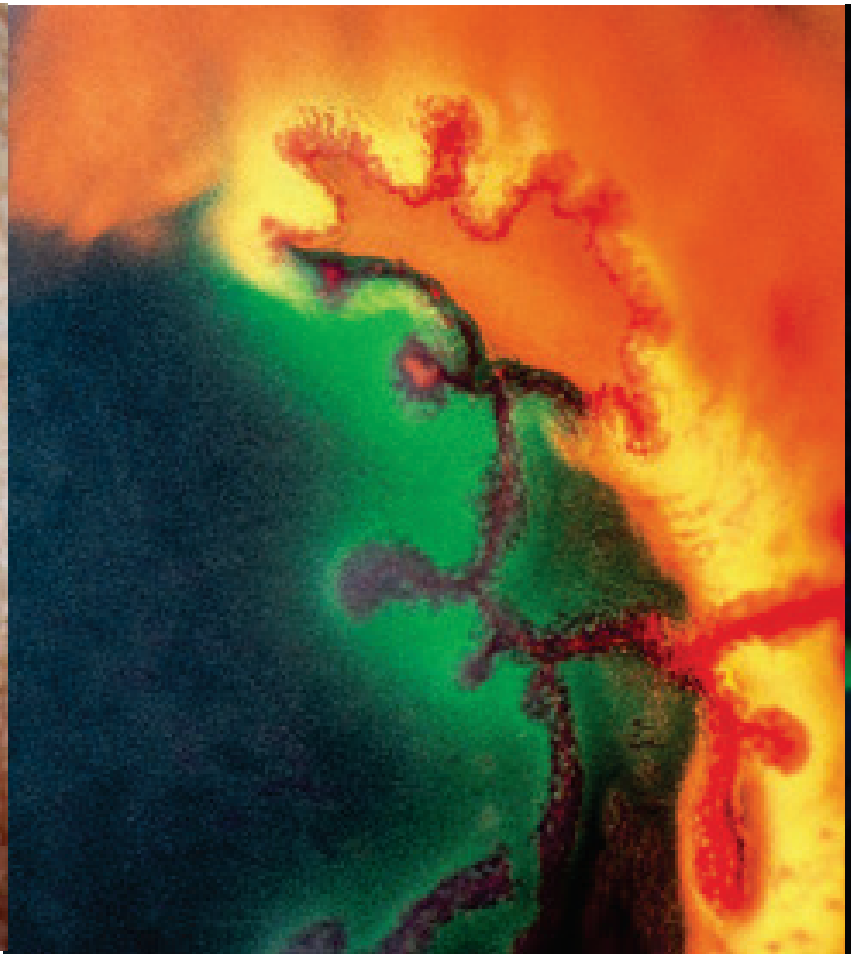
Microbial keratitis

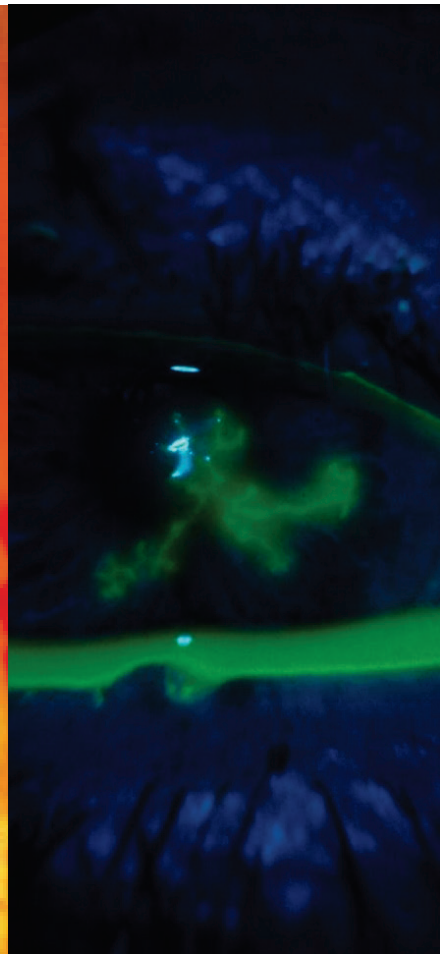
- Bacterial
- Viral
- Fungal
- Acanthamoeba
  (contact lenses)



Viral keratitis:
Herpes Simplex Virus







Keratitis: Management

- Corneal scrape
- Mydriatic
- Start intensive antimicrobials immediately
- Bacterial
  - Monotherapy: ciprofloxacin
  - Dual therapy: fortified Kefzol & Tobrex
- HSV
  - Acyclovir ointment 5x daily

Acute Red Eye
Differential Diagnosis

- Conjunctivitis
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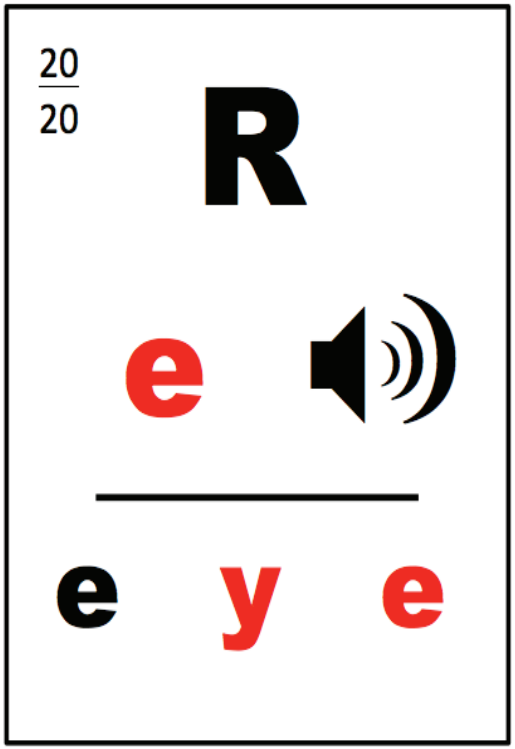
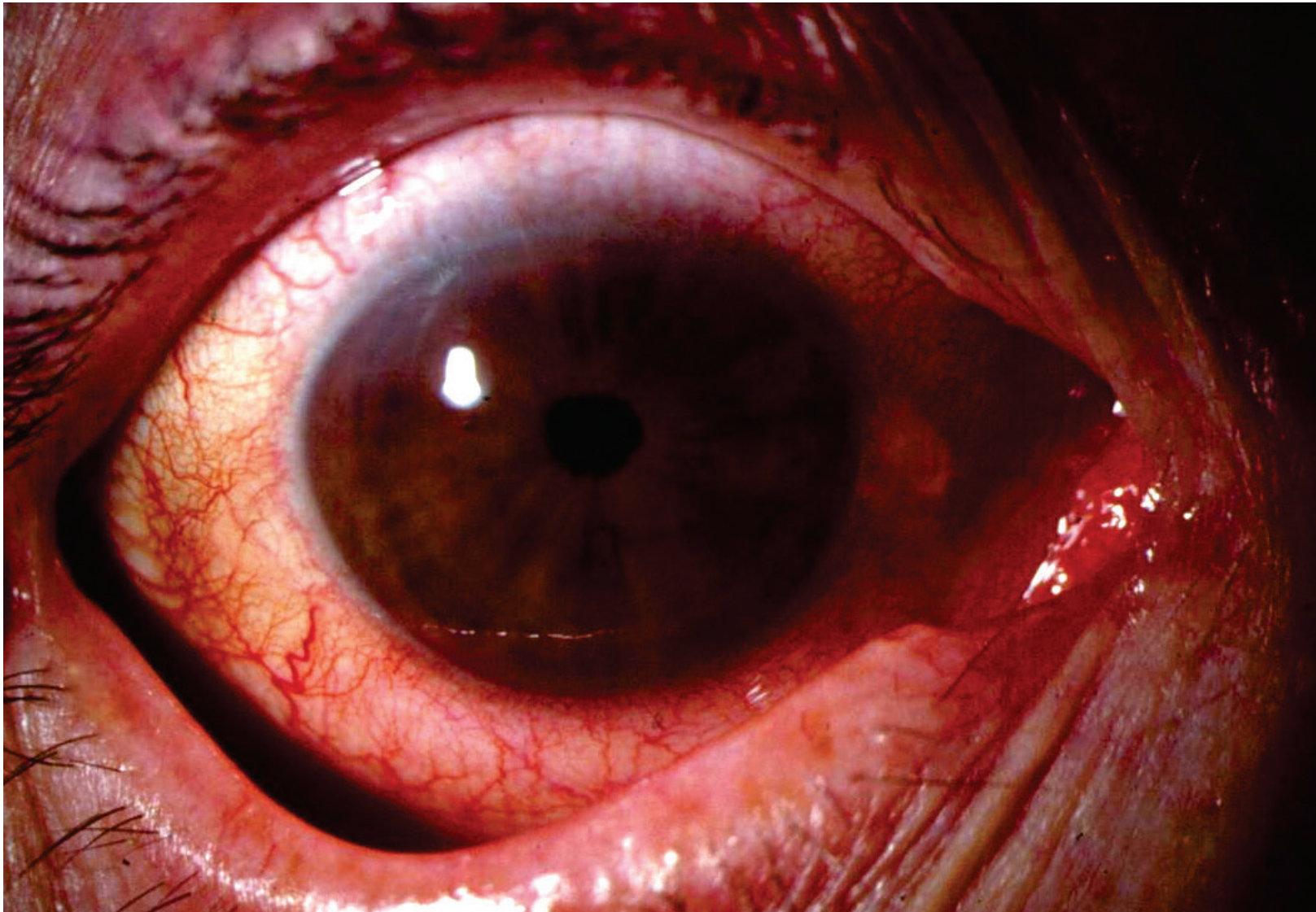


Anterior Uveitis

History
Past ocular disease ✗
Decreased vision ✓
Pain and severity ✓
Photophobia: **+++**
Ocular discharge ✗
Systemic symptoms ≈

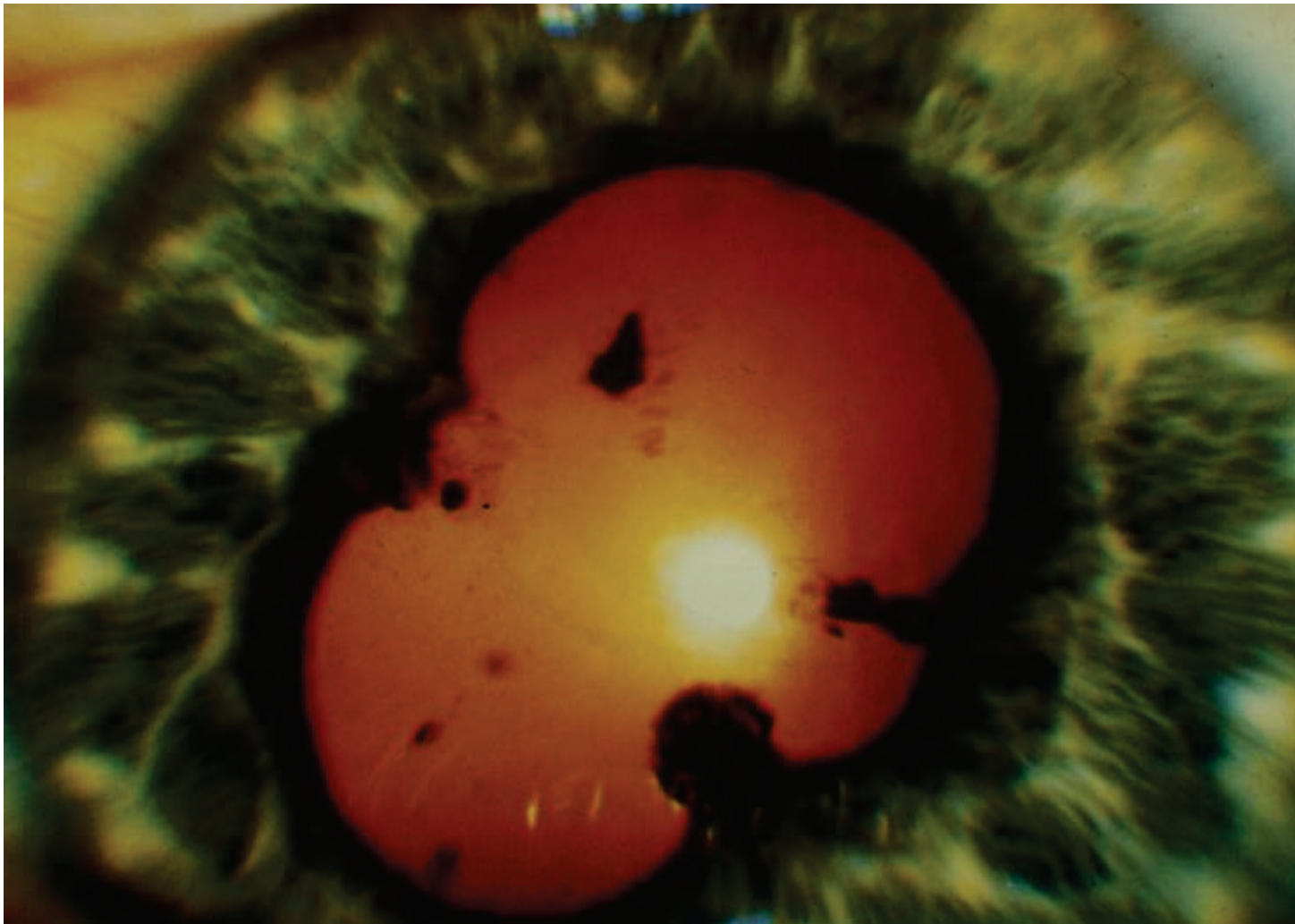
Signs
Vision ✓
Discharge ✗
Redness and distribution: **Ciliary**
Corneal clarity ✗
Pupil size and mobility: **Small (miotic)**
Intraocular pressure ✗

Acute Anterior Uveitis / Iritis



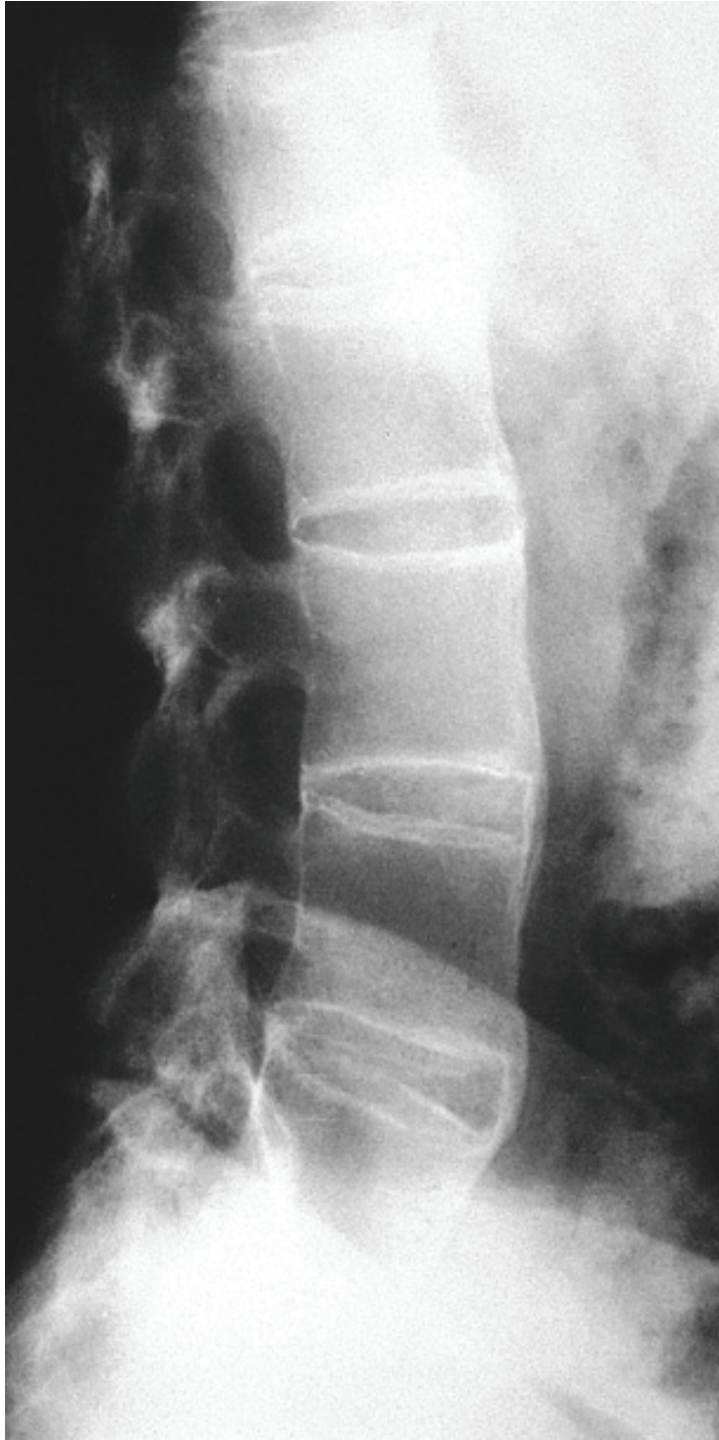
Acute Anterior Uveitis/Iritis

Posterior synechiae



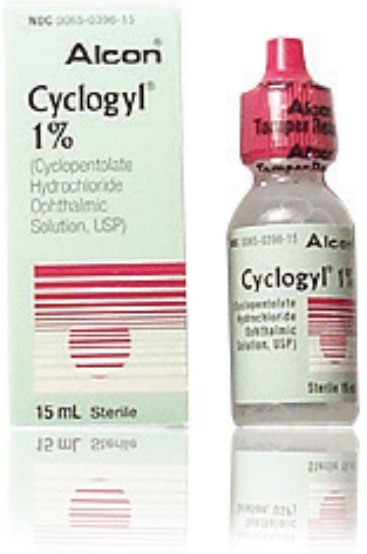
Aetiology

- Idiopathic
- Ankylosing spondylitis
- Reiters syndrome
- Juvenile arthritis
- Psoriatic arthropathy
- Sarcoidosis



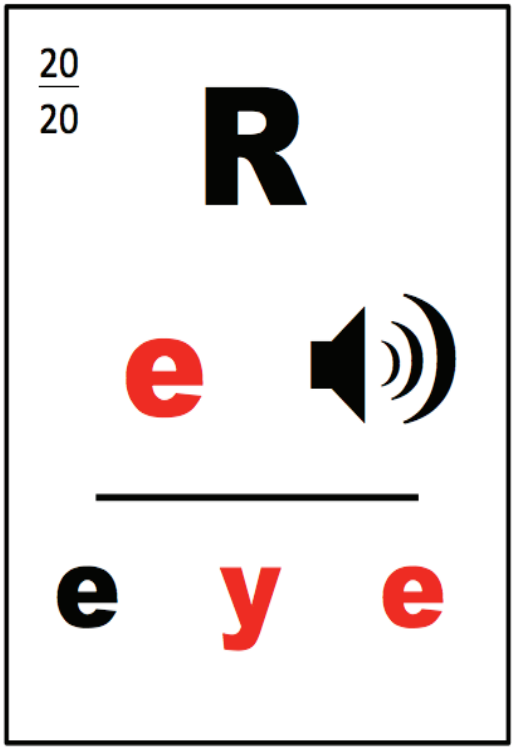
Anterior Uveitis: Management

- Subdue Inflammation
  - Topical corticosteroids
- Prevent Posterior Synechiae
  - Mydriatic e.g. cyclopentolate
- Reduce IOP if elevated
  - Betablocker e.g. timolol



Acute Red Eye
Differential Diagnosis

- Conjunctivitis
- Keratitis
- Uveitis/Iritis
- Acute Angle Closure Glaucoma
- Scleritis
- Episcleritis
- Subconjunctival Haemorrhage
- Ocular Trauma

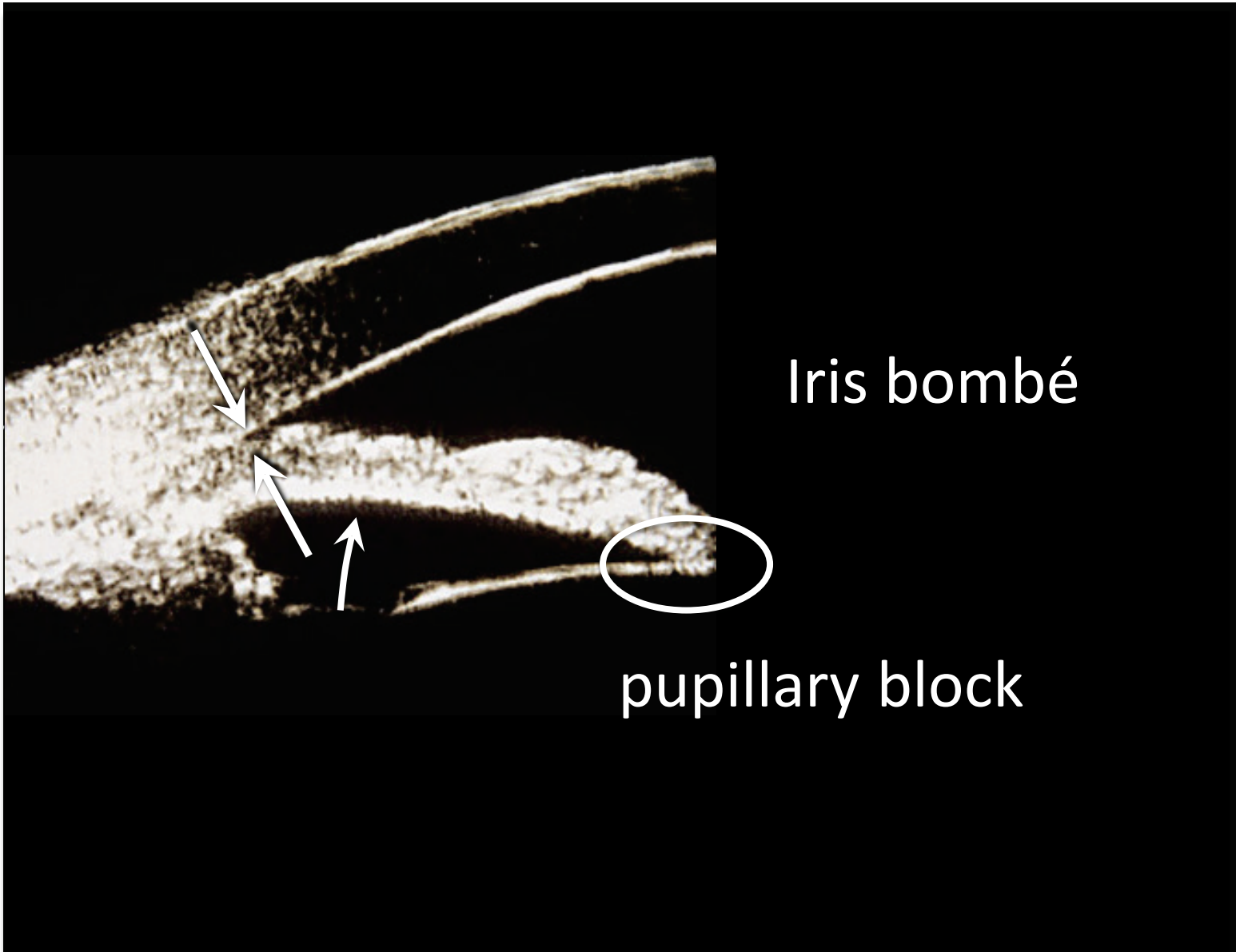


Acute Angle Closure

History
Past ocular disease ✗
Decreased vision: **+++**
Pain and severity: **+++**
Photophobia ✗
Ocular discharge ✗
Systemic symptoms ✗

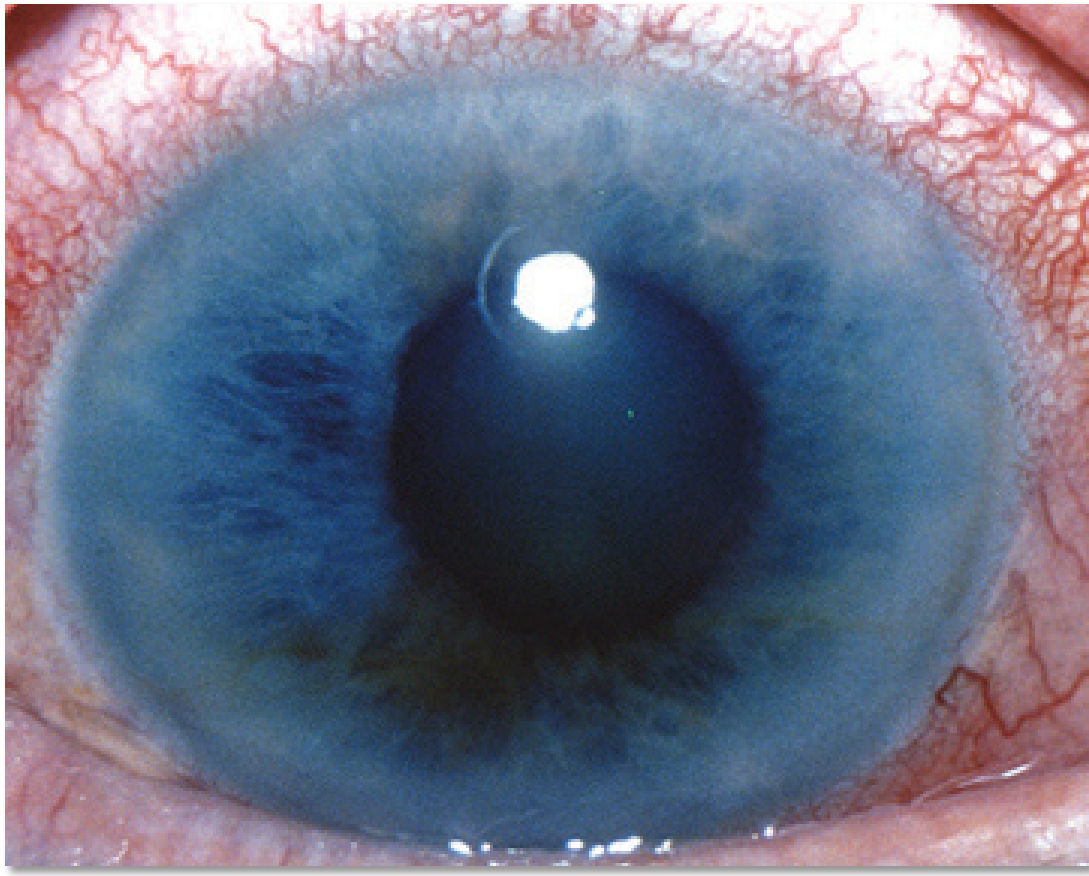
Signs
Vision ↓ **+++**
Discharge ✗
Redness and distribution: **Ciliary**
Corneal clarity ↓
Pupil size and mobility: **Fixed mid-dilated**
Intraocular pressure ↑↑

ACAG: Anatomical predisposition



Acute Closed Angle Glaucoma

- Red eye
- Hazy cornea
- Pupil mid-dilated
- Pupil non-reactive
- High IOP



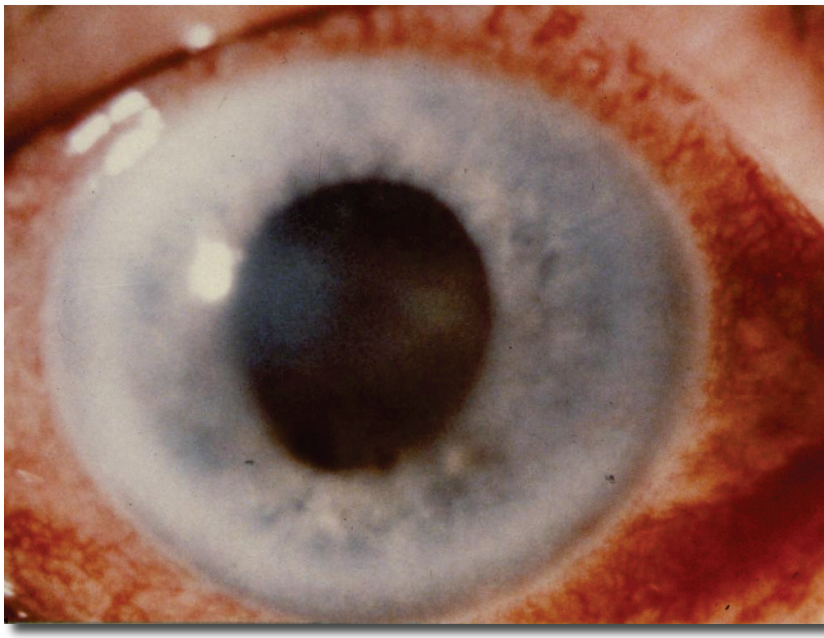
Acute Closed Angle Glaucoma

- Incidence
  - 1/1000 (Caucasian) to 1/100 (Asian) > 40 yrs
  - Ratio M:F is approximately 1:4
- Predisposition
  - Short eye
  - Narrow angle
  - Large lens

Therefore the older female hypermetrope is at risk

ACAG: Acute Management

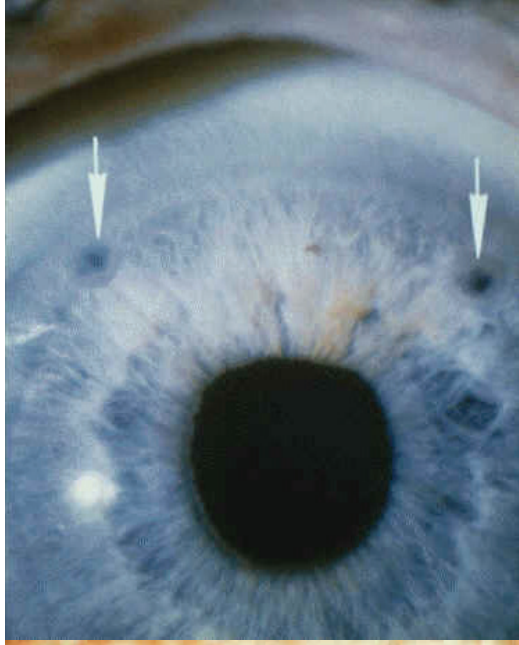
- Reduction of IOP (Typically > 50mmHg)
  - Topical Agents
    - Prostaglandin analogues
    - Betablockers
    - Alpha agonists
  - Systemic Agents
    - Acetazolamide
    - Mannitol

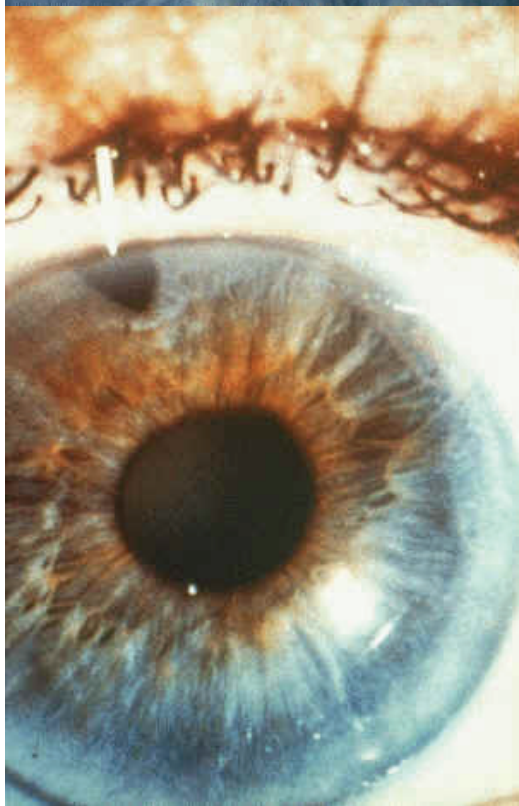


ACAG:
Surgical management

Aim: to re-establish normal aqueous flow & maintain IOP reduction

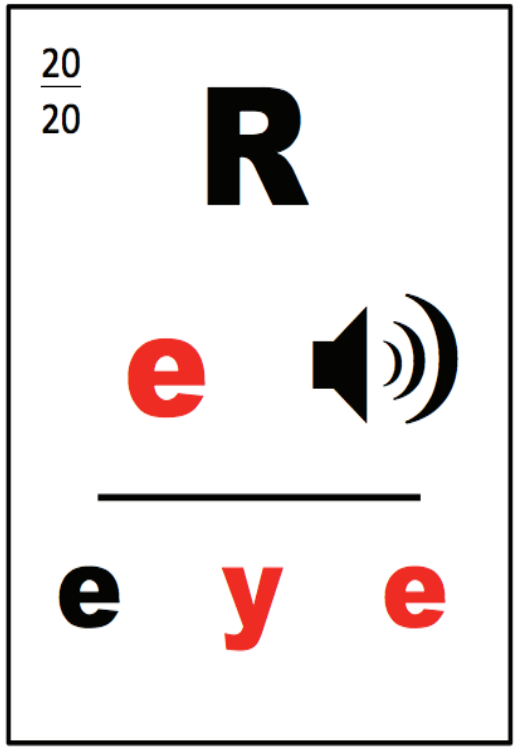
- YAG laser iridotomy
- Crystalline lens extraction
- Surgical iridectomy
- Trabeculectomy





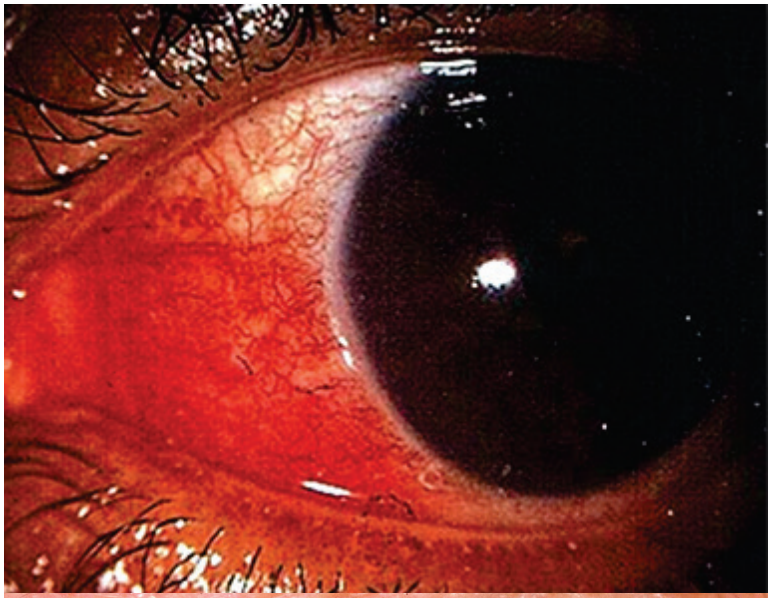
Acute Red Eye
Differential Diagnosis

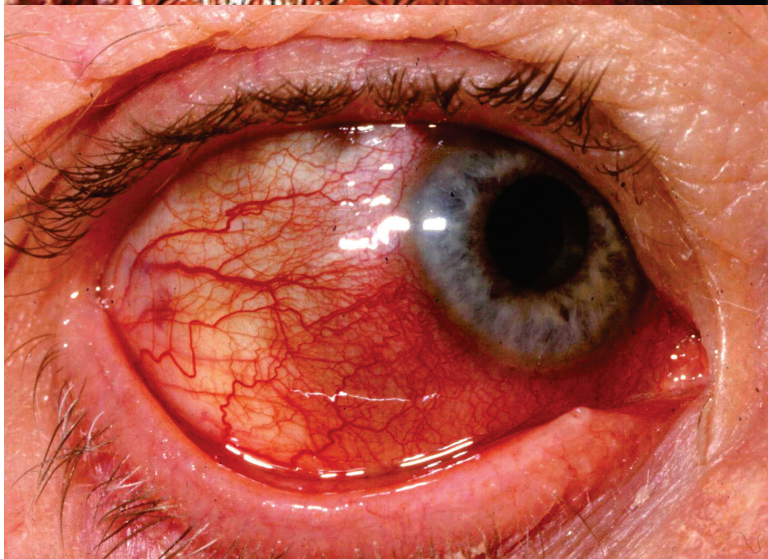
- Conjunctivitis
- Keratitis
- Uveitis/iritis
- Acute Angle Closure Glaucoma
- Scleritis
- Episcleritis
- Subconjunctival Haemorrhage
- Ocular Trauma



Scleritis

- Relatively rare
- Very severe boring pain
- Focal injection of sclera
- Can lead to blindness if untreated
- Associated with systemic disease



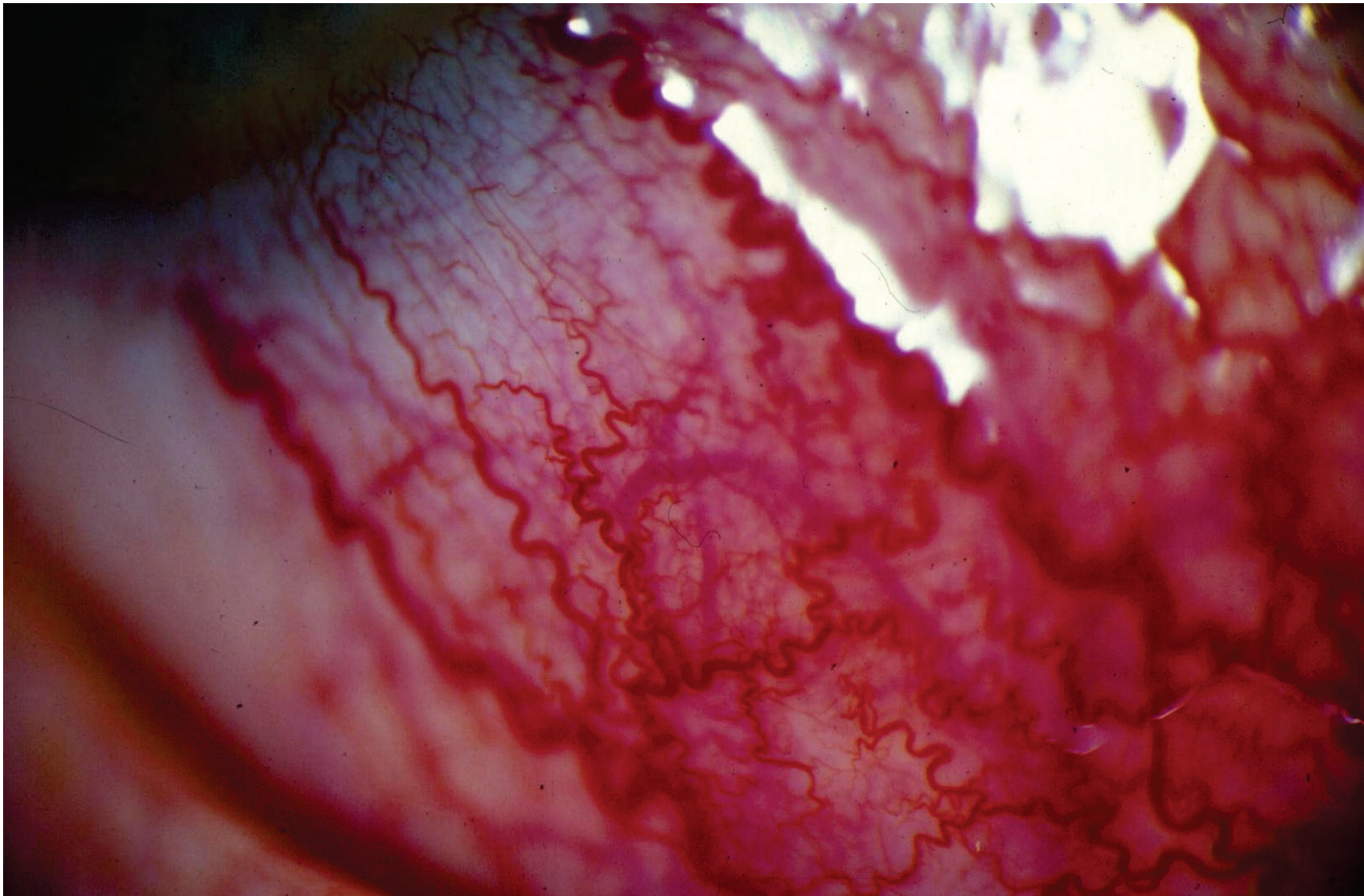


Scleritis

History
Past ocular disease ≈
Vision ✗
Pain and severity: **+++**
Photophobia ✗
Ocular discharge ✗
Systemic symptoms ✓

Signs
Vision ✗
Discharge ✗
Redness and distribution: **Sectorial, bluish**
Corneal clarity ✗
Pupil size and mobility ✗
Intraocular pressure ✗

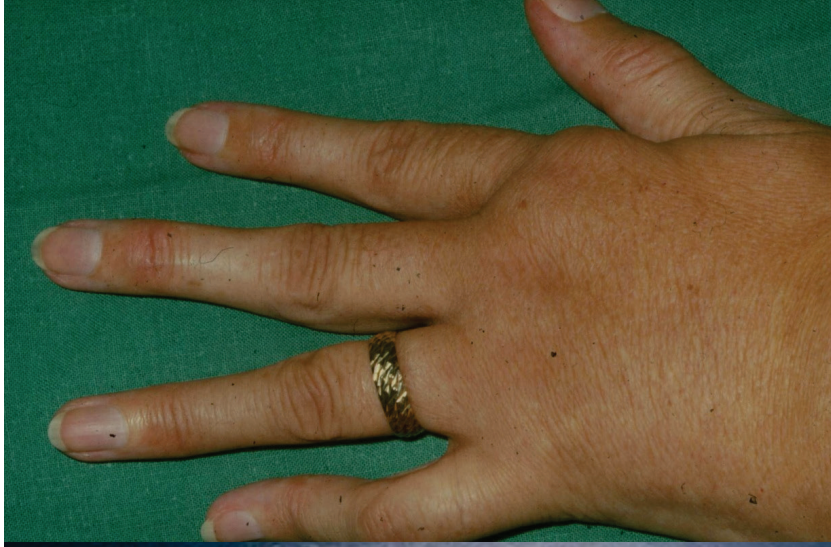
Scleritis

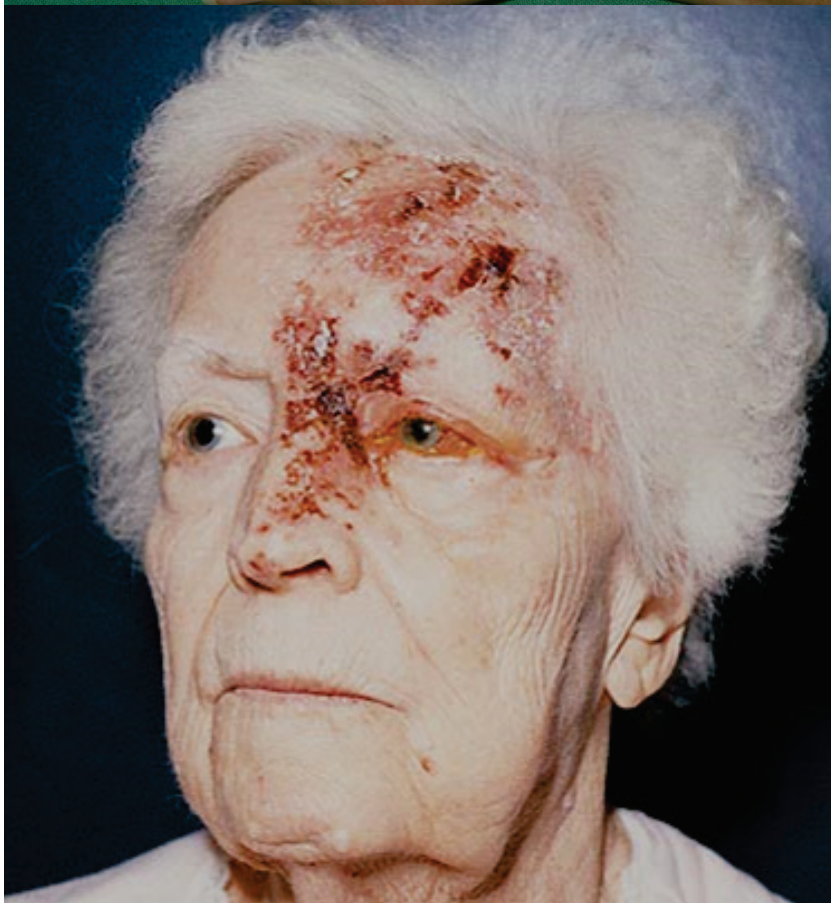


Scleritis:

Systemic associations

- Rheumatoid arthritis
- Herpes Zoster Ophthalmicus





Acute Red Eye
Differential Diagnosis

- Conjunctivitis
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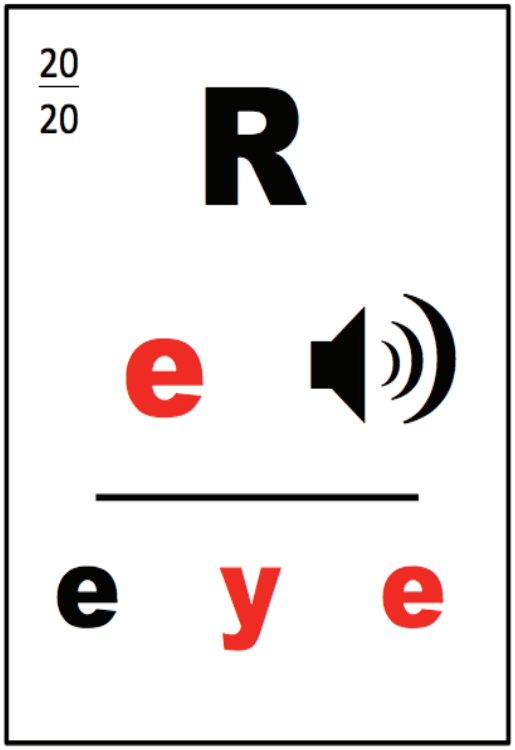
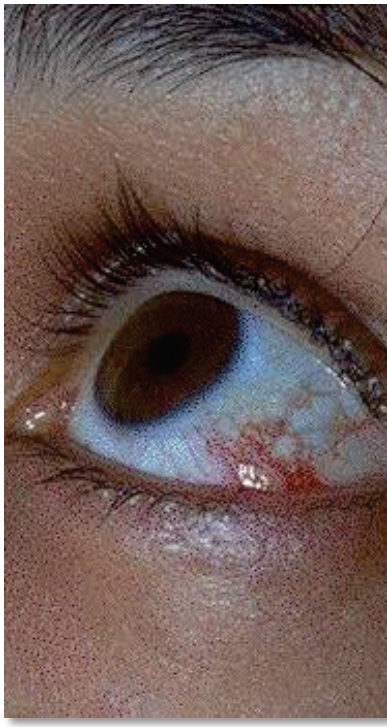
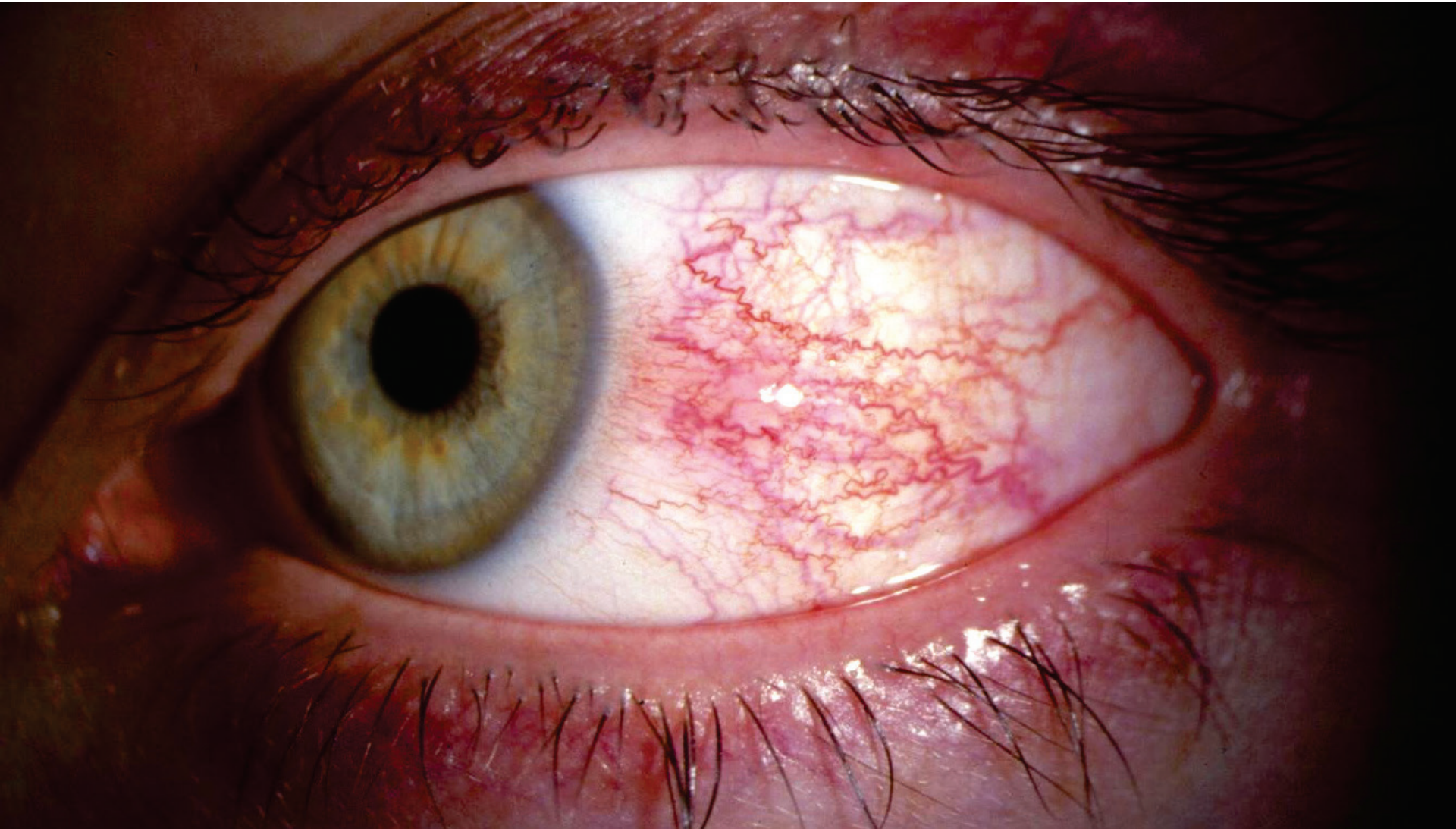


Episcleritis

- Relatively common
- Mild ocular discomfort
- Mild superficial injection
- Usually requires no treatment
- Seldom associated systemic disease



Episcleritis



Episcleritis

History
Past ocular disease ≈
Vision ✗
Pain and severity: +
Photophobia ✗
Ocular discharge ✗
Systemic symptoms ✗

Signs
Vision ✗
Discharge ✗
Redness and distribution: **Sectorial, pink**
Corneal clarity ✗
Pupil size and mobility ✗
Intraocular pressure ✗

Acute Red Eye
Differential Diagnosis

- Conjunctivitis
- Keratitis
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- Acute Angle Closure Glaucoma
- Scleritis
- Episcleritis
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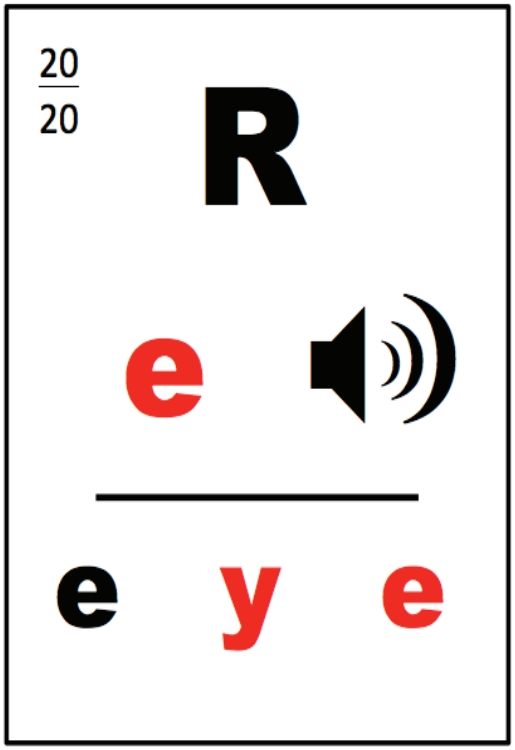
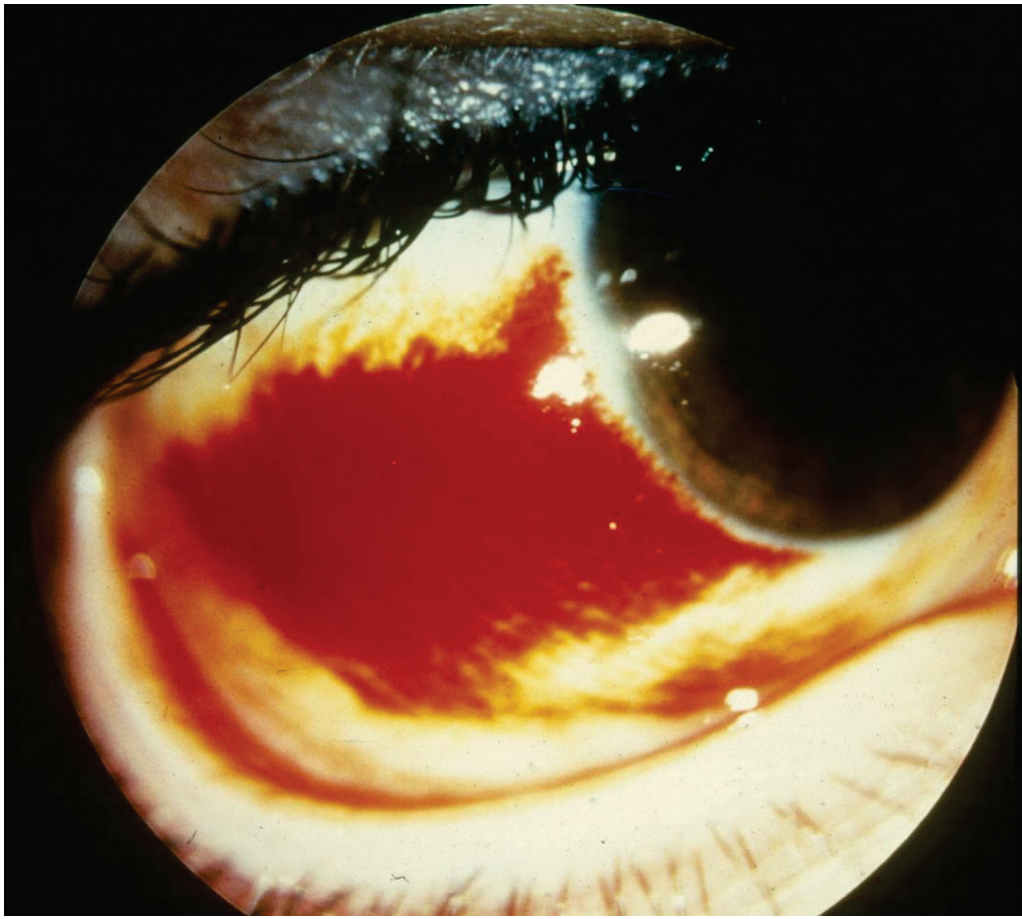


Subconjunctival Haemorrhage

- Focal bleeding under conjunctiva
- Severe coughing
- Valsalva manoeuvre
- Rarely systemic hypertension
- Requires no treatment



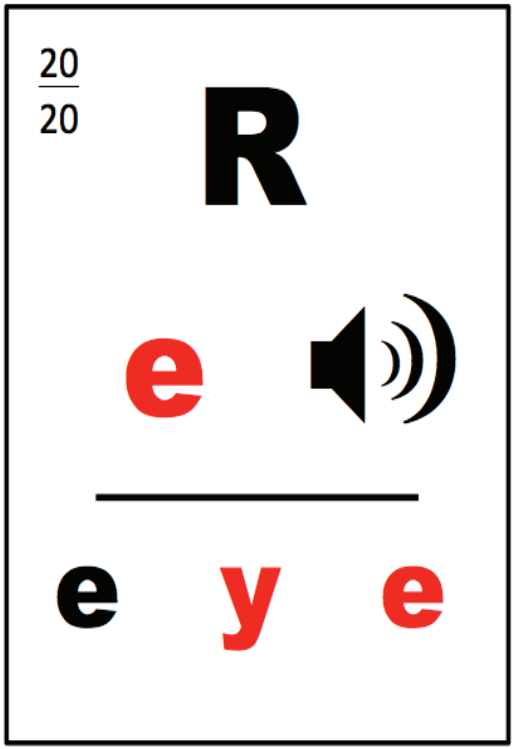
Subconjunctival haemorrhage

History
Past ocular disease ✗
Vision ✗
Pain and severity ✗
Photophobia ✗
Ocular discharge ✗
Systemic symptoms ✗

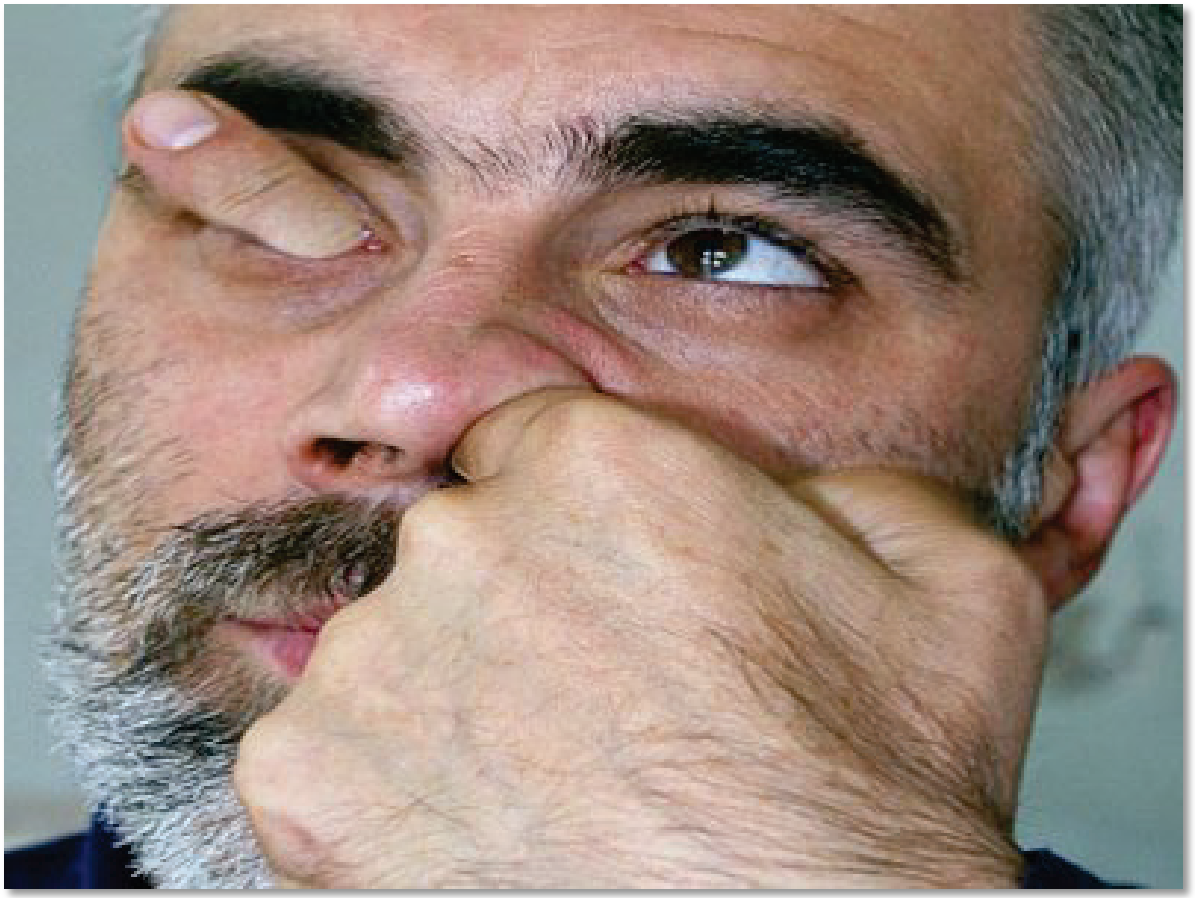
Signs
Vision ✗
Discharge ✗
Redness and distribution: **Opaque red**
Corneal clarity ✗
Pupil size and mobility ✗
Intraocular pressure ✗

Acute Red Eye
Differential Diagnosis

- Conjunctivitis
- Keratitis
- Uveitis/iritis
- Acute Angle Closure Glaucoma
- Scleritis
- Episcleritis
- Subconjunctival Haemorrhage
- Ocular Trauma



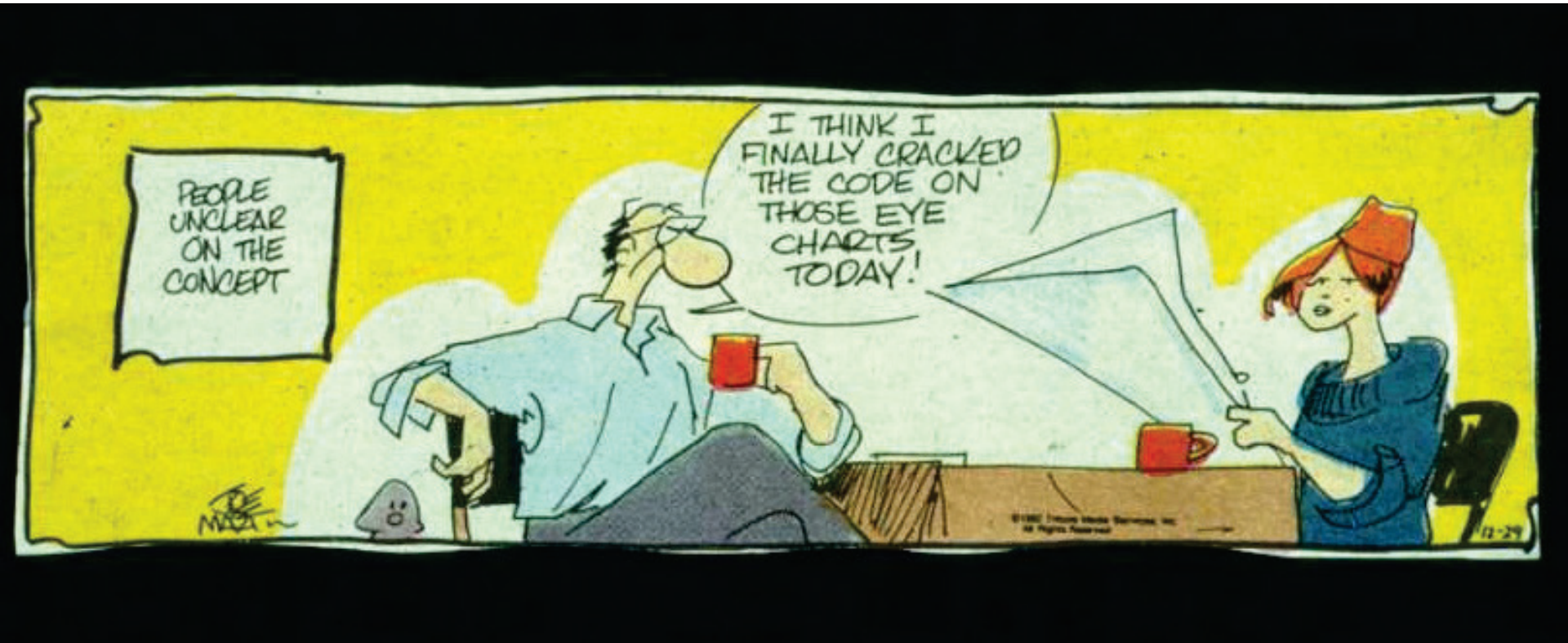
Ocular trauma!!



Beware of picking your nose ….

The Acute Red Eye

- A methodical examination will enable appropriate management / referral decisions to be made.

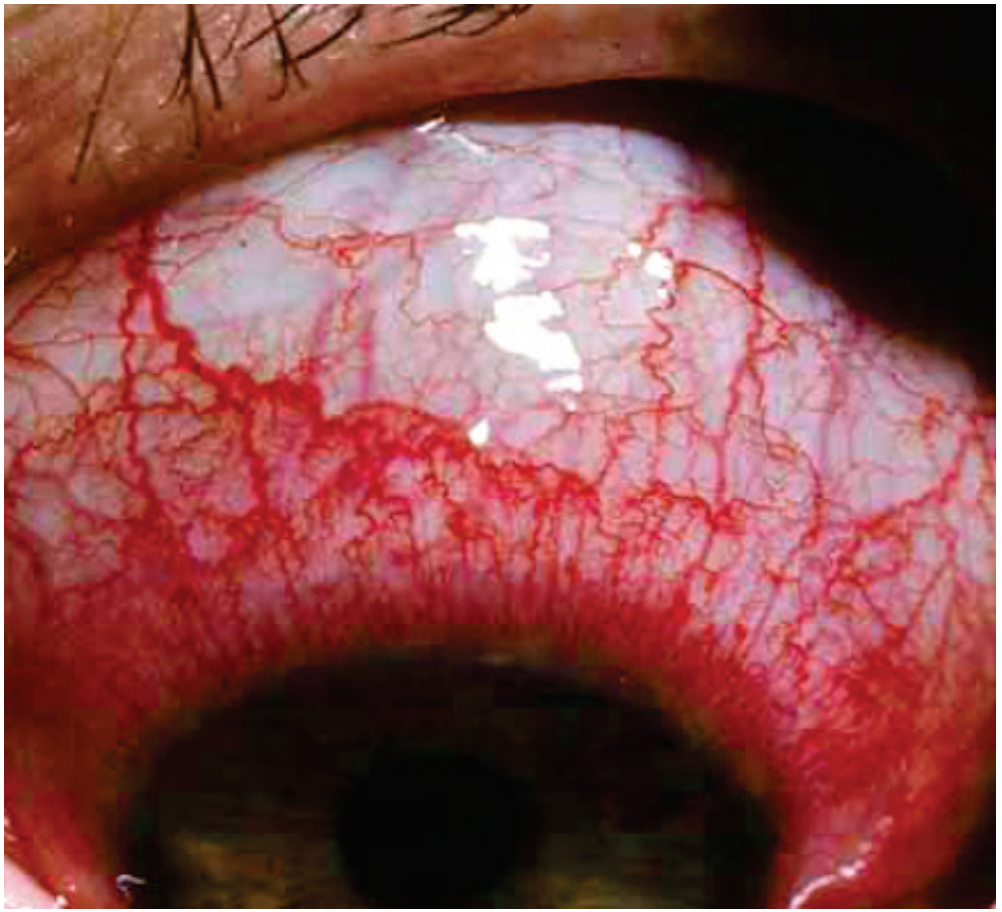


Quiz – acute red eye

- 34 year old male
- Eye ‘a bit sore’
- Sensitive to light
- Vision slightly blurry

Sight threatening

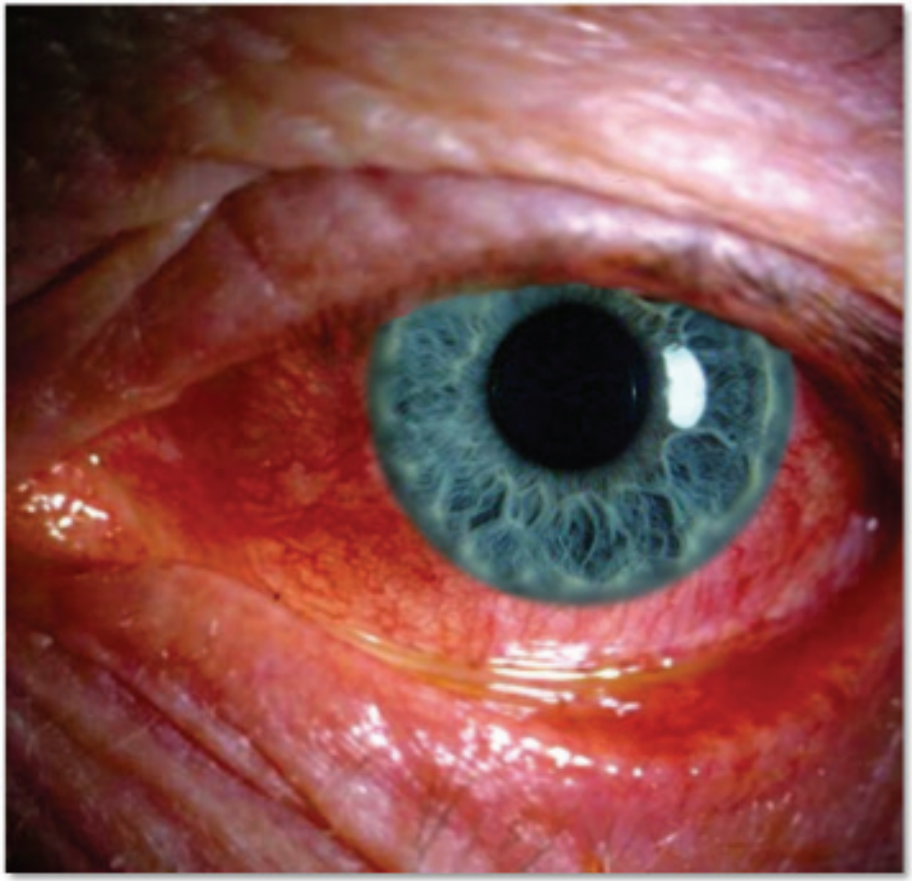
or self limiting?



Quiz – acute red eye

- 78 year old female
- Sore (uncomfortable) since this morning
- Couldn't open eyes easily first thing
- Intermittent blurring of vision

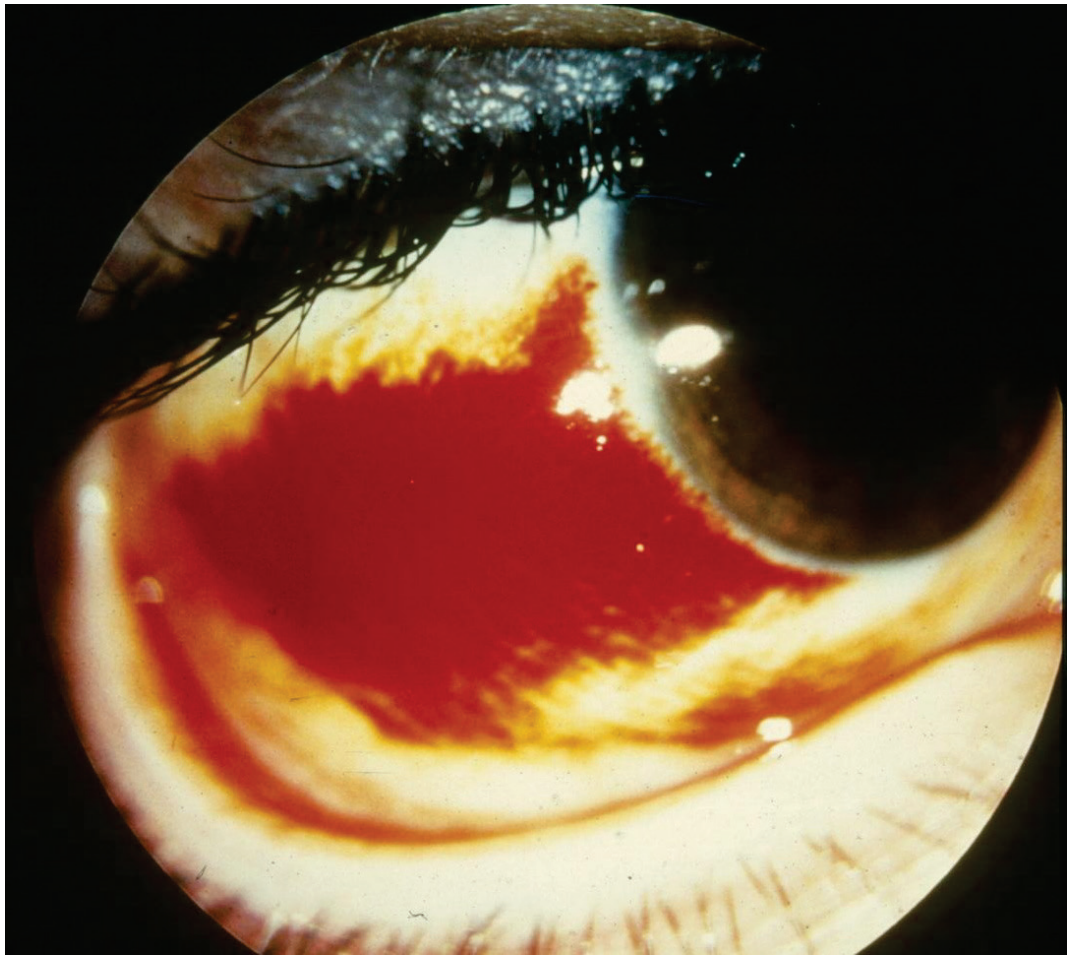
Sight threatening
or self limiting?



Quiz – acute red eye

- 29 year old male
- Concerned about red eye that appeared suddenly
- Not painful

Sight threatening or self limiting?




THANK YOU!