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Annual Primary Care Conference & Exhibition
24-26 OCTOBER

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Ophthalmology Made Simple
Assessment, Common problems & Common pitfalls

Clinical Learning [G1]

Dr Anup Shah MRCOphth MRCGP
Highview Medical Centre & Moorfields Eye Hospital
www.primarycareophthalmology.co.uk

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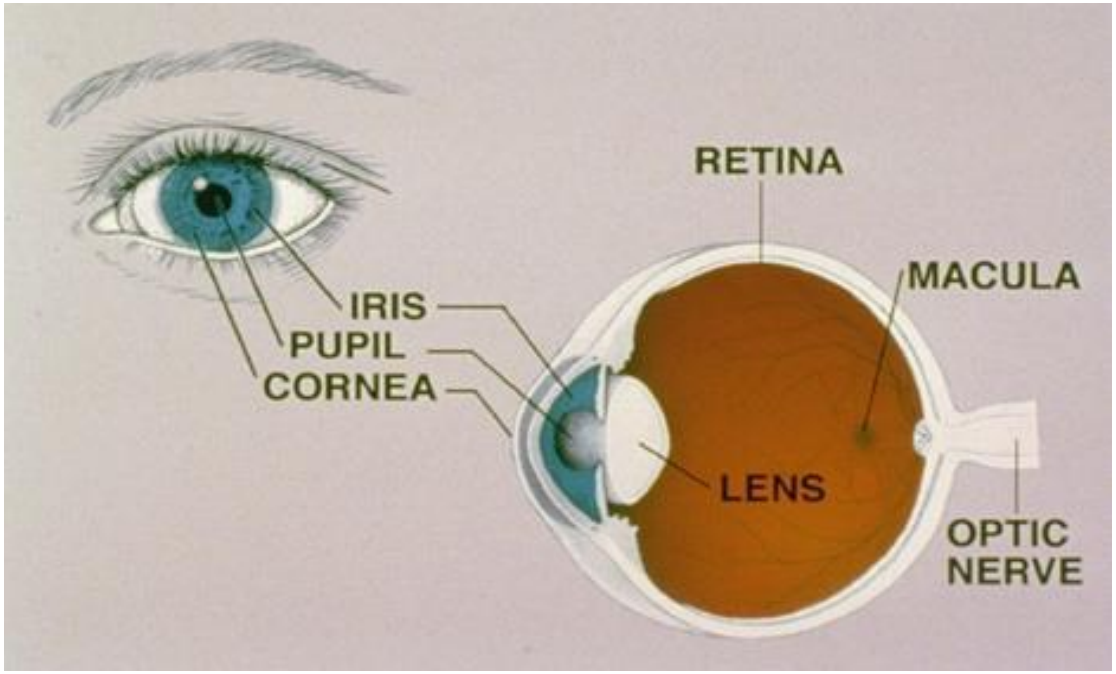
How to approach the Eye in Primary Care

- Eye problems are common
- 1.5% GP consultations
- Minimal exposure
- Primary Care key role – patient centred management
- Regular eye tests

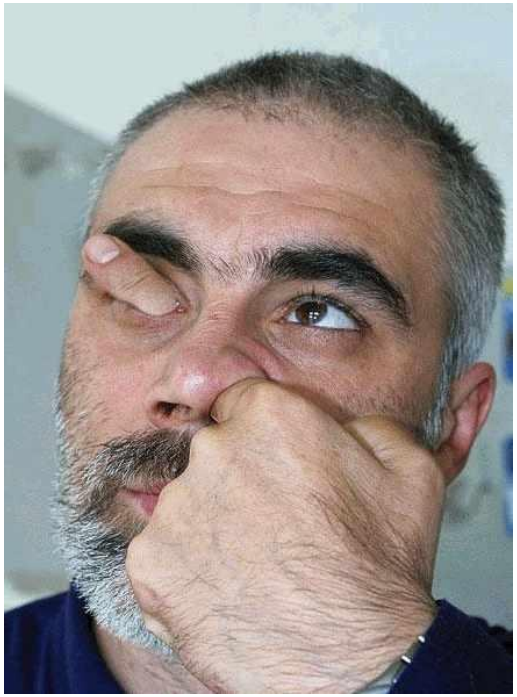
More common than you think …

- 2,000,000 people in the UK with sight loss
- Vast majority are over 65
- 25,000 children (50% have other disabilities)
- Every day another 100 people start to lose their sight
- Ageing population will mean increase

Anatomy of the Eye



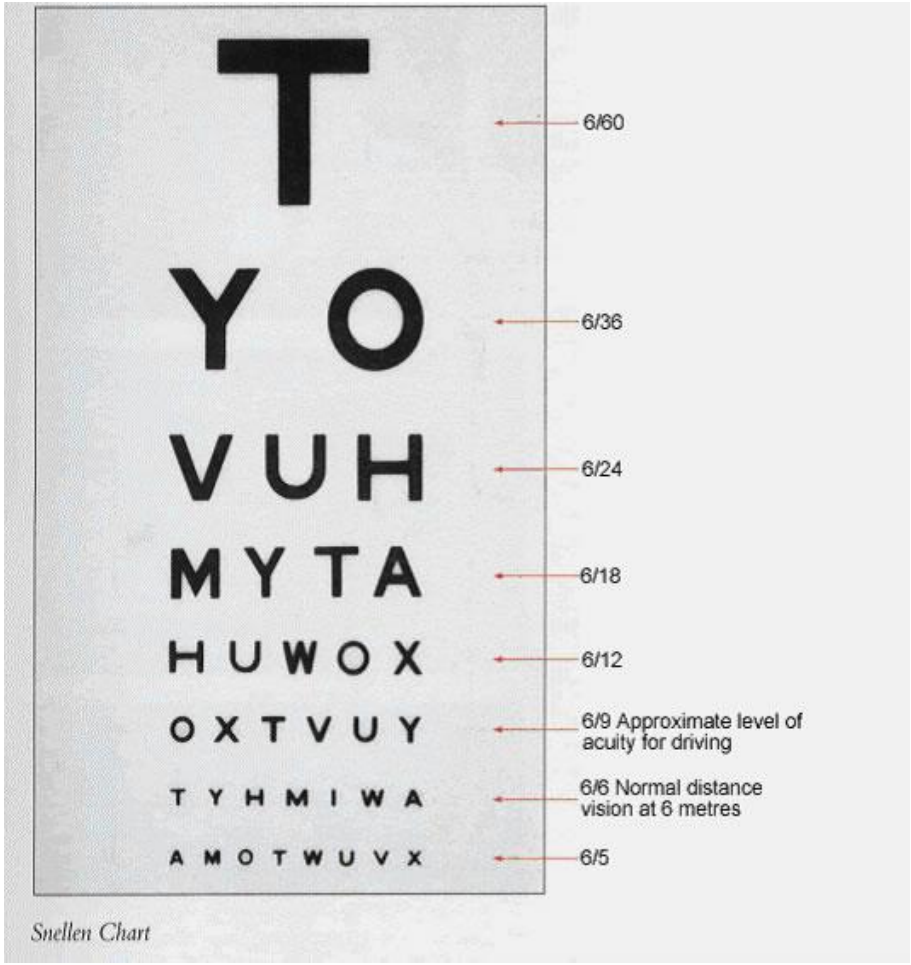
How to Approach the Eye in Primary Care



- Eye anatomy
- History
- Focused examination

4 Key Questions: (Red Flags)

- Is there visual blurring? Worse than Snellen 6/12
- Is there any pain?
- Is there any sensitivity to light (photophobia)?
- Are they a contact lens wearer?



Snellen Chart

Eye History

- Symptoms: Gradual or Sudden?

  Vision? Pain? Sensitivity to Light ?

- Trauma? FB exposure? Discharge?

- PMH
- DH
- FH

Eye Examination

- VISUAL ACUITY, VISUAL ACUITY, VISUAL ACUITY!!
- Pin hole

"Record : 6/what"

- Naked eye and ophthalmoscope
- Lids and lashes– evert with a paperclip ?
- Conjunctiva, sclera: redness, discharge

Continued …

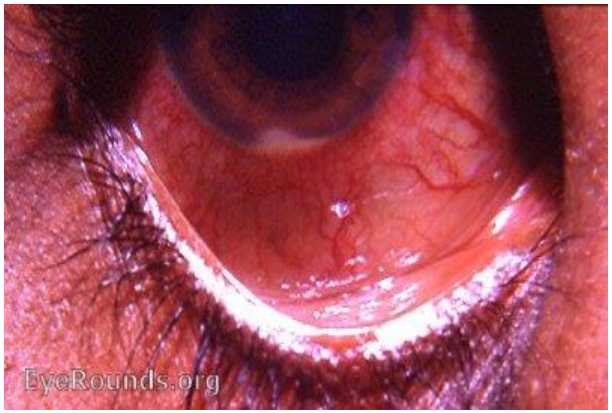
- Cornea: Stain all with fluorescein (blue light)
- Pupil: PERL, symmetrical?
- Red reflex: Cataract or Haemorrhage

- Fundoscopy: disc, macula, vessels

- Dilating drops: Tropicamide 1%

- Evert the eyelid. You may be surprised …

Limbal inflammation

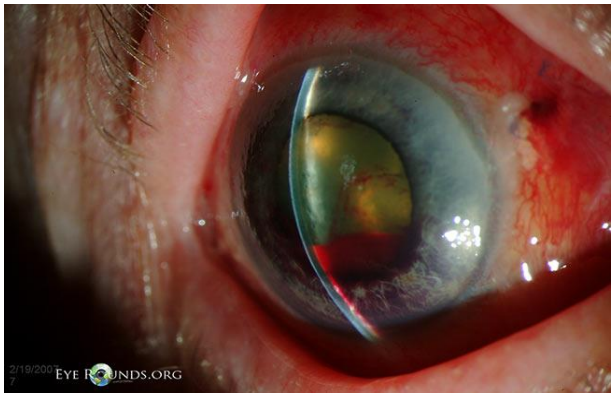


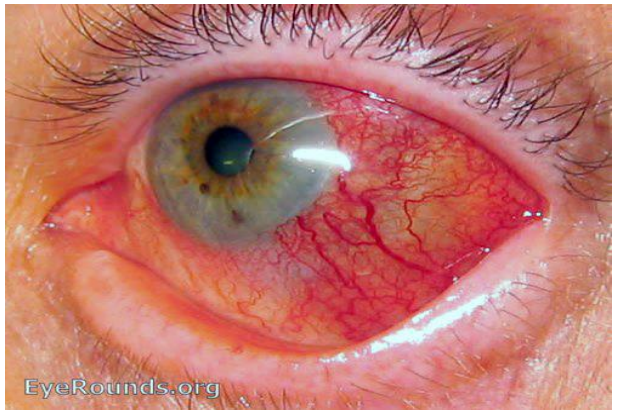
Photos courtesy of eyerounds.org at University of Iowa: http://webeye.ophth.uiowa.edu

Conditions to exclude:

- Contact lens keratitis
- Corneal ulcer – bacterial or herpetic
- Acute anterior uveitis (iritis)
- Angle closure glaucoma
- Scleritis
- Orbital cellulitis

- Post operative infection
- Neonatal conjunctivitis
- Chemical injury





Photos courtesy of eyerounds.org at University of Iowa: http://webeye.ophth.uiowa.edu

Conditions to manage in Primary Care:

- Conjunctival lesions
- Episcleritis
- Sub-conjunctival haemorrhage
- Conjunctivitis
  - Allergic
  - Viral
  - Bacterial
  - Chlamydial (it's more common than you think)
- Everything else: blepharitis; dry eyes; foreign body, drops

Titbits to take away:

- Most cases you will be able to manage yourselves
- Where is the redness: perilimbal?
- Red flags: slit-lamp assessment
- No steroids in primary care (unless someone else is taking the responsibility)

- In contact lens wearers: this is usually the cause
- Anaesthetic cornea: diabetes, age, contact lens, herpes

- Iritis recurs: – and may not be as painful
- If a patient has herpes simplex – tell them it'll recur

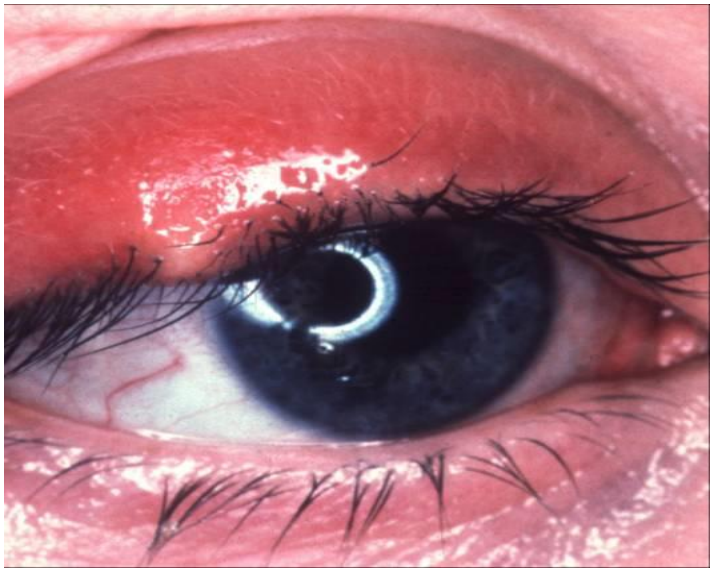
Meibomianitis

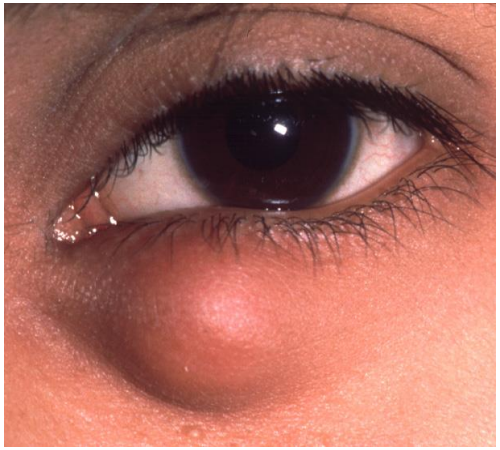
- Posterior blepharitis
- Associated with acne rosacea.

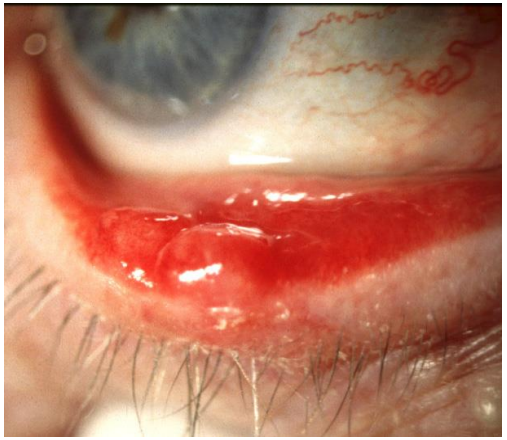
- Clinical features
  - Burning, worse in mornings.
  - Inflamed meibomian glands, secretions +/- chalazions.

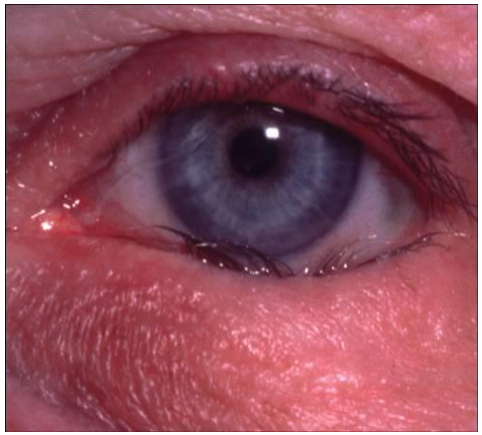
- Treatment
  - Lid hygiene, warm compresses
  - Oral tetracyclines

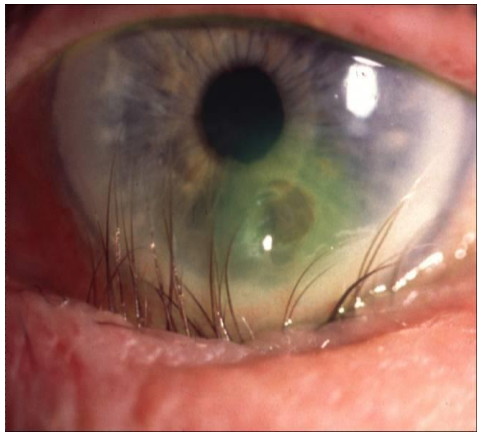
Chalazion

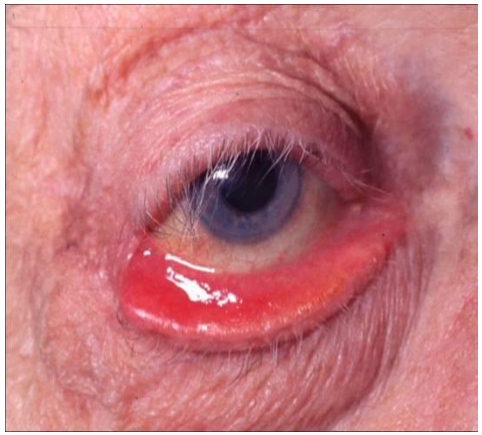


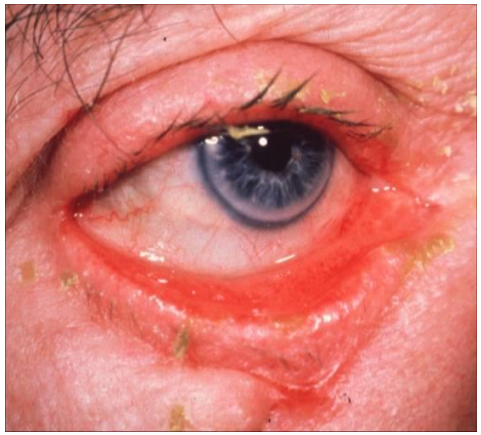












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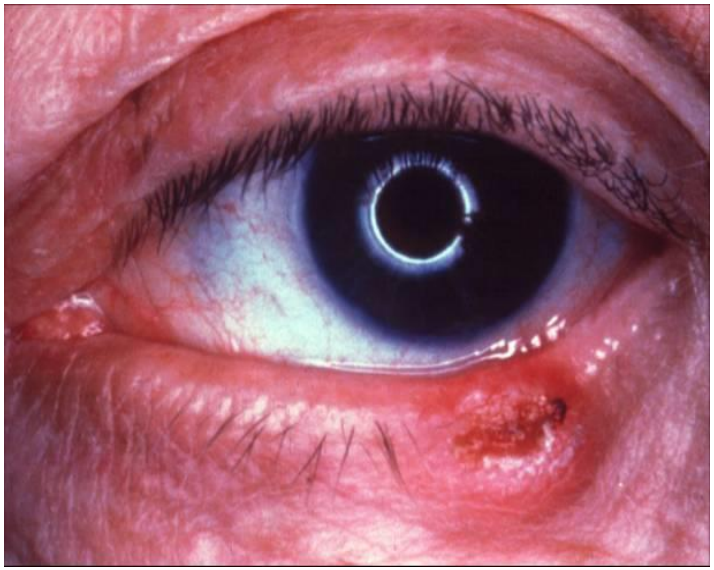
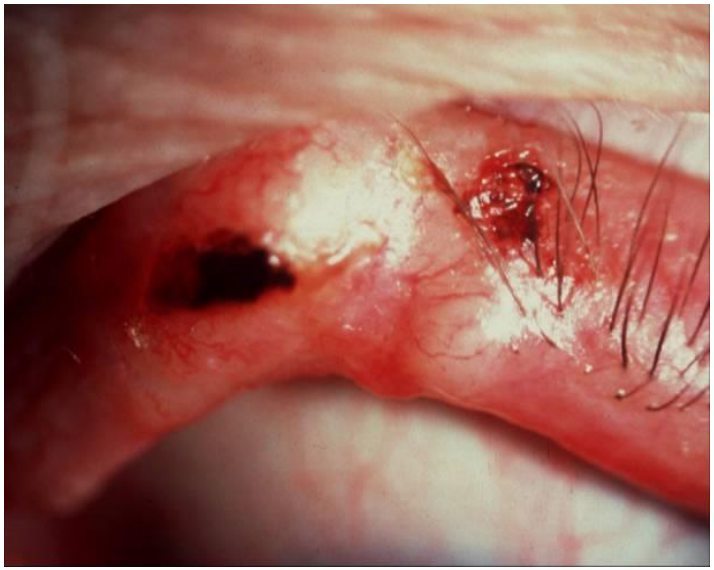
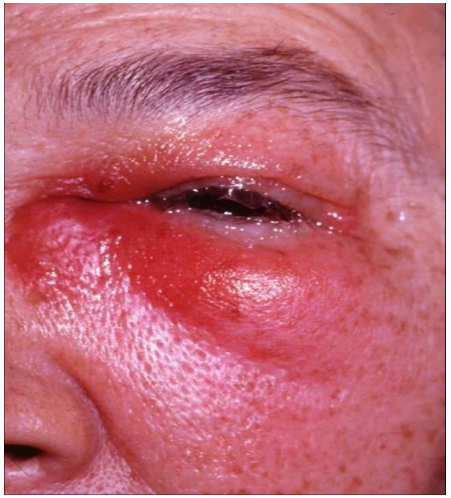


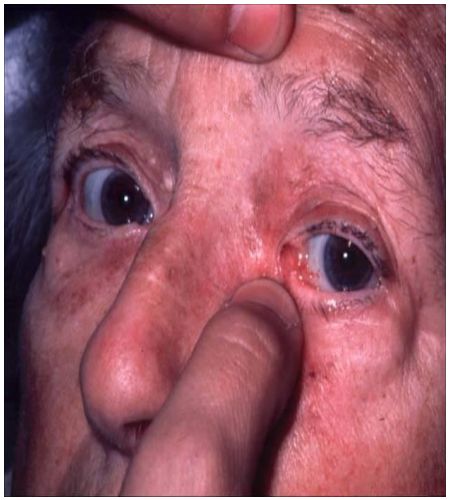


90% BCC
5-10% SqCC
1-5% Seb CC
Rarely melanoma

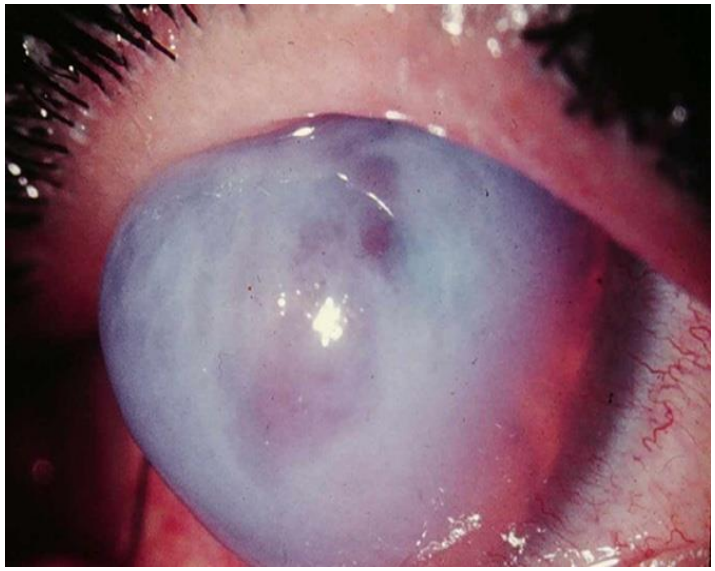
Nasolacrimal duct obstruction

- Congenital
- Acquired
  - Commonly elderly
  - Stenosis of NLD
  - Secondary infection - acute dacryocystitis
  - Treat with broad spectrum antibiotics
  - IV antibiotics if abscess / orbital cellulitis
  - DCR





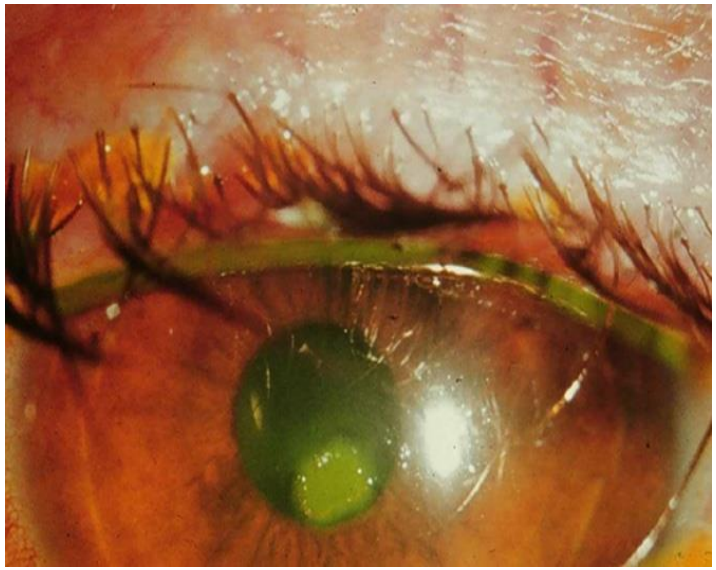
Corneal Pathology

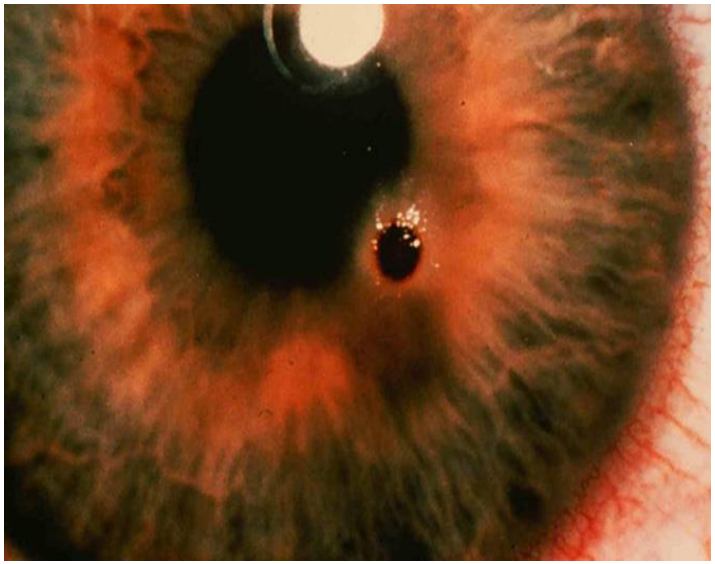


- Corneal abrasion
- Foreign body

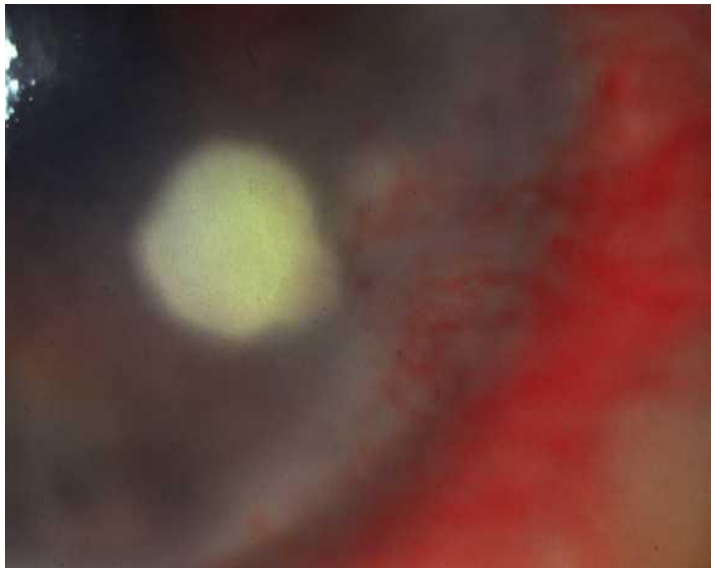
- Infective keratitis
- Herpes simplex keratitis
- Herpes zoster keratitis

Corneal Abrasion / Foreign Body





Infective Keratitis

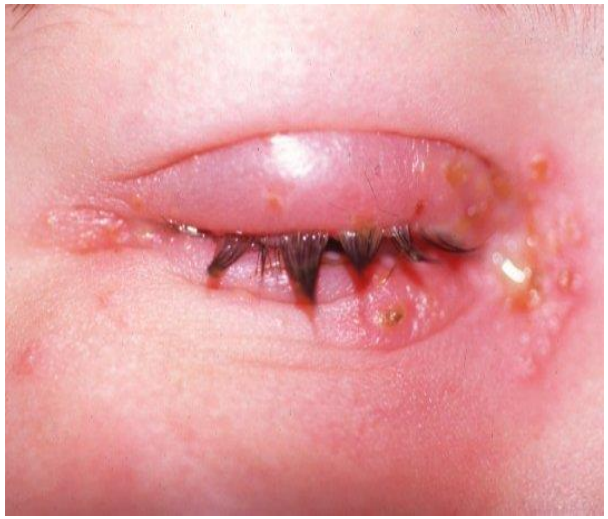


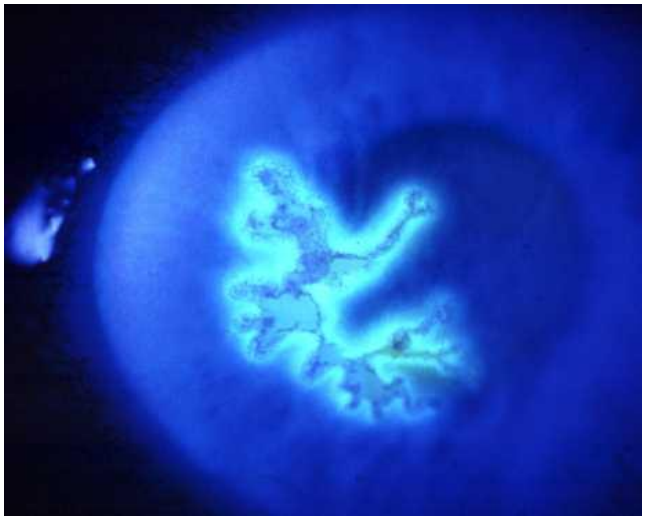
- Bacterial; Fungal; Viral

- Severe pain
- Foreign body sensation
- Photophobia
- Blurring of vision

- Eyelid oedema, red eye
  corneal opacity
- Uveitis, hypopyon

Herpes simplex keratitis

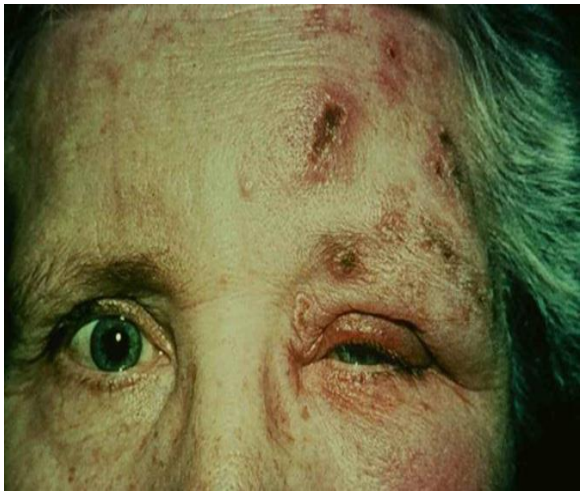




H. Simplex:

Aciclovir ointment (5 x day) review at 2 days.
If systemic oral Aciclovir 200mg x5 5/7.

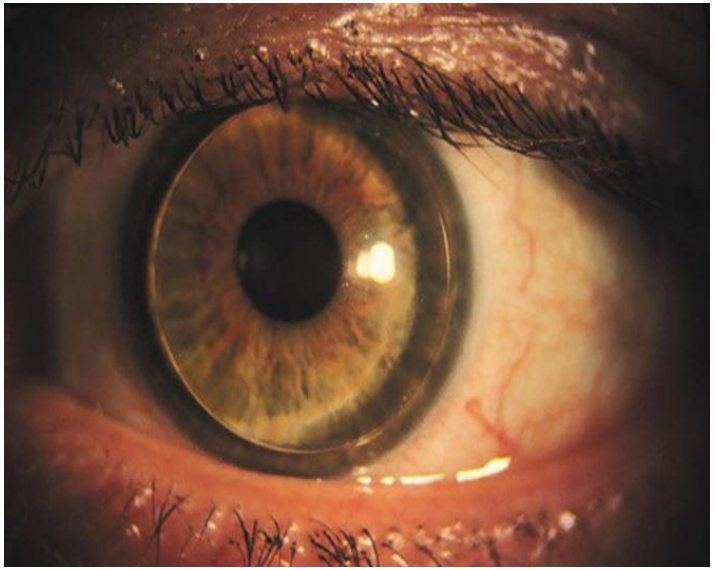
Herpes zoster keratitis



H. Zoster:
Aciclovir oral 800mg (5 x day) review at 2 days.

Can penetrate all layers of the eye

Contact Lenses



Hard, soft,
Rigid gas permeable

Complications:
Blinding: Infection
Non-blinding: dry eye, microtrauma, hypoxia, hypersensitivity (GPC)

Meticulous lens care

Treatment

- Contact lens related ulcers can be very aggressive:
  - Pseudomonas
  - Acanthamoeba (protozoan) : swimming pools. Very painful and symptoms out of keeping with signs
- Treat all lens related ulcers very seriously

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High Risk Situations

- Missing Red Flag Signs

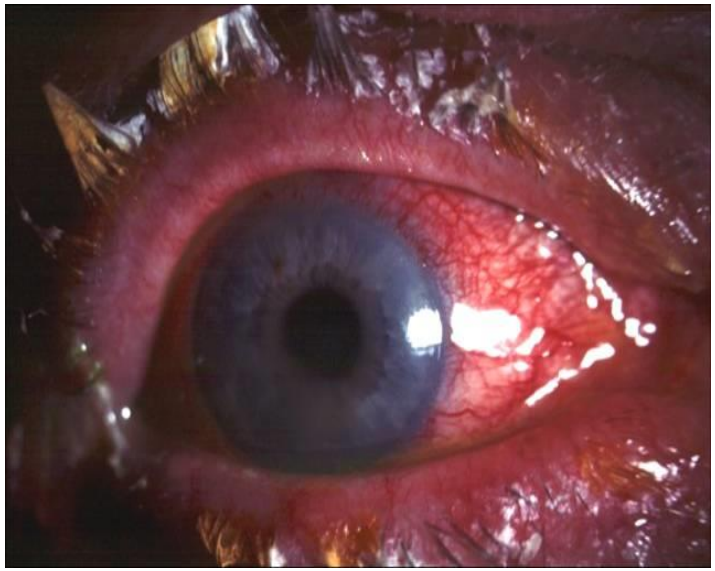
- Corneal ulcers / Contact lens problems being missed for conjunctivitis
- Acute glaucoma being missed for conjunctivitis
- Iritis mistaken for conjunctivitis
- Periorbital cellulitis mistaken for orbital cellulitis

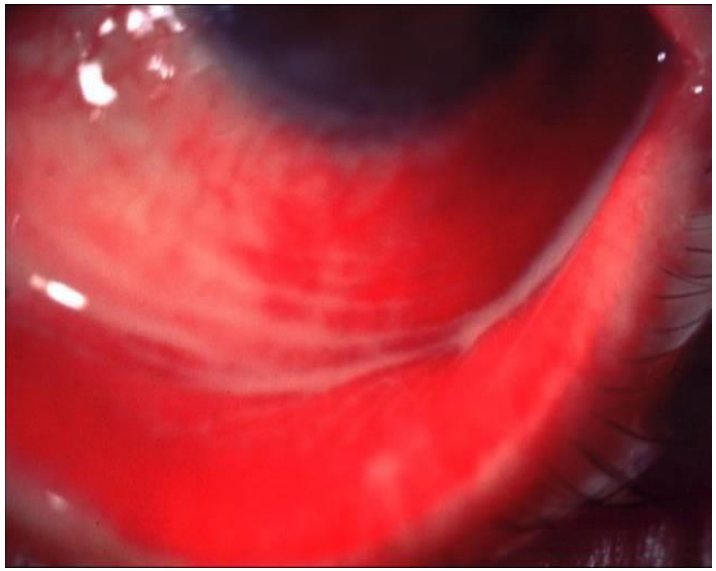
- Giant cell arteritis: missed or delayed diagnosis
- Missed abnormalities with the red reflex at the 6 week check

Red Flag Signs

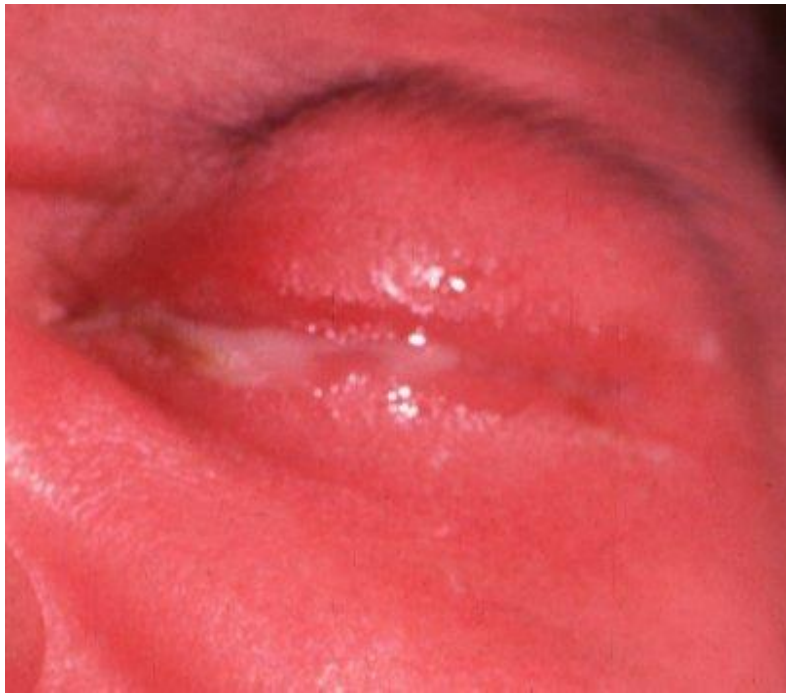
- Severe pain
- Photophobia
- Reduced Vision
- Halo Vision
- Contact Lens Wearer

- Ciliary Flush
- High eye pressure
- Corneal changes
- Proptosis
- Shallow AC depth





Neonatal Conjunctivitis



Time of onset guideline, must be swabbed and referred

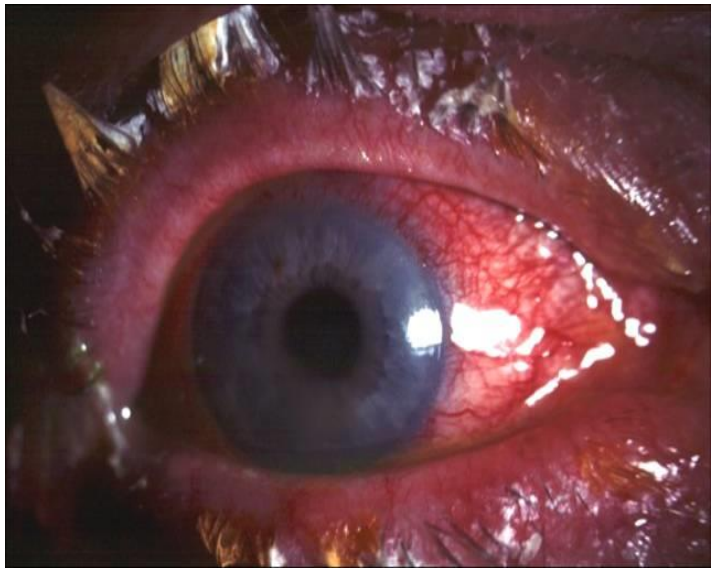
@birth - chemical

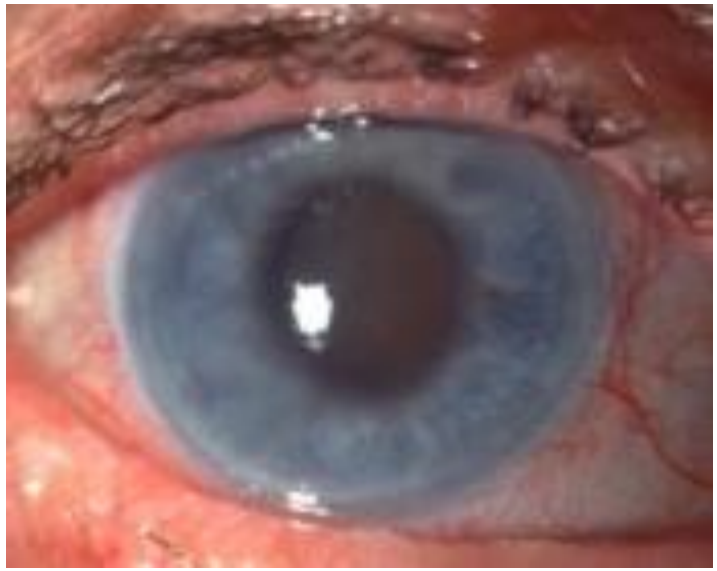
2-3/7 discharge++ Gonococcus, other bacteria

2-3/7 no discharge herpetic

5-12/7 chlamydia

Angle Closure Glaucoma

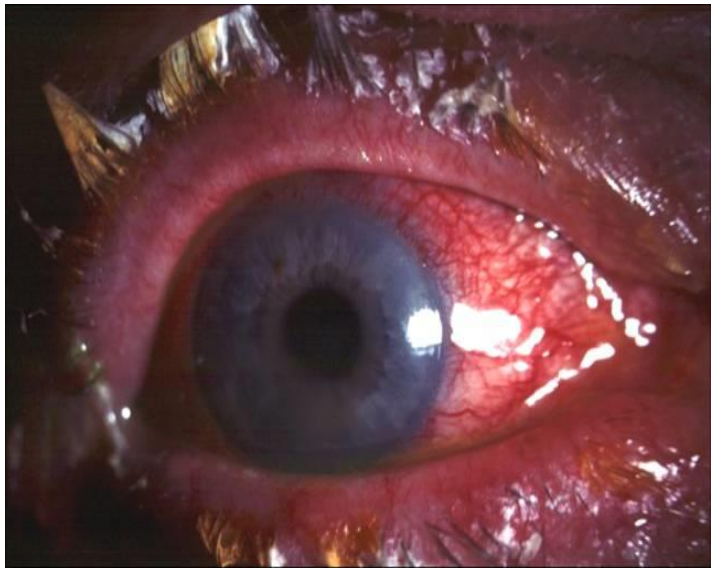


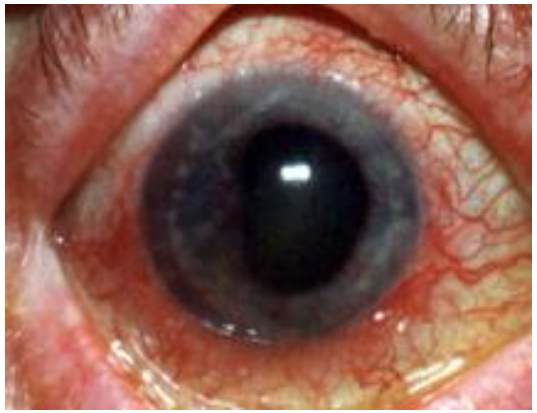


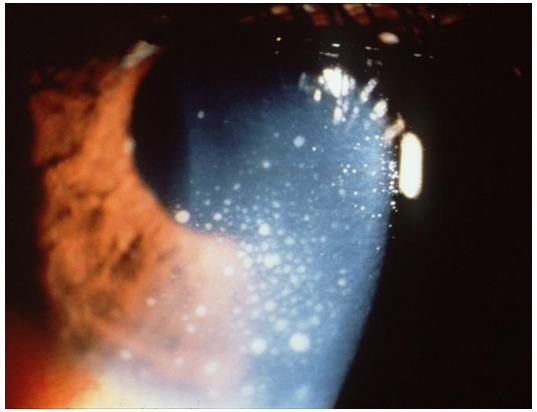
Cardinal Signs

Pain
Haloes

Iritis





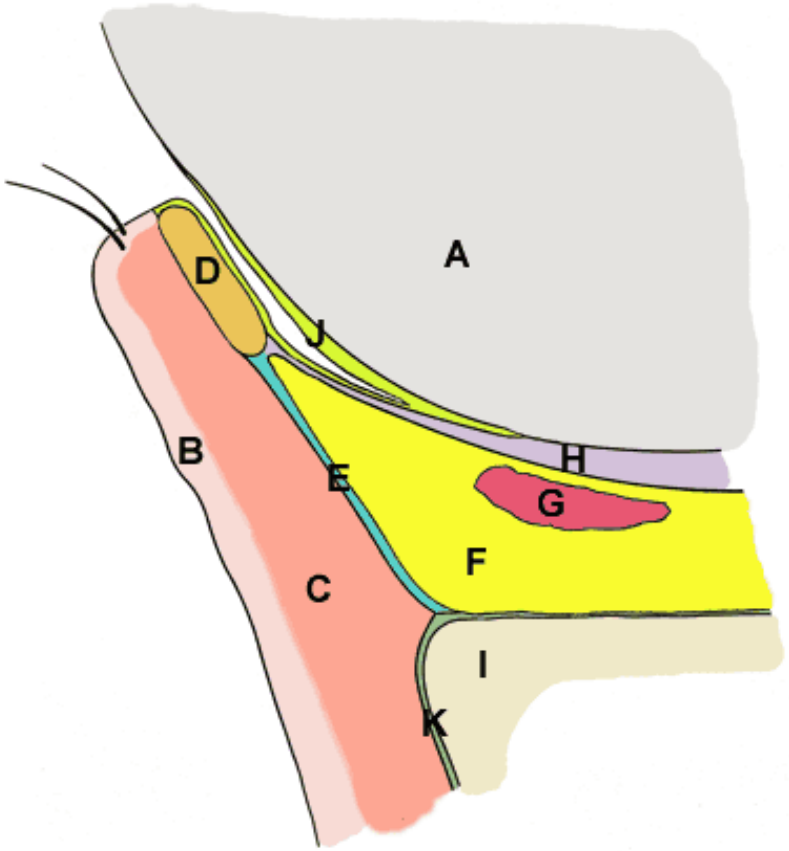


Cardinal Signs

Pain
Photophobia

+/- visual loss

The Eyelid



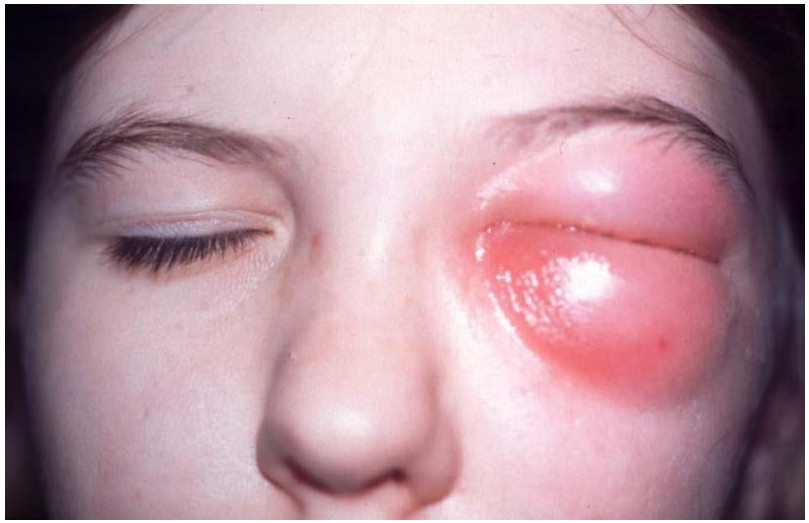
B- skin
C- obicularis
D- tarsus
E- orbital septum
F- orbital fat
G- inferior oblique
H- inferior tarsal aponeurosis
I- maxillary sinus
J – conjunctiva
K – sinus wall

Periorbital Cellulitis

- Infection anterior to orbital septum
- Skin trauma
- Spread of local infection
- From remote infection

- Unilateral lid swelling & redness confined to lid,
- White eye

Orbital Cellulitis



- Infection behind orbital septum
- Life-threatening

- More common in children

  Strep pneumoniae.

  Staph aureus

  Strep pyogenes

  H. influenzae

Orbital Cellulitis

Aetiology

- Sinus-related 90%
- Dacrocystitis
- Post-traumatic
- Post-surgical
- Extension of periorbital cellulitis

Admit all under the Paediatricians

Clinically

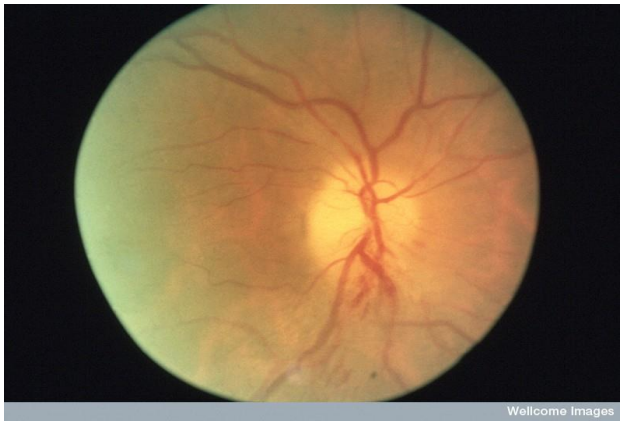
Severe malaise, fever, & pain

- +/- VA reduced
- +/- proptosis
- +/- painful limited eye movements
- +/- red eye

Anterior Ischaemic Optic Neuropathy

- Usually >50
- ESR / history / biopsy
- GCA:

  needs urgent steroids to protect second eye
- Swollen disc early becomes pale later



Signs to Watch for Giant Cell Arteritis

- Missed symptoms of giant cell arteritis
- Visual disturbance
- Visual loss
- Scalp tenderness
- New headache in an older person
- Jaw claudication (pathognomic)
- Weight loss

- Proximal myalgia

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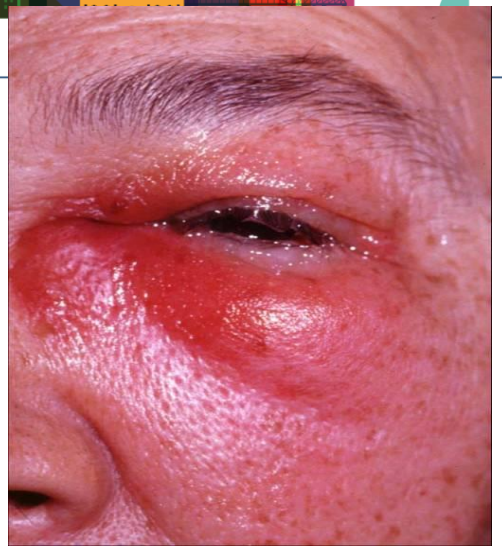
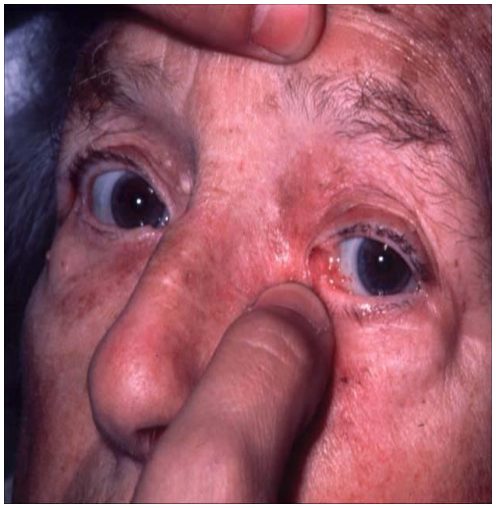
Nasolacrimal duct obstruction

- Congenital
- Acquired



  - Elderly
  - Stenosis of NLD
  - Secondary infection - acute dacryocystitis.

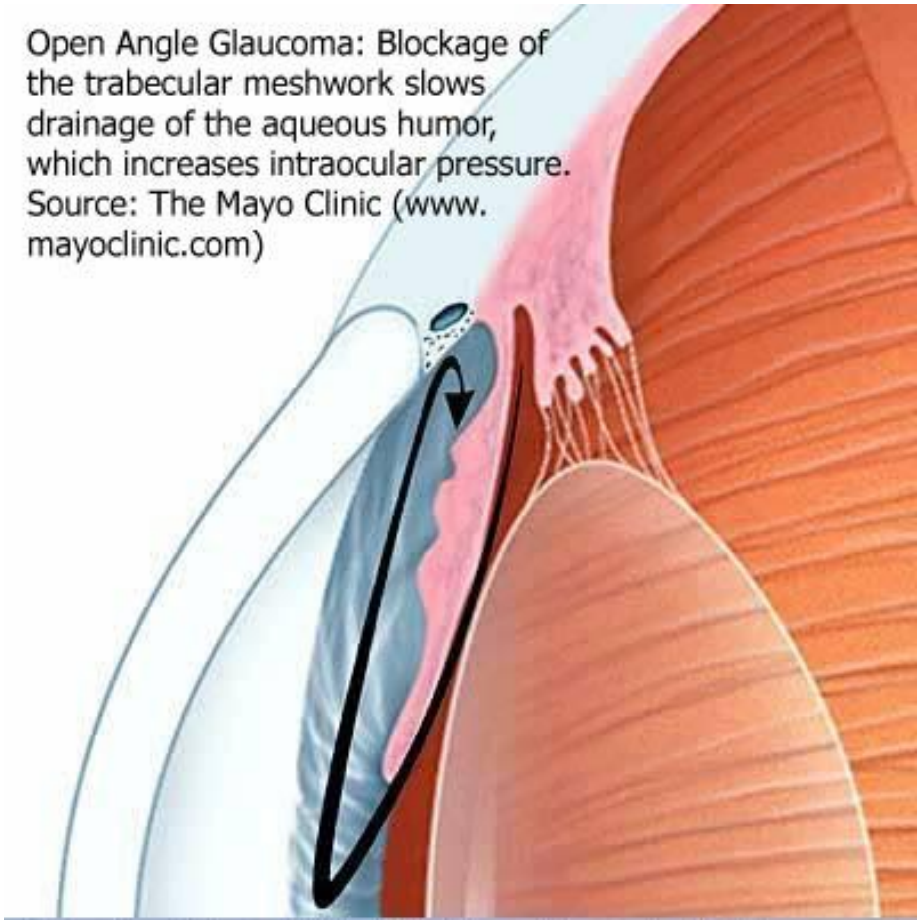


  - Broad spect. abx.
  - Admit for IV abx if abscess/orbital cellulitis
  - DCR after infection controlled.

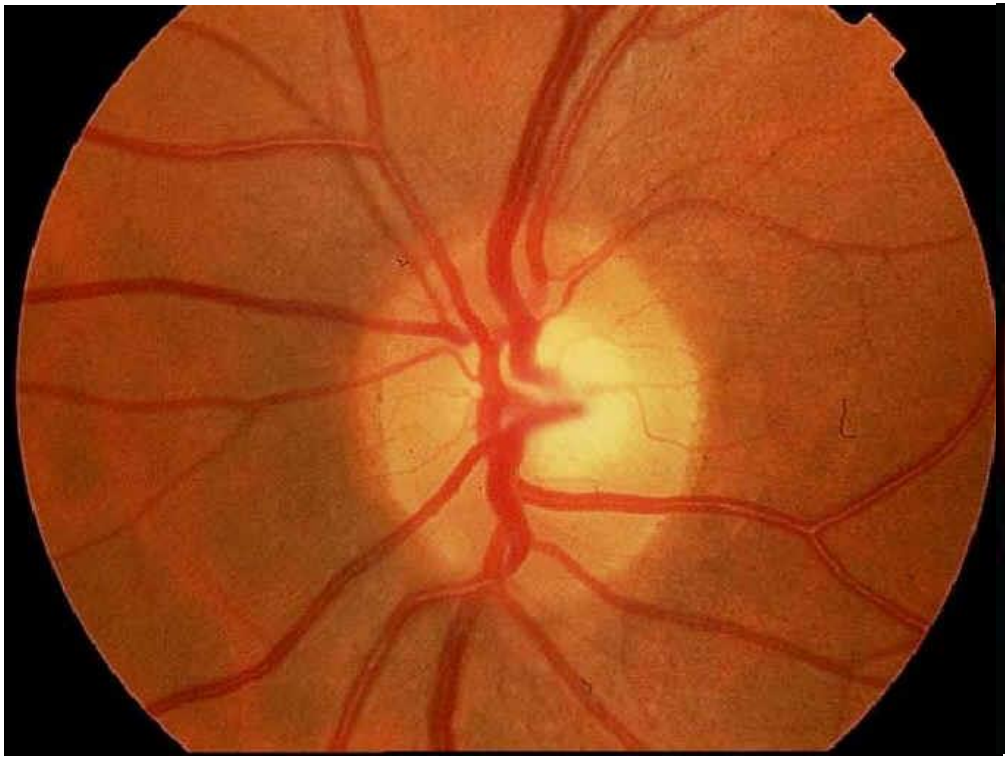
Glaucoma

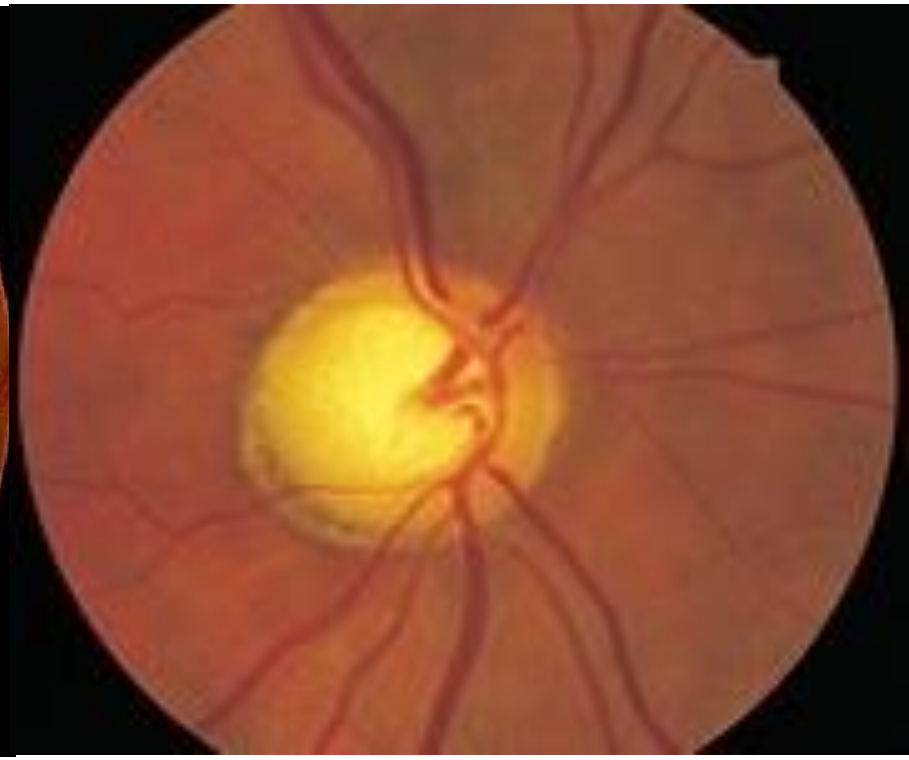
- Group of conditions which gradually steal sight
- Leads to blindness through damage to the optic nerve
- Early stages may have no symptoms
- >50% of people with glaucoma undiagnosed

- Primary Open Angle Glaucoma (POAG) 1% of population
  - Adult onset optic neuropathy with glaucomatous disc and field changes
  - Open irido-corneal angle
  - IOP>21mmHg



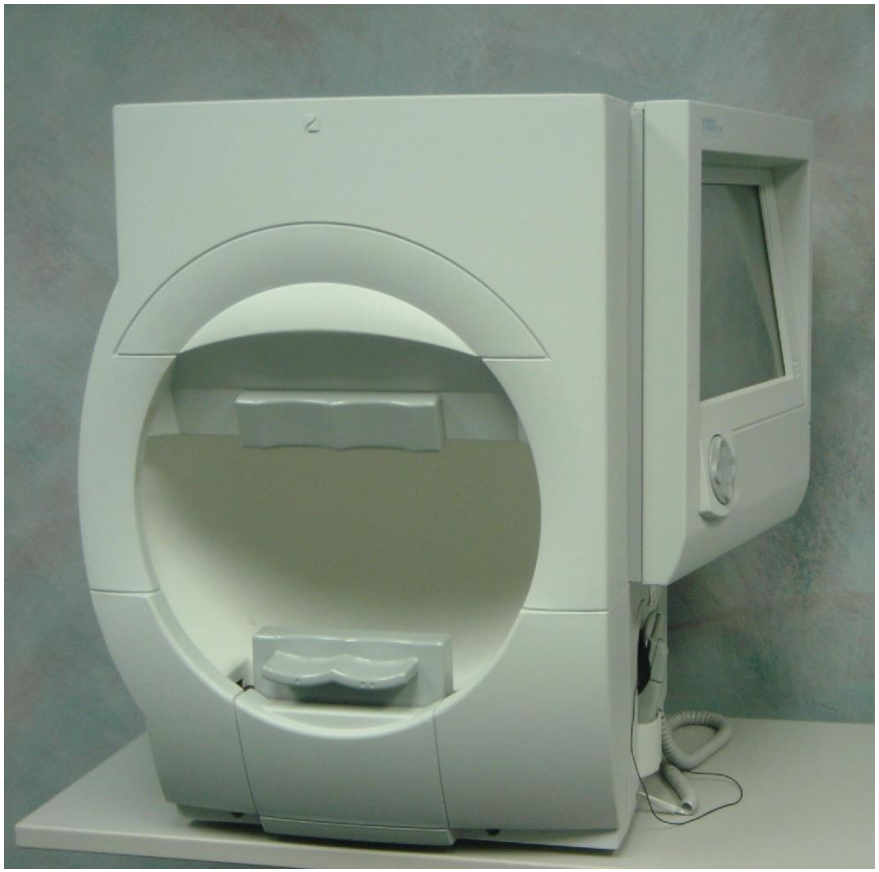
POAG – disc cupping





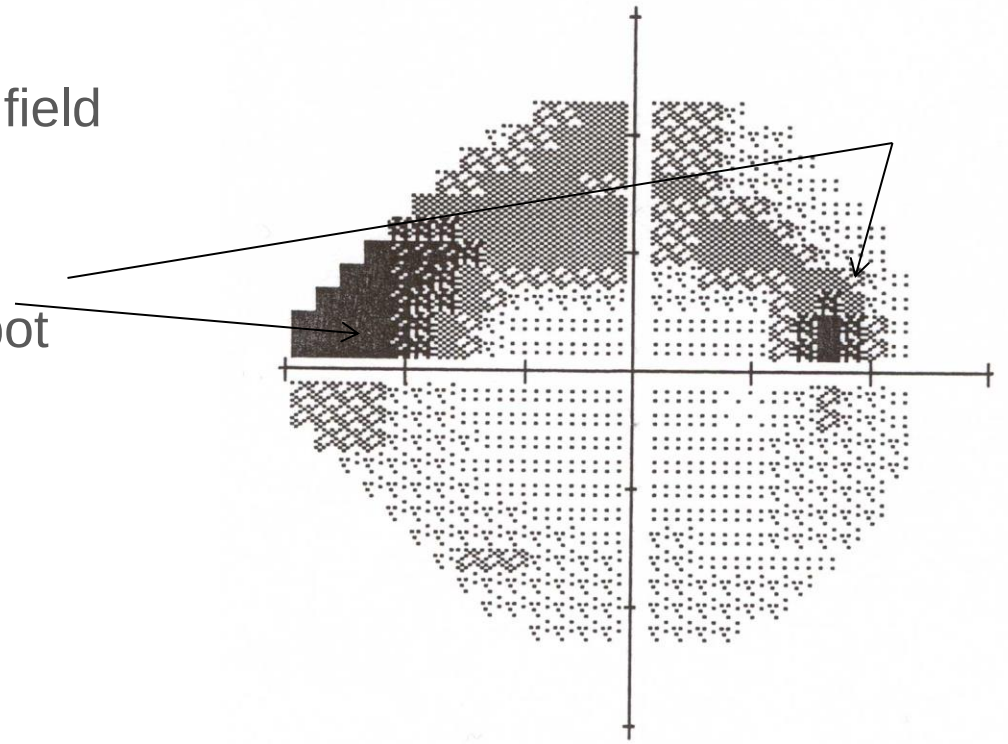
Automated Field Testing

- Humphrey perimeter
- Gold standard
- Rapid, reliable and portable
- Comparison with age matched population data
- Repeat tests improves performance



Arcuate Field Loss

- Classic glaucomatous field defect
- Connects with blind spot
- ‘Nasal step’

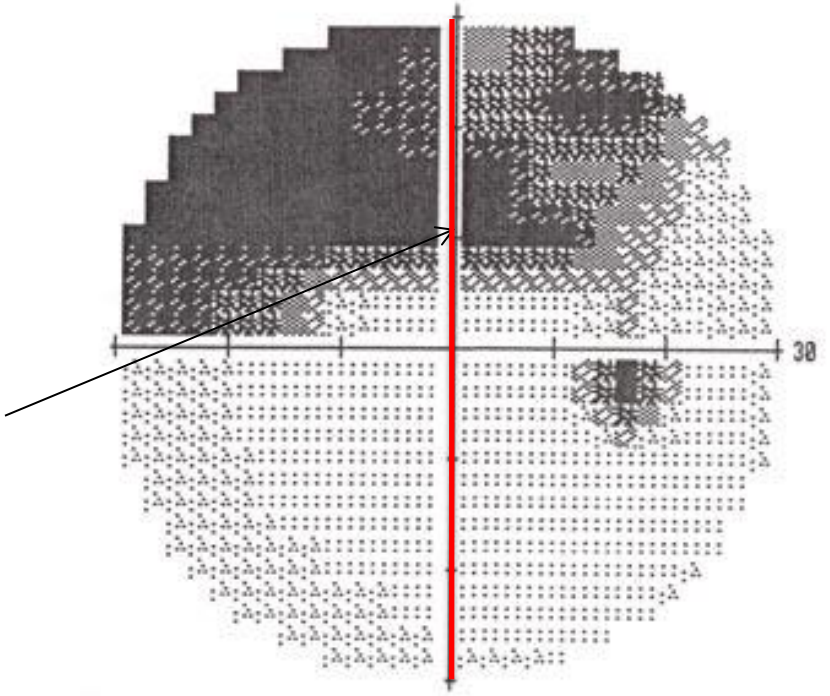


Advanced Glaucoma

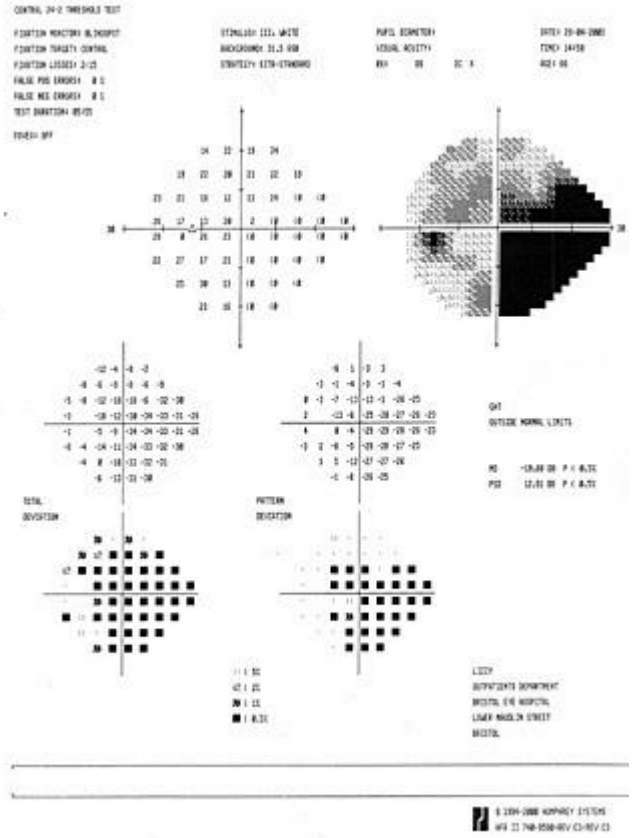
- Arcuate pattern
- May have good VA

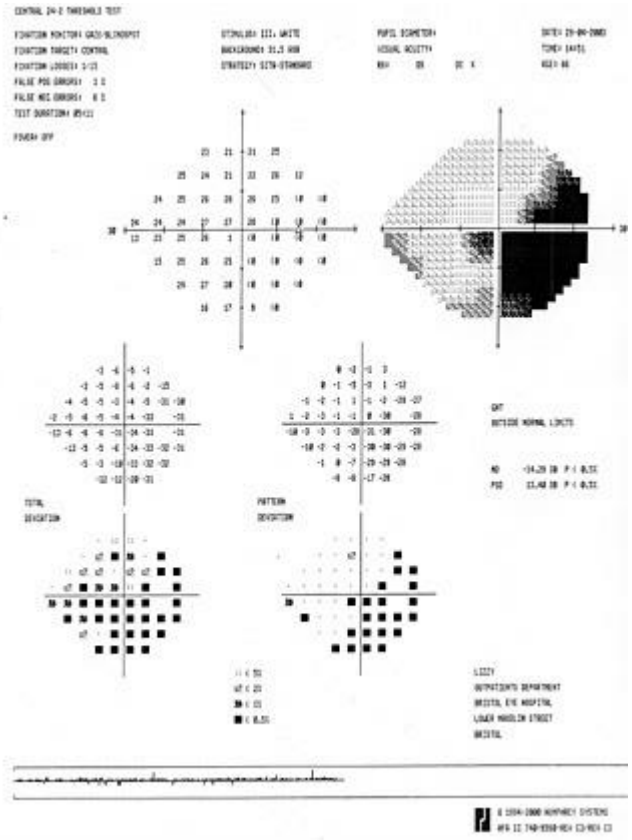
- Defect crosses the vertical midline

- Neurological field defect (chiasm or beyond) respects the vertical meridian



Neurological Field Defect





Glaucoma Management

- No cure but damage can be slowed
- Drops
- Laser
- Surgery

Disadvantages of topical route of administration

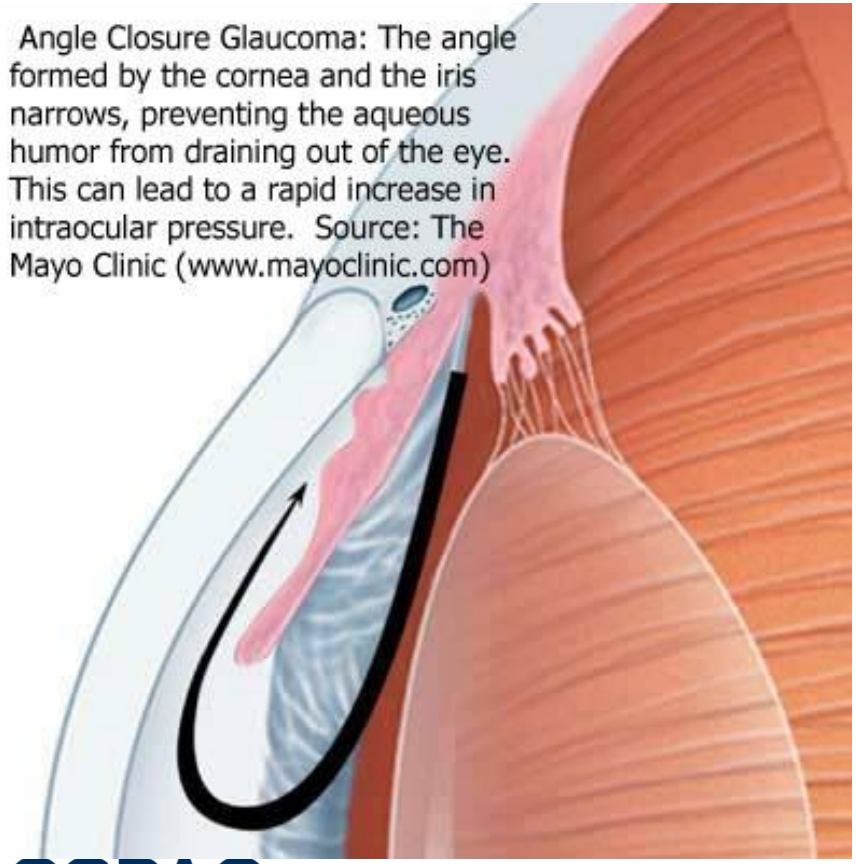
- Some patients find dropper bottle difficult
- Stinging and burning
- Not compatible with contact lenses
- Preservatives may cause reactions
- Systemic absorption and adverse effects

DVLA driving regulations

- To read car registration from 20m (6/10)
- Monocular patient
  - must notify DVLA but may drive when clinically advised that has adapted
  - Cannot hold Group 2 licence
- Loss of field (Binocular Esterman)
  - a field of at least 120° on the horizontal
  - no significant defect in the binocular field which encroaches within 20° of fixation either above or below the horizontal meridian
- Diplopia

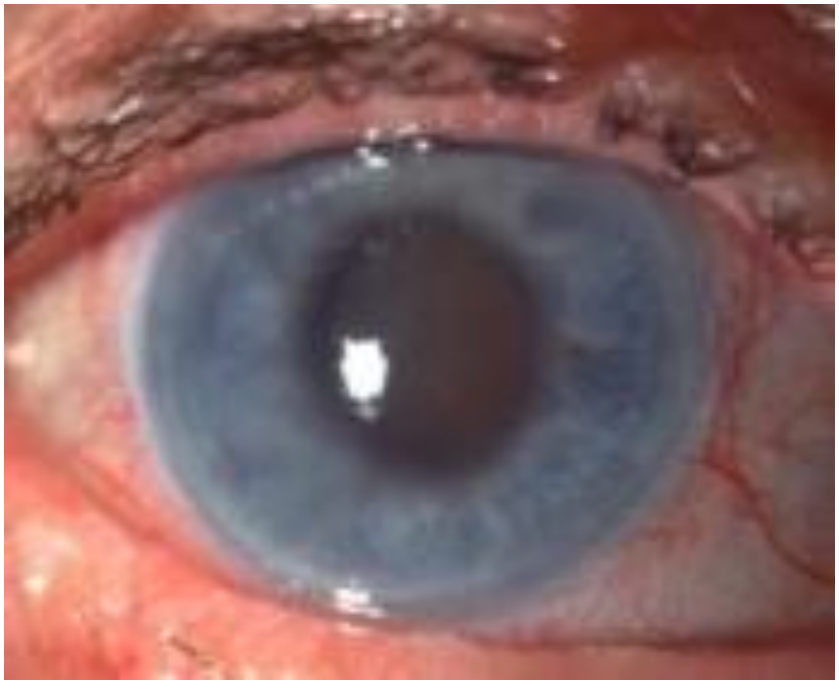
Angle closure glaucoma

- ↑IOP from partial or complete occlusion of the iridocorneal angle
- 0.1% of >40yr
- 1.5% of Chinese >50yr



Angle Closure Glaucoma ('Acute glaucoma')

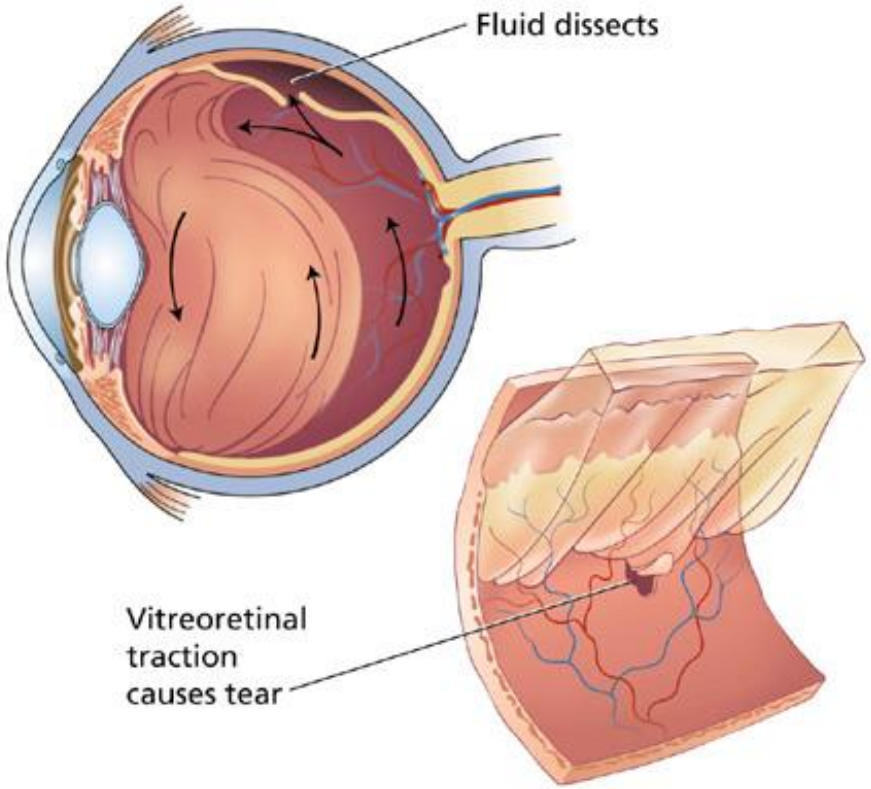
- Loss of vision, severe pain +/- nausea. Photophobia, haloes
- Cornea hazy, pupil – semi-dilated, unreactive, eye is hard!
- IOP>50-80mmHg



Case 1 “Flashes & Floaters”

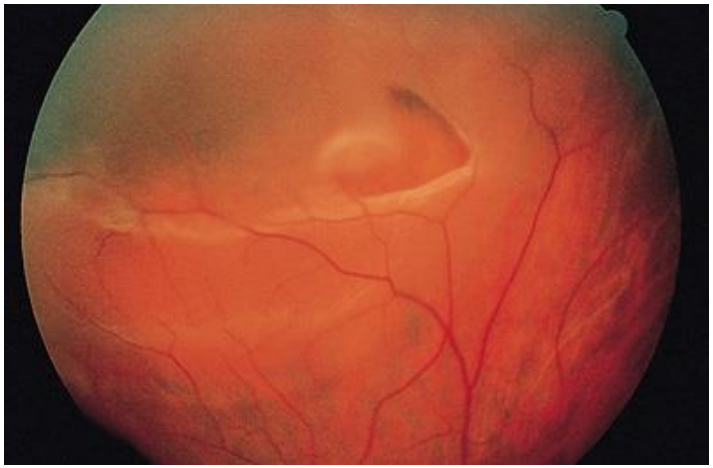
- A 52 year old man has noticed black spots like “cobwebs” in his right eye for a few days with some flashes of light and now there is a dark shadow in the bottom part of his vision. He has worn spectacles for myopia from the age of 13.

Mechanism of retinal tear



Retinal Detachment

- Floaters
- Flashing lights
- Peripheral field loss (curtain)
- Loss of central vision
- Loss of red reflex

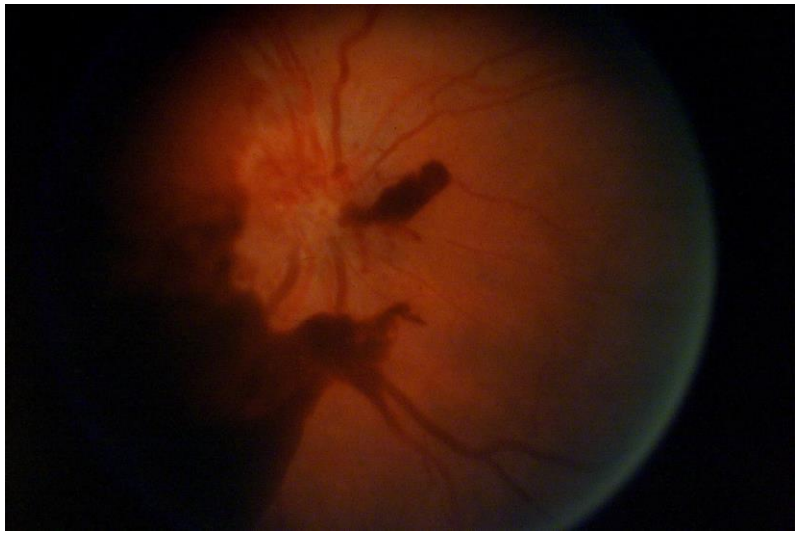


Case 2 Floaters

- A 36 year old diabetic type 1 of 25 years duration and renal failure presents with a sudden onset of floaters in his right eye. His visual acuity is 6/36 in the right eye and 6/6 in the left eye.

Vitreous Haemorrhage

- Floaters
- Loss of vision
- Loss of red reflex
- Diabetic retinopathy
- Retinal Tear
- Sickle Cell Retinopathy



Case 3

- An 80 year old woman complains that she has been finding it more difficult to read the newspaper recently and that in the last week her right vision has become much worse and that straight lines look wobbly with that eye.

- Her visual acuity is 6/24 in the right eye and 6/9 in the left eye.

Age-related Macular Degeneration (AMD)

Leading cause of blindness in over 50s in the west

Retina of macula suffers thinning, atrophy and in some cases bleeding

Can result in loss of central vision

AMD risk factors

Age

SMOKING

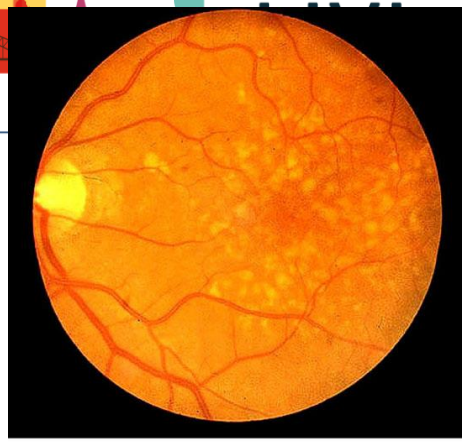
Family history (some genes identified)

Cardiovascular status; hypertension, high cholesterol, obesity

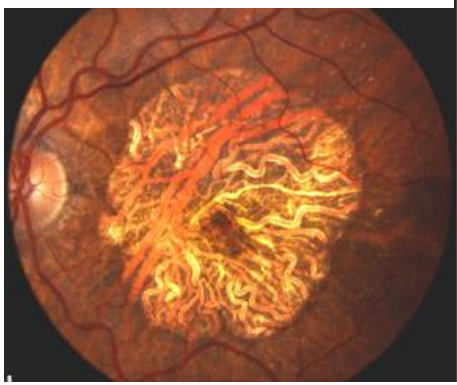
Race

Dry and Wet

Dry (nonexudative) macular degeneration may by asymptomatic or notice a gradual loss of central vision.



Fundas photograph of a patient with age related macular degeneration.



Wet (exudative) macular degeneration often notice a rapid onset of vision loss.

Questions?

www.primarycareophthalmology.co.uk

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