

# Approach to Common Eye Conditions In Primary Care

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# Introduction

## 1. Common Scenarios

- Ocular Trauma
- Red Eye
- Blurring of vision
- Diplopia
- Floaters

## 2. What to manage and what to refer

## 3. Management of common eye conditions

# Ocular Trauma

- Exclude life threatening injury
- Determine
  - Mechanism of injury
  - Sharp vs blunt injury
  - Onset
  - Presence of FB
  - If chemical → Which chemical- Acid or Alkali?

# Signs

- VA at presentation
- RAPD
- Lid involvement → laceration or bruise
- Infraorbital hypoaesthesia
- EOM
- Ocular involvement

# Assessment

- X-Ray → OM, Lateral
- X-Ray → Look up, look down view (for foreign body)
- CT Orbit

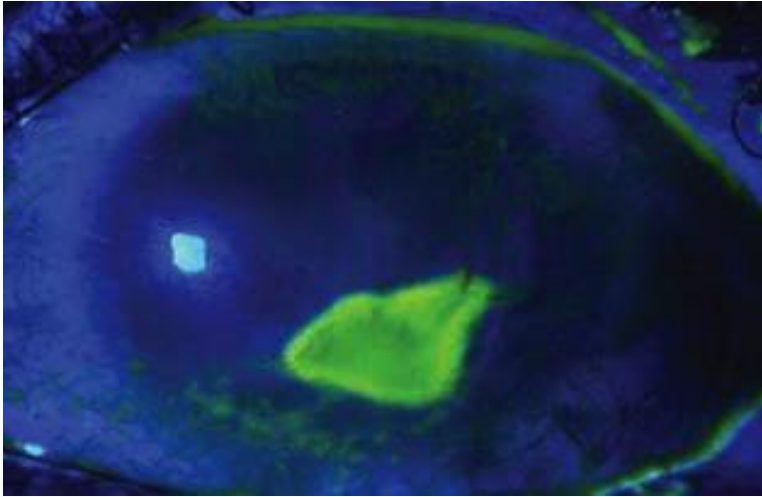


# Chemical Injury

- Ocular emergency, needs immediate irrigation of the eye before referral



# Common scenarios







# Blurring of Vision

1. Transient BOV (resolution within 24 hours)
2. Persistent BOV
  - Painless
    - Acute onset
    - Chronic onset
  - Painful

# Transient visual loss

## Few seconds

- Papilledema
- Postural hypotension
- Dry eyes

## Few minutes

- Amaurosis fugax / TIA  
(unilateral/  
homonymous  
hemianopia)
- Ophthalmic migraine

# Blurring of Vision

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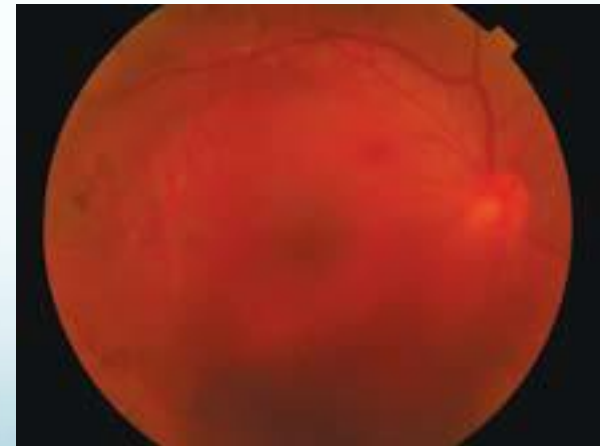
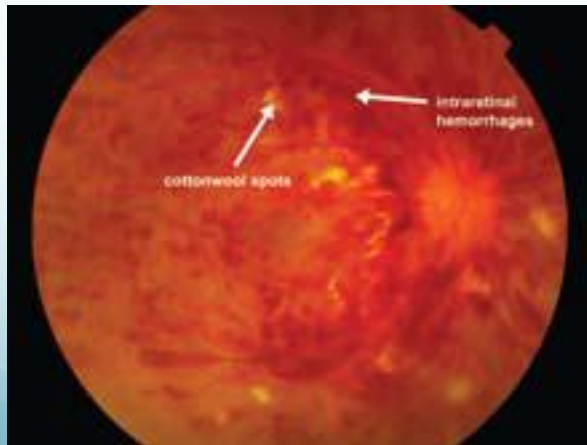
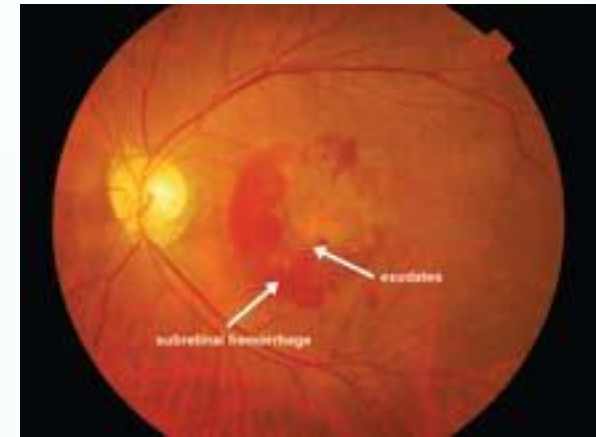
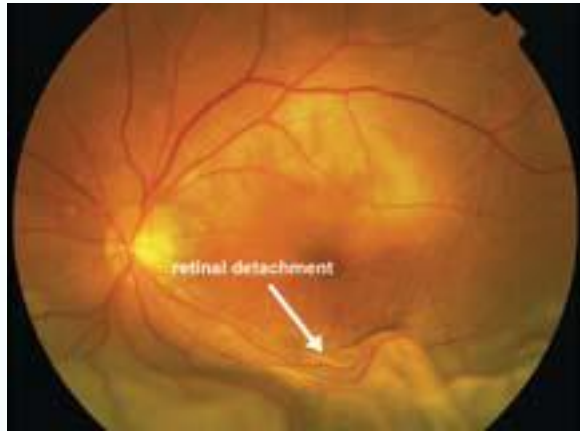
# Painless persistent BOV

## Acute onset

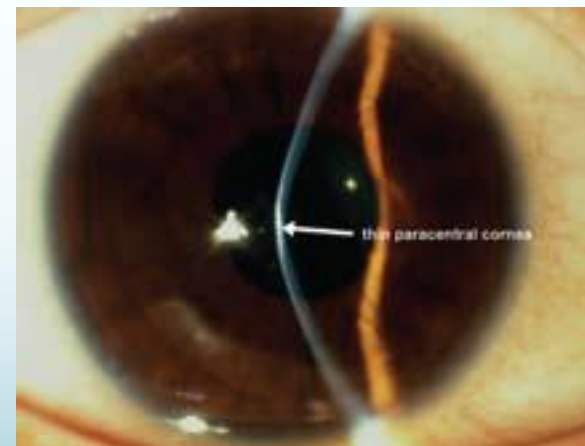
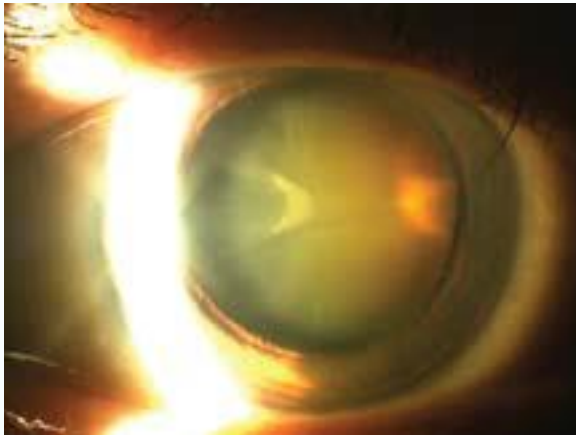
- Vitreous hemorrhage
- Retinal detachment
- Central retinal artery/ vein occlusion
- Ischemic optic neuropathy
- Macular lesion
  - Age related macular degeneration
  - Central serous macular edema
  - macular hole

## Gradual onset

- Refractive error
- Cataract
- Chronic glaucoma
- Age related macular degeneration
- Diabetic maculopathy
- Corneal pathology
  - keratoconus
  - corneal dystrophy





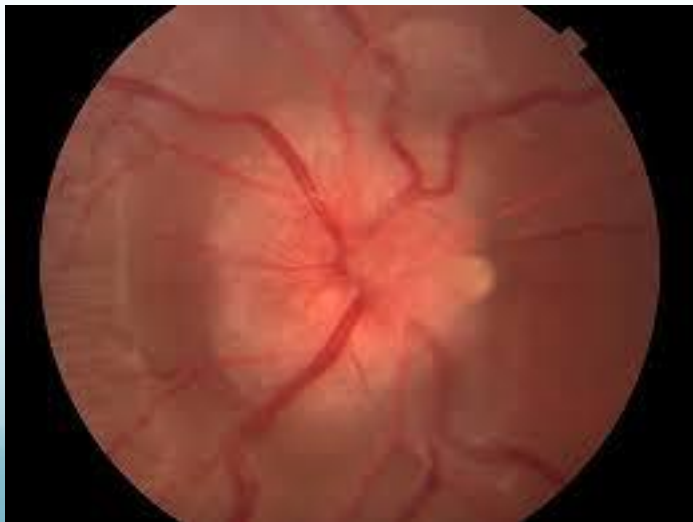


# Blurring of Vision

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# Painful persistent BOV

- Corneal lesion
  - Infective keratitis
  - Corneal abrasion
- Glaucoma
  - Acute angle closure
  - Lens induced
- Anterior uveitis
- Optic neuritis



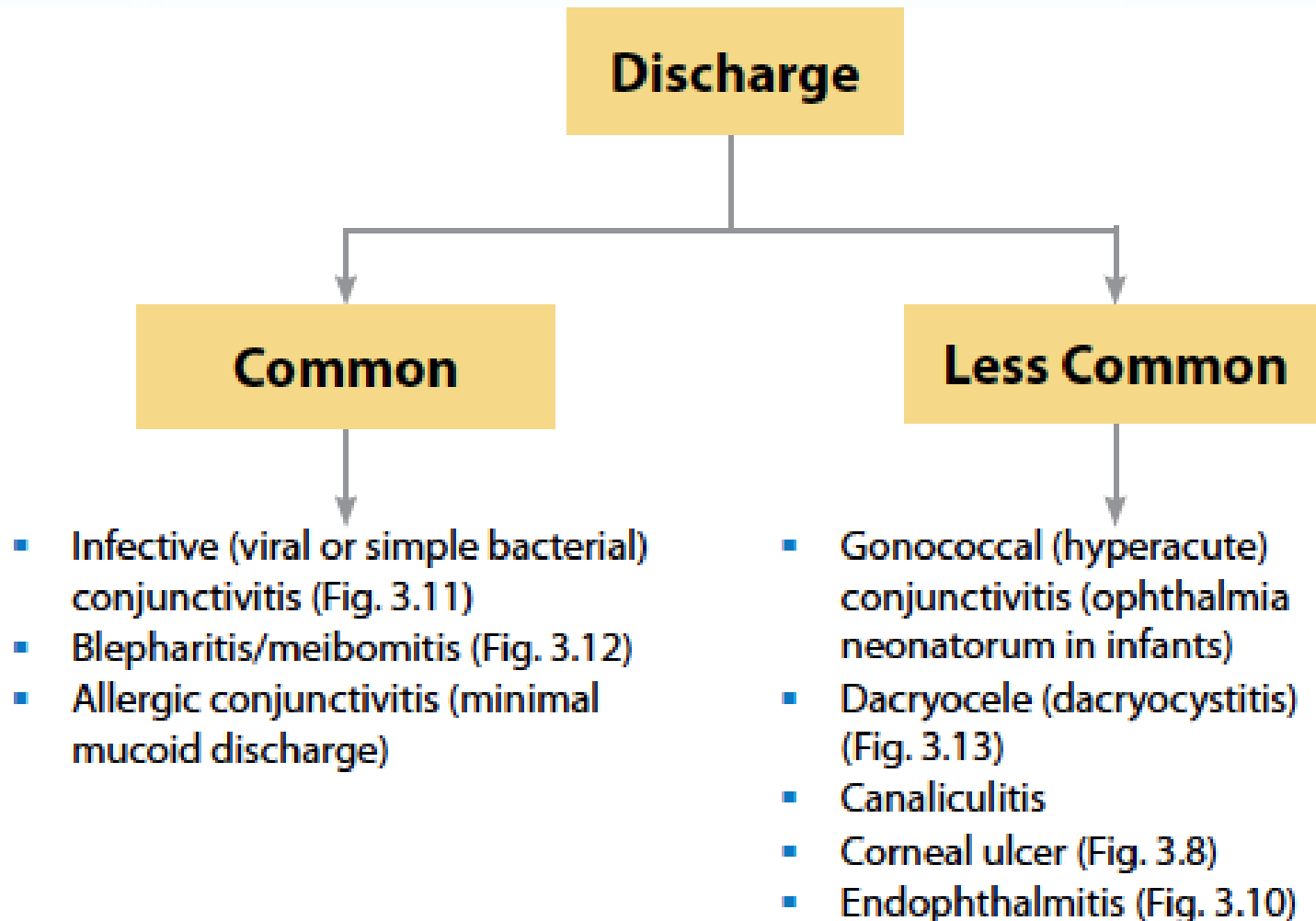
# Red Eye

Key points to consider when managing red eye

- Discharge
- Visual Acuity
- Pain
- Pupil
- Pressure (IOP)

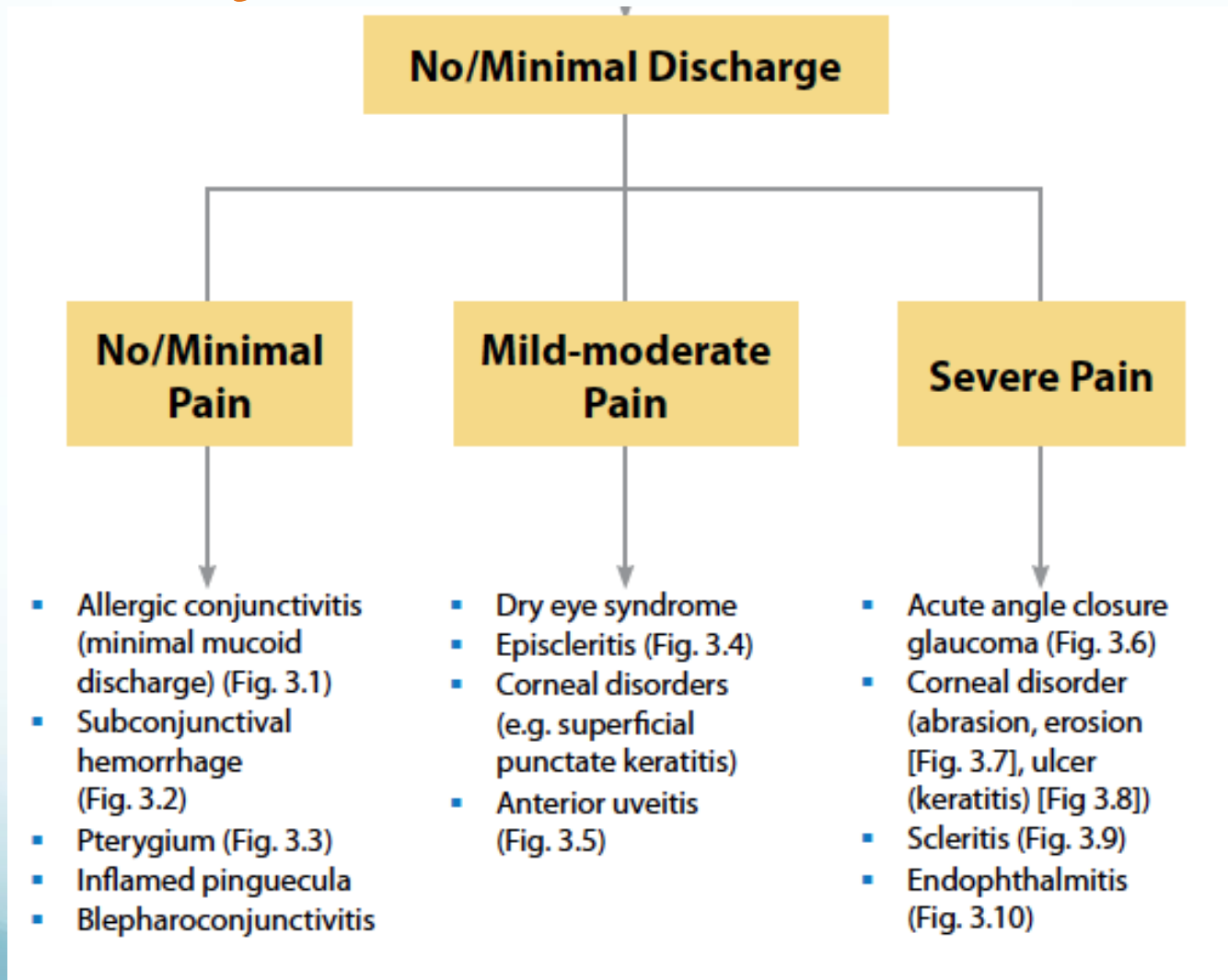


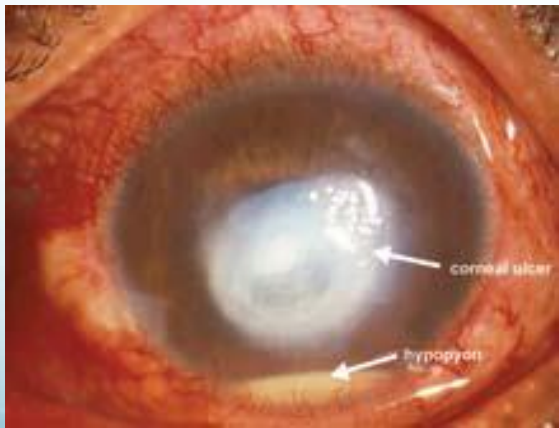
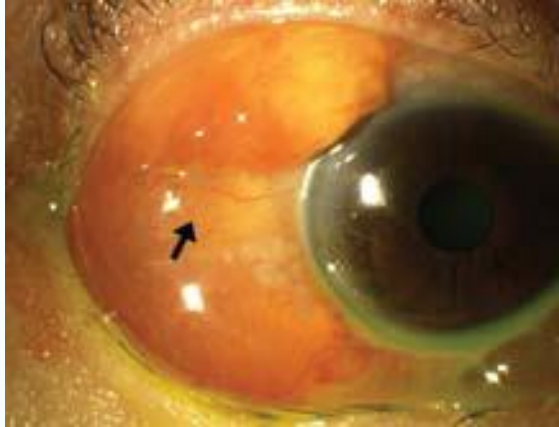
# Red Eye – With Discharge





# Red Eye – No/minimal discharge





# Diplopia

- Double vision
- Binocular vs monocular
  - Ask if diplopia persists on occlusion of either eye



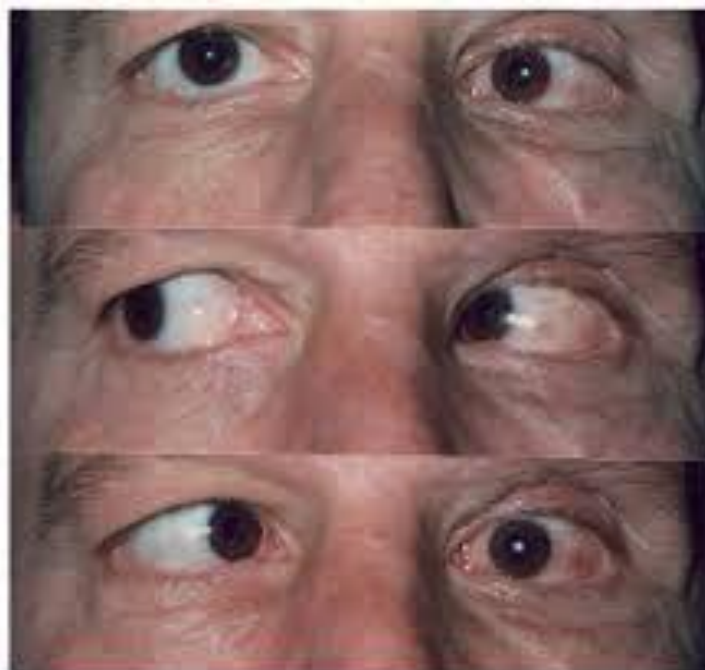
# Diplopia

## Monocular

- Refractive error
- Corneal pathology-  
keratoconus/ corneal scar
- Following refractive surgery
- Cataract
- Lens dislocation
- Macular pathology-  
Epiretinal membrane, edema

## Binocular

- Intermittent- Myasthenia  
gravis
- Persistent- Cranial nerve III,  
IV and VI palsy
- Thyroid eye disease
- Orbital fracture
- Strabismus- exotropia/  
esotropia



# Floaters

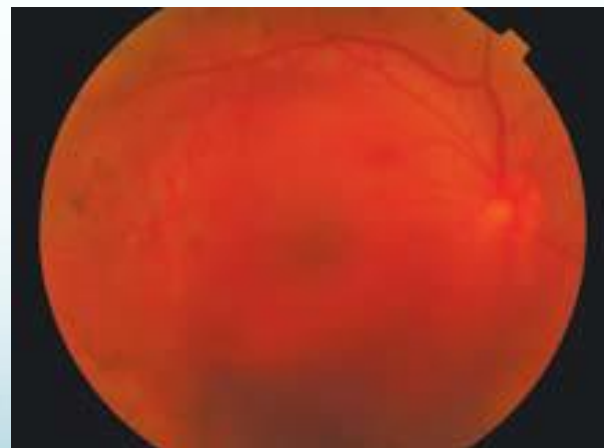
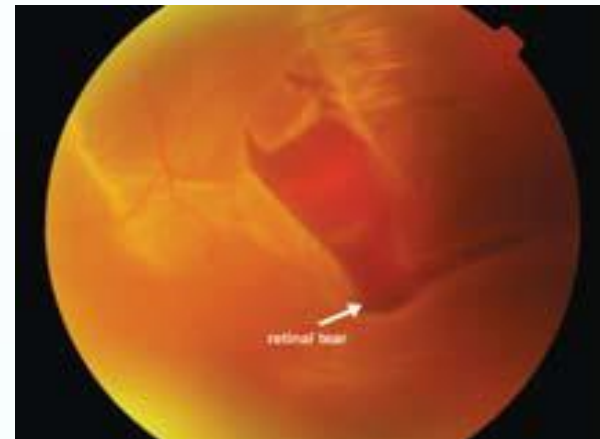
- Floaters are mobile opacities in the vitreous which cast shadows on the retina
  - Most noticeable in bright light or against a white backdrop
- May be associated with photopsia or flashes of light

## Floaters

- Posterior vitreous detachment
- Retinal tear/ detachment
- Uveitis
- Vitreous hemorrhage

## Photopsia

- Posterior vitreous detachment with/ without retinal tear/ detachment
- Migraine (zig-zag pattern, recurrent for few minutes, aura preceding migraine attack)





## 2. What to Manage

- Dry Eye Disease
- Small Styes and Chalazia
- Viral and mild Allergic Conjunctivitis
- Spontaneous subconjunctival hemorrhage
- Pinguecula and Pterygium

# When to Refer

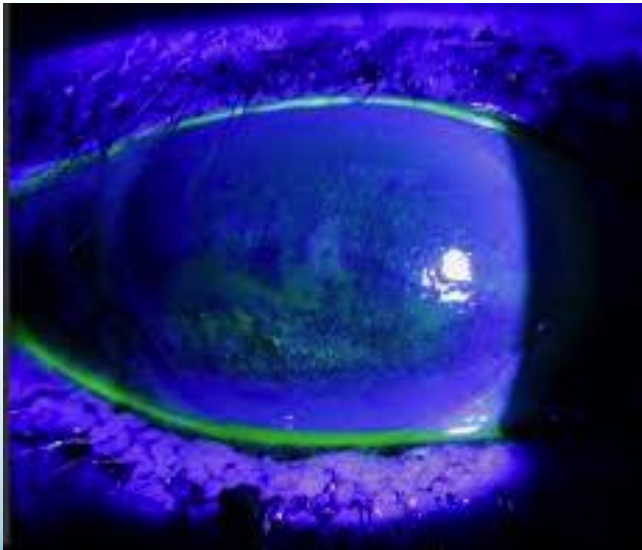
- Any doubt in diagnosis
- Recent eye surgery with complaints
- Ocular trauma with potential loss of vision
- Red eyes in a contact lens user
- Unilateral persistent painful red eye
- Sudden onset BOV
- Sudden change in chronic symptoms
  - E.g. increase in number of floaters or photopsia
- Refer children (<16 y.o.) w ocular complaints
  - < 12 y.o. → KKH

# Management of common conditions

- Dry eye disease
- Dry, gritty, discomfort or tired eyes which get worse throughout the day.
- Mildly sensitive to light (not significant photophobia)
- Slight blurred vision, which improves on blinking
- Both eyes are usually affected (may be asymmetrical symptoms)

# Examination

- Normal eye exam to mild conjunctival injection.
- Corneal staining with fluorescein strip.



# Treatment

- Tear substitutes: mild to moderate cases of dry eye syndrome can usually be successfully treated using over-the-counter artificial tear drops.
- If a patient has severe symptoms and needs to use eye drops more than six times a day, or if they wear contact lenses, advise them to use preservative-free eye drops.

- Eye ointment can also be used to help lubricate eyes, but it can often cause blurred vision, so it is probably best used only at night.
- More severe cases may require specialist medication or lacrimal punctal plugs.

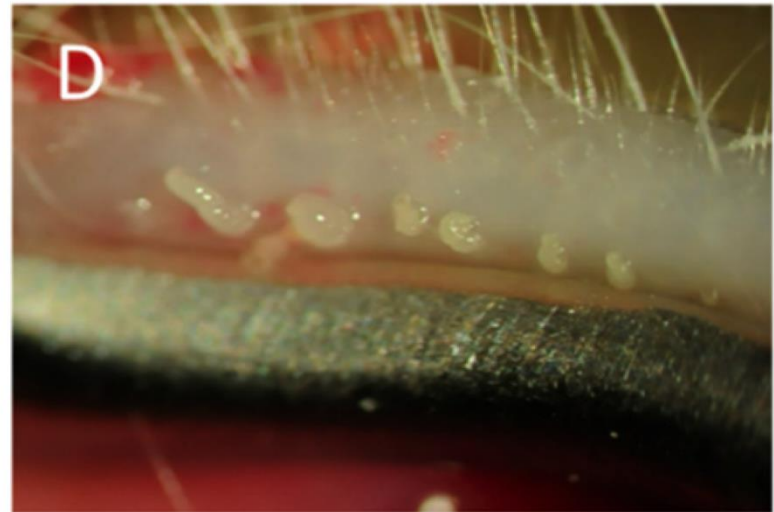
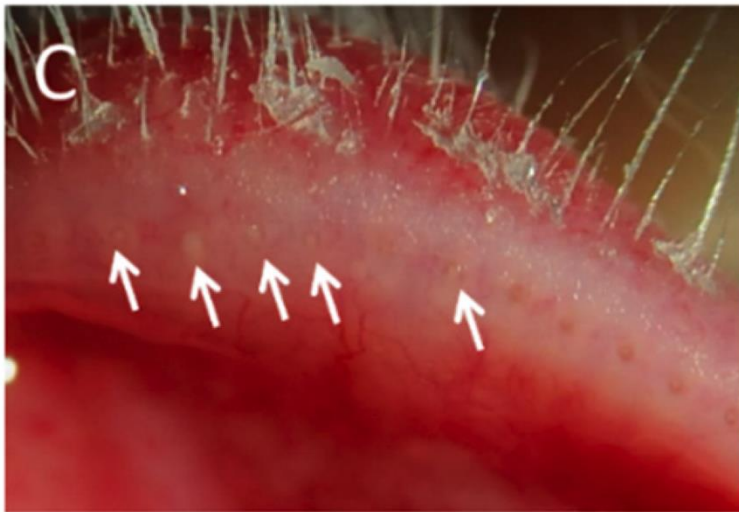


# Advice

- Encouraging frequent blinking, especially during visually attentive tasks such as reading or computer use.
- Minimizing direct exposure to air conditioning or fan.
- Emphasize that it is chronic condition and requires prolonged use of eye drops.
- Eye drops will make eye comfortable but the dry eye sensation might not completely resolve.

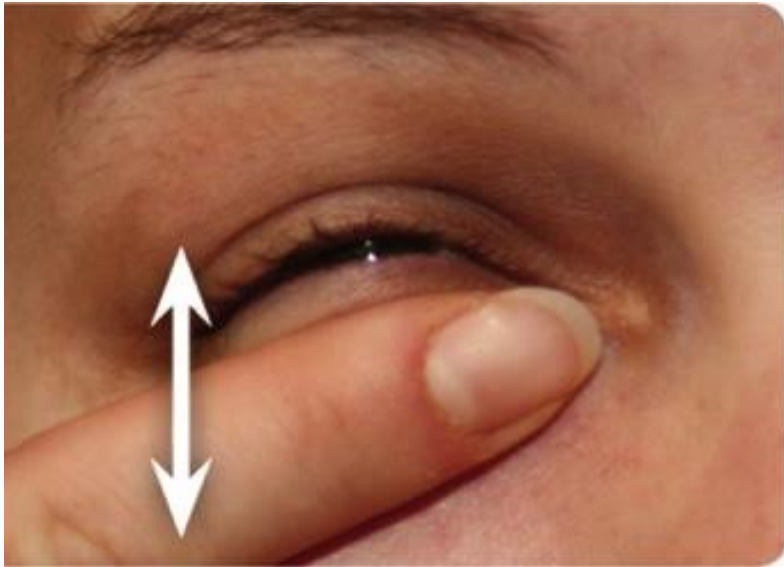
# Blepharitis

- It is a chronic inflammatory disorder of the eyelids.
- There is crusting around the eyelashes with blocked Meibomian glands.



# Treatment

- Applying a warm compress to closed eyelids followed by massage and cleaning the eyelids with soapy applicators usually leads to symptomatic improvement.
- Chronic recurrent condition.



# Chalazion

- A chalazion is a firm round lump in the upper or lower eyelid caused by a chronic inflammation/blockage of the meibomian gland.



# Treatment

- Apply warm compresses.
- If acutely inflamed, prescribe antibiotic ointment (oc fusidic acid/ oc tetracycline) for one to two weeks.
- Usually oral antibiotics are not necessary unless associated with preseptal cellulitis.
- Chalazia will often disappear without further treatment within a few months.
- If conservative therapy fails, it can be treated by surgical incision (incision and curettage under local anesthetic)

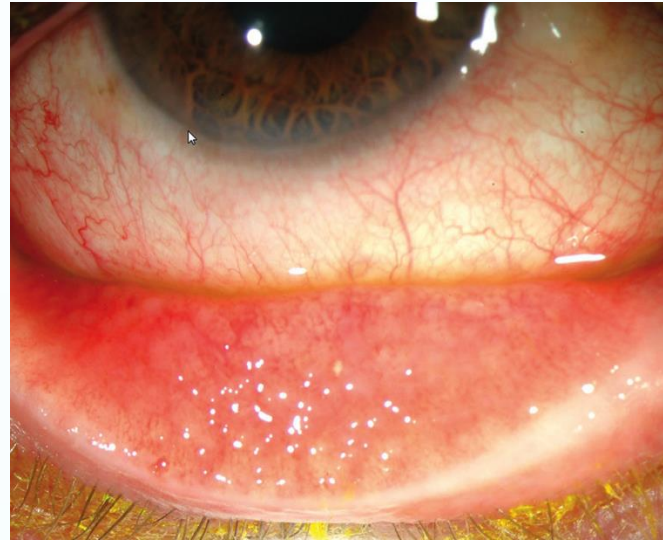


# Acute conjunctivitis

- Red eyes, foreign body sensation, itching, light sensitivity, burning, and watery discharge.
- With bacterial conjunctivitis, patients present with mucopurulent discharge and matting of the eyelids upon waking.
- Patients with viral conjunctivitis usually have a recent history of an upper respiratory tract infection or recent contact with a sick individual.

# Examination

- Visual acuity is usually at or near their baseline vision.
- The eye is diffusely injected and may have chemosis and subconjunctival hemorrhage.
- In some cases, a membrane or pseudomembrane can be appreciated in the fornix.
- Follicles, small, dome-shaped nodules without a prominent central vessel, can be seen on the palpebral conjunctiva.
- The cornea can have subepithelial infiltrates
- Palpation of the preauricular lymph nodes may reveal a reactive lymph node in viral conjunctivitis.



# Treatment

- Treatment for viral conjunctivitis is aimed at symptomatic relief.
- Viral conjunctivitis is self limiting condition.
- Antibiotic eye drops (g. chloramphenicol, g. tobramycin, oc. fusidic acid, oc. tetracycline) – mainly for bacterial conjunctivitis...
- Topical lubricants
- Role of steroid (g. dextracin). Steroids are not necessary and should not be prescribed at primary care level.

# Advice

- Hand hygiene
- Recovery in 1-3 weeks
- One followed by the other eye involvement
- Most of the time eye recovers completely but in some cases corneal infiltrates that can decrease the vision and cause light sensitivity.

# Allergic conjunctivitis

- Red, itchy eyes with ropy discharge.
- Recurrent symptoms.
- Associated with history of allergic rhinitis, asthma and eczema.
- The eye is diffusely injected and may have chemosis.
- Papillae present on palpebral conjunctiva
- Limbitis/ Horner-trantas spots
- Corneal fluorescein staining/ epithelial defect/ shield ulcer





# Treatment

- Avoid exposure to allergen (dust mites, pollens)
- Apply cool compresses.
- Lubricants for occasional itchy eyes.
- Antihistamine or antimast cell drops (eg cromoglycate, patanol) are used for persistent symptoms.
- Eye drops need to be continued regularly for few weeks.
- Role of Naphcon-A (vasoconstrictor/ antihistamine combination)- not more than 3 days.

# Subconjunctival Hemorrhage

- Subconjunctival hemorrhages usually have no cause, but are more common after coughing or vomiting excessively.
- They can also be caused by mild trauma.



# Symptoms

- Patients may describe a mild popping sensation in the eye prior to observing the redness.
- May describe a mild foreign body sensation or an eye ache.
- Usually symptom free.

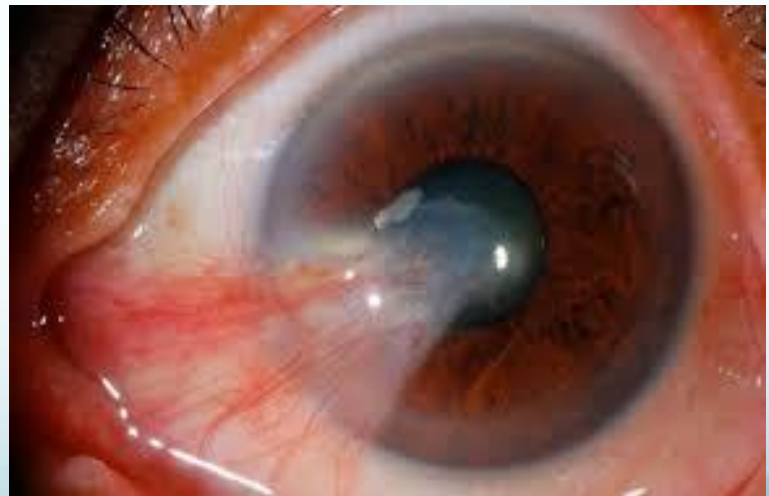
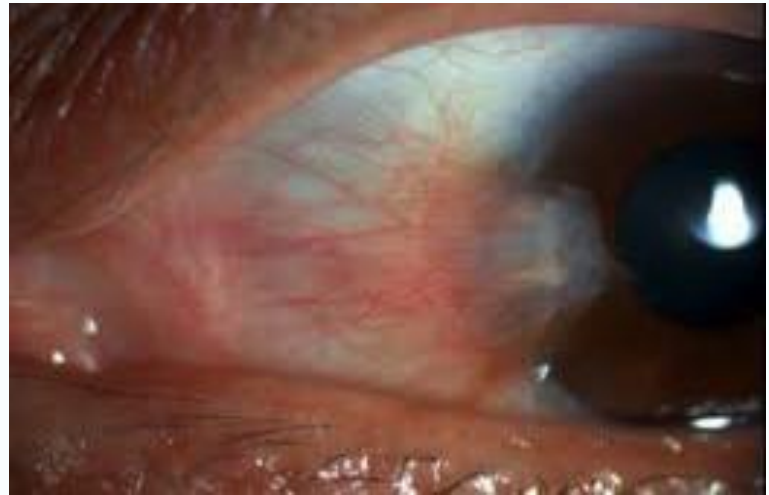
# Treatment

- If no history of trauma, no treatment is required; reassure patient that the hemorrhage will resolve over the course of a week or two.
- If trauma is the cause, consider referral to an ophthalmologist to ensure no underlying scleral damage or other injury.
- If subconjunctival hemorrhages are recurrent, further investigations may be required to exclude any clotting disorders; however in most cases no underlying serious cause will be found.

# Pinguecula and Pterygium

- A pinguecula is a raised yellowish white mass within the bulbar conjunctiva, adjacent to the cornea.
- It does not tend to grow onto the cornea.
- However, it may cause irritation or cosmetic concern.
- A pterygium is a fleshy triangular growth of bulbar conjunctiva that may spread across and distort the cornea and induce astigmatism
- Symptoms may include decreased vision and foreign body sensation.







# Advice

- Reduce exposure to ultraviolet light by wearing ultraviolet-blocking sunglasses, wearing a cap with a wide brim, and seeking shade from direct sunlight.
- Lubricants to relieve irritation.
- If involving visual axis, persistent inflammation or cosmetically unacceptable then requires surgical excision.

# Management of chronic conditions

- Dry eye
  - Cataracts
  - Floaters
- 
- Age related chronic condition
  - Persistent symptoms

# Dry eyes

- Need to continue using lubricating eye drops.
- For mild-moderate dry eyes, all over-the-counter eye drops are similar.
- Dry eyes advice.

# Cataract

- Usually start developing from the age of 40.
- Earlier in some patients (steroid use, diabetics).
- Surgery is required when affecting vision or activities of daily life.

# Floaters

- Once PVD occurs, floaters will never resolve.
- More prominent in bright light or white background
- RD advice- Return if worsening of floaters, flashes or blur vision/ curtain effect.

# Acknowledgement

Dr Jayant V Iyer

Consultant, Singapore National Eye Centre (SNEC)

Essential Ophthalmology. Red Cell Series.

*Chee SP, Jap A, Iyer JV. 2012*



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# *A Presentation by Singapore National Eye Centre*

