



CONJUNCTIVITIS

By: Dr. Charity Zalwango

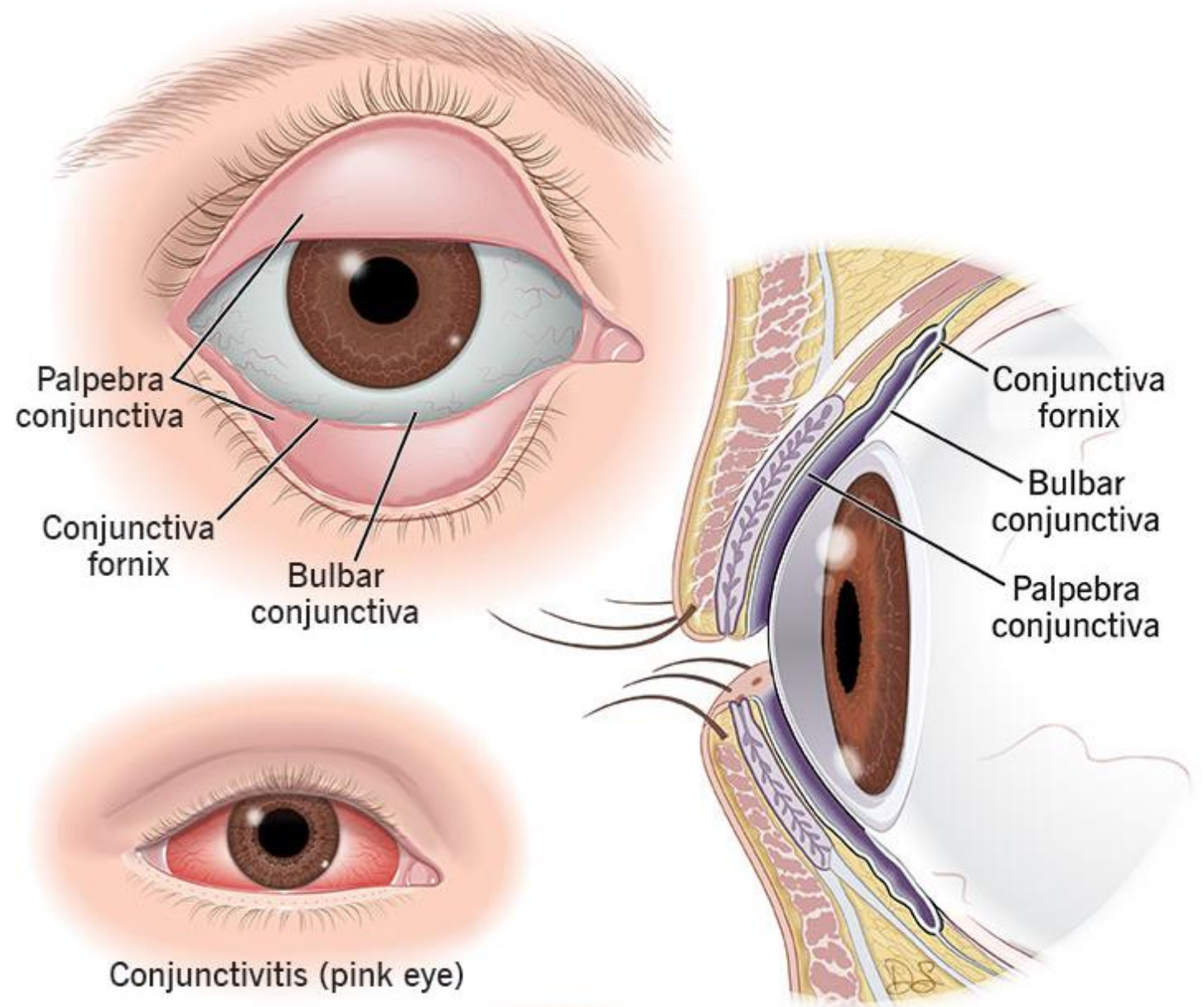
OBJECTIVES:

To understand;

- Causes
- Clinical presentation
- Diagnosis
- Management
- Complications
- Prevention



ANATOMY



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DEFINITION:

- Conjunctivitis refers to the inflammation of the conjunctival tissue characterized by engorgement of blood vessels, pain and ocular discharge.
- It is one of the most common causes of hospital visits.



CAUSES

Common Conjunctivitis Causes



Viruses which cause
Diseases like mumps
Measles etc...



Allergens, allergic
Diseases like asthma
Eczema and hay fever



Bacterias like
staphylococcus aureus
Streptococcus, etc...



Irritants, smoke, dust
wind, bright ultraviolet
light, chlorine etc...



Fungi, organic
matter like dirt
or plants



Eye Conditions,
like Blepharitis, Entropion
& Chronic dacryocystitis



VIRAL CONJUNCTIVIS

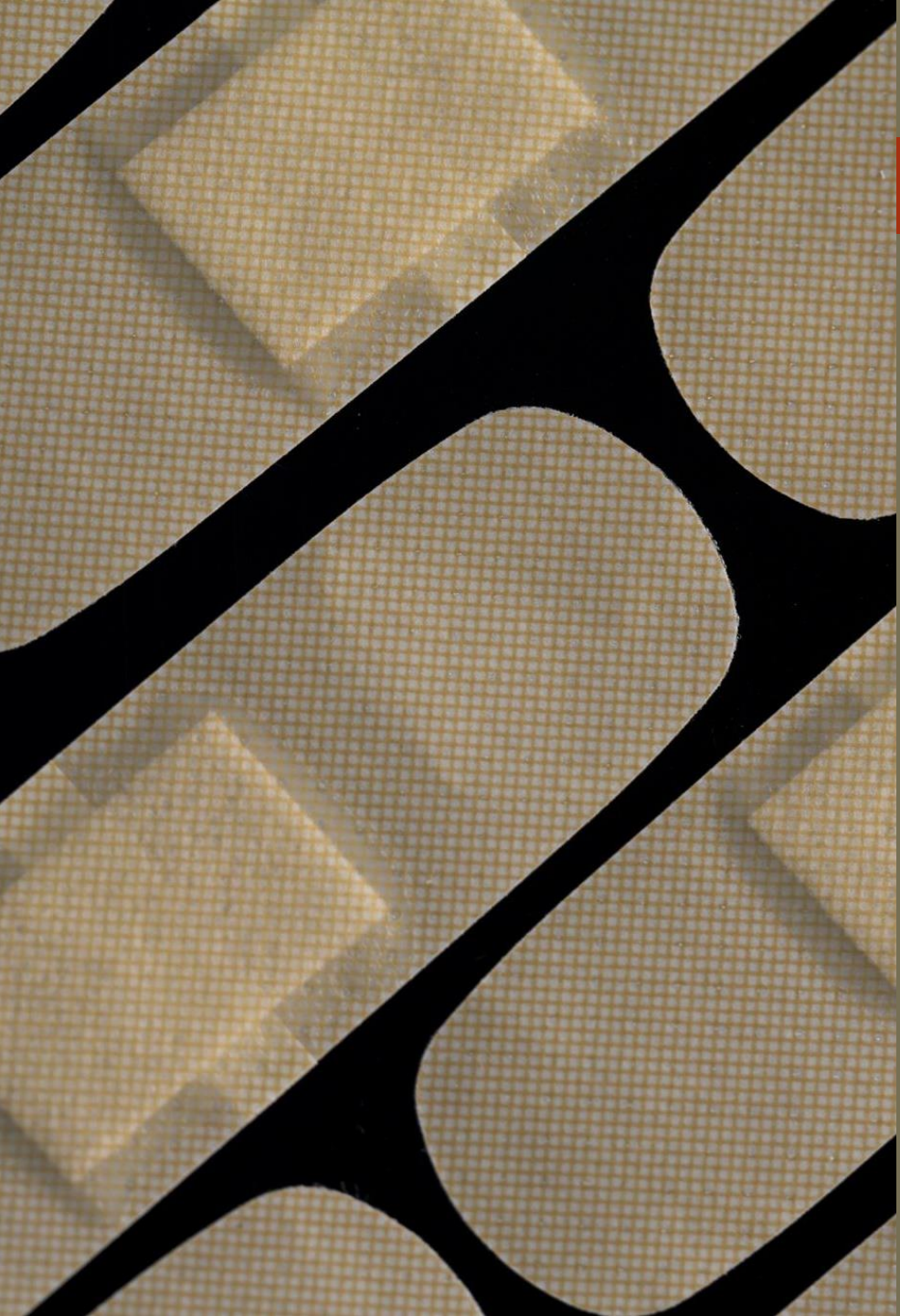

- 90% of viral conjunctivitis cases are caused by adenoviruses.

(I) Pharyngoconjunctival fever is associated with pharyngitis, fever and acute follicular conjunctivitis usually in children is commonly caused by serotypes 3, 4, and 7.

(ii) Epidemic keratoconjunctivitis is more severe with follicular conjunctivitis, corneal infiltrates, corneal scarring, and pseudomembranes. Serotypes 8, 19 and 37.



- Acute haemorrhagic conjunctivitis is highly contagious and is associated with prominent subconjunctival haemorrhage.
- caused by enterovirus 70(EV 70), coxsackievirus A24 and adenovirus serotype 11.
- Herpetic conjunctivitis; 1.3- 4.8% are caused by HSV, unilateral follicular conjunctivitis, and vesicular lesions on the eyelids.

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- Spread: - contaminated hands, discharge from eyes, contaminated medical equipment, swimming pools.

NOTE: Due to its highly contagious nature, adenovirus conjunctivitis

Outbreaks can occur in various settings; like schools, hospitals, and communities leading to localized epidemics.

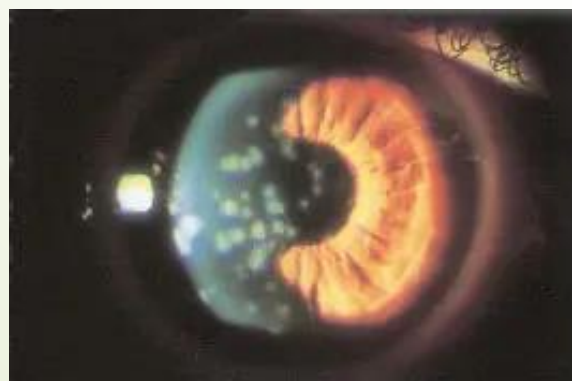
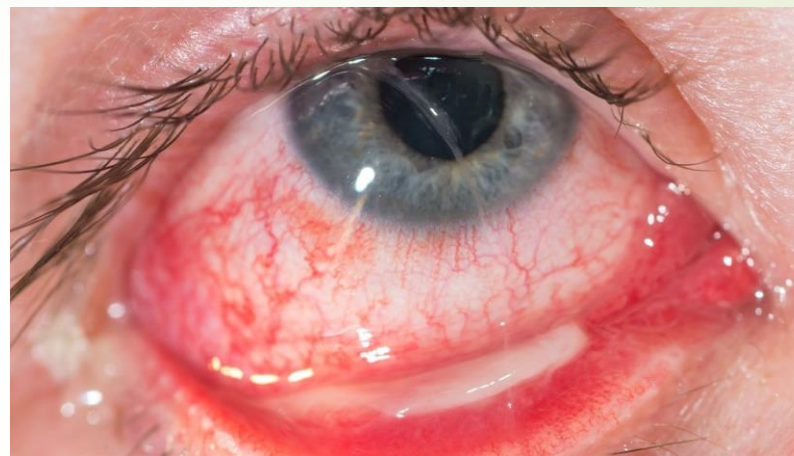
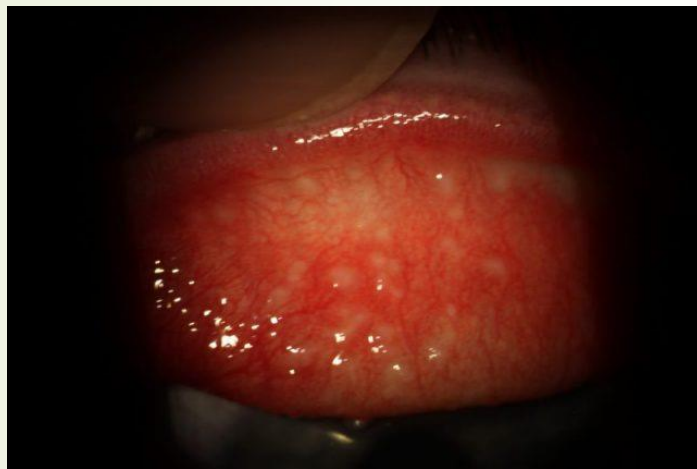


Symptoms

- Redness
- Itchiness
- FB sensation
- Burning sensation
- Tearing
- Hxo of recent URTI



Signs

- Conjunctival follicles
- Tender palpable lymph nodes
- Watery discharge
- Edematous lids
- Pseudomembrane
- Subepithelial infiltrates



MANAGEMENT

- Reassure the patient that viral conjunctivitis is self limiting and typically gets worse in the first 4-7 days.
- Preservative free artificial tears 4-8x a day
- Antihistamine drops to relieve itching
- Topical NSAIDS help reduce redness and pain
- Cool compresses
- Pseudomembranes can be peeled off to alleviate pt discomfort and prevent future scar formation.
- Povidone Iodine irrigation.(5%)

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- NOTE: Topical corticosteroid use is only indicated in membrane formation and subepithelial infiltration.
 - Adverse effects:
 - prolongation of viral shedding
 - exacerbation of HSV keratitis
 - increase in IOP

ANTIBIOTICS do not play a role in viral conjunctivitis. They can induce ocular toxicity , increase bacterial resistance etc

PREVENTION

- Avoid touching and rubbing eyes, shaking hands, sharing towels/hankies
- Restrict work and exposure to others while eyes are red and discharging
- Stay home during infectious phase, this helps limit disease spread
- Hand hygiene; wash with soap and water
- Contact with infected items such as towels, door handles etc should be avoided
- Environmental cleaning and disinfection

BACTERIAL CONJUNCTIVITIS

- The most common organisms are; staphylococcus aureus, haemophilis influenza, and staphylococcus pneumonia.
- Ophthalmica neonatorum; chlamydia trachomatis, Neisseria gonorrhoea
- Bacterial conjunctivitis can result from direct contact with infected individuals, and abnormal proliferation of the native conjunctival flora.

Redness
Fb sensation
Mucopurulent discharge





- Ophthalmic drug therapies for acute bacterial conjunctivitis.
Antibiotic agents Treatment
Aminoglycosides
Gentamicin Ointment: 4 ×/d for 1 wk Solution: 1-2 drops 4 ×/d for 1 wk
Tobramycin Ointment: 3 ×/d for 1 wk
- **Fluoroquinolones**
Besifloxacin 1 drop 3 ×/d for 1 wk
Ciprofloxacin Ointment: 3 ×/d for 1 wk Solution: 1-2 drops 4 ×/d for 1 wk
Gatifloxacin 3 ×/d for 1 week
Levofloxacin 1-2 drops 4 ×/d for 1 wk
Moxifloxacin 3 ×/d for 1 wk
Ofloxacin 1-2 drops 4 ×/d for 1 wk
- **Macrolides**
Azithromycin 2 ×/d for 2 d; then 1 drop daily for 5 d
Erythromycin 4 ×/d for 1 wk
- **Sulfonamides**
Sulfacetamide Ointment: 4 ×/d and at bedtime for 1 wk Solution: 1-2 drops every 2-3 h for 1 wk
- **Combination drops**
Trimethoprim/polymyxin B 1 or 2 drops 4 ×/d for 1 wk

ALLERGIC CONJUNCTIVITIS

- Usually caused by airborne allergens such as pollen, dust mites
- Seasonal, perennial and vernal keratoconjunctivitis
- Predominately Ig E mediated hypersensitivity reaction
- Symptoms; tearing, itching, burning sensation
- Signs ; papillae , hyperemia, cobblestones(vkc)



TREATMENT

- Avoidance of allergen is the main stay of treatment.
- Lubricating eye drops
- Anti histamines and mast cell stabilizers(olapatidine, ketotifen, azelastine)
- Low potent steroids in severe cases
- Topical NSAIDS(diclofenac, ketorolac)



Differential diagnosis

- Glaucoma
- Keratitis
- Subconjunctival haemorrhage
- Dry eye
- Scleritis
- pterygium

Complications

Complications of acute conjunctivitis are rare.

Pts of HSV are at a higher risk. They tend to develop corneal complications, uveitis.

Pts of Neisseria gonorrhoea ; corneal perforations

References

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- Community Eye Health Journal
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