Conjunctivitis: inflammation of the conjunctiva (transparent mucous membrane that lines inside of eyelids & outside of sclera)

- Viral
- Bacterial (acute, chronic, hyperacute)
- Herpes zosters (ophthalmicus)
- Chlamydia
- Allergic
- Dry eye
- Blepharitis
- Corneal abrasion/foreign body
- Subjunctival hemorrhage
- Episceritis
- Keratitis
- Irititis
- Glaucoma
- Chemical burn
- Scleritis

Viral Conjunctivitis

Sx: diffuse redness; normal vision; PEARL

Signs: minimal pain; gritty sensation; mild itchiness; watery/serous discharge

Causes: adenovirus, enterovirus, coxsackievirus, VZV, HSV, Esptein-Barr virus, influenza

Spreads via direct contact (don't share personal items & hand-washing)

Typically starts with URTI → spreads to eye(s) → resolves spontaneously w/in days to 1-2 weeks

Treatment:

1. Cold compress
2. Ocular decongestants/vasoconstrictors (1-2 drops QID prn x 3 days)
   * beware stinging & rebound hyperemia (limit 3-5 days)
3. Artificial tears

Acute bacterial conjunctivitis

Signs: eyelid edema; normal vision; PEARL; diffuse redness; no corneal involvement

Sx: mild-mod pain/stinging; foreign body sensation; mucopurulent discharge; glued eyes (upon waking)

Causes:
Children: S. pneum & H. flu

Adults: Staph aureus

Spreads via direct contact (contaminated fingers) – hand hygiene & don't share personal items

Typically resolved w/in 3-4 wks (days w/ effective txt)

Categories:

Acute: most common; <3-4 wks

Hyperacute: rapid onset & progression → corneal perforation; opious purulent discharge, pain, diminished vision (N. gonorrhea)
→ REFERRAL to ophthalmologist

Chronic: symptoms > 4 wks (w/ relapses after txt)
→ REFERRAL to ophthalmologist

Bacterial conjunctivitis: no clear efficacy advantage of one topical antibiotic option over another
→ majority of cases are self-limiting improving w/in 2-5 days (abx txt = quicker recovery w/in 2-5 days)
→ fluoroquinoones reserved for more severe infections (involving cornea)
= delaying abx treatment in patients WITHOUT RISK FACTORS

Risk factors for complications:

1. Anyone potentially exposed to virulent/unique bacterial strains (HCPs/pts)
2. Immunocompromised
3. Diabetes
4. Contact lens wearers
5. Recent ocular surgery

Empiric treatment:

- Sulfacetamide sodium 10% or 30% solution: broad spectrum (bacteriostatic): 1-2 drops q2-3h
- Chloramphenicol 0.5% ophthalmic solution: 1-2 drops q3-6h
- Genatmicin
- Neomycin

Non-pharm: eyelid margin hygiene: warm compress to closed eyelids 5-10 mins; gently scrub lid margin w/ cotton swab/cloth cleansing w/ warm water (+/- drop of baby shampoo)

Allergic Conjunctivitis

Signs: normal vision/PEARL; diffuse redness (conjunctival injection); NO corneal involvement; cobblestone papillae under upper eyelid (vernal conjunctivitis); blistered conjunctiva (chemosis)

Sx: bilateral; painless tearing; intense itchiness; stringy/ropy/ watery discharge

Causes: pollen, dust mites, animal dander/feathers, environmental antigens

Associated with atopic diseases (asthma, eczema, allergic rhinitis), seasonal allergies

For prevention: avoid exposure if possible; consider mattress and pillow covers

Treatment options:

1. Mast cell stabilizer: 2-3 days for onset of sx relief
   → for longer term symptom management/control
2. Histamine H1 receptor antagonists (antihistamines): more immediate relief of symptoms (w/in 30 mins)
3. Decongestant/vasoconstrictor: relief in mins – hours
   → short term sx management (3-4 days max – risk of rebound congestion)

Herpes Zoster Opthalmicus: shingles affecting the eye

- HSV3 (Varicella/Chicken Pox) often occurring in older adults & elderly
- Reactivation of latent virus along ophthalmic division of trigeminal nerve
- Rash follows "dermatomal" distribution that follows 5th cranial nerve and may carry into the eyelid, conjunctiva, and any other parts of the eye
- Sx: very sensitive, painful, tingling rash → REFERRAL

Patient history during eye exam

1. Do you have other systemic symptoms? Cold/flu-like symptoms (more viral)?
2. Is it affecting one eye (unilateral) or both (bilateral)?
3. Do you have an allergy history? Exposure to chemicals/foreign body?
4. Do you have other systemic conditions? New medications?
5. **Do you wear contact lenses?**

Non-pharmacological txt in any red eye case:

- Stop wearing contact lenses
- Avoid make-up
- Avoid smoke & wind exposure

Referral (to ophthalmologist):

- Is there pain?
- Vision changes?
- Sensitivity to light (photophobia)?
- Was there trauma to the head or eye?
- Is there corneal involvement (keratitis)?