

## Ophthalmology Disorders: Conjunctivitis & Glaucoma

### Conjunctivitis (Bacterial & Viral)

**Definition:** Inflammation of the conjunctiva (mucous membrane covering sclera and inner eyelid), commonly caused by infection or allergy.

#### Etiopathogenesis:

- Bacterial: Staphylococcus aureus, Streptococcus pneumoniae, Haemophilus influenzae.
- Viral: Adenovirus (most common), enteroviruses, herpes simplex.
- Transmission via direct contact, contaminated objects, or respiratory droplets.
- Pathophysiology: Pathogen invasion → local inflammation → hyperemia, edema, and discharge.

#### Clinical Manifestations:

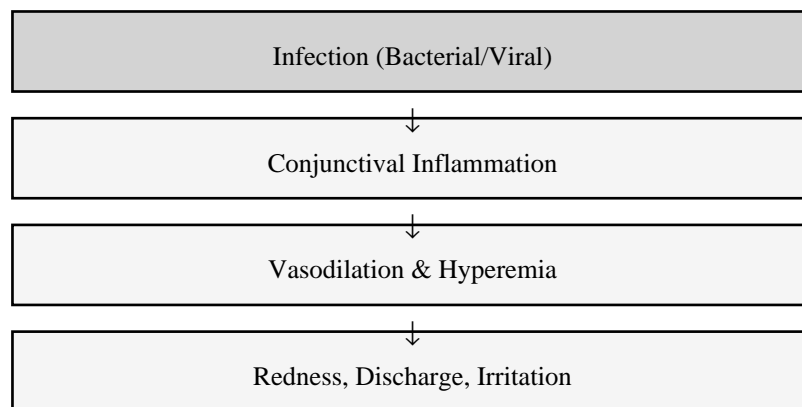
- Red eye, itching, burning, foreign body sensation.
- Tearing, photophobia.
- Bacterial: purulent discharge, eyelids sticking.
- Viral: watery discharge, preauricular lymphadenopathy, often bilateral.

#### Management:

Non-pharmacological: Hygiene measures, hand washing, avoiding sharing towels, cold compresses, artificial tears.

Pharmacological: Topical antibiotics (bacterial), antiviral therapy for HSV (acyclovir), antihistamines or lubricants for viral cases.

#### Flowchart: Pathophysiology of Conjunctivitis



### Glaucoma

**Definition:** A group of eye disorders characterized by optic neuropathy associated with raised intraocular pressure (IOP), leading to progressive vision loss.

#### Etiopathogenesis:

- Imbalance between aqueous humor production and outflow.
- Open-angle glaucoma: reduced trabecular meshwork drainage.
- Angle-closure glaucoma: blocked anterior chamber angle.
- Risk factors: age, family history, diabetes, hypertension, corticosteroid use.

**Clinical Manifestations:**

- Open-angle: gradual peripheral vision loss, tunnel vision.
- Angle-closure: sudden severe eye pain, headache, halos around lights, nausea, vomiting, blurred vision.
- Optic disc cupping on fundoscopy.

**Management:**

Non-pharmacological: Regular screening in high-risk patients, lifestyle modification (control of diabetes, hypertension).

Pharmacological: Topical prostaglandin analogs, beta-blockers, alpha agonists, carbonic anhydrase inhibitors, osmotic agents (for acute angle closure).

Surgical options: Laser trabeculoplasty, iridotomy, trabeculectomy.

**Flowchart: Pathophysiology of Glaucoma**