

Diseases of the conjunctiva system

Sawa private university

College of health and medical

technology

fourth class

Conjunctival degeneration

seventh eye disease lecture



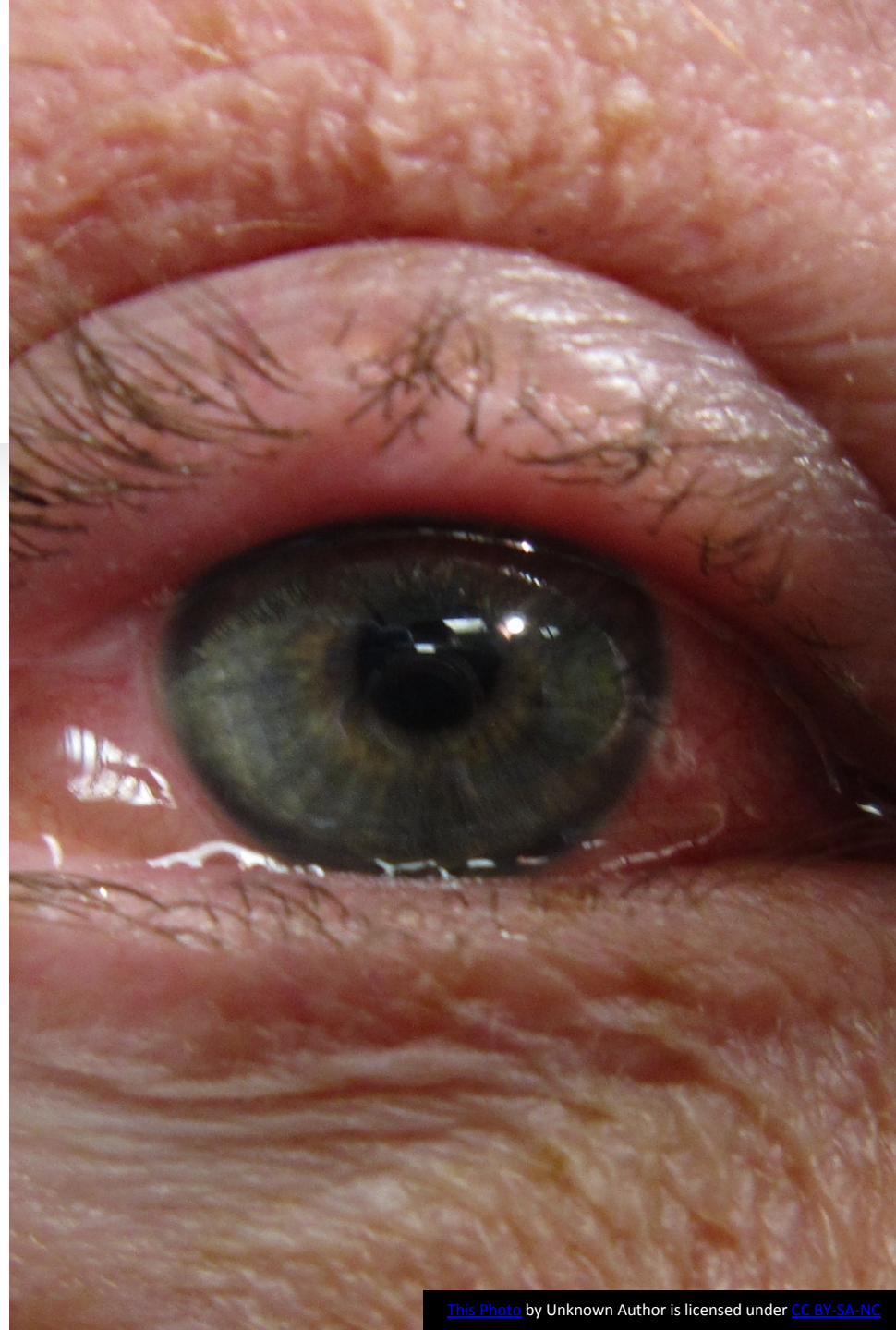
Dr. Muhammad Sajad Hussan

Conjunctiva Functions

- • Lubrication: mucin + tears maintain smooth ocular surface
- • Immune defense: IgA + lymphoid follicles
- • Barrier protection against microbes & irritants
- • Allows smooth eye movements

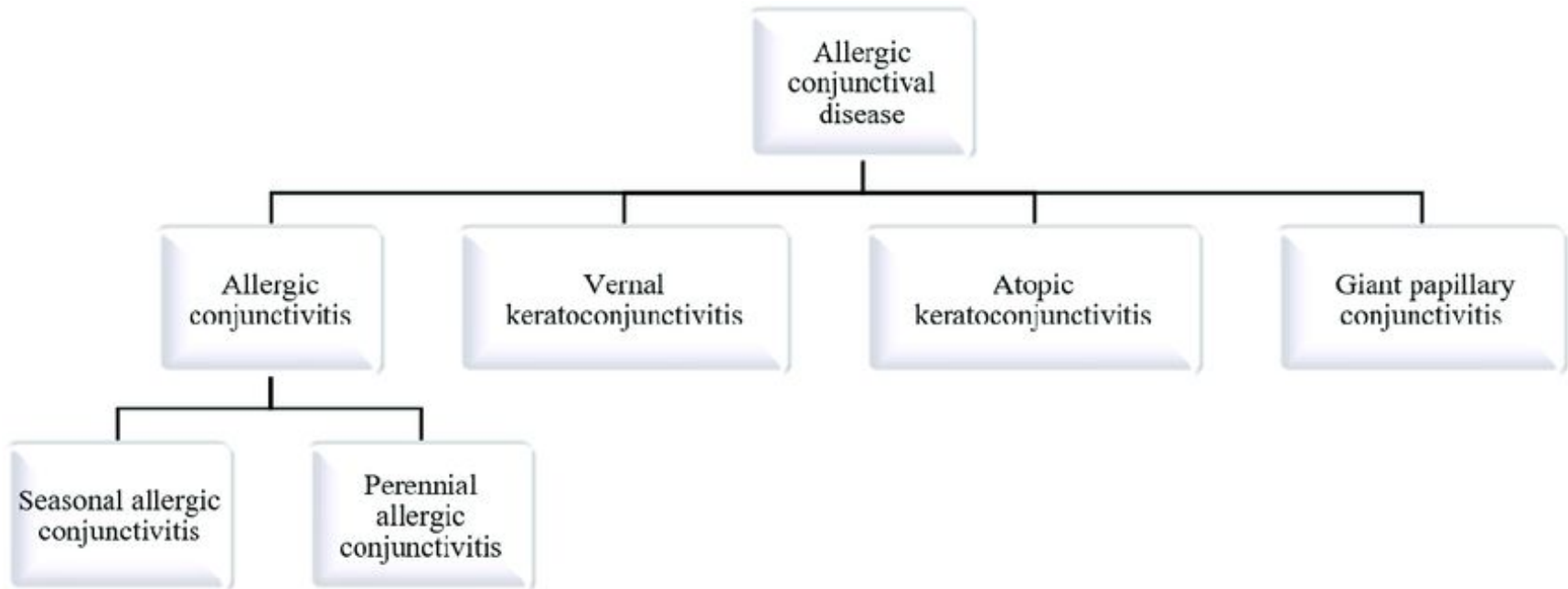
Allergic Conjunctivitis Mechanism

- • Type I Hypersensitivity Reaction
- • Allergen triggers mast cell degranulation
- • Histamine release → itching, redness, vasodilation
- • Chronic inflammation may cause papillae formation



Classification of Allergic Conjunctivitis

- 1. Seasonal AC – pollen-related
- 2. Perennial AC – dust/mites; year-round
- 3. Vernal KC – children, hot climates
- 4. Atopic KC – adults w/ eczema
- 5. Giant Papillary – contact lenses/friction

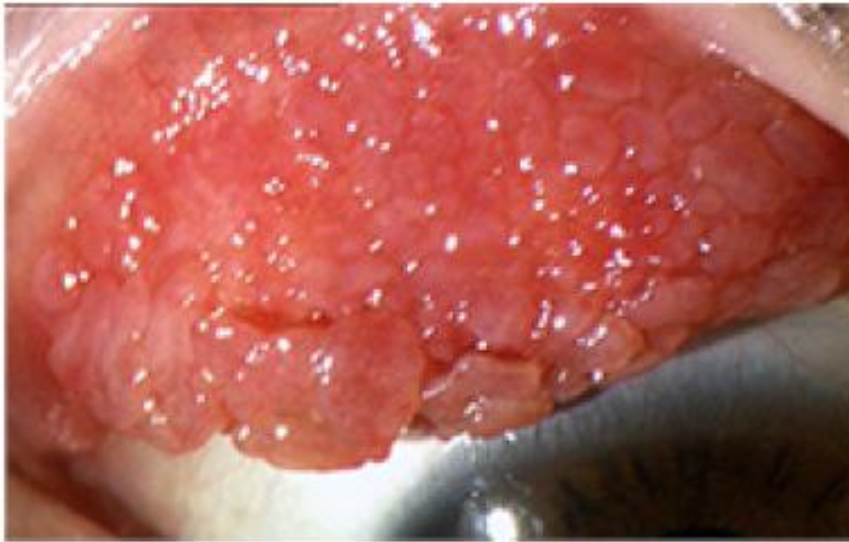


Clinical Signs in Allergic Conjunctivitis

- • Papillae (raised, vascular structures on tarsal conjunctiva)
- • Chemosis (conjunctival edema)
- • Hyperemia (redness)
- • Ropy mucous discharge
- • Eyelid dermatitis in chronic cases

Vernal Keratoconjunctivitis (VKC)

- • Mostly males aged 5–20 in warm climates
- • Severe itching & photophobia
- • Trantas dots at limbus
- • Cobblestone papillae on upper tarsal conjunctiva
- • Risk of corneal shield ulcer



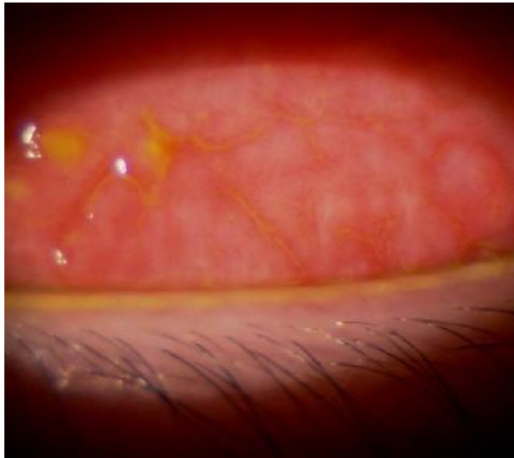
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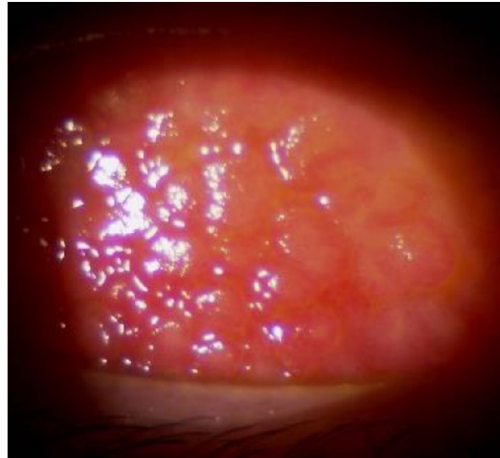
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Atopic Keratoconjunctivitis (AKC)

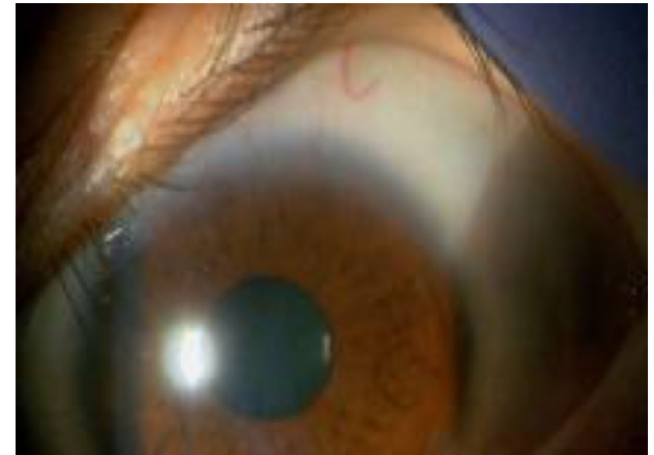
- • Adults (20–50) with chronic eczema or atopic dermatitis
- • Chronic disease → corneal scarring & neovascularization
- • Eyelid skin thickened & dry
- • Requires long-term immunomodulator therapy



(a)



(b)



(c)

Giant Papillary Conjunctivitis (GPC)

- • Mechanical irritation: contact lenses / sutures
- • Large papillae cause lens intolerance
- • Symptoms: itching, lens movement, mucus
- • Management: stop lenses + change lens hygiene/material



Treatment Strategy for Allergic Conjunctivitis

- Mild:
 - Lubricants + cold compress
- Moderate:
 - Antihistamines (Olopatadine, Ketotifen)
 - Mast cell stabilizers (Cromolyn sodium)
 - Dual-action drops preferred
- Severe:
 - Short course topical steroids
 - Cyclosporine/Tacrolimus for chronic control

Definition of Degenerative Diseases of the Conjunctiva

Degenerative diseases of the conjunctiva are non-inflammatory, progressive structural changes in the conjunctival tissue that occur due to long-term environmental exposure, aging, or metabolic changes.

These conditions cause the conjunctiva to lose its normal elasticity and transparency, leading to thickening, yellow discoloration, or fibrovascular growth, but without infection or primary inflammation.

Key Characteristics

- **Chronic and slowly progressive**
- **Often linked to:**
 - UV radiation
 - Dry climate / wind exposure
 - Aging (elastotic degeneration)
- **Usually painless**
- **May cause:**
 - Cosmetic concerns
 - Irritation
 - Astigmatism (if cornea is involved)

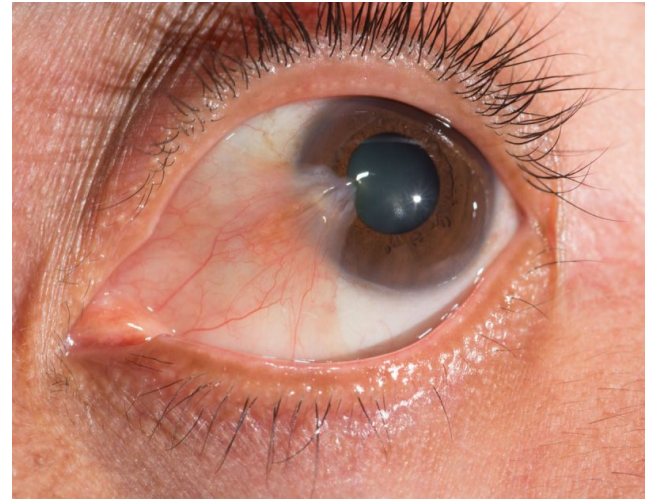
Pinguecula

- • Yellowish conjunctival degeneration (elastoid)
- • Caused by UV, wind, dry environment
- • Usually asymptomatic but may inflame
- • Manage with lubrication + sunglasses
- • Steroids for pingueculitis



Pterygium

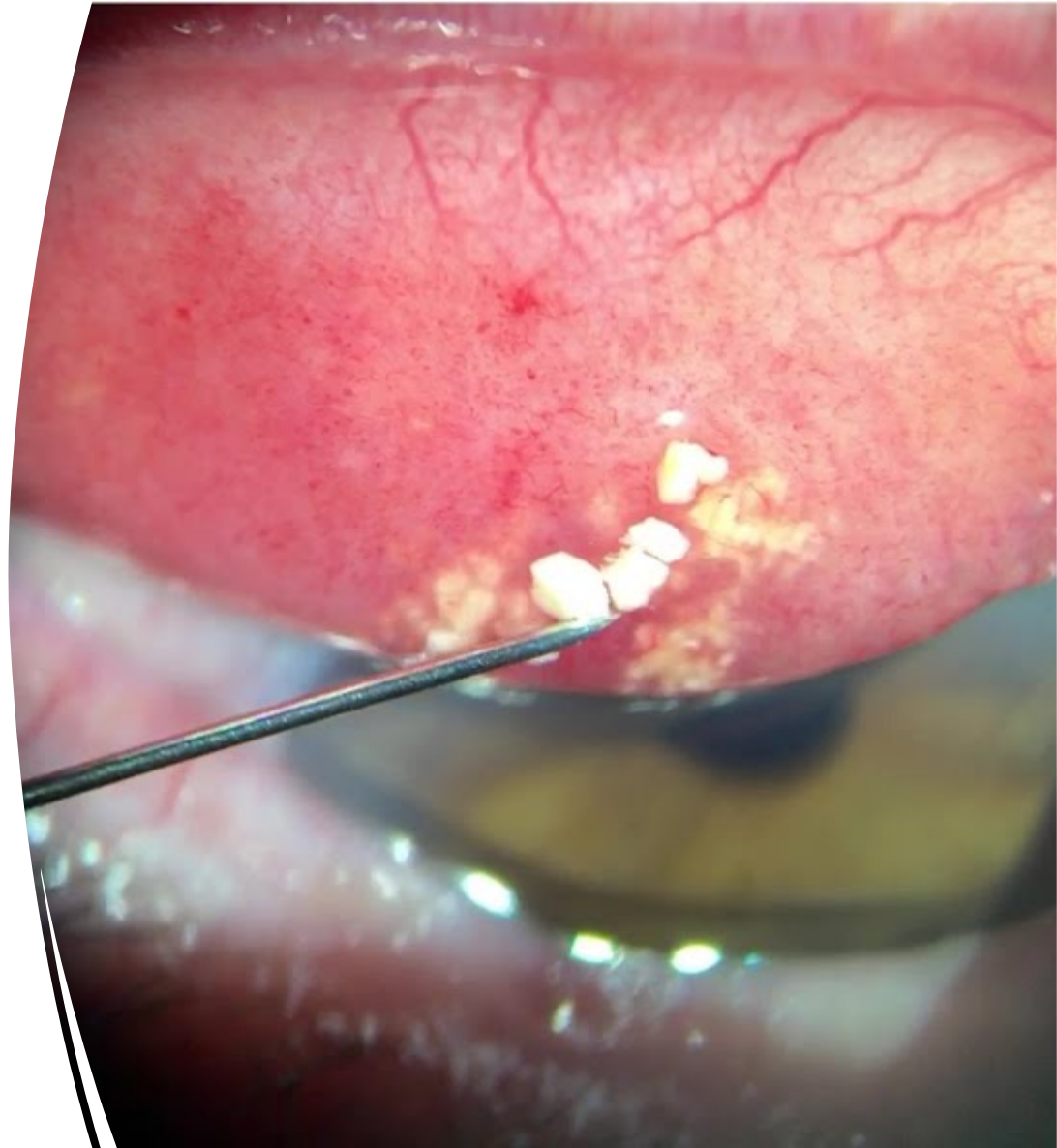
- • Fibrovascular growth invading cornea
- • May induce astigmatism
- • Risk factors: UV, outdoor work, dust
- • Surgery indicated if vision affected or progress
- • Recurrence reduced by conjunctival graft



Conjunctival Concretions & Bitot Spots

- Concretions:
 - Calcified epithelial debris
 - Common in elderly, dry eye
 - Remove if irritating
- Bitot Spots:
 - Foamy patches from Vitamin A deficiency
 - Seen in malnutrition
 - Treat with Vitamin A replacement

ACTIVE CONCRETIONS "FEELS LIKE
THERE ARE ROCKS UNDER MY EYELID"
SINGLE CONCRETION REMOVAL TECHNIQUE



Complete Summary

Allergic diseases →
inflammatory &
immune-mediated → treat
inflammation

Degenerative diseases →
UV/dryness related → protect +
surgical correction if needed

Early recognition prevents
corneal complications and
visual loss.