

VENERAL KERATOCONJUNCTIVITIS

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It is a recurrent, bilateral, interstitial, self-limiting, allergic inflammation of conjunctiva having periodic seasonal incidence frequently involving cornea as well. It has synonyms like spring catarrh, seasonal allergic conjunctivitis, warm weather conjunctivitis.

Epidemiology

It is common in India with exacerbations in spring and summer or on change in climate to warm environment. It is common in boys under 10 years of age and is a self limiting disease. Limbal form of VKC – common in dark skinned individuals from Africa & India.

Pathology

•VKC is **type 1 Hypersensitivity reaction** (IgE mediated) to exogenous agents.

•In individuals previously sensitized to an antigen a rapid immunological reaction occurs within minutes after combination of that antigen with antibody bound to mast cells.

• Activation of mast cells release mediators – Histamine, Heparin, Prostaglandins,

Leukotrienes, ECFA, TNF,EMBP etc

Effect on Conjunctiva

•Conjunctival epithelium – hyperplasia, downward projection in sub-epithelial tissue

• Adenoid Layer – Eosinophil infiltration; Plasma cells, lymphocytes, basophils and histiocytes.

•Fibrous layer – Proliferation, hyaline changes

•Conjunctiva vessel – Proliferation, increased permeability, vasodilatation.

All these pathological changes lead to formation of multiple papillae in the upper tarsal conjunctiva

Symptoms

•Symptoms include burning sensation, itching, Intense photophobia, Chemosis , Lacrimation, Characteristic white stringy mucous discharge, Eyelid edema, Blepharospasm ,Foreign body sensation , Running nose and Functional and behavioral abnormality in children.

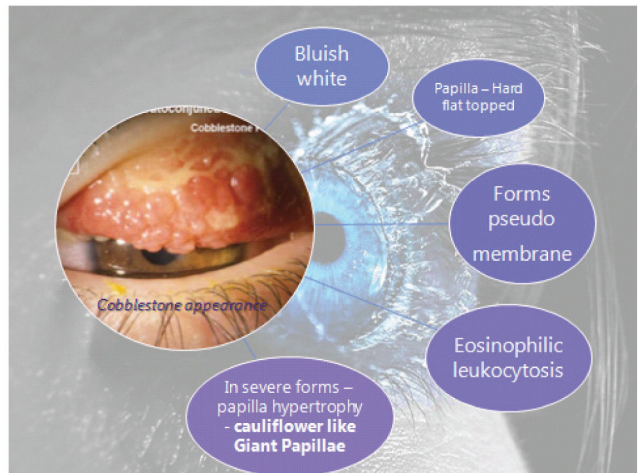
Palpebral form of VKC

- Upper tarsal conjunctiva of both eyes
- On everting upper eyelid – Palpebral conjunctiva is seen to be hypertrophied and mapped into polygonal raised areas resembling **cobblestone**.



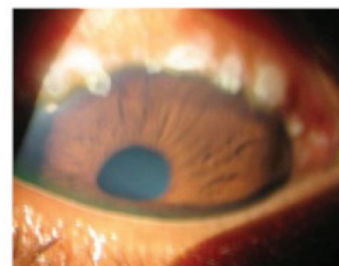
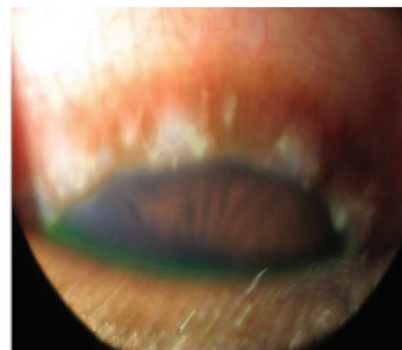
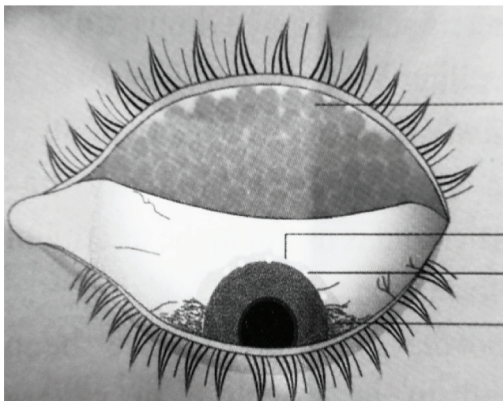
Bulbar/Limbal form

- Dusky red triangular congestion of bulbar conjunctiva
- Translucent gelatinous accumulation of tissue around limbus
- Presence of discrete whitish raised dots called **Horner-Tranta's** spots composed of eosinophilic aggregates and epithelial debris.



Mixed form

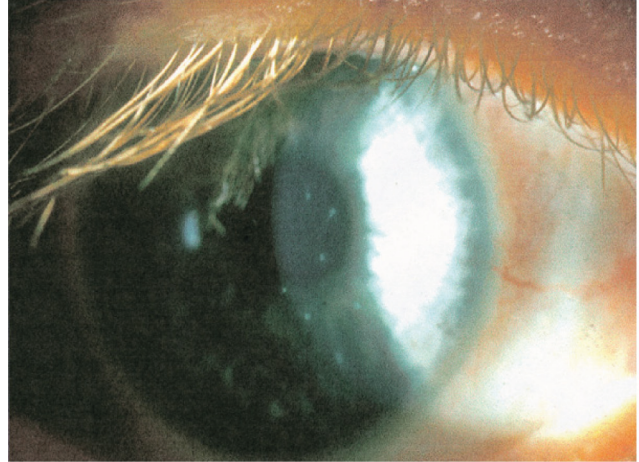
- Combined features of both palpebral and bulbar forms Co Cobble stone papillae.
- Gelatinous limbal membrane Tantra' s spot Dusky red triangular congestion



Complications

Punctate Epithelial Keratitis

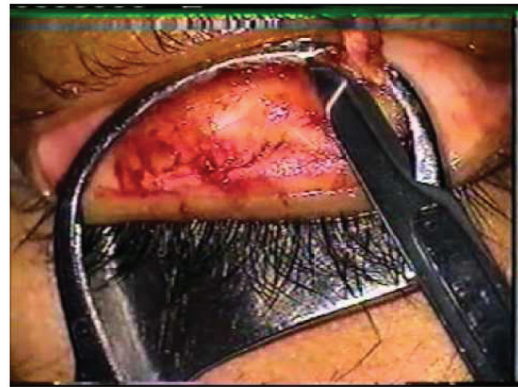
- Complication of palpebral form
- Lesions are fine, diffuse, solitary, superficial; usually located on upper third of cornea.
- Occurs due to toxic affects of mediators released by conjunctiva.
- Rarely painful
- Stains with Rose bengal and Fluroscein dyes.



Ulcerative Vernal Keratitis

- Areas of punctuate epithelial keratitis coalesce forming frank epithelial *macroerosions* due to chronic mechanical irritation from giant tarsal papillae.

These ulcers are called shield ulcers.



Vernal Corneal Plaque

- Cells and mucous deposited in bed of lesions
- Bare areas get coated by layer of altered exudates leading to formation of homogenous whitish **vernal plaque** firmly anchored to underlying corneal stroma
- Noteworthy risk of bacterial superinfection and corneal opacity Subepithelial scarring
- Vernal plaques maintain inflammatory process and prevent re-epithelization
- Rarely it induces corneal neovascularization and once healed, it leads to anterior stromal opacities due to formation of **ring scar**.

