

# Vernal Keratoconjunctivitis and its homoeopathic management

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**Abstract-** Vernal Keratoconjunctivitis is a common bilateral atopic disease clinically characterized by limbal papillae (Horner Tranta dots) having papillary, limbal, and mixed forms. The most consistent presentation is itching, and the episodes are often recurrent, usually perennial in the beginning, and become chronic over time. The males are more often affected than females. It is commonly found in males of age less than 25 years. It predominantly affects the children. It is usually chronic and bilateral but sometimes it may be asymmetrical. Histopathology shows eosinophils in the conjunctival secretions. The treatment of this condition was difficult initially, but with the advancement in research, the immunological basis of the disease is well understood which has helped in better treatment. Effective management of vernal Keratoconjunctivitis includes timely diagnosis, appropriate differentiation of the various etiologies, and appropriate treatment. Homoeopathy is very effective in the treatment and cure of this condition if an appropriate remedy is selected based on the homoeopathic principles of simillimum.

**Keywords-** Vernal Keratoconjunctivitis, Homoeopathy, Trantas dots

## INTRODUCTION

Vernal Keratoconjunctivitis (VKC) is a recurrent, bilateral allergic inflammation of the conjunctiva. The episodes are often periodic and have seasonal recurrences. Seasonal exacerbations characterize the condition in the initial stages with a peak incidence during spring and summer. Vernal Keratoconjunctivitis [VKC] is also called as spring catarrh, spring ophthalmia, and vernal catarrh. It is a recurrent bilateral seasonal conjunctivitis that is characterized by intense itching, photophobia, white

ropy discharge and appearance of well-defined polygonal raised area of papillary hypertrophy on the palpebral conjunctiva and a wall of gelatinous thickening at the limbus. VKC is a subtype of allergic conjunctivitis. Vernal Keratoconjunctivitis (VKC) is a type of allergic conjunctivitis.

Additional types include perennial and seasonal rhinoconjunctivitis, atopic Keratoconjunctivitis, and giant papillary conjunctivitis. VKC is classified based on the area of ocular involvement into palpebral, limbal, and mixed forms.

VKC is a chronic non contagious allergic disorder with seasonal recurrences that usually occurs during spring or warm weathers. It usually affects population of age group 3 to 25 years and males are mostly affected.

VKC is a unique disorder among a spectrum of allergic eye diseases, most commonly involving the upper tarsal Conjunctiva. It is frequently affecting males but is also seen in tropical regions where both sexes are equally affected.

## Palpebral VKC

This involves the upper tarsal conjunctiva. There is a close association between the inflamed conjunctiva and the corneal epithelium, often leading to significant corneal disease.

## Limbal VKC

This typically affects bulbar conjunctiva in the palpebral area and typically affects the Black and Asian populations.

## Mixed VKC

This has features of both the palpebral and limbal forms.

#### Epidemiology

The prevalence of vernal Keratoconjunctivitis varies from region to region. It is more commonly seen in tropical and sub-tropical countries and is more prevalent in warm and dry areas. The prevalence reported from cooler countries like the United States as 0.29/10000 population. A prevalence varying from 1.2 to 12.6 cases per 10000 have been reported from Europe. The disease is much more common in countries like Africa, with a reported prevalence varying from 2 to 37%.

It has also often been associated with higher socioeconomic status. The type of VKC depends on the geographical region. The types are limbal & palpebral. Limbal is more often seen in central & southern African Countries. While palpebral is frequently found in Europe & America.

This disease shows exacerbations & remissions with change of weather. It is self-limiting diseases and the frequency of attacks & their severity of symptoms eventually subside as the patients ages.

#### Pathophysiology

In vernal Keratoconjunctivitis, multiple papillae are seen in the upper tarsal conjunctiva. The underlying pathological process involves hyperplasia of the conjunctival epithelium. These hyperplastic tissues send projections downwards into the sub epithelial tissue. The adenoid layer shows marked cellular infiltration by eosinophils, plasma cells, lymphocytes, and histiocytes. The fibroblasts show proliferative changes, which later undergo hyaline changes. These factors are responsible for the inflammatory process and are involved in tissue remodeling, resulting in giant papillae seen in VKC.

#### Etiopathogenesis

Vernal Keratoconjunctivitis is a recurrent, bilateral disorder. VKC is more commonly present in males and is most commonly seen after five years. Most cases show remission over the years and are usually resolved by puberty. Few may develop atopic Keratoconjunctivitis over the years. VKC is more commonly seen in warm and dry climates. There is

also a seasonal variation in these patients, with peak incidence occurring in the spring and summer. These symptoms might become perennial over the years. Thus more chronic the disease, the higher are the chances of symptoms becoming persistent.

Both IgE-mediated and cell-mediated immune mechanisms are thought to be responsible for these exacerbations. Activated eosinophils have also been implicated in the pathophysiology of VKC. Gabrielides also showed the consistent presence of eosinophils in the conjunctival scrapings of VKC patients. Additionally, the role of type 4 hypersensitivity mediated by CD4 T helper cells has also been highlighted through a few studies. Immunomodulators like interleukins 4, 5, 13, and fibroblast growth factors have also been implicated. There is also reported over-expression of cytokines and chemokines in the conjunctiva of these patients.

VKC is having atopic origin and evidences for it are:

- Seasonal incidence
- High levels of IgE in serum & tears.
- Increased levels of mediators derived from mast cells & eosinophils, including histamine & tryptase in tears.
- Increased number of eosinophils & mast cells in conjunctival specimens.
- Therapeutic response to mast cells stabilizer.
- Genetic factor
- personal allergy history, other predisposing factors include male gender, close contact with animals, and increased exposure to dust and sunlight

#### Symptoms

- Irritated, painful, itchy eyes
- Burning sensation in the eyes
- Pink or red eyes
- Light sensitivity
- Swollen eyes (especially the area around the edge of the cornea where the cornea meets the sclera, or white of the eye )
- Blurred vision
- Excessive tearing
- Eyelids that are rough, bumpy, and have white mucus (especially inside the upper lids)

#### Signs of vkc

- Papillary reaction of upper tarsal conjunctiva and limbus
- Thick mucus discharge -sticky
- Bulbar conjunctival hyperemia
- Corneal involvement
- Epithelial erosions
- Ptosis
- Blepharospasm
- Classical sign - Trantas dots
- Shield ulcers or plaques

#### Complication

The ocular complications reported among vernal Keratoconjunctivitis patients include steroid-induced cataract, steroid-induced glaucoma, irregular astigmatism, keratoconus, acute hydrops, shield ulcer, central corneal scars, and limbal tissue hyperplasia.

#### Diagnosis

There are no specific diagnostic criteria for VKC. It is diagnosed through clinical signs and symptoms and also typical epidemiology. In difficult cases conjunctival scraping are done to detect eosinophils and IgE infiltration.

#### Treatment

- Over-the-counter antihistamines, such as Benadryl
- Vasoconstrictors
- Dual acting agents (Antihistamines and mast cell stabilizers)
- NSAID agents
- Mast cell stabilizers
- NSAID agents
- Corticosteroids
- Immunosuppressive drugs

#### General Management

- Identification and avoidance of allergens and exacerbating factors.
- Avoid exposure to triggering factors like sun, wind, salt water by using hats, sunglasses, swimming goggles
- Frequent washing of hand, face and ear are suggested.
- Cold compresses help as natural decongestant

- Lubricating eye drops

#### Homeopathy treatment

- In homoeopathy, we individualized each and every patient and select simillimum according to totality of symptoms which can give curative effects with holistic approach. So, for the treatment of Vernal Keratoconjunctivitis our goal is patient as a whole. Here are some commonly used homoeopathic remedies for symptoms associated with VKC.
- Belladonna - There is inflammatory swelling and supuration of the lacrimal aperture. Spots and ulcers are present over cornea Ptosis is present. Heat and burning sensation in the eyes. Agglutination of the eyelids with flow of acrid and corrosive tears.
- Euphrasia - This medicine works well in case where a person has swelling and redness around the eyes. Inflammation of the cornea is seen with bluish obscuration and pellicle over cornea. There is gnawing pain in the eyes. Ulceration in the edges of eyelids. After ulcers heal scars and specks are present in the cornea. Swelling of lower eyelids, smarting and lancinating pains Photophobia especially in sun copious secretion of mucus.
- Calcarea carbonicum - Useful in cases with Inflammation and swelling of the corners of the eyes. There are ulcers and spots in cornea with opacity. Quivering of eyelids with abundant secretion of mucus that causes agglutination resulting in closing of eyes especially in the morning.
- Cuprum metallicum - Eyes are red and inflamed with sunken look. There is obscuration of the site with pains which resembles a bruise. Convulsions of eyes is present with restless movements. Violent itching of the eyes especially towards evening.
- Argentum Nitricum – This medicine is well indicated for cases having profuse eye discharge. The white eyes are in pink or red in colour. The eyelids are congested. Lids are also swollen.

Along with this eyelids margin are thick and red. Itching, burning and beating sensation in the eyes.

- Natrum Muriaticum – It is very useful to manage sensitivity to light in these cases. There is inflammation of eyes with burning, smarting and shooting pains. They have frequent corrosive lacrimation especially in the morning and there is sand like sensation in eyes. Spasm of eyelids especially while closing.
- Mercurius corrosivus - The eyes are inflamed and prominent with redness of conjunctiva and acrid lacrimation. They have intense photophobia and burning, smarting pains if eyes would be forced out.
- Pulsatilla - The patient suffers from inflamed and red conjunctiva with burning sensation in the eyes with sharp, shooting, pressive pains. Pain as if scratched by knife. The lacrimation is profuse acrid and corrosive. Photophobia leading to lancing pains.
- Magnesium Phosphoricum - They have intermittent and spasmodic, darting, lightening like pains >warmth, with photophobia, sensitive to touch; increased lacrimation.
- Nux vomica - The eyes pain as they are bruised. They have burning, smarting pains with inflamed scleroses and conjunctiva with aversion to light. The discharge from eyes is sanguine and agglutination of eyes at night. Excessive photophobia <morning.

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