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"An Integrative Review Of Vernal Keratoconjunctivitis And Kaphaja Abhishyanda: Bridging Ayurveda And Modern Ophthalmology"

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ABSTRACT

Ayurveda, the ancient medical tradition of India, underscores the paramount importance of ocular health, identifying the eye as essential to quality of life. Among the seventeen eye diseases described in the *Susruta Saṃhita, Abhishyanda* is presented as a condition involving all parts of the eye and is regarded as the foundational cause of many ocular disorders. In modern ophthalmology, **Vernal Keratoconjunctivitis (VKC)** is a chronic, bilateral, and seasonally exacerbated allergic inflammation of the ocular surface, commonly affecting children and adolescents in tropical regions. VKC is characterized by itching, grittiness, mucous discharge, redness, lacrimation, and photophobia—clinical features that closely parallel the *Ayurvedic* description of *Kaphaja Abhishyanda*. This article highlights the conceptual resemblance between VKC and *Kaphaja Abhishyanda* based on their shared symptomatology and pathophysiological attributes. The comparative analysis aims to strengthen the academic understanding of these conditions within traditional and contemporary frameworks.

Keywords : *Kaphaja Abhishyanda , Netraroga ,* Vernal Keratoconjunctivitis

INTRODUCTION

Eyes are a vital part of our daily lives and are considered one of the most precious gifts we possess. Our ability to see the world around us is a blessing, and this gift of eyesight enables us to experience and navigate the world. *Ayurveda*, the ancient science of India has described the importance of eye, without which a life is miserable. *Shalakya Tantra* is one of the eight branches of *Asthang Ayurveda* [1] which deals with *Urdhavjatrugata Rogas*.

Acharya Sushrutra explained *Shalakya Tantra* in a systematic manner in *Uttara Tantra of Sushrutra Samhita*. He has described 76 eye diseases and their medicinal and surgical treatment. Among 76 eye diseases, *Abhishyanda* is a one among *17 Sarvagata Netraroga*[2].*Abhishyanda* is classified is as the eye disease affecting all parts of the eye.

Abhishyanda is considered the most significant *Netra Gata Vyadhi,* acting both as a disease and a causative factor (*Nidanarthakara Roga*)for other eye conditions[3]. It is regarded as the root cause of nearly all eye diseases by various Acharyas[4]

Netra Abhishyanda refers to the condition where there is excessive discharge from the eyes, caused by the presence of *Syandana* in all of the *Urdva Jatru Srotas.* This condition leads to an accumulation of moisture (*Kledana*) in the *Doshas*, *Dhatus*, and *Malas*, resulting in profuse secretion around or from various parts of the eyes[5]

Netra Abhishyanda is classified into four types according to Dosha predominance i.e., *Vataja, Pittaja,,Kaphaja and Raktaja Abhishyanda*.

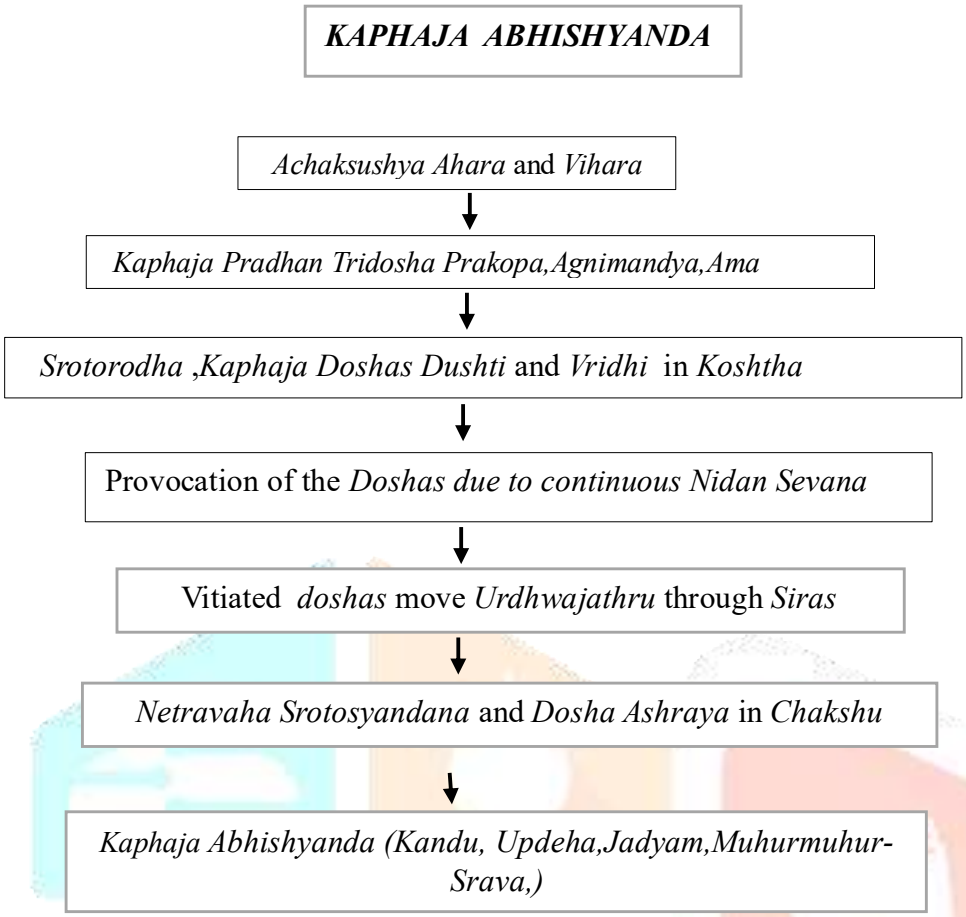
Kaphaja Abhishyanda is characterized by:

"उष्णाभिनन्दा गुरुताऽक्षिशोफः कण्डूपदेहौ सिततातिशैत्यम्।
स्त्रावो मुहुः पिच्छिलएवचापिकफाभिपन्ने नयने भवन्ति || (सु.उ.त.6/8)
"स्यन्दे तु कफसम्भवे, जाड्यंशोफोमहान कंडूर्निद्राअन्ननाभिनन्दनम्।
सान्द्र स्निग्ध बहुश्वेत पिच्छावद्दूषिकाश्रुता।।" (अ ह उ 15/10), (अ ह उ. 18/9)

Rupa (clinical feature) mentioned for ***Kaphaja Abhishyanda*** in different classics can be tabulated as follow:-

Clinical feature	S.S.	A.S.	A.H.	M.N.	Y.R.	G.N.
Ushnaabhinanda	+		-	+	+	+
Gurtavam	+	-	-	+	+	+
Shopha	+	-	-	+	+	+
Kandu	+	+	+	+	+	+
Upadeha	+	-	-	+	+	+
Sheetata	+	-	-	+	+	+
Atishaitya	+	-	-	+	+	+
Muhu Srava	+	-	-	+	+	+
Pichchila Srava	+	-	-	+	+	+
Jadyam	-	+	+	-	-	-
Nidra	-	+	+	-	-	-
Annaanabhinanda	-	+	+	-	-	-
Sandra Srava& Dushika	-	+	+	-	-	-
Snigdha Srava& Dushika	-	+	+	-	-	-
Bahu Sweta pichila Srava& Dushika	-	+	+	-	-	-

SAMANYA SAMPRAPTI OF NETRA ROGA :



Schematic Representation of Pathogenesis of *Kaphaja Abhishyanda*

SAMPRAPTI GHATAKA OF KAPHAJA ABHISHYANDA :

- *Dosha* : *Kapha pradhana tridosha*
- *Dushya* : *Rasa and Rakta*
- *Agni* : *Mandagni*
- *Srotasa* : *Rasavaha* and *Raktavaha*
- *Sroto Dushti* : *Sang , Vimargagmana* and *Atipravrriti*
- *Rogamarga* : *Madhyam*
- *Adhishthana* : *Sarvaakshi*
- *Vyadhi Svabhava* : *Chirkari*

KAPHAJA ABHISHYANDA CHIKITSA-

Abhishyanda is a *Sarvagata Vyadhana SadhyaVyadhi*. The dietary measures, medications for *Shodhana* and *Shaman* and various treatment modalities for *Abhishyanda* are explained by various *Acharyas* but in detail by *Acharya Sushruta* in four different chapter of *Uttartantra* i.e. 9th, 10th, 11th & 12th chapter respectively. A separate chapter has been given for *Chikitsa* of *Shleshma Abhishyanda* in *Sushrut Uttaratantra*.

Kaviraj Ambikadutta Shastri has mentioned different kind of treatments of *Abhishyanda.* In *Bhaishajya Ratnavali* 64th chapter *Netraroga chikitsa Prakaranam*. Also describe the importance of *Langhna* for five days in five disorders,

लंघनालेपनस्वेदसिराव्यधविरेचनैः।
उपाचरेदभिश्यन्दानञ्जनाच्योतनादिभिः ।।
अक्षिकुक्षिभवा रोगाः प्रतिश्यायव्रणज्वराः ।
पञ्चैते पञ्चरात्रेण प्रशमंयान्ति लंघनात् ।।

***Samanya Chikitsa*:** The line of treatment of *Abhishyanda* is *Langhana*, *Lepana*, *Swedana*, *Sira Vedhana*, *Virechana*, *Anjana* and *Ashchyotana* respectively[6].While all *Acharyas* gave due important to the *Langhana Karma* while explaining the treatment of the *Abhishyanda*.

Prevention:

"Prevention is better than cure", this proverb has the most significance in the ocular disorder, where inadequate prophylaxis leads to visual handicaps, the worst of all handicaps. *Acharya Sushruta* has described preventive measures i.e.

" सङ्क्षेपत :क्रियायोगो निदानपरिवर्जनम् ।
वातादीनां प्रतिघातः प्रोक्तो विस्तरतः पुनः "॥ (सु. उ.1/25)

***Nidana Parivarjan*:**-Avoidance of the etiological factors, specifically by which the eye diseases occur.

Vishishta Chikitsa:

स्यन्दाधिमन्थौ कफजौ प्रवृद्धौ जयेत्सिराणामथ मोक्षणेन।
स्वेदावपीडाञ्जन धूम सेक प्रलेपयोगैः कवलग्रहैश्च॥3॥
रुक्षैस्तथाऽचयोतन संविधानैस्तथैव रुक्षैः पुटपाकयोगैः।
त्र्यहात्र्यहाच्चाप्यपतर्पणान्ते प्रातस्तयोस्तिक्तघृतं प्रशस्तम्॥4॥
तदन्नपानञ्चसमाचरेद्धि यच्छलेष्मणोनैवकरोति वृद्धिम्।
धतूर पील्वर्क कपित्थभङ्गैः \\5\\
स्वेदं विदध्यादथवाऽनुलेपं बर्हिष्ठ शुण्ठी सुरकाष्ठकुष्ठैः ॥6॥**(सु.उ.त.11/3-6)**

Acharya Sushruta in *Kaphaja Abhishyanda Chikitsa* quoted that *Apatarpana, Tikta Ghrita Sevana, Sira Vyadhana, Svedana, Avapeedana, Anjana, Dhooma, Seka, Pralepa, Kavalagraha, Rooksha Aschyotana, Rooksha Putapaka* and *Tikta Annapana* are useful in *Kaphaja Abhishyanda*.

In commentary, *Sarvanga Sundara* by *Acharya Arunadatt*a said that after *Rakta Mokshana Snehana* should be done till *Samyak lakshanas* are achieved followed by *Virechana Karma*. *Chikitsa manjari* explains same treatment modalities as *Vagbhatacharya*.

The main procedures are *Swedana, Avapida nasya, Anjana, Dhuma, Pariseka, Pralepa, Kaval Graham, Ruksha Aschyotan* and *Ruksha Putapaka*. *Apatarpana* followed by intake of *Ghrita* processed with bitter medicines in the morning at intervals of three days each time.

Vernal Kerato-Conjunctivitis or Spring Catarrh

ETYMOLOGY

"Spring Catarrh" or "Vernal Kerato-conjunctivitis" takes its name from its seasonal predilection for the spring equinox. Onset is common in early spring and summer with remissions during the cooler months. However this seasonal pattern is less marked in tropical climates.

DEFINITION

Vernal keratoconjunctivitis (VKC) (spring catarrh) is an uncommon recurrent, bilateral, external, ocular inflammation affecting children and young adults.[7]

Vernal catarrh is a bilateral conjunctivitis that typically occurs with the onset of hot weather, making it more of a summer condition than a spring one.[8]

American Optometry Association defines "Vernal Conjunctivitis is a severe conjunctival inflammation that can have corneal complication. The majority of affected patients are male under the age of 20years."[9] The average duration of vernal conjunctivitis is 4 years. And more patients tend to outgrow the condition by age 30.[10]

ETIOLOGY [11] :

Vernal keratoconjunctivitis is caused by an immediate hypersensitivity reaction to some exogenous allergens. VKC is found mostly in families with history of atopy and asthma.There is increased IgE and eosinophils in he blood.

IMMUNOPATHOGENESIS[12]

The conjunctiva, which has a rich vascular supply, abundant immune mediators, and direct exposure to the environment, is often involved in immune-mediated and allergic reactions. The various effects of these reactions are responsible for the signs and symptoms present in patients with allergic conjunctivitis.

In the pathogenesis of vernal keratoconjunctivitis, Th-2 mediated reaction and allergic inflammation of conjunctiva with mast cell and eosinophil has been implicated.

Allergens come in contact with Conjunctiva Th-2 lymphocytes alteration

↓

Exaggerated IgE response to allergens

↓

Hyper secretion of IgE (IL-4) + activation of mast cell and basophil

↓

Immediate inflammatory reaction + recruitment of inflammatory cells(Lymphocytes, eosinophils)

↓

Release toxic cell mediator s/a cationic protein, eosinophil, EDN, EPX With corneal epithelial damage

↓

Inflammatory & epithelial cell induce fibroblast proliferation and collagen production(Conjunctival findings)

CLINICAL MANIFESTATIONS

SYMPTOMS[13]

In all forms of VKC the principal symptom is 'Itching', which is usually the earliest symptom. It can be intense, persistent and precede all tissue changes. It worsens towards evening and may be aggravated by exposure to dust, wind, bright light or physical exertion associated with sweating. Rubbing the area that itches can increase the itching. Continued eye lid rubbing increases mast cell degranulation and subsequently itching and inflammation and can also encourage secondary bacterial infections.

Other symptoms include

Photophobia (Intolerance of light),

Burning Sensation,

Heaviness on lids,

Repeated Lacrimation,

Ropy or mucus Discharge; Thick mucus hyper-secretion with sticky mucous filaments, called 'ropy discharge', is a characteristic of VKC. Accumulations of the material at the inner canthus are found in the morning.

Eye irritation is a word frequently used by patients to describe the uncomfortable, sometimes, hot tight sensitive feeling of their eyes.

Foreign body sensation is caused by conjunctival surface irregularity and copious mucous discharge.

Pain- The presence of pain is indicative of a compromised Cornea.

Blood shot eyes are frequently mentioned by the child or his parents as bothersome and persistent symptom.

Variation in symptomatology is a prominent feature in early course of VKC; as the disease progress, the symptoms can intensify and, in some cases, become perennial.

SIGNS OR CLINICAL FORMS [14]:

1) Palpebral or Tarsal form of VKC : The palpabral form is characterized by Conjunctival Pappillae;(**Cobble Stone Papiilae**) small rounded protuberance or a small fleshy projection on the tarsus surface of upper palpabral conjunctiva. Lower tarsus is relatively free of giant papillae and actually shows a slight degree of chemosis.

2) Balbar-Limbal VKC : Whitish chalk like dots may be seen at the limbus and are transient limbal or conjunctival yellow-white points or deposits, are degenerating eosinophils and epithelial cell debris called **Horner Tranta's dots.**

3) Mixed VKC : A waxing and a waning gray white lipid deposition in the pheriphral , superficialstroma can occure and is known as **Pseudogerontoxon.**

TREATMENT :

1) General Measures[15]: Include alteration of the VKC patients enviroment climatotherapy ,cool compresses.

2) Medical :

Antihistamine[15] - Antihistamines act via histamine receptor antagonism to block the inflammatory effects of endogenous histamine and relieve any associated signs and symptoms.

Mast-cell stablizer[15] - Alongside antihistamines and dual-acting agents, mast cell stabilizers (instilled two to four times daily) form the first line of treatment and are effective in reducing the signs and symptoms of disease.

Corticosteroid[16] - Topical corticosteroid eye drops should be used as short, pulsed therapy to provide symptomatic relief in patients with more persistent VKC or acute exacerbations.

Immuno-Modulator[16] - Topical calcineurin inhibitor are frequently prescribed for patients with VKC . They are recommended in patients with acute phase or persistent, moderate or sever VKC that is not responding to anti-allergic drug.

DISCUSSION

Vernal Keratoconjunctivitis is a chronic, bilateral, allergic inflammatory disorder of the ocular surface that predominantly affects children and young adults, especially in warm and dry climates. The disease exhibits seasonal exacerbations, classically during spring and summer, and is strongly associated with atopy, elevated IgE levels, and eosinophilic inflammation. These features closely parallel the Ayurvedic description of *Kaphaja Abhishyanda*, a *Sarvagata Netra Roga* characterized by *Kapha* predominance with involvement of *Rasa* and *Rakta Dhatus*.

From an *Ayurvedic* standpoint, *Vasanta Ritu* represents the period of *Kapha Prakopa*, during which liquefied *Kapha* leads to obstruction of *srotas* and manifests as excessive secretion, heaviness, itching, and edema. Childhood, being a *Kapha*-dominant age, further predisposes individuals to Kapha-related disorders. This seasonal and age-related susceptibility described in Ayurveda finds a direct correlation with the epidemiology of VKC, which predominantly affects male children and adolescents and tends to resolve by adulthood.

The cardinal symptom of VKC—intense itching (Kandu)—is universally emphasized in Ayurvedic texts as a hallmark feature of *Kaphaja Abhishyanda*. Other shared clinical features such as *Guruta* (heaviness), *Shopha* (edema), *Pichchila* and *Sandra Srava* (thick, sticky discharge), *Sheetata* and *Atishaitya* (coldness), and *Bahu Shveta Srava* (copious whitish discharge) strongly support the conceptual resemblance. The presence of ropy mucous discharge in VKC closely corresponds to the *Pichchila* and *Snigdha* nature of Kapha described in Ayurvedic classics.

From a pathophysiological perspective, VKC involves a Th2-mediated hypersensitivity reaction, mast cell degranulation, eosinophilic infiltration, and chronic inflammatory changes in the conjunctiva and cornea. This immunopathogenesis can be conceptually understood in *Ayurveda* as *Kapha*-induced *Srotorodha, Mandagni*, accumulation of *Kleda*, and subsequent *Rakta Dushti*, leading to chronicity (*Chirakari Svabhava*) of the disease. The chronic, relapsing nature of VKC aligns with the *Ayurvedic* description of *Abhishyanda* acting as a *Nidanarthakara Roga*, capable of initiating or aggravating other ocular disorders if not properly managed.

The treatment principles *of Kaphaja Abhishyanda—Langhana, Apatarpana, Ruksha Chikitsa, Tikta Ghrita Sevana, Raktamokshana, Nasya, Anjana*, and *Aschyotana*—are aimed at reducing *Kapha*, improving *Agni*, clearing *srotas*, and preventing recurrence. These principles conceptually correspond with modern therapeutic strategies such as allergen avoidance, mast cell stabilization, antihistamines, corticosteroids, and immunomodulators, all of which focus on controlling inflammation and preventing tissue damage.

Thus, *Ayurveda* offers a systemic and preventive approach, addressing not only the ocular manifestations but also the underlying doshic imbalance and lifestyle factors, which are often underemphasized in conventional management.

CONCLUSION

Kaphaja Abhishyanda, as described in *Ayurvedic* literature, shows a remarkable conceptual and clinical resemblance to Vernal Keratoconjunctivitis of modern ophthalmology. The similarity in age of onset, seasonal exacerbation, symptomatology, chronicity, and underlying inflammatory mechanisms strongly supports this correlation. Ayurveda provides a holistic framework that explains VKC not merely as a localized ocular allergy, but as a manifestation of systemic *Kapha predominance, Mandagni,* and *Srotodushti*.

Early identification of *Kaphaja Abhishyanda* and timely implementation of appropriate Ayurvedic therapeutic measures—particularly *Langhana, Apatarpana,* and *Kapha-shamaka Chikitsa*—can help prevent disease progression and reduce recurrence. Integrating *Ayurvedic* principles with modern ophthalmic care may offer a more comprehensive, preventive, and patient-centered approach to managing VKC.

This conceptual correlation not only enriches academic understanding but also opens avenues for integrative clinical research, encouraging the development of safer, long-term management strategies for chronic allergic ocular diseases.

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