

Effect of *Kaulitika Varti-Madhu Ashchyotana* in the Management of *Kaphaja Abhishyanda* with Special Reference to Vernal Keratoconjunctivitis (VKC) - A Case Study

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ABSTRACT

Rationale: Vernal Keratoconjunctivitis (VKC) is a recurrent bilateral chronic allergic inflammatory disease of the ocular surface affecting mainly young children in first decade of life. As per Ayurveda, the disease VKC bears resemblance to the *kaphaja abhishyanda* which is one among four types of *abhishyanda* (conjunctivitis). The line of treatment of *abhishyanda* is *langhana* (fasting), *lepana* (anointing with medicated paste), *swedana* (causing perspiration), *siravedhana* (venesection), *virechana* (purgation), *anjana* (collyria application) and *ashchyotana* (guttae application) respectively. Based on this principle, the present case was managed with *amapachanayoga* and *ashchyotana* as per classical guidelines.

Background: An Indian female aged 23 years presented in December 2020 with complaints of severe itching, watering, redness, papillae on upper palpebral conjunctiva, gelatinous opacification (approx. 2 mm in size) around the limbus and Tranta's dots for 11 years. The patient had recurrent episodes of this illness since last 11 years.

Intervention and Outcome: The patient was treated on prescribed line of treatment i.e. *langhana* (*amapachana*) and *ashchyotana* as described in Ayurveda for *abhishyanda* disease. Before treatment, the severity score determined by the 5-5-5 Exacerbation Grading Scale in VKC was 145. After the therapy, the severity score reduced to 0.00. Hence, 100% improvement in disease severity.

Keywords: *abhishyanda*, *ashchyotana*, *amapachana*, *spring catarrh*

INTRODUCTION

VKC is a recurrent bilateral chronic allergic inflammatory disease of the ocular surface affecting mainly young children in first decade of life. ¹ The prevalence of allergic ocular disease was 20.1% and VKC described 3.9% of ocular allergies in children. ² Allergies tend to run in families, although no obvious mode of inheritance is

identified. Therapies imparted by modern science include lubricants, decongestants, mast cell stabilizer, antihistamines, topical steroids, NSAIDs and immune-modulators eye drops. Antihistamines are suitable for short term use (2-6 weeks), but do not prevent future recurrence of symptoms. Cataract, glaucoma, infections and corneal melting may occur with treatment with

topical steroids. In Ayurveda, the features of vernal keratoconjunctivitis very well resemble to features of *kaphaja abhishyanda*- a subtype of four types of *abhishyanda* (conjunctivitis). The line of treatment of *abhishyanda* is *langhana*, *lepana*, *swedana*, *siravedhana*, *virechana*, *anjana* and *ashchytana* depending on the presentations of the disease. Based on this treatment principle, the present case was managed with *amapachana yoga*³ and *ashchytana*⁴. There was marked improvement in symptoms and signs of the disease with this simple treatment regimen. The present case emphasizes that the Ayurveda has tremendous potential in dealing with such chronic and distressing illnesses.

CASE REPORT

An Indian female of age 23 years and weight 55 kg came to Netraroga OPD of National institute of Ayurveda, Jaipur, with complaints of excessive itching, watering, redness, papillae on upper palpebral conjunctiva, gelatinous opacification (approx. 2 mm in size) around the limbus and Tranta's dots for 11 years. The patient had recurrent episodes of this illness since last 11 years. Earlier these exacerbations were contained satisfactorily with lubricants, mast cell stabilizer, antihistamines and topical steroid eye drops, by which she was getting symptomatic relief. The patient has no significant family history. She is a nurse by profession and her work was impacted by her ailment.

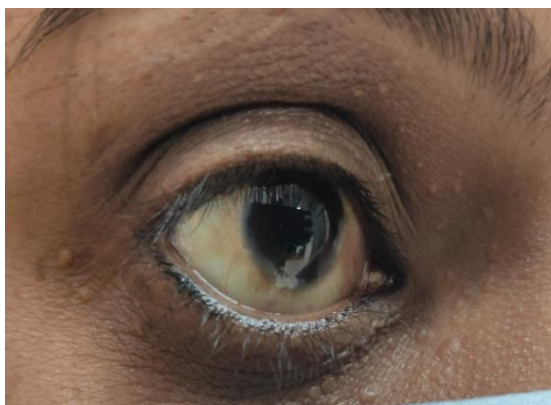


Figure 1. OD before treatment

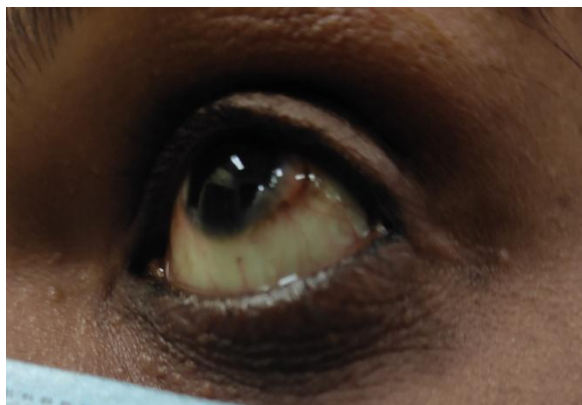


Figure 2. OS before treatment

Diagnostic evaluation and Assessment

On visual acuity examination, it was found that vision in right and left eyes were 6/6 partial in both eyes correctable up to 6/6. On slit lamp examination there were numerous papillae present on upper palpebral conjunctiva, gelatinous opacification around the limbus (2 mm in size) and Tranta's dots.

Table No. 1: Ocular Examination Findings before treatment

	OD(Right eye)	OS(Left eye)
Eyelashes	Normal	Normal
Eyelids	Normal	Normal
Conjunctiva	Congestion, papillae present on upper palpebral conjunctiva	Congestion, papillae present on upper palpebral conjunctiva
Cornea	Gelatinous opacification, Tranta's dots	Gelatinous opacification, Tranta's dots
Pupil	Shape & Size- Normal, Reaction- Normal	Shape & Size- Normal, Reaction- Normal
Lens	Clear	Clear

Her blood investigation done on 22/03/2020 showed ESR- 8mm/Hr, T.E.C.- 0.19, Hb- 14.4g/dl, TLC- 6.6, TEC-4.9, PLT-224.0, HCT- 44.5%, M.C.V.- 90.6fL, MPV- 11fl, M.C.H.- 29.3pg, M.C.H.C.- 32.3gm/dl, R.D.W.CV- 11.6%, N 54.2%, L 35.4%, M 6.6%, E 2.8%, B 0.8%, ANC- 3.6, ALC- 2.34, AMC- 0.44, AEC- 0.18, ABC- 0.05, FBS- 91.2mg/dl. Her blood pressure was 120/80mm of Hg, Height 5.2 feet, weight 61 kg.

On the basis of signs and symptoms the present case was diagnosed as a case of *kaphaja abhishyanda* as per explained in the classical texts⁵ and on the basis of history and slit lamp examination it was categorized as Vernal Keratoconjunctivitis (VKC)⁶. Her severity score determined by the 5-5-5

Exacerbation Grading Scale in VKC ⁷ was 145 calculated on December 22nd, 2020.

Table no. 2: Time Line

Date	Presenting complaints			
22/12/2020	<i>Kandu</i> (Excessive itching), <i>Muhurmuhurpichchilasrava</i> (watering), redness, papillae on upper palpebral conjunctiva, <i>akshishopha</i> (gelatinous opacification, 2 mm in size) around the limbus and Tranta's dots since 11 years.			
Date	Past medical history and intervention			
2010 to 2020	Took Allopathic treatment and got symptomatic relief intermittently			
Diagnosis- <i>Kaphaja Abhishyanda</i> (Vernal Keratoconjunctivitis)				
Therapeutic Intervention				
Duration	Medication	Dose	Route	Frequency
December 22 nd 2020 - December27 th 2020	<i>Amapachana yoga</i> : <i>Paniya</i> prepared from <i>Dhanyaka</i> (<i>Coriandrum sativum</i>)-15gm, <i>Mustaka</i> (<i>Cyperus rotundus</i>)-10gm, <i>Sunthi</i> (<i>Zingiber officinale</i>) - 5gm Consumed throughout the day. (2 litres)			
December27 th 2020-January27 th 2020	<i>KaulitikaVarti-Madhu Ashchytana</i> (There are fine particle present in <i>Kaulitika varti ashchytana</i> . These particles can cause abrasions on the cornea, due to which patient is advised to wash the eyes with running water five minutes after drug application. Patient is called for follow up on the seventh day after first application of drug. Patient is examined on the slit lamp after staining with fluorescein sodium ophthalmic strips. After each follow up patient was assessed for improvement in subjective and objective parameters. After one month most of the sign and all symptoms disappeared. The treatment was terminated after recovery and patient called for follow up after one month without any drug advised. Patient was again examined on slit lamp for any sign and symptoms but nothing was found.)	2 Drops	Topical	4 times a day
Life style modifications				
Advised to sleep early and to follow ideal daily routine, timely intake of food, to take green leafy vegetables, <i>ghrita</i> , milk and fruits. Also advised to reduce watching TV, mobile, computer work and avoid pickles, fried food.				
Outcome				
Improvement in symptoms (itching, redness, watering) and signs (papillae, Tranta's dots, gelatinous opacification)				

Table No. 3: Ayurveda Parameters

S. No.	Ayurveda Parameters	Finding in patient
1	<i>Dosha</i> (biological factors of the body)	<i>Kaphaja pradhana, pitta</i>
2	<i>Dushya</i> (body tissues)	<i>Rasa and rakta</i>
3	<i>Agni</i> (digestive and metabolic factors)	<i>Mandagni</i>
4	<i>Koshtha</i> (bowel habit)	<i>Madhyama</i>
5	<i>Srotas</i> (structural and functional channels)	<i>Rasavaha and raktavaha</i>
6	<i>Srotodushiti</i>	<i>Sang, vimargagamana and atipravariti</i>
7	<i>Rogamarga</i> (the pathway of disease manifestation)	<i>Madhyama</i>
8	<i>Adhithana</i> (site of location)	<i>Sarvakshitejojalashritapatala</i>
9	<i>Vyadhisvabhava</i>	<i>Chirakari</i>
10	<i>Sadhyasadyata</i> (prognosis)	<i>Krachchhasadhyata</i>

(Excessive itching), *Muhurmuhurpichchilasrava* (watering), redness, papillae on upper palpebral conjunctiva, *akshishopha* (gelatinous opacification, 1mm in size) around the limbus and Tranta's dots. As the illness is recognized as *Kaphaja Abhishyanda*, so *Amapachana yoga* and *Ashchytana* therapy was planned for her. Her pre-operative blood investigations were done to observe her suitability for *amapachana* and *ashchytana* therapy. As *purva karma* medicines e.g. *amapachana* (*Dhanyaka* 15gm, *Mustaka* 10gm, *Sunthi* 5gm) for *deepana pachana* to relieve her *ama* was given for five days.

TREATMENT AND OUTCOME

At first visit on December 22nd 2020 the patient presented with features of *Kandu*

Table No. 4: Rationale of the therapeutics

S. No.	Name of the medicine administered	Rationality
1	<i>Amapachanapaniya yoga</i>	For <i>agni deepana</i> i.e., ignition of the digestive fire and <i>pachana</i> i.e., digestion of <i>ama</i> (undigested food material) and detachment of <i>lina</i> (adherent and concealed) <i>dosha</i> from the <i>dushya</i> and <i>srotasa</i> .
2	<i>Kaulitika varti-madhu ashchytana</i>	In <i>Kaulitika Varti-Madhu Ashchytana</i> , <i>madhu</i> is used in maximum quantity. <i>Kaulitika varti</i> have <i>daruharidra</i> and <i>aja-dugdha</i> . By virtue of <i>tikta rasa</i> of <i>daruharidra</i> it pacifies <i>daha</i> (burning sensation) and <i>kandu</i> (itching) and <i>kashaya rasa</i> it pacifies vitiated <i>kapha dosha</i> and have <i>shodhana</i> & <i>ropana karma</i> . <i>Madhu</i> is considered as best <i>kapha shamaka dravya</i> , having <i>lekhana</i> , <i>chedana</i> properties and it acts as a <i>yogavahi dravya</i> which enhance the actions of the <i>Daruharidra</i> , provide facility to penetrate the drug at target site (<i>sukshamamarganusari</i>).



Figure 3. OD after treatment



Figure 4. OS after treatment

DISCUSSION

In the present case study, patient was given Kaulitika Varti Ashchryotana after aamapachana. The diagnosis was done on the basis of signs and symptoms described in ayurvedic and modern texts and then examined on clinical parameters. During the treatment, patient was assessed on every 8th day of treatment. Hence patient was examined four times during total period of therapy. After one month, drug administration was stopped and patient was followed up for further one month. During and after the course of therapy, there were no side effects of the treatment. There was relief in the various symptoms of Kaphaja abhishyanda (vernal keratoconjunctivitis) like redness, foreign body sensation,

burning sensation etc. This treatment decreased the various signs of Kaphaja abhishyanda (vernal keratoconjunctivitis) like conjunctival congestion and gelatinous opacification also.

The physiological effects of the drugs and mechanism of their action are best understood by the properties of its basic physiochemical factors i.e. *Rasa, Guna, Veerya, Vipaka, Karma, and Prabhava* of the drugs. These primarily affect the Doshas and determine their *Doshakarma* activity, which in turn corrects the vitiated Doshas and maintains the Doshika equilibrium of the body. The Pharmacodynamics of the selected drugs of the present study can be explained as follows:

Table no. 5: Pharmaco-Dynamics of Aampachana Drugs (*Rasa Panchaka*)

Drug	Pharmacological properties				Therapeutic properties		
	Rasa	Guna	Virya	Vipaka	Vata	Pitta	Kapha
Dhanyaka ⁱ	Kashaya, Tikta, Madhura, Katu	Laghu, Snigdha	Ushna	Madhura	↓	↓	↓
Mustaka ⁱⁱ	Tikta, Katu, Kashaya	Laghu, Ruksha	Sheeta	Katu		↓	↓
Shunthi ⁱⁱⁱ	Katu	Laghu	Ushna	Madhura	↓	↓	↓

The Aampachana drug has a predominance of Katu, Tikta, Kashaya Rasa, Laghu, Ruksha Guna Ushna Veerya, Madhura Vipaka. Considering the Doshakarma is Kapha-Pitta-vatashamaka (Tridoshashamaka) by its Rasa, Guna, Veerya, and Vipaka. Thus, the overall effect of the compound drug is Aampachana and hence it disintegrates the pathology of the disease Kaphaja Abhishyanda, which is Kapha-Pittaja in its manifestation.

Pharmacological properties of contents of Aampachana yoga:

- Dhanyaka (*Coriander sativum*) is having Anti-inflammatory, analgesic, antioxidant, antimicrobial, anti-bacterial, anti-fungal, Hepato-protective activity, anticancer, hypolipidemic, hypoglycemic, hypotensive gastrointestinal effects.¹¹
- Mustaka (*Cyperus rotundus*) is having anti-inflammatory, anti-allergic, anti-

histamine, analgesic, antiulcer, anti-arthritic, antioxidant, anti-platelet, anti-pyretic, anti-viral, anti-candida, anti-malaria, anti-helminthic and wound healing activity.¹²

- Sunthi (*Zingiber officinalis*) is having anti-inflammatory, analgesic, anti-allergic, antimicrobial, antioxidant, hepato-protective, immune-modulatory and antacid activity.¹³

Method of preparation of *Kaulitika-vartiashchyotana*¹⁴:

Daruharidra, Aja-dugdha and Madhu was processed to prepare Kaulitika Varti Ashchyotana, a topical ophthalmic medication mentioned in Gadnigraha (Netra Rogadhikara).

- *Daruharidra* was taken as a *yavkutachurna* (coarse powder) and *kwatha* (decoction) was prepared by adding 16 times water, heated and

reduced the volume to one fourth, after then filtered with a muslin cloth. *Aja-dugdha* (goat's milk) was taken in a ration of 1/8 part to *Daruharidra* in a stainless-steel vessel and heated on low flames and then mixed it into filtered decoction and *paka* was done in *mandagni*. It was then thoroughly stirred while adding *Aja-dugdha* and it was heated with constant stirring maintaining the temperature till it attained *Raskriya* (ointment like) form. Heating was stopped when *Varti* was formed. *Varti* was tested for the absence of crackling sound.

- *Kaulitika Varti Ashchyotana* was prepared by mixing *Varti* with honey and the product was packed into a 10 ml sterile bottle. It was used in the form of *ashchyotana* topically for 30 days.

Table no 6: Pharmaco-Dynamics of *KaulitikaVartiAshchyotana*

Drug	Pharmacological properties			Therapeutic properties			
	Rasa	Guna	Virya	Vipaka	Vata	Pitta	Kapha
<i>Daruharidra</i> ⁿ	Tikta, Kashaya (Rasanjana – katu)	Laghu, Ruksha	Ushma	Katu		↓	↓
<i>Aja-dugdha</i> ⁿ	Madhura	Guru, Snigdha, Mridu, Pichchila	Sheeta	Madhura	↓	↓	
Honey ⁿ	Madhura, Kashaya	Laghu, Ruksha, Shlakshana, Vishada	Sheeta	Madhura	↓	↓	

The drug *kaulitika varti ashchyotana* has a predominance of *kashaya*, *madhura*, *tiktarasa*, *laghu*, *ruksha*, *mridu*, *shlakshana*, *vishada* *guna* *sheeta* *veerya*, *madhura* *vipaka*. Considering the *doshakarma*, the drug is *vata-pitta-kaphashamaka* by its *rasa*, *guna*, *veerya*, and *vipaka*. Thus, the overall effect of the compound drug is *vata-pitta-kaphashamaka* and hence it disintegrates the pathology of the disease *kaphaja abhishyanda*, which is *kapha-pittaja* in its manifestation.

Pharmacological properties of contents of *Kaulitikavarti*:

- *Daruharidra* (*Berberis aristata*) extract (berbarine, berberine, oxycanthine, epiberberine, palmatine, dehydrocaroline, jatrorrhizine and columbamine etc.) shows anti allergic

activity, anti-inflammatory. It is also reported as an antioxidant activity, antimicrobial, antioxidant, anticancer, wound healing, eye and ear infections, jaundice, skin diseases.¹⁸

- *Aja-dugdha* (Lactus) is having anti-inflammatory and anti-allergic activity.¹⁹
- Honey is having anti-inflammatory, antioxidant, antimicrobial, antibacterial activity, anti-fungal, antiviral, wound healing.²⁰

CONCLUSION

Kaulitika varti-madhu ashchyotana was found to be very effective in relieving all the clinical features like itching, watery discharge, redness, foreign body sensation, burning sensation, palpebral & bulbar conjunctival congestion and gelatinous

opacification. The treatment was devoid of any toxic effect also and thus can safely substitute the modern management of vernal keratoconjunctivitis (Kaphaja Abhishyanda).

PATIENT PERSPECTIVE: I had attained marked relief in this disease which I couldn't get for so many years. I am very much satisfied and thankful for bringing me to this stage of almost being normal for which I was aspiring since long time.

INFORMED CONSENT: An informed written consent was obtained from the patient before reporting her case.

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Conflict of Interest: None

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