

A CLINICAL STUDY ON THE EFFECT OF *KRISHNA MRITTIKA VIDALAKA* IN THE MANAGEMENT OF *KAPHAJA ABHISHYANDA* W.S.R. TO SPRING CATARRH

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Received on: 05/05/2022

Revised on: 25/05/2022

Accepted on: 15/06/2022

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ABSTRACT

Abhishyanda or Netrabhishyanda is mentioned in classical literature of Ayurveda under Sarvagata Netra Roga.^[1] It is classified as the eye disease affecting all parts of eye. The gravity of Abhishyanda is such that it is often said to be the cause of all eye disorders.^[2] Adhimantha (Acute congestive glaucoma/Acute uveitis), a blinding eye disease directly originates from Abhishyanda,^[3] if not treated properly or neglected. Netrabhishyanda is classified into four types according to Dosha predominance viz. Vataja, Pittaja, Kaphaja and Raktaja Abhishyanda.^[4] Kaphaja Abhishyanda can be correlated with spring catarrh. Spring Catarrh is a recurrent, bilateral, allergic inflammation of conjunctiva having periodic seasonal incidence, mainly Type-1 IgE mediated hypersensitivity reaction to pollen allergens.^[5] Spring Catarrh accounts for 66% to 90% of all cases of allergic eye diseases.^[6] The present study was done in single group of 15 patients of Kaphaja Abhishyanda. Patients were treated by Vidalaka with Krishna Mrittika. The signs and symptoms were studied before and after treatment. Results of the study showed marked (13.3%), moderate (66.7%), mild (20%) improvement in patients.

KEYWORDS: *Kaphaja Abhishyanda, Sarvagata Netra Roga, Krishna Mrittika, Vidalaka.*

INTRODUCTION

Spring catarrh is common ophthalmic condition in particular age group (4 to 20 years approximately) mostly in males. VKC often occurs on a seasonal basis, with a peak incidence over late spring and summer. VKC is rare in temperate regions, but relatively common in warm dry climate. Spring Catarrh accounts for 66% to 90% of all cases of allergic eye diseases.

The comprehensive knowledge of *Shalaky Tantra* mainly as per *Videha* has been recorded in first 26 chapters of *Sushruta Samhita (Uttara Tantra)* perhaps by *Nagarjuna*. *Sushruta* has described the 76 types of eye diseases in his classical text '*Sushruta Samhita*'.^[7] These eye diseases are classified according to the structures affected in the eye. One group of eye disease known as '*Sarvagata Roga*' includes the *Netrabhishyanda*. *Netrabhishyanda* is explained under the heading '*Sarvagata Roga*' because all the eye disease under this heading are occupying most of the part of the eyeball like *Mandala*, *Sandhi* and *Patala*.

In *Ayurvedic* texts (*Sushruta* and *Vagbhatta-Ashtanga Samhita*), *Abhishyanda* is described in the chapter entitled '*सर्वगतरोगविज्ञानीय*' means study of the diseases involving/affecting all parts of the eye.^[8] *Abhishyanda* is the root cause of generalized eye diseases. *Acharya Sushruta* described it as: Almost all the affections of eye originate from *Abhishyanda* as the root cause. Therefore a wise clinician should treat a cause of developing *Abhishyanda* promptly for the benefit of the patients.^[9]

According to *Acharya Vagbhatta*, in *Abhishyanda*, *Doshas* excreted through every *Srotasa* (channels) of '*Urdhvajatrugata*' (Supraclavicular region).^[10] Rest of *Ayurvedic Acharyas* have not given a specific definition whereas the word *Shyanda* is used in reference to the *Abhishyanda* disease and is considered as; an excessive discharge from eyes.

Therefore keeping in view the need of time and gravity of the disease, present study was undertaken with the topic entitled "**A Clinical Study on the Effect of *Krishna Mrittika Vidalaka* in the Management of *Kaphaja Abhishyanda* w.s.r. to Spring Catarrh.**"

AIMS AND OBJECTIVES

- a. To see the similarity of *Kaphaja Abhishyanda* with that of Spring Catarrh.
- b. To evaluate the effect of *Vidalaka* with *Krishna Mrityika* (external application) on Spring Catarrh.
- c. To provide cheap, safe and effective remedy.

MATERIALS AND METHODS**Plan of the Study**

- i. The proposed work was a clinical trial.
- ii. Written and informed consent of the new patients were taken before inclusion in trial.
- iii. 15 patients were selected from the OPD and IPD of Govt. *Ayurvedic* Hospital Paprola and were treated by *Vidalaka* with *Krishna Mrityika*.

Selection Criteria**I. Inclusion Criteria**

- i. Patients willing to undergo trial.
- ii. Patients having typical clinical features pertaining to Spring Catarrh.
- iii. Patients between age group 5-20 years of either sex.

II. Exclusion Criteria

- i. Patients below 5 years and above 20 years of age.
- ii. Patients not willing to undergo trial.
- iii. Patients suffering from dry eye, blephritis, trichiasis, dacryocystitis, chronic rhinitis and trachoma.
- iv. Patients suffering from other specific conjunctival diseases.
- v. Patients suffering from major systemic diseases like Diabetes, Hypertension.

1. Itching (*Netra Kandu*)

- | | |
|--|---|
| ❖ No itching | 0 |
| ❖ Itching sensation not requiring to rub eye | 1 |
| ❖ Continuous itching which requires rubbing of eyes | 2 |
| ❖ An incapacitating itch which would require significant eye rubbing | 3 |

2. Lacrimation (*Muhurmuhur Srava*)

- | | |
|------------------|---|
| ❖ No lacrimation | 0 |
| ❖ Occasional | 1 |
| ❖ Continuous | 2 |
| ❖ Very Severe | 3 |

3. Mucous Ropy Discharge (*Pichchila Srava*)

- | | |
|---|---|
| ❖ No Pichchila Srava | 0 |
| ❖ Pichchila Srava not required moping | 1 |
| ❖ Pichchila Srava causing sticking of lids in morning | 2 |

4. Heaviness of lids (*Guruta*)

- | | |
|------------------------|---|
| ❖ No heaviness | 0 |
| ❖ Occasional heaviness | 1 |
| ❖ Continuous heaviness | 2 |

5. Photophobia (*Prakasha Asahya*)

- | | |
|---------------------------------|---|
| ❖ No photophobia | 0 |
| ❖ Only during exposure to light | 1 |
| ❖ Intermittent | 2 |
| ❖ Continuous | 3 |

6. Foreign Body Sensation (*Samhrasha, Shookpuranabhta*)

- | | |
|-----------------------------|---|
| ❖ No foreign body sensation | 0 |
|-----------------------------|---|

Investigation Required**Blood investigations**

- Hb gm%, TLC, DLC, ESR, FBS
- Visual acuity test
- Slit lamp examination

Criteria for Assessment

- **Subjective Criteria** - On the basis of grading and scoring of clinical symptoms.
- **Selection of Material required** - *Krishna Mrityika* (external application)

Follow up

After completion of the trial the patients were followed up for further 7 days to note the effect of withdrawal or adverse effects of treatment.

It is hoped that finding obtained through this research trial was certainly proved fruitful in enriching the present knowledge of the subject.

Sampling Technique

The selected patients were kept in one group only.

- **Group** - One group only.
- **Duration** - Four weeks.
- **Follow up** - 7 days after completion of trial.

Assessment Phase

- Assessment was done on the basis of clinical improvement in signs and symptoms during before and after treatment.
- The effect of treatment was assessed by clinical observations as well as on the basis of investigation report as follows:

❖ Occasional foreign body sensation	1
❖ Intermittent foreign body sensation	2
❖ Continuous foreign body sensation	3
7. Burning Sensation (Usha, Daha)	
❖ No burning sensation	0
❖ Burning sensation on exposure to light	1
❖ Intermittent burning sensation	2
❖ Continuous burning sensation	3
8. Palpebral Conjunctival Congestion	
❖ No congestion	0
❖ Congestion with clear pattern of blood vessels	1
❖ Congestion with poorly visible pattern of blood vessels	2
❖ Velvety pattern of conjunctiva or loss of blood vessel pattern	3
9. Bulbar Conjunctival Congestion	
❖ No congestion	0
❖ Muddy colour of bulbar conjunctiva	1
❖ Conjunctival congestion in palpebral aperture	2
❖ Conjunctival congestion in whole bulbar conjunctiva	3
10. Conjunctival Hypertrophy	
1. Palpebral	
❖ No conjunctival hypertrophy	0
❖ Diffuse conjunctival hypertrophy	1
❖ Giant conjunctival hypertrophy	2
❖ Cobble stone papillae	3
❖ Giant papillae with copious mucous	4
2. Bulbar conjunctiva	
❖ No heaping	0
❖ Slight Heaping of conjunctiva less than 360	1
❖ Heaping of conjunctiva 360 with circumcorneal encroachment	2
❖ Heaping of conjunctiva 360 with circumcorneal encroachment with Tranta spots	3

Registered patients were assessed on the improvement in the subjective and objective criteria before and after the treatment. The scoring system were adopted to assess the improvement in subjective parameters and appropriate clinical tools for objective criteria.

Criteria for Overall Assessment

The assessment was done by adopting the following scoring pattern

- **Cured:** 100 % relief in signs and symptoms.
- **Marked improvement:** 75% to 99% improvement in signs and symptoms was recorded as marked improvement.
- **Moderate improvement:** 50% to 74% improvement in signs and symptoms was considered as moderate improvement.
- **Mild improvement:** 25% to 49% improvement in signs and symptoms was considered as mild improvement.
- **Unchanged:** <25% reduction in signs and symptoms was noted as unchanged.

Drug Review

In Ayurveda, the use of *Krishna Mrittika* was explained in different context.^[11,12]

Rasa Panchaka of *Krishana Mrittika*

Rasa:- Madhura Pradhana, Ishat Kashaya.^[13]

Guna:- Guru, Sanigdha, Laghu, Khara, Vishada, Ruksha, Sukshama.^[14]

Veerya:- Sheeta

Vipaka:- Madhura.

Preparation of *Krishna Mrittika Vidalaka*

1. Fresh, clean, dry & fine *Krishna Mrittika* had been used in the treatment process.
2. *Mrittika* was obtained approximately 3 to 5 feet from the ground level.
3. *Krishna Mrittika* should not contain stones, wood particles.
4. Area from where *Krishna Mrittika* was collected which was away from industrial, agricultural area, pesticides and all contamination sources.
5. *Mrittika* was not touched with naked hands.
6. Wooden stick/instrument was used for mixing the *Krishna Mrittika*.

How to use *Vidalaka*

Wash your hands well before the preparation of *Iepa*.

- Before *Poorva Karma* the patient was asked to lie down on bed.
- Then patient was asked to close the eyes.
- *Mrittika Vidalaka* used in the treatment had 2-5 mm thickness.
- After *Mridu Swedana*, *Mrittika Vidalaka* was applied on eye lids leaving the eye lashes.

- After 30 minutes of application *Mrittika Vidalaka*, *lepa* started drying.
- After 30 minutes *Mrittika lepa* was removed & then area was cleaned with fresh water.
- *Krishna Mrittika* powder was mixed with clean cold water or texture of paste was not be too thick or too thin.
- Paste was applied on eyelids by leaving the eye lashes.
- After retaining for suitable time it was peeled of carefully, paste was not be too dry to remove.
- Then eye was irrigated with clean water.

Mud Therapy

Mud therapy is the process of using one of natural element of the universe for healing purpose. It is a treatment in Naturopathy. Mud is an important element of nature. It contains important minerals which have positive effects on Human health. Mud can absorb toxins from human body therefore it is very useful in preventing many diseases. It is also known for its healing properties. It also helps in cooling and relaxing body as it can hold moisture for a long time.

Having some greasiness makes black mud suitable for mud therapy, it is rich in minerals and also retain water for long time. This soil is smooth and removes the effects of toxins. It reduces inflammation and eliminates pain. Black soil is useful in irritation, burning, poisoning, toxic boils and skin diseases. This soil also reduces the deterioration of the blood and accumulation of toxic substances in it.

Features of Black Soil

- The black colour of this soil is due to presence of small proportion of Titaniferous magnetite or due to iron and black constituents of parent rock.
- Very retentive to moisture.
- It swells greatly. In hot climate, the moisture evaporates, the soil shrink and is seamed with broad and deep cracks, this permit oxygenation of the soil to sufficient depths.
- Chemical properties: 9 to 10% of iron oxide, 10% of alumina, 6 to 8% of lime and magnesium carbonates, potash is variable less than 0.5 % and phosphorous, nitrogen and humus are low.

Statistical Analysis

The information regarding demographic data was given in percentage. The scoring of criteria of assessment was analysed statistically in terms of mean values of B.T. (Before Treatment), A.T. (After treatment), S.D.(Standard Deviation), and S.E.(Standard Error). The effect of therapy in the group was assessed by applying students paired 't' test for comparing the before treatment and after treatment scores of assessment criteria. The results obtained were considered highly significant for $p < 0.001$ or < 0.01 , significant for $p < 0.05$ and insignificant for $p > 0.05$.

Observations

- Maximum number of patients were of age group 5 to 15 years (86.7%), were Males (80%), Unmarried (100%), Hindu (100%), residents of rural area (100%), belonged to lower middle class (66.7%), Receiving primary education (66.7%) and enjoyed veg. diet with (60%).
- Majority of patients had *Kapha-Pitta Prakriti* (66.7%), *Madhya Dehabala* (63.2%).
- Maximum number of patients had onset of disease in summer (86.7%), Family history of any allergic disorder were reported by 6.7%.
- Symptoms of Spring Catarrh like itching found in all patients (100%), *Pichchila Srava* (60.55%), burning sensation (100%), lacrimation (80%), Photophobia (60%), Foreign body sensation (60%), oedema (46.6%), chemosis (26.6%).
- Palpebral and bulbar conjunctival congestion found in all cases.
- Out of 15 registered patients all 15 completed the trial satisfactory.
- The result showed that therapy provided significant relief in Itching (75.40%), lacrimation (50.8%), burning sensation (68.91%), foreign body sensation (36.89%), photophobia (53.24%), bulbar congestion (68.07%) and palpebral congestion (31.25%).

Effect of Therapy

1. **Effect on Itching:** The initial mean score of itching was 1.86 before treatment and it was reduced to 0.46 after treatment. The percentage relief was 75.40% which was highly significant at the level of $p < 0.001$.
2. **Ropy Discharge:** The initial mean score of mucous ropy discharge was 1.18 before treatment and it was reduced to 0.72 after treatment. The percentage relief was 38.9% which was significant at the level of $p = 0.01$.
3. **Lacrimation:** Relief in lacrimation was 54.8% with initial mean score before commencement of trial was 1.66 which comes down to 0.75% after completion of trial which was statistically highly significant with $p < 0.001$.
4. **Burning Sensation:** The mean score of Burning Sensation was 1.93 before treatment and it was reduced to 0.66 after treatment with 68.91% improvement which was statistically significant with $p < 0.001$.
5. **Foreign Body Sensation:** The initial mean score of foreign body sensation was 1.22 before treatment and it was reduced to 0.77 after treatment. The percentage relief was 36.89% which was statistically significant with $p < 0.001$.
6. **Photophobia:** The initial mean score of photophobia was 1.54 before treatment and it was reduced to 0.72 after treatment. The percentage relief was 53.24% which was statistically significant with $p < 0.001$.
7. **Heaviness of lids:** The initial mean score of heaviness of lids was 1.00 before treatment and it

was reduced to 0.57 after treatment. The percentage relief was 43% which was statistically insignificant with $p > 0.05$.

- 8. Bulbar Conjunctival Congestion:** The initial mean score of bulbar conjunctival congestion was 1.66 before treatment and it was reduced to 0.53 after treatment. The percentage relief was 68.07% which was statistically highly significant with $p > 0.001$.
- 9. Palpebral Conjunctival Congestion:** The initial mean score of palpebral conjunctival hypertrophy was 1.60 before treatment and it was reduced to 1.10 after treatment. The percentage relief was 31.25% which was statistically highly significant with $p < 0.01$.

Overall Effect of Therapy

- No patient was cured.
- 2 (13.33%) patients were markedly improved.
- 10 patients (66.66%) were moderately improved.
- 3 patients (20%) were mildly improved.

DISCUSSION

To treat the disease in a proper way, it is necessary to know the positive factor and the disease process. The study of literature shows that Spring Catarrh has resemblance with *Abhishyanda* mainly with *Kaphaja* type of *Abhishyanda*. So any drug/procedure advocated for this particular disease should have properties to bring the affected *Doshas* to normal level.

Poorva Karma

First procedure adopted was Swedana Karma, Swedana is Agneya and it illuminates Agni. Acharya Charaka has mentioned that Swedana helps in liquefying the *Doshas* which are accumulated in the minute channels (*Sukshama Srotasa*) of the body and this helps in their precipitation on the surface.^[15] Acharya Sushruta has also mentioned that Swedana enhances Agni and also responsible for *Srotomukha Vishodhana*.^[16]

Pradhana Karma

After Swedana, *Krishna Mrityika* is applied, *Krishna Mrityika* is *Shothhara*, *Dahashamaka* and *Kaphapitta Shamaka* as mentioned by Acharya Sharangdhara and Acharya Bhavprakasha, also has *Vishhara* properties mentioned by Acharya Sushruta which is **Aptopadesha Pramana** for us. Acharya Sushruta mentioned that *Mrityika* have *Kashaya* and *Madhura Rasa* it pacify *Kapha Dosh* and balances *Pitta Dosh*. Acharya Charaka has explained that *Kashaya Rasa* has *Ruksha*, *Laghu* and *Vishada*, *Sheeta Guna*.^[17]

The *Krishna Mrityika* reaches to the deeper tissues through *Siramukha* & *Swedvaha Srotasa* due to its *Sukshama Guna*; *Vishada Guna* that clears the channels; *Laghu Guna* helps in removing heaviness from lids (*Shotha*) and *Ruksha* and *Khara Guna* pacify *Kapha Dosh*, so clears lacrimation and discharge. *Madhura*

Rasa is *Vata-Pitta Shamka* that helps in pain and burning sensation.

As we apply *Krishna Mrityika* in paste form by mixing water in it, so water (*Jala Mahabhuta*) act as media for absorption of active principles of *Krishna Mrityika*. *Jala Mahabhuta* has *Daha Shamaka* effect due to its *Sheeta Guna* and *Madhura Rasa* also helps in reducing burning sensation. Due to these properties, it clears the obstruction in *Swedavahi Srotasa* & allows the local toxins to flow out through the *Sweda* and clean out the micro channels. Thus reduces the sign & symptoms of *Kaphaja Abhishyanda*. Also black mud is antiseptic, anti-inflammatory, emollient, refrigerant and has colloidal properties that eliminate toxins and harmful substances from body.

Benefits of mud therapy

- An eye mud pack helps in relaxing the eyes.
- Therapeutically, it reduces irritation, itching, allergic condition such as conjunctivitis and hemorrhage of the eye ball.
- It helps in correcting refractive error like short/ long sightedness.
- It is effective in glaucoma, where it works to reduce the eye ball tension.
- It has anti-inflammatory effects and boost immune system.
- The cold moisture in mud relax the pores of skin, draw the blood to the surface, relieve the congestion, promote heat radiation and eliminate morbid materials.
- Anti- spastic, analgesic, immune modulator effect.

CONCLUSION

1. The effect of *Krishna Mrityika Vidalaka* was highly encouraging.
2. No unwanted effect of *Krishna Mrityika* was noticed in any cases.
3. In the present study, the treatment given was proved cheap, safe and effective.

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