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"A COMPARATIVE CLINICAL EVALUATION OF PATHYADI ANJANA VARTI AND MADHU SHIGRU ASCHYOTANA LOCAL APPLICATION IN THE MANAGEMENT OF KAPHAJA ABHISHYANDA W.S.R. TO ALLERGIC CONJUNCTIVITIS"

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ABSTRACT

Kaphaja Abhishyanda have been explained under the heading 'Sarvagata Roga'. Abhishyanda is considered as root cause of all most all the eye diseases. If it is not treated in time it leads to severe complication like Adhimantha and Hatadhimantha. The symptomatology of Kaphaja Abhishyanda can be correlated with allergic conjunctivitis. Allergic conjunctivitis is the most common type of eye allergy and is widely experienced by global population. Having a prevalence rate of 5-22% in general population and a recurrence rate of 41- 62%. Acharya Sushruta has recommended 'Kriya Kalpas' such as Aschyotana, Anjana etc. for the management of Abhishyanda, along with other therapeutic interventions. In the present study, total 30 patients were included and divided in 2 groups equally. In one group 15 patients were subjected to *Pathyadi Varti* for *Anjana* and in other

group 15 patients were given *Madhu Shigru Aschyotana*. Clinical study carried out under designed protocol and results of study were assessed in terms of effect on various clinical feature of *Kaphaja Abhishyanda* (Allergic conjunctivitis). The present study shows highly significant reduction in clinical feature of *Kaphaja Abhishyanda* with local application of

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Pathyadi Anjana Varti and Madhu Shigru Aschyotana. In both of drugs Madhu Shigru Aschyotana shows better results than comparison to Pathyadi Anjana Varti.

KEYWORDS: Kaphaja Abhishyanda, Pathyadi Anjana Varti, Madhu Shigru Aschyotana, allergic conjunctivitis.

INTRODUCTION

The eye is the "window of soul" and holds special importance among all the sense organs. Without vision the day and night are same and this beautiful world is useless even if one possess plenty of wealth.^[1]

Abhishyanda is one among the Sarvagata Netra Rogas, which affects all parts of the eye, having good prognosis. [2] It is of four types depending upon the predominant dosha viz-Vataja, Pittaja, Kaphaja and Raktaja Abhishyanda. In each type of Abhishyanda nature of pain, discharge, congestion, oedema etc. varies. On analysing the signs and symptoms predominant Dosha can be assessed. If these Abhishyanda are not treated in time it leads to a hemi cranial painful condition of eye called Adhimantha. [3]

Description of four types of *Abhishyanda* is found amongst 76 diseases of eye in *Ayurveda* texts. Out of four *Abhishyanda*, *Kaphaja Abhishyanda* where itching and grittiness of the eye, foreign body sensation of eyes, watering, congestion, eye lid oedema, scanty & ropy discharge from eyes, heaviness of eyes, etc. are quite similar to allergic conjunctivitis is a common ocular ailment of childhood and adolescent age group as described in modern ophthalmology text.

Exposure to allergen like dust, smoke, pollens, dandruff, animal dander etc. gives immediate reaction. Avoidance of the allergen is quite difficult. So distressing signs and symptoms may cause extreme discomfort to the patient and it can disturb patient's routine life.

No such an effective drug is available in the modern ophthalmology which can cure the disease Allergic Conjunctivitis completely. Moreover after stopping the treatment symptoms of the disease re-occur.

Acharya Sushruta has recommended '*Kriya Kalpas*' such as *Aschyotana*, *Anjana* etc. for the management of *Abhishyanda*, along with other therapeutic interventions. ^[4]

Keeping all these points in mind it is decided to evaluate the effect of *Anjana* and *Aschyotana* on *Kaphaja Abhishyanda*-Allergic Conjunctivitis.

The present study entitled "A comparative study on the effect of *Pathyadi Anjana Varti*^[5] and *Madhu Shigru Aschyotana*^[6] in the management of *Kaphaja Abhishyanda* w.s.r. to Allergic Conjunctivitis" was carried out with the aim of searching better remedy for the disease.

MATERIALS AND METHODS

The study was carried out in these sections viz.

Selection of patients

Patients attending the O.P.D. and I.P.D. of department of *Shalakya*, eye unit N.I.A. Hospital with signs and symptoms of *Kaphaja Abhishyanda* – Allergic Conjunctivitis, between age of 15-70 were selected for the present study. A total number of 30 patients were studied into two groups (Group A -15 patients, Group B -15 patients).

Sampling Technique

A total number of 30 patients with signs and symptoms of *Kaphaja Abhishyanda* –Allergic Conjunctivitis were registered and divided into two groups as below viz.

Group A: Pathyadi Anjana Varti-15 patients

Group B: Madhu Shigru Aschyotana Eye Drops -15 patients

The patients were selected randomly, irrespective of their sex, religion, occupation, education etc. the written consent of the patients were taken before starting the clinical study.

Criteria of Diagnosis

The diagnosis of *Kaphaja Abhishyanda* – Allergic Conjunctivitis was done on both the modern and *Ayurveda* basis. For this purpose a special research proforma was prepared as per the modern and *Ayurveda* view. After taking ophthalmic and systemic history, a detailed conjunctival examination was carried out by torch light and slit lamp examination before and after study. Routine blood investigations were done to rule out any systemic disease.

Inclusion Criteria

All patients in the age group of 15 to 70 years presenting with signs and symptoms of Allergic conjunctivitis and *Kaphaja Abhishyanda* as mentioned in classical text were be taken into account.

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Exclusion Criteria

1. Patients not willing for trial.

2. Abhishyanda associated with infections and Corneal Ulcers.

3. Abhishyanda associated with Trachoma.

4. Allergic conjunctivitis with other forms of allergy like skin rash and allergic Asthma.

5. Any individual above 70yrs and below 15yrs of age either of any sex.

Investigations

For the purpose of assessing the general condition of the patient and to exclude other

pathologies, the following investigations were performed in all the selected patients.

Routine Examination

1. Complete blood count.

2. Erythrocyte Sedimentation Rate.

Method of study

All patients selected for clinical trial were explained the nature of the study and their consent

was obtained on the proforma before inclusion in the study.

In total 30 patients were selected for present study who fulfilled the criteria of diagnosis and

consented for study. They all were treated with Pathyadi Anjana Varti and Madhu Shigru

Aschyotana for local application.

Grouping of patients

Group A: (Pathyadi Anjana Varti)

Drug: Pathyadi Anjana Varti

Dose: 1 *Harenu* once daily in morning for local application in lower *cul-de-sac*.

Duration: 15 days

Group B: (*Madhu Shigru Aschyotana* Eye Drops)

Drug: *Madhu Shigru Aschyotana* Eye Drops

Dose: 2 drops four times daily for local application in lower *Cul - de-sac*.

Duration: 15 days

Duration of the Trial

The trial of the therapy was carried for 15 days.

Follow Up: A minimum period of one month was planned for the follow up study.

Criteria for Assessment

In this study, the results were assessed with regards to the clinical sign and symptoms (on the basis of grading and scoring system) and overall improvement.

Clinical Assessment

The signs and symptoms were assessed by adopting suitable scoring method.

- 1) Kandu (itching)
- 2) Guruta (heaviness in eyes)
- 3) Muhurmuhursrawa (lacrimation)
- 4) Foreign body sensation
- 5) Akshishopha (swelling of eye lids)
- 6) Raga(congestion of conjunctiva)

OBSERVATIONS AND RESULTS

Total 34 patients were registered in this clinical study; amongst them 30 patients completed the treatment and 4 patients discontinued the treatment. So Observation of 34 patients and Results of 30 patients are given below.

- In the present study maximum numbers of patients were between 15-30 years age group (70.59%), 52.94% were male patients and 79.41 % were Hindu.
- Maximum numbers of patients were Student (47.06 %), married (52.94%), and with middle class economic status (64.71%).
- The study shows that maximum patients were Literate (91.18%), residents of urban area (52.94%) and having acute on chronic onset of disease (88.24%)
- Maximum numbers of patients were suffering since 2-3 years (35.29 %), suffering since 1-6months (32.35%) and 94.12% had negative family history.
- Maximum were vegetarian (67.65%), with regular bowel habit (94.12%), *Madhyama Koshtha* (91.18%) and addicted with Tea/coffee (35.29%).
- Maximum patients were having Vata -Kaphaja Prakriti (44.12%), Madhyama Sara (73.53%), Madhyama Samhana (73.53%), Madhyama Pramana (76.47%), Madhyama Satmya (44.12%), Madhyama Satva (52.94%), Madhyama Ahara Shakti (76.47%), Madhyama Vyayama Shakti (73.53%), and Yuva Vaya (70.59%).

- Maximum numbers of patients were having allergy with dust and wind (73.53%) and having history of allergic rhinitis (11.76%).
- 100% of patients were complained of itching and redness, whereas 88.24% patients were having lacrimation and F.B. sensation, 79.41% patients were having Heaviness in lids, 73.53% were having photophobia.
- Maximum numbers of patients i.e. 100% patients were having congestion and ropy discharge and 88.24% were having follicles.
- 100% patients were having *Kandu and Pichchila Srava*, 94.12 % were having *Upadeha*, 88.24 % were having *Muhurmuhur Srawa* and 79.41% were having *Guruta*.

Table no. I: Presenting symptoms of allergic conjunctivitis wise distribution of 34 patients of *Kaphaja Abhishyanda*.

Presenting Symptoms	No. of Patients	Percentage
Itching	34	100 %
Discomfort	10	29.41 %
Redness	34	100 %
Lacrimation	30	88.24 %
F.B. sensation	30	88.24 %
Photophobia	25	73.53 %
Heaviness in lids	27	79.41 %
Roughness in eye	6	17.65 %
Burning Sensation	12	35.29 %

Table no. II Signs of allergic conjunctivitis wise distribution of 34 patients of *Kaphaja Abhishyanda*.

Signs	No. of Patients	Percentage
Lid swelling	8	23.53 %
Congestion	34	100 %
Follicles	30	88.24 %
Papillary hyperplasia	3	8.82 %
Ropy discharge	34	100 %

Table No.III: Showing effect of therapy on clinical features in Group-A

S.	Clinical features	Mean Score		% 0f	S.D.	S.E.	P	Results	
No.	Chincal leatures	BT	AT	Diff.	Relief	S.D.	S.E.	1	Nesuits
1	Kandu	2.667	0.267	2.400	89.99%	0.498	0.091	< 0.0001	ES
2	Guruta	1.267	0.267	1.000	78.93%	0.831	0.152	< 0.0001	ES
3	Muhurmuhur Srawa	0.933	0.200	0.733	78.56%	0.450	0.082	< 0.0001	ES
4	Foreign body sensation	1.400	0.467	0.933	66.64%	0.583	0.107	< 0.0001	ES
5	Akshishopha	0.400	0.066	0.333	83.25%	0.711	0.130	< 0.0313	S
6	Raga	1.267	0.400	0.867	68.43%	0.629	0.115	< 0.0001	ES

The effect of drug reveals that maximum percentage of Relief was observed in the parameter of *Kandu* (89.99%) followed by *Akshishopha* (83.25%), *Guruta* (78.93%), *Muhurmuhur Srawa* (78.56%), *Raga* (68.43%) and foreign body sensation (66.64%) relief. Percentage of Relief is statistically highly significant in *Kandu, Guruta, Muhurmuhur Srawa, Raga*, Foreign body sensation and it is significant in case of *Akshishopha*.

Table No. IV: Showing effect of therapy on clinical features in Group-B.

S.	. Clinical Features		Mean Score		% 0f	S.D.	S.E.	P	Results
No.	Chincal Features	BT	AT	Diff.	Relief	S.D.	5.E.	Г	Results
1	Kandu	2.800	.133	2.667	95.25%	0.607	0.111	< 0.0001	ES
2	Guruta	1.733	0.200	1.533	88.45%	0.819	0.150	< 0.0001	ES
3	Muhurmuhur Srawa	1.333	0.133	1.200	90.02%	0.407	0.074	< 0.0001	ES
4	Foreign body sensation	1.533	0.333	1.200	78.28%	0.664	0.121	< 0.0001	ES
5	Akshishopha	0.467	0.133	0.333	71.30%	0.480	0.088	< 0.0020	VS
6	Raga	1.600	0.333	1.267	79.19%	0.583	0.107	< 0.0001	ES

The effect of drug reveals that maximum percentage of relief was observed in the parameter of *Kandu* (95.25%) followed by *Muhurmuhur Srawa* (90.02%), *Guruta* (88.45%), *Raga* (79.19%), Foreign body sensation (78.28%), *Akshishopha* (71.30%), relief. Percentage of Relief is statistically highly significant in *Kandu*, *Guruta*, *Muhurmuhur Srawa*, *Raga*, Foreign body sensation and it is very significant in case of *Akshishopha*.

Table No.V: Intergroup comparison of clinical features of *Kaphaja Abhishyanda*.

S.	Clinical Features	Mean		SD		SE		U	P	Results
No.	Chincal Features	G_{A}	G_{B}	G_{A}	G_{B}	G_{A}	G_{B}	U	Г	Results
1.	Kandu	2.4	2.667	0.498	0.607	0.091	0.111	318	0.0252	S
2.	Guruta	1	1.533	0.831	0.819	0.152	0.15	290	0.0093	VS
3.	Muhurmuhur Srawa	1.6	2	0.724	0.525	0.132	0.096	338	0.0338	S
4.	Foreign body sensation	0.933	1.2	0.583	0.664	0.107	0.121	370	0.1457	NS
5.	Akshishopha	0.333	0.333	0.48	0.711	0.088	0.13	410	0.45	NS
6.	Raga	0.867	1.267	0.629	0.583	0.115	0.107	308	0.0154	S

When the effect of treatment was compared between the groups in different symptoms, it was found that there was very significant difference seen in symptom like *Guruta* in eyes. In clinical terms it means that there was a very significant difference in both groups and the treatment given in group -B was found to be more effective than group A.

It was also seen that there was significant difference of results in symptom like *Kandu*, *Muhurmuhur Srawa* and *Raga*. In clinical terms it means that there was a significant

difference in both groups and the treatment given in group -B was found to be more effective than group A.

It was also seen that there was no significant difference of results in symptom like *Akshishopha* and Foreign body sensation. In clinical terms it means that there were no significant difference in both groups and there were approximately equally effective.

DISCUSSION

It was found that 70.59% cases of *Kaphaja Abhishyanda* – Allergic Conjunctivitis were in the age group of 15 to 30 years. The possible explanation is that these patients were exposed to polluted and dusty atmosphere as this is the most active phase of life. So they cannot avoid the allergen coming in contact with ocular surface.

On considering the nature of occupation, it was observed that maximum i.e. 47.06% patients were students, while 17.65% were housewives.

There is some relation between *Vyadhis* and occupation; here the students, housewives are more prone to *Atapa Sevana*, *Raja Nishevana*, *Dhuma Nishevana*, *Suksma Nirkishana* etc. causative factors cannot be avoided. *Suksma Nirikshana*, *Raja Nishevana*, *Dhuma Nishevana*, is very common for the students as their routine work is generally concerned with studies, computer work and outdoor activity. As these factors have the direct effect on the eyes and cause comparatively more eye-strain and lacrimation.

Maximum number of the patients i.e. 73.53% had reported dust and wind as aggravating factor, while 11.76% patients had reported sunlight as aggravating factor and 5.88% of the patients had reported pollens as aggravating factor of the disease. As per *Ayurveda*, excessive *Raja* and *Dhuma Sevana* may causes imbalance of *Doshas*. Hence it can be considered as one of the important factors in the causation of *Kaphaja Abhishyanda* – Allergic Conjunctivitis.

PROBABLE MECHANISM OF DRUG ACTION

Relief in the clinical features of the disease was caused by reduction in inflammation. Both drugs were effective in controlling the clinical features, although *Madhu Shigru Aschyotana* showed better response than *Pathyadi Anjana Varti*. The study of literature reveals that there can be many possible mechanisms working individually or in combination to affect the inflammatory process directly or indirectly.

Probable mode of action of Pathyadi Anjana Varti

Pathyadi Anjana Varti acted as a Lekhana Anjana and Lekhana Anjana can clean the Srotasas by its medicinal effects. The Malas are drained out through the nostrils and mouth so generally it can be used in Kapha predominant diseases.

Pathyadi Anjana Varti contains three drugs-Haritaki, Haridra and Yasthimadhu. Maximum of these having Tikta Katu Rasa, Laghu Ruksha Guna, Ushna Veerya, Madhura Vipaka and Tridosha Shamaka property.

Table showing Ras Panchaka of Pathyadi Anjana Varti.

Name	Rasa	Guna	Veerya	Vipaka	Part Used	Dosha Karma
Haritaki	Kashaya, Katu, Tikta,	Laghu,	Ushna	Madhura	Fruit	Tridosha
<i>Пагиакі</i>	Amla, Madhura	Ruksha	Osnna			Shamaka
Haridra	Tikta, Katu	Ruksha,	Ushna	Katu	Rhizome	Tridosha
		Laghu				Shamaka
Yasthimadhu	Madhura	Guru,	Sheeta	Madhura	Root	Vatapitta
		Snigdha			Koot	shamaka

On The Basis of Rasa

Function of *Katu Rasa* is *Kapha Shamak*, *Agni Deepaka*, *Krimigna*, *Kandu Nasak*, *Chakshu Virechana*, *Abhishyanda Nasak*, *Sroto Vishodhana* which alleviates itching, lid and conjunctival swelling and *Guruta*.^[7] *Tikta Rasa* is also present in most of contents of *Pathyadi Anjana Varti*. *Tikta rasa* has *Vishagna*, *Krimigna* and *Kandu Dahashamaka*, *Lekhana* properties, alleviates *Abhishyanda* and itching.^[8]

On the Basis of Guna

Laghu Guna is Langana and Shrotoshodhaka, which is present in maximum herbs of Pathyadi Anjana Varti, which alleviates kapha. Ruksha Guna is also having kapha Shamaka property. [9,10]

On The Basis of Veerya

Ushna Veerya drug act as *Agnideepana* and *Pachana karma*.

Sheet Veerya of Yasthimadhu controls excessive effect of Ushna Veerya on Tikshana Anjana.

On The Basis Of Vipaka

Regarding *Vipaka*, maximum contents have *Madhura Vipaka* followed by *Katu Vipaka*. *Katu Vipaka* is said to be *Kapha Shamaka* and *Madhura Vipaka* has got *Pitta-Shamaka* and soothing effect on the tissues of eye.

Modern properties

From modern point of view the probable mechanism of action can be as follow.

- Aqueous extract of dried fruit of *T. chebula* (*Haritaki*) showed anti-inflammatory effect by inhibiting inducible nitric oxide synthesis. [11]
- Aqueous extract of *T. chebula* produced an increase in humoral antibody titre and delayed type hypersensitivity (Immunomodulatory effect) in mice. [12]
- *Haritaki (Terminelia chebula*) has anti-inflammatory, anti-allergic, immunomodulatory activity. [13]
- Turmeric (*Curcuma longa* Linn.) has anti-inflammatory and antioxidant property. [14]
- Yasthimadhu (Glycyrrhiza Glabra) also have anti-inflammatory, anti-allergic, immunomodulatory and anti- oxidant property^[15]

Probable mode of action of Madhu Shigru Aschyotana

Table showing Ras Panchaka of Madhu Shigru Aschyotana.

Name	Rasa	Guna	Veerya	Vipaka	Part Used	Dosha Karma
Madhu	Madhura, Kashaya	Laghu, Ruksha, Shlakshna, Vishada	Sheet	Madhura		Tridosha shamaka
Shigru	Katu, Tikta	Laghu, Ruksa, Tiksna	Ushna	Katu	Leaves	Kapha Vata shamaka

Madhu Shigru Aschyotana contains Shigru having Katu, Tikta Rasa, Laghu Ruksha Teekshna Guna, Ushna Veerya, Katu Vipaka and Kapha Vata Shamaka property.

On The Basis of Rasa

Function of *Katu Rasa* is *Kapha Shamak*, *Agni Deepaka*, *Krimigna*, *Kandu Nasak*, *Chakshu Virechana*, *Abhishyanda Nasak*, *Sroto Vishodhana* which alleviates itching, lid and conjunctival swelling and *Guruta*. ^[7]

Tikta Rasa is also present in Shigru. Tikta rasa has Vishagna, Krimigna and Kandu Dahashamaka, Lekhana properties, alleviates Abhishyanda and itching.^[8]

On The Basis of Guna

Laghu Guna is Langana and Shrotoshodhaka, which is present in Shigru which alleviates Kapha. Ruksha Guna is also having Kapha Shamaka property. [9,10] Teekshana Guna having Kapha-Vatahara, Lekhana and Shodhana property which alleviates the Kaphaja Abhishyanda. [16]

On The Basis of Veerya

Ushna Veerya, drug acts as Agnideepana, Pachana and Kaphagna karma.

On The Basis Of Vipaka

Regarding Vipaka, Shigru has Katu Vipaka which is Kapha Shamaka.

In *Madhu Shigru Aschyotana*, *Madhu* is used as maximum quantity *Dravya* of this formulation, *Madhu* is said best *Kapha Shamaka Dravya*^[17], *Madhu* is having *Lekhana* property^[18] and it acts as a *Yogavahi Dravya*^[19] which helps and improves the actions of the *Shigru*.

Modern properties

From modern point of view the probable mechanism of action can be as follow. The *Moringa oleifera* dichloromethane extract shows high antioxidant activity.^[20]

It is also reported as an anti-inflammatory, antimicrobial, antioxidant, anticancer, cardiovascular, hepatoprotective, anti-ulcer, diuretic, antiurolithiatic, and antihelminthic. [21]

It was observed that both drugs were effective in treating or controlling the clinical features of disease although *Madhu Shigru Aschyotana* showed better efficacy then *Pathyadi Anjana Varti*, possible reasons regarding that may be.

All *Acharyas* have given due importance while *Acharya Vagbhatta* quoted it as an *Aadya Upakrama* – foremost procedure in treatment of all the eye diseases. ^[22] It is safe as well as most economical procedure. It eliminates the *Doshas* from all parts of eyes effectively.

In *Madhu Shigru Aschyotana Swarasa Kalpana* is used in formulation of drug which is more potent than other *Kalpanas* example- *Kwath*, *Gutika* etc.

Shigru Patra is having high anti-oxidant properties along with anti-inflammatory, antimicrobial and anthelmintic properties.

It was also seen the presence of more acceptability of Aschyotana than *Anjana* in patients.

CONCLUSION

After scrutinizing the study regarding *Kaphaja Abhishynda* and its management following conclusions can be drawn.

- ∠ Kaphaja Abhishynda is one of the most common disease affecting man is facing in present days.
- On the basis of signs and symptoms Kaphaja Abhishyanda can be correlated with allergic conjunctivitis.
- Management of the Allergic Conjunctivitis in modern ophthalmology has considerable side effects and also is not cost effective.
- Eye Drops is the preferred mode of application when considering the dose maintenance, easy and safe administration.
- Out of 30 patients in Over All Therapy, 02 patients in group A and 08 patients in group B showed complete cure. Marked improvement was observed in 08 patients in Group A and 04 Patients in Group B. Moderate improvement was observed in 05 patients in group A and 03 patients in group B.
- No adverse effects were observed during the study in both of formulations viz. *Pathyadi* Anjana Varti and Madhu Shigru Aschyotana.
- ✓ No recurrence during follow up was observed after completion of trial.
- Thus, it can be concluded that *Madhu Shigru Aschyotana* showed better results in the clinical symptoms of *Kaphaja Abhishyanda* Allergic conjunctivitis but still the results obtained in *Pathyadi Anjana Varti* group are also encouraging.

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