

A COMPARATIVE STUDY ON NIMBA PATRA SWARAS ASHCHYOTANA AND MADHU SHIGRU SWARAS ASHCHYOTANA IN KAPHAJA ABHISYANDA W.S.R. MUCOPURULENT CONJUNCTIVITIS

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ABSTRACT

Kaphaja Abhisnyanda (Mucopurulent Conjunctivitis) is a communicable eye disease; it is a major public concern in the rural areas of developing countries particularly in India. Treatment is needed in this disease to reduce the morbidity, and person to person spread. 40 patients fulfilling the inclusion criteria of *Kaphaja Abhisnyanda* (Mucopurulent Conjunctivitis) were randomly selected and divided into 2 groups, group A (*Nimba Patra Swaras*) and group B (*Shigru Madhu Swaras*). Source of patients: O.P.D and I.P.D of *Ashwini Ayurvedic Medical Collage Hospital and Research Center*, Ring Road, Maralur, Tumkur. *Ashchyotana* was done 2 drops to each eye at the regular interval of 4 hours daily for a period of seven days and follow up done after 7 days of treatment. Clinical signs and symptoms were given with suitable scores according to their severity and assessed based on relief after treatment. Overall effect of therapies after 7 days of treatment showed in group A marked improvement 5%, Moderate 20%, Mild 65% and no change in 5%. In group B Marked improvement 10%, Moderate 45%, Mild 45%, No change in 0%.

Keywords: *Abhisnyanda; Nimba Patra Swaras; Shigru Madhu swaras; Ashchyotana;*

INTRODUCTION

Kaphaja Abhisnyanda, a *sarvagata* disease of eye¹. It is characterized by heaviness and itching in eyes, sticking of eye lids, matting of eye lashes and thick slimy copious mucopurulent discharge². The causative factors of *Kaphaja Abhisnyanda* include *dhooma*, *raja*, and variation in seasons, unhygienic conditions and irregular sleeping habits.³

According to *Acharya Sushruta*, *Abhisnyanda* is the main reason of all eye diseases and is considered as *Aupasargika roga*.⁴ If the disease is untreated it leads to many serious complications like *Adhimantha*, *Akshipakatyaya*, *Avrana shukla* etc and even loss of vision.⁵ Based on the aetiology, clinical signs and symptoms it can be correlated to muco-purulent conjunctivitis.⁶

Conjunctivitis is a common condition of the eyes that occurs worldwide and affects all genders and social strata, affecting more than 2 percent of the population. Mucopurulent Conjunctivitis is a type of bacterial Conjunctivitis and in developing country like India it is more prevalent. Prevalence of bacterial conjunctivitis is found to be 68.1%. Affection of both eyes due to conjunctivitis is 51.7%. Conjunctivitis among rural residents is 59% when compared to urban residents which are 34.66%. Conjunctivitis among males is found to be 59.4% whereas it is 40.6% among females.⁷ It is a global economic burden. The bulk of Conjunctivitis related cost include physician consult, supportive care, prescription drugs, diagnostic tests and productivity losses associated with time, away from work or school.

For treatment of mucopurulent Conjunctivitis use of antibiotics is often unnecessary as bacterial infection is self limiting and complications are rare; overutilization of antibiotics resistance and expose patient to drug related typical allergic and toxicity antibiotic resistance is a growing problem. Hence the ailing person has to endure both discomforts and embarrassment. Hence this condition is important to recognize because of its significant associated ocular discomforts, social implications and the economic impact of the disease in terms of lost work time.

In *Ayurveda Snehana, Mridu svedana, Siravyadhana, Virechana* and *Netra Kriyakalpas* like *Ashchyotana, Seka* and *Anjana* are mentioned in the treatment of *Abhishyanda*.⁸ Out of these *Ashchyotana* is a simple procedure, which is indicated in the initial stage of eye diseases. *Tikta rasa, Ushna, Teekshna dravya Ashchyotana* is advised in *Kaphaja Abhishyanda*.⁹

In classics we get various references regarding the use of *Nimba & Shigru* in different forms for *Netra Vikaras* and also in *abhishyanda*. *Nimba & Shigru* are categorized under *Chakshushya gana* and has *krimighna, Kandugna & swedopag* properties.^{10,11} Hence *Nimba & Shigru* are considered to be a potent, reliable drug in the treatment of *Kaphaja Abhishyanda*. *Madhu* also has *krimighna, lekhana & chakshushya* properties.¹² *Nimba patra swaras &*

Madhu Shigru swaras are widely used as folklore medicine in the treatment of *Netra rogas*.

Material and Methods

The patients of *Kaphaja Abhishyanda* attending the O.P.D and I.P.D of *Shalakyata*, Ashwini Ayurvedic Medical College, Hospital and research centre Tumkur, were selected for this study irrespective their sex, caste and socio economical status. The patients were examined in detail as per special proforma which includes both Ayurvedic and modern methods of examination of patients prepared for this purpose. They were further subjected to following criteria of diagnostic inclusion and investigations to reach the final diagnosis. All the patients Selected for trial were explained the nature of the study and their written informed consent was obtained.

Ethical Clearance

The topic of the study together with the case proforma was submitted to the institutional ethical committee of Ashwini Ayurvedic Medical College and Research Centre, Tumkur. The significance, aims and objectives, methodology and probable result of study were clarified to the committee and ethical clearance was obtained for the condition of the study.

Diagnostic Criteria:

The diagnosis is mainly based on the Clinical features of *Kaphaja Abhishyanda* (Mucopurulent Conjunctivitis) such as,

- *Kandu*
- *Gurutha*
- *Srava*
- *Upadeha*
- *Sopha*

Inclusion Criteria:

Patients aged above 15 years with classical features of *Kaphaja Abhishyanda* such as *Kandu* (Itching), *Gurutha* (Heaviness in eyelids), *Srava* (Mucopurulent discharge), *Upadeha* (Sticking together of lid margins with discharge during sleep), *Sopha* (mild oedema of eyelids) with duration less than 1 month were selected. If the disease is untreated it leads to many serious complications like *Adhimantha, Akshipakatyaya, Avrana shukla* etc and even loss of vision, so taken

cases below one month.

Exclusion Criteria:

- Patients aged below 15 years & above 50 years.
- Duration of disease more than 1 month.
- Patients having symptoms of *Vataja*, *Pittaja*, *Raktaja Abhislyanda*, *Puyalasa* and *Sandhigata rogas*.
- *Abhislyanda* associated with other ocular and systemic diseases.

Assessment Criteria:

- Self formulated grading scale (which is peer reviewed) was prepared and assessed on the basis of improvement in signs and symptoms.
- Assessed with subjective and objective parameters for *Kaphaja Abhislyanda* (Mucopurulent Conjunctivitis) before and after the treatment with appropriate statistical method.

Subjective Parameter-

- *Kandu*
- *Gurutha*
- *Srava*
- *Upadeha*
- *Sopha*

Objective Parameter-

- Cytology and Bacteriological examination of conjunctival secretion.

LABORATORY INVESTIGATION:

- Blood for TC, DC, ESR and AEC.
- Cytology and Bacteriological examination of conjunctival secretion (***Staphylococcus aureus***) before and after treatment in selected patients.

Sampling Method and Research Design:

40 patients diagnosed as *Kaphaja Abhislyanda* were attending in *Shalakya tantra* OPD and IPD of *Ashwini Ayurved* Medical College, Hospital and research centre *Tumkur*; Simple random Sampling method is used for selection of patients and randomly divided into 2 groups. i.e. (Group A) *Nimba Patra Swaras Ashchyotana* (ref-*A.H.Uttara sthana 16/17*) (Groups B) *Shigru Madhu Swaras Ashchyotana* (ref-

A.H. Uttara sthana 16/9) each comprising of 20 patients.

1. Group A- The patients of this group were instilled two drops of *Nimba patra Swaras Ashchyotana* in each eye and repeated at the interval of four hours during day time for a period of seven days.
2. Group B- Patients of this group received *Ashchyotana* with two drops *Shigru Madhu Swaras* in each eye at the interval of four hours during day time for a period of seven days and follow up was done after 7 days of interval in both groups. Changes or progress were recorded periodically. The routine diet was advised to the patients of both the groups during the treatment. No other medicine was given internally and externally.

1- Method of preparation of *Nimba patra swaras*:

The fresh and tender leaves of *Nimba* (***Azadirachta Indica***) cleaned well, pounded and the resultant paste is rolled in to a bolus, squeezed through a clean cotton cloth and the expressed fresh juice is collected in a clean container.

2-Method of preparation of *Shigru Madhu swaras*:

The fresh and tender leaves of *Shigru* (***Moringa Olefera***) cleaned well, pounded and the resultant paste is rolled in to a bolus, squeezed through a clean cotton cloth and the expressed fresh juice is collected in a clean container. According to *Ayurveda* classics if quantity of a drug is not mentioned in a combination then it should be taken in equal amount 1:1. By taking aseptic precaution for preparing the *Swarasa* of *Shigru Patra*, 1 part *Swarasa* was filtered and mixed with 1 part *Madhu*.

Criteria for Assessment of Treatment

Assessment was based on relief found in the clinical signs and symptoms of the disease. For this purpose main clinical signs and symptoms were given with suitable scores according to their severity before, during and after treatment. Following symptoms were assessed

Table 1-

No	Subjective Parameter		Grading	
1	<i>Kandu</i>	Normal	0	
		Mild	1	
		Moderate	2	
		Severe	3	
2	<i>Gurutha</i>	Normal	0	
		Mild	1	
		Moderate	2	
		Severe	3	
3	<i>Srava</i>	Normal	0	
		Ocassional	1	
		Intermittant	2	
		Continious	3	
4	<i>Upadeha</i>	Normal	0	
		Mild Sticking Of Eye Lash	1	
		Moderate Sticking Of Eye Lash	2	
		Severe Sticking Of Eye Lash	3	
5	<i>Sopha</i>	Normal	0	
		Mild	1	
		Moderate	2	
		Severe	3	
Objective Parameter				
1	Cytology And Bacteriology Examination Of Conjunctival Secretion		Absent	0
			Present	1

Criteria for Assessment of Overall Effects

Overall effect of the therapy was assessed in terms of complete remission, marked improvement, moderate improvement, and mild improvement and unchanged is observed by adopting the following criteria.

- **Complete remission:** 100% relief in Chief complaints and no recurrence during follow up study were considered as complete remission.
- **Marked improvement:** 75–100% improvement in chief complaints is recorded as marked improvement.
- **Moderate improvement:** 50-75% improvement in chief complaints is recorded as moderate im-

provement.

- **Mild improvement:** 25-50% improvement in chief complaints is considered as mild improvement.
- **Unchanged:** Less than 25% reduction in chief complaints or recurrence of the symptoms to the similar extent of severity is noted as recurrence.

Statistical analysis of the result: Statistical analyses were done by using the Students‘t’ test and Paired ‘t’ test was used in the calculation of the significance. The results have shown P values at less than <0.05 and are considered as statistically significant in this study.

RESULTS

Table 2: Overall effect of *Nimba Patra swaras* in Group-A

EFFECT OF TREATMENT IN GROUP – A		
Class	Grading	No of patients
0-25%	No Improvement	2
26% -50%	Mild Improvement	13
51% - 75%	Moderate Improvement	4
76% - 100%	Marked Improvement	1

Graph 1: Overall effect of *Nimba Patra swaras* in group A

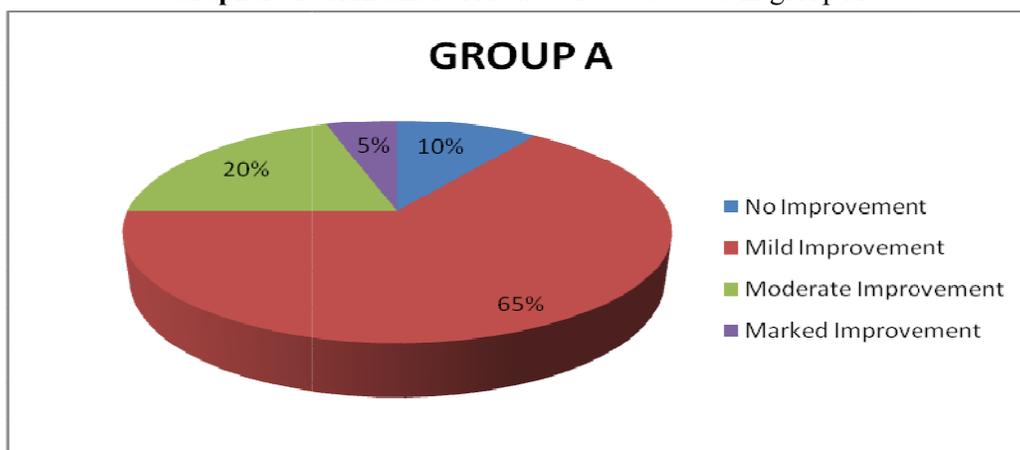


Table 3: Overall effect of *Shighru Madhu Swaras* in Group-B

EFFECT OF TREATMENT IN GROUP – B		
Class	Grading	No of patients
0-25%	No Improvement	0
26% -50%	Mild Improvement	9
51% - 75%	Moderate Improvement	9
76% - 100%	Marked Improvement	2

Graph 2: Overall effect of *Shighru Madhu Swaras* in Group B

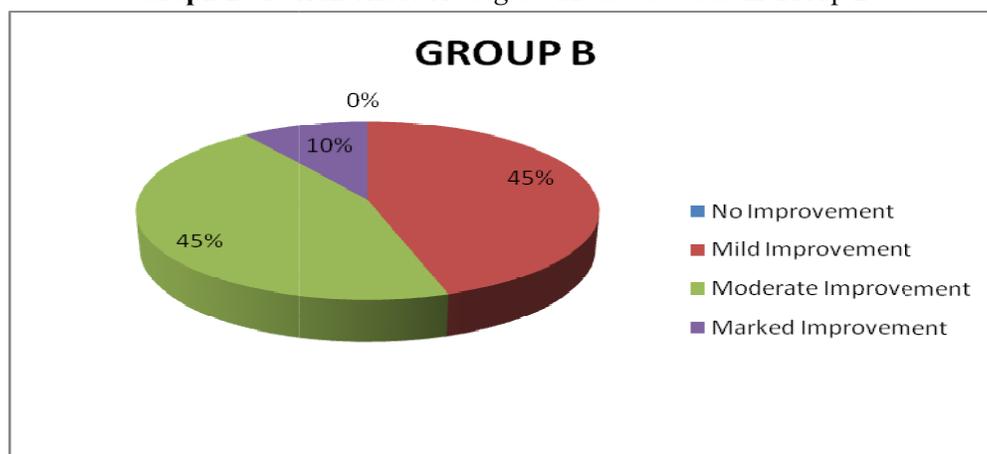


Table 4: Comparative results of Group-A and Group-B

Characteristics	Group-A			Group-B		
	Mean score		Percentage of relief	Mean score		Percentage of relief
	BT	AT/FU		BT	AT/FU	
KANDU	1.5	0.8	44.83	1.5	0.65	55.17
GURUTHA	1.9	1.05	43.24	1.8	0.85	52.77
SRAVA	1.9	1.1	42.1	2	1	48.71
UPADEHA	2	1.1	43.58	2.3	1.1	52.17
SOPHA	1.7	0.9	45.45	1.7	0.65	61.76
BACTERIA	0.4	0.2	50	0.6	0.2	66.67

Table 5: Comparative results of Group A and Group B

Group A	Group B	Mean Difference	SE (±)	T value	P value
45.54	55.07	9.53	3.15	1.96	<0.05

Result of group A

The percentage of improvement in Group A on *Kandu* is 44.83%, *Gurutha* is 43.24%, *Srava* is 42.10%, *Upadeha* is 43.58%, *Sopha* is 45.45% and *Bacteria* is 50.0%.

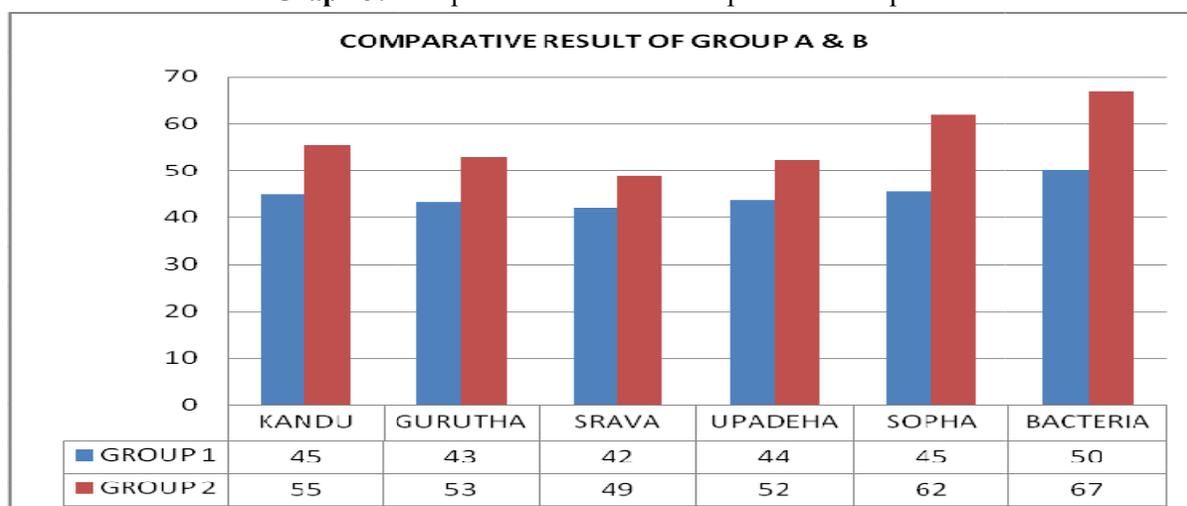
Result of group B

The percentage of improvement in Group B on *Kandu* is 55.17%, *Gurutha* is 52.77%, *Srava* is 48.71%,

Upadeha is 52.17%, *Sopha* is 61.76% and *Bacteria* is 66.67%.

Comparative analysis of the overall effect of the treatments in both the groups was done by statistically with unpaired t test. The test shows that the treatment is statistically significant in Group B when compared to Group A. Group A overall result is 45.54% and Group B overall result is 55.07%.

Graph 3: Comparative results of Group-A and Group-B



DISCUSSION

Nimba patra swaras and *shigru madhu swaras Ashchyotana* is selected for the present clinical study. *Nimba* and *Shigru* possess antibacterial property. *Ashchyotana* is done in a lesser dose (two drops). It enhances the absorption of the drug and its residence time. It would be an ideal line of management. *Ashchyotana* is a *Netra Kriya Kalpa* where the drug is instilled into the eyes. It is effective in *Ruk, Toda, Kandu, Srava* and *Raga*. It has direct action on the ocular tissues especially on conjunctiva, so it is useful in *conjunctival* disorders. It flushes out debris and bacteria and reduces the matting of eye lashes. It increases the local circulation, therefore it reduces *oedema*.

Nimba and *Shigru* possess *Tikta rasa, Ushna, Teekshna, Rooksha, Chakshushya* and *Krimighna guna* those help to counteract the *Kapha* vitiation. *Nimba* as well *Shigru* having antibacterial, antifungal, anti-inflammatory properties. Both are rich source of Vitamin A, Vitamin C which is used as supplements to combat the symptoms of conjunctivitis. Vitamin A reduces infection; Vitamin C strengthens the defense mechanism.

Madhu also having *lekhana, chakshushya, yogavaahiguna*, it is also rich source of Vitamin B6, Vitamin C etc. The pH of honey is commonly between 3.2 & 4.5. This relatively acidic pH level prevents the growth of many bacteria.

In present study only 2 drops of medicine was used for *Ashchyotana*. This not only increases residence time but also the absorption of the drug. Lesser quantity of drug increases the residence time in the fornix and helpful in better absorption.

CONCLUSION

Kaphaja Abhislyanda (mucopurulent conjunctivitis) is one of the most common disease affecting man is facing in present days. In the present clinical study, Both *Nimba patra swaras ashchyotana* and *Shigru Madhu swaras Ashchyotana* gave Moderate results in the clinical features like *Kandu, Guruta, shopha, Updeha & pichchila srava*. Out of 40 patients in Over

All Therapy, 01 patient in group A and 02 patients in group B showed Marked Improvement. Moderate improvement was observed in 04 patients in Group A and 09 Patients in Group B. Mild improvement was observed in 13 patients in group A and 09 patients in group B, while 2 patients were remained unchanged in Group A. Redness and Burning Sensation were observed during the study in both of formulations. These are safe, economical and procedure is easy to perform, and proved to be cost effective, less, safe and better drug for *Ashchyotana* in *Kaphaja Abhislyanda*. Thus, it can be concluded that *shigru Madhu Swaras Ashchyotana* showed better results in the clinical symptoms of *Kaphaja Abhislyanda* (mucopurulent conjunctivitis) but still the results obtained in *Nimba patra Swaras* group are also encouraging.

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Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Shabaz Mansoori et al: Comparative Study On Nimba Patra Swaras Ashchyotana And Madhu Shigru Swaras Ashchyotana In Kaphaja Abhisyanda W.S.R. Mucopurulent Conjunctivitis. International Ayurvedic Medical Journal {online} 2019 {cited September, 2019} Available from:

http://www.iamj.in/posts/images/upload/1463_1469.pdf