



A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF MADHU-SHIGRUPALLAVA SWARASA ASCHYOTANA AND MADHU-SHIGRUPALLAVA ARKA ASCHYOTANA IN THE MANAGEMENT OF VATAJA ABHISHYANDA W.S.R. TO ALLERGIC CONJUNCTIVITIS

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ABSTRACT

Introduction: Vataja abhishyanda explained in the context of Sarvagata netra roga is a commonly seen clinical condition. It can be compared to allergic conjunctivitis explained in the contemporary science, its lakshanas are nistodana, stambana, sangharsha, parushya, kandu, srava, raga and prakasha asahishnuta. Allergic diseases have dramatically increased in the last decades. Ocular allergy represents one of the most common ocular conditions encountered in clinical practice. Allergic conjunctivitis prevalence has been estimated in 6-30% of population and up to 30% in children. In India more than 10 million cases per year is recorded. **Objective:** To evaluate the therapeutic effect of Madhu-shigrupallava swarasa aschyotana and Madhu-shigrupallava arka aschyotana in the management of Vataja Abhishyanda w.s.r. to Allergic conjunctivitis. To compare the therapeutic efficacies of both the groups. **Methods:** 20 patients in each group fulfilling the inclusion criteria of vataja abhishyanda were selected from O.P.D and I.P.D of Shalaky Tantra, SKAMCH &RC, Bengaluru. Madhu-shigrupallava swarasa aschyotana was done in both Group A and Madhu-shigrupallava arka aschyotana Group B, 10 drops each for 14 consecutive days. **Results and conclusion:** Though both the forms of drugs beneficial in management of Vataja Abhishyanda w.s.r. to allergic conjunctivitis, however Madhu- Shigru pallava swarasa was comparatively better than Madhu-Shigru pallava arka aschyotana in parameters like Kandu, Vividha vedana (Discomfort), Sangharsha, Upadeha, Raga, Shophya and Papillary reactions. Madhu- Shigrupallava Arka Aschyotana was given better results in parameters like Srava and Prakasha asahishnuta. Due to krimighna, chakshushya, lekhana, ropana and shodhana properties of Madhu- Shigru pallava yoga, both forms of medicine found beneficial in Vataja Abhishyanda.

KEYWORDS: Vataja abhishyanda, Allergic conjunctivitis, Madhu-shigrupallava swarasa aschyotana, madhu-shigrupallava arka aschyotana.

INTRODUCTION

Among the 76 eye diseases mentioned by Acharya Sushruta, Abhishyanda is one among the vyadhana sadhya vyadhi.^[1] It is called as Ghora nayanamayakara told by Madhavakara as it is the main cause for all the eye diseases, and it is an Aupasargika roga.^[2] If not treated properly, it may lead to further complications like Adhimantha, Hathadhimantha, Drushtinasha. Vataja abhishyanda is characterized by toda (pricking sensation), stambha (rigidity), romaharsha (horripulation), sangharsha (foreign body sensation), parushyata (roughness), shiroabhitapa (headache), vishushkabhava (feeling of dryness), Shishirashruta (lacrimation), alpa shophata (mild chemosis)^[3] Allergic conjunctivitis is an atopic disorder commonly encountered in ocular clinical practice. It has been reported that about one-fifth of the entire human population suffers from one form of allergy or another of

which about 20% is due to allergic conjunctivitis. These variations may be attributed both to genetic and environmental factors (including warm, dry climate and extent of pollution)^[4] The prevalence of allergic conjunctivitis varies worldwide between 6-30% and is a major health concern in the rural areas of developing countries particularly in India.^[5] Allergic conjunctivitis is the inflammation of the conjunctiva which is caused due to an allergic reaction of body's immune system to an allergen. It is characterized by intense itching, burning sensation in the eyes associated with watery mucus, mild photophobia, hyperemia, chemosis, and edema of lids.^[6]

Aschyotana one among the Kriyakalpa is indicated as Adyopakrama for acute conditions of eye.^[7] Madhu-Shigrupallava swarasa aschyotana is mentioned under vataja abhishyanda chikitsa by Acharya Vagbhata which includes Madhu and Shigrupallava.^[8] Both being

Chakshushya and krimihara helps to alleviate vitiated Vata dosha and to reduce Abhishyanda. Shigrupallava arka is mentioned by Ravana in Arka prakasha,^[9] which is having more shelf life i.e. 1-2 years when compared to swarasa. Hence, the present study was an attempt to scientifically validate the effect of Madhu-Shigrupallava swarasa aschyotana and Madhu- Shigrupallava arka aschyotana in the management of Vataja abhishyanda w.s.r. to Allergic conjunctivitis.

MATERIALS AND METHOD

Total 40 Subjects with the clinical features of Vataja Abhishyanda w.s.r. to Allergic conjunctivitis coming under the inclusion criteria approaching the OPD and IPD of Shalakya Tantra, Sri Kalabyraveswara Ayurvedic Medical College Hospital & Research Center, Bangalore were selected for the study. The sample collection was initiated with post approval from the Institutional Ethics Committee. Study design- Randomized double arm open label clinical study. Sampling Technique- The subjects who fulfil the inclusion criteria were selected using random sampling technique of lottery method. Study was also registered under Clinical Trial Registry of India (CTRI/2019/01/016961).

The Madhu and fresh Shigrupallava required for swarasa and Arka Ashcyotana was collected from the vendors and the drugs were authenticated by the faculty of Dravya Guna of Sri Kalabyraveswara Ayurvedic Medical College Hospital & Research Center, Bangalore.

Diagnostic criteria^[10]

- Subjects presenting with lakshanas of Vataja Abhishyanda.
- Subjects presenting with signs and symptoms of Allergic conjunctivitis.

Inclusion criteria

- Subjects of either gender from 17-55 years of age.
- Subjects presenting with lakshanas of Vataja Abhishyanda.
- Subjects presenting with signs and symptoms of Allergic conjunctivitis.

Exclusion Criteria

- Subjects with complications like Marginal corneal ulcer, Trachoma, Dacryocystitis, Keratoconjunctivitis, Infective conjunctivitis and other ocularinfections.
- Subjects with other systemic diseases that interfere with the course of treatment.

Intervention: The study was intervened for a duration of 21days which is divided into treatment and follow up study comprising of 14 days and 7 days respectively. The total duration of the study in both the groups was 21days.

Group A- Madhu- Shigrupallava swarasa aschyotana 10 drops were administered in 5 divided doses i.e., 2 drops at a time for 14 days.

Group B- Madhu-Shigrupallava arka aschyotana 10 drops were administered in 5 divided doses i.e., 2 drops at a time for 14 days.

The Swarasa was prepared freshly every day and arka was prepared at Bangalore test house, Rajajinagar, Bengaluru.

Assessment parameters

Subjective parameters: 1. Nistoda/vividha vedana (Pricking sensation). 2. Sangharsha (Foreign body sensation). 3. Shishirashruta (Lacrimation) and mild Upadeha (mucoïd discharge). 4. Kandu(itching) 5. Prakasha asahishnuta (Photophobia).

Objective parameter: 1. Raga (Congestion). 2. Presence of Papillae. 3. Vartmasopha (Odema).

Lakshanas(Signs and symptoms)	0	1	2	3
Kandu (Itching)	Absent	Occasional	Frequent	Constant
Vividha vedana(Discomfort including burning, pricking sensations)	Absent	Mild	Moderate	Severe
Sangharsha (Foreign-body sensation)	Absent	Occasional	Intermittent	Continuous
Srava (Discharge) Jalarava (Watering of eyes)	Normaltear	Sensation of fullness of the conjunctiva	Infrequent spilling of tears from the lid margin	Constant spilling of tears from the lid margin
Upadeha (Mucoïd discharge)	Absent	Small amount of mucoïd discharge	Moderate amount of mucoïd discharge, presence of crust upon awakening	Eyelids tightly matted together on awakening; warm soaks necessary to open eyelids
Prakasha asahishnuta (Photophobia)	Absent	Mild intolerance to bright light, can manage without dark glasses	Moderate, necessitating dark glasses	Extreme photophobia, even with dark glasses

Raga (Hyperaemia)	Absent	Slightly dilated blood vessels, pinkin color	More apparent vessel dilatation, vessel coloris red	Numerous and obvious dilated blood vessels,color deep red
Papillary reactions	Absent	small size papillae	Cobble stone appearance	Giant papillae seen
Shotha (Oedema of lids And conjunctiva)	Absent	swelling of lower lid	swelling of lower and upper lids, mild decrease in palpebral fissure, effort to keep eyes open	Extremely swollen lower and upper lids along with chemosis, swelling beyond lower lid fold and in upper lid, severe decrease in palpebral fissure, extreme difficulty in opening eyes.

Observations

Age

Among the subjects registered, 18(45%)subjects belonged to the age group of 17-22years, 5(12.5%) subjects belonged to the age group of 23-28years, 4 (10%)subjects belonged to the age group of 29-34 years, 4(10%) subjects belonged to the age group of 35-40 years, 1(2.5%) subject belonged to the age group of 41-46 years, 4(10%) subjects belonged to the age group of 47-52 years and 4(10%) subjects belonged to the age group of 53-58 years.

Gender

In the present study, 21 (52.5%) were females and 19(47.5%) were males.

Religion

Out of 40 subjects in both the groups, 29(72.5%) subjects were Hindus, 8(20%) subjects were Muslims and 3(7.5%) were Christians.

Socio-economic status

Out of 40 subjects in both the groups, 33(82.5%) subjects belonged to middle socio-economic class, 6(15%) subjects belonged to lower socio-economic class.

Occupation

In the present study, 21 (52.5%) of the subjects were students, 9(22.5%) subjects were Homemakers, 3(7.5%) were from Business field and 7 (17.5%) were other field (Driver, bank employee, teacher, watchman, sales manager, scrapematerial dealer).

Addiction

Out of 40 subjects in both the groups, 2(5%) subjects were habituated to smoking, 19(47.5%) subjects were habituated to coffee and 13(32.5%) were habituated to tea.

Srava (Watering of eyes)

Table-2: Effect of Treatment on watering of eyes Within Group A.

Watering of eyes	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT – AT	1.05	.39	.088	NR	19	10.00	190.00	-4.18	<0.001	HS
				PR	0	.00	.00			
				Ties	1					
BT -AF	1.15	.48	.109	NR	19	10.00	190.00	-4.06	<0.001	HS
				PR	0	.00	.00			
				Ties	1					

Nidana

Out of 40 subjects, 34(85%) Subjects were exposed to wind and dust, 11(45%) subjects were having contact with flower, animals and pollens , 6 (15%) subject had *exposure to AC* and 18 (45%) subjects had *Upper respiratory tract infection*, 17 (42.5%) subjects had habit of *using eye cosmetics*, 15 (37.5%) subjects were habituated to *dadhi sevana*, 22(55%) subjects had the habit of *Ratrijagarana*.

Lakshanas

Out of 40 subjects, 40(100%) subjects had Raga, 38(95%) subjects had Srava, 31(77.5%) subjects had Kandu, 23(57.5%) subjects had discomfort, 15(37.5%) subjects had photophobia, 14(35%) subjects had Sangharsha, 13(32.5%) subjects had edema of lid and conjunctiva, 21(52.5%) subjects had papillae and 2(5%) subject had Shirobhitapa.

Chronicity

Out of 40 subjects, 32 (80%) subjects had duration up to ≤ 6 months, 2 (5%) subjects had duration of > 6 months to ≤ 12 months, 3 (7.5%) subjects had duration of > 18 months ≤ 24 months and 3(7.5%) had duration >2 years.

RESULTS

The parameters considered for the clinical study were subjected to Wilcoxon Sign rank test to compare the Mean values within the groups and Mann Whitney, 'U' test to compare the Mean difference values between the groups at different time points like before treatment (BT), after treatment (AT) and at follow-up (AF). The differences in the mean values were considered highly significant at $p < 0.001$ and $p < 0.01$, Significant at $p < 0.05$ and Non-significant at $p > 0.05$.

Table -3: Effect of Treatment on Watering of eyes Within Group B.

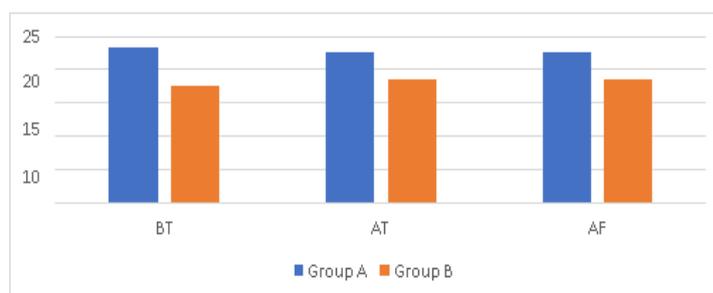
Watering of eyes	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p- value	Re
BT-AT	.90	.307	.068	NR	18	9.50	171.00	-4.24	<0.001	HS
				PR	0	.00	.00			
				Ties	2					
BT-AF	1.00	.324	.072	NR	19	10.00	190.00	-4.26	<0.001	HS
				PR	0	.00	.00			
				Ties	1					

Table-4: Effect of Treatment on watering of eyes between Group A & GroupB

Watering of eyes	Group A		Group B		Mann-WhitneyU	Z value	p- value	Remarks
	Mean rank	Sum of ranks	Mean rank	Sum of ranks				
BT	23.42	468.50	17.58	351.50	141.500	-1.88	.059	NS
AT	22.50	450.00	18.50	370.00	160.000	-1.36	.173	NS
AF	22.50	450.00	18.50	370.00	160.000	-1.56	.118	NS

No significant difference in between the groups statistically at BT, AT and at AF (p value>0.05), however mean rank of group B is smaller, hence reduction of

watering of eyes of group B is comparatively better than group A.

**Graph-1: Effect of Treatment on watering of eyes between Group A & Group B.****Kandu (Itching)****Table-5: Effect of Treatment on Kandu Within Group A.**

Itching	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p- value	Re
BT-AT	.85	.58	.13	NR	15	8.00	120.00	-3.69	<0.001	HS
				PR	0	.00	.00			
				Ties	5					
BT-AF	1.00	.72	.16	NR	15	8.00	120.00	-3.54	<0.001	HS
				PR	0	.00	.00			
				Ties	5					

Table-6: Effect of Treatment on Kandu Within Group B.

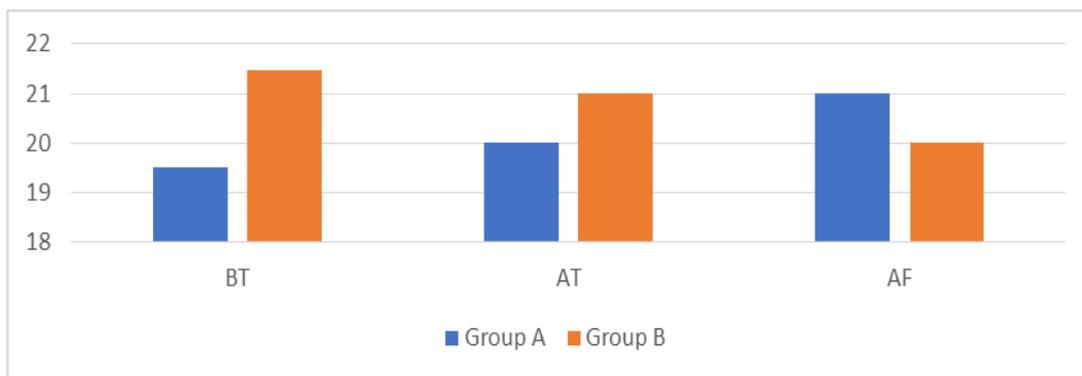
Itching	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p- value	Re
BT-AT	.95	.60	.13	NR	16	8.50	136.00	-3.75	<0.001	HS
				PR	0	.00	.00			
				Ties	4					
BT-AF	1.20	.76	.17	NR	16	8.50	136.00	-3.61	<0.001	HS
				PR	0	.00	.00			
				Ties	4					

Table-7: Effect of Treatment on Kandu between the Group A and Group B.

Itching	Group A		Group B		Mann-WhitneyU	Z value	p- value	Remarks
	Mean rank	Sum of ranks	Mean rank	Sum of ranks				
BT	19.52	390.50	21.48	429.50	180.5	-.57	.569	NS
AT	20.00	400.00	21.00	420.00	190	-.31	.755	NS
AF	21.00	420.00	20.00	400.00	190	-.33	.739	NS

No significant difference in between the groups statistically at BT, AT and AF (p value>0.05), however

mean rank of group A(AT) is smaller, hence reduction of *Kandu* of group A is better than group B.



Graph-2: Effect of Treatment on *Kandu* between Group A & Group B.

Discomfort

Table-8: Effect of Treatment on Discomfort Within Group A

Discomfort	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT – AT	.600	.598	.133	NR	11	6.00	66.00	- 3.207	.001	HS
				PR	0	.00	.00			
				Ties	9					
BT-AF	.700	.656	.146	NR	12	6.50	78.00	- 3.276	.001	HS
				PR	0	.00	.00			
				Ties	8					

Table 9: Effect of Treatment on discomfort Within Group B.

Discomfort	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT-AT	.550	.604	.135	NR	10	5.50	55.00	- 3.051	.002	HS
				PR	0	.00	.00			
				Ties	10					
BT-AF	.700	.732	.163	NR	11	6.0	66.00	- 3.071	.002	HS
				PR	0	.00	.00			
				Ties	9					

Table-36: Effect of Treatment on discomfort between Group A & Group B.

Discomfort	Group A		Group B		Mann- Whitney U	Z value	p-value	Remarks
	Meanrank	Sum of ranks	Meanrank	Sum of ranks				
BT	20.62	412.50	20.38	407.50	197.50	-.07	.942	NS
AT	20.42	408.50	20.58	411.50	198.50	-.06	.948	NS
AF	20.50	410.00	20.50	410.00	200.00	.00	1.0	NS

No significant difference in between the groups statistically at BT, AT and AF (p value>0.05), however mean rank of group A (AT) is less, hence reduction of

discomfort in group A is comparatively better than group B.



Graph-3: Effect of Treatment on Discomfort between Group A & Group B.

Prakasha asahishnuta (photophobia)

Table-10: Effect of Treatment on Prakasha asahishnuta (photophobia) Within Group A.

Photophobia	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT-AT	.35	.489	.109	NR	7	4.00	28.00	- 2.64	.008	HS
				PR	0	.00	.00			
				Ties	13					
BT-AF	.45	.604	.135	NR	8	4.50	36.00	- 2.71	.007	HS
				PR	0	.00	.00			
				Ties	12					

Table-11: Effect of Treatment on Prakasha asahishnuta (photophobia) Within Group B.

Photophobia	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT-AT	.30	.47	.105	NR	6	3.50	21.00	- 2.449	.014	S
				PR	0	.00	.00			
				Ties	14					
BT -AF	.35	.48	.109	NR	7	4.00	28.00	- 2.646	.008	HS
				PR	0	.00	.00			
				Ties	13					

Table-12: Effect of Treatment on Prakasha asahishnuta (photophobia) between Group A & Group B.

Photophobia	Group A		Group B		Mann- Whitney U	Z value	p-value	Remarks
	Mean rank	Sum of ranks	Mean rank	Sum of ranks				
BT	21.18	423.50	19.82	396.50	186.500	-.43	.665	NS
AT	21.00	420.00	20.00	400.00	190.000	-.59	.553	NS
AF	20.50	410.00	20.50	410.00	200.000	.00	1.00	NS

No significant difference in between the groups statistically at BT, AT and AF (p value>0.05), however mean rank of group B(AT) is smaller, hence reduction of

Prakasha asahishnuta (photophobia) of group B is comparatively better than group A.



Graph-4: Effect of Treatment on Prakasha asahishnuta (Photophobia) between Group A & Group B.

Sangharsha (foreign body sensation)

Table-13: Effect of Treatment on Sangharsha (foreign body sensation) Within Group A.

Sangharsha	Mean	SD	SEM	Wilcoxon rank	Z value	p-value	Re
BT-AT	.30	.57	.127	NR	5	3.00	15.00
				PR	0	.00	.00
				Ties	15		
BT -AF	.30	.57	.127	NR	5	3.00	15.00
				PR	0	.00	.00
				Ties	15		

Table-14: Effect of Treatment on Sangharsha (foreign body sensation) Within Group B.

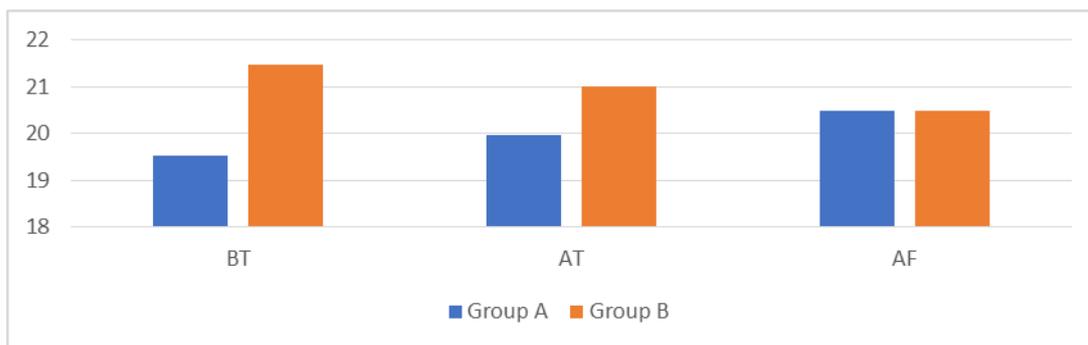
Sangharsha	Mean	SD	SEM	Wilcoxon rank	n	MR	Sum	Z value	p-value	Re
BT-AT	.35	.489	.109	NR	7	4.00	28.00	- 2.646	.008	HS
				PR	0	.00	.00			
				Ties	13					
BT-AF	.45	.604	.135	NR	8	4.50	36.0	- 2.714	.007	HS
				PR	0	.00	.00			
				Ties	12					

Table-15: Effect of Treatment on Sangharsha (foreign body sensation) between Group A & Group B.

Sangharsha	Group A		Group B		Mann-Whitney U	Z value	p-value	Remarks
	Mean rank	Sum of ranks	Mean rank	Sum of ranks				
BT	19.52	390.50	21.48	429.50	180.500	-.631	.528	NS
AT	19.98	399.50	21.02	420.50	189.500	-.622	.534	NS
AF	20.50	410.00	20.50	410.00	200.000	.000	1.000	NS

No significant difference in between the groups statistically at BT, AT and AF (p value > 0.05), however mean rank of group A(AT) is smaller, hence reduction of

Sangharsha (foreign body sensation) of group A is comparatively better than group B.



Graph-5: Effect of Treatment on Sangharsha (foreign body sensation) between Group A & Group B Upadeha (mucoïd ropy discharge)

Table-16: Effect of Treatment on Upadeha (mucoïd ropy discharge) Within Group A.

Upadeha	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT-AT	.25	.44	.099	NR	5	3.00	15.00	-2.236	.025	S
				PR	0	.00	.00			
				Ties	15					
BT-AF	.35	.67	.15	NR	5	3.00	15.00	-2.070	.038	S
				PR	0	.00	.00			
				Ties	15					

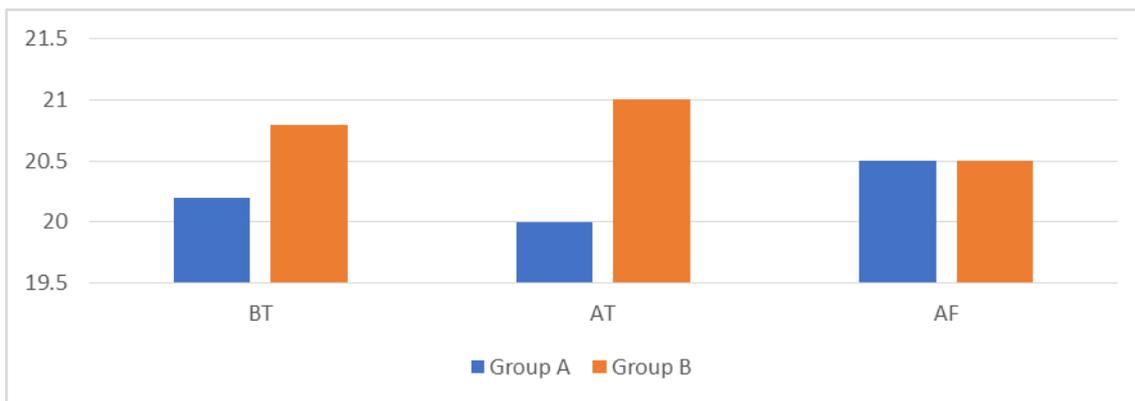
Table-17: Effect of Treatment on Upadeha (mucoïd ropy discharge) Within Group B.

Upadeha	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT-AT	.35	.67	.15	NR	5	3.00	15.00	-2.070	.038	S
				PR	0	.00	.00			
				Ties	15					
BT-AF	.50	.94	.21	NR	5	3.00	15.00	-2.060	.039	S
				PR	0	.00	.00			
				Ties	15					

Table-18: Effect of Treatment on Upadeha (mucoïd ropy discharge) between Group A & Group B.

Upadeha	Group A		Group B		Mann-Whitney U	Z value	p-value	Remarks
	Mean rank	Sum of ranks	Mean rank	Sum of ranks				
BT	20.20	404.00	20.80	416.00	194.0	-.214	.831	NS
AT	20.00	400.00	21.00	420.00	190.0	-.472	.637	NS
AF	20.50	410.00	20.50	410.00	200.0	.000	1.000	NS

No significant difference in between the groups statistically at BT, AT and AF (p value > 0.05), however mean rank of group A(AT) is smaller, hence reduction of Upadeha of group A is comparatively better than group B.



Graph-6: Effect of Treatment on Upadeha (mucooid ropy discharge) between Group A & Group B.

Raga (redness)

Table-19: Effect of Treatment on Raga (redness) Within Group A.

Redness	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT-AT	1.10	.307	.068	NR	20	10.50	210.00	- 4.300	<0.001	HS
				PR	0	.00	.00			
				Ties	0					
BT-AF	1.25	.444	.099	NR	20	10.50	210.00	- 4.134	<0.001	HS
				PR	0	.00	.00			
				Ties	0					

Table -20: Effect of Treatment on Raga (redness) Within Group B.

Redness	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT-AT	1.350	.489	.109	NR	20	10.50	210.00	- 4.072	<0.001	HS
				PR	0	.00	.00			
				Ties	0					
BT-AF	1.60	.502	.112	NR	20	10.50	210.00	- 4.053	<0.001	HS
				PR	0	.00	.00			
				Ties	0					

Table-21: Effect of Treatment on Raga (redness) between Group A & Group B.

Redness	Group A		Group B		Mann-Whitney U	Z value	p-value	Remarks
	Mean rank	Sum of ranks	Mean rank	Sum of ranks				
BT	17.30	346.00	23.70	474.00	136.000	-1.92	.054	NS
AT	19.70	394.00	21.30	426.00	184.000	-.52	.598	NS
AF	20.00	400.00	21.00	420.00	190.000	-.41	.681	NS

No significant difference in between the groups statistically at BT, AT and AF (p value>0.05), however

mean rank of group A is less, hence reduction of redness of eyes in group A is comparatively better than group B.



Graph 7: Effect of Treatment on Raga (redness) between Group A & Group B.

Papillary reactions

Table-22: Effect of Treatment on Papillary reactions Within Group A.

Papillary reactions	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p-value	Re
BT-AT	.35	.489	.109	NR	7	4.00	28.00	- 2.646	.008	HS
				PR	0	.00	.00			
				Ties	13					
BT-AF	.35	.489	.109	NR	7	4.00	28.00	- 2.646	.008	HS
				PR	0	.00	.00			
				Ties	13					

Table-23: Effect of Treatment on Papillary reactions Within Group B.

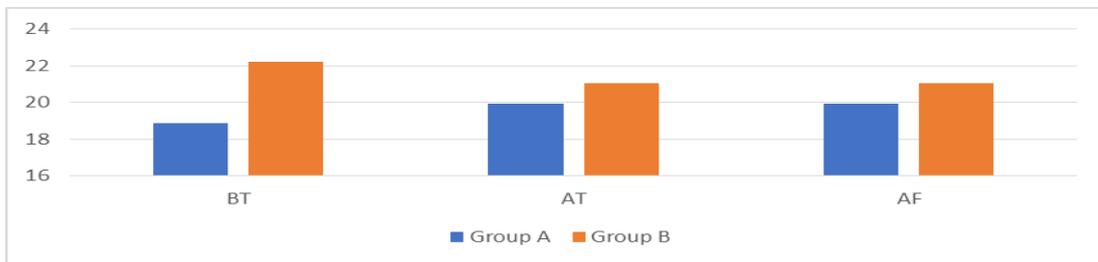
Papillary reactions	Mean	SD	SEM	Wilcoxon rank	Z value	p- value	Re			
BT-AT	.50	.51	.11	NR	10	5.50	55.00	- 3.162	.002	HS
				PR	0	.00	.00			
				Ties	10					
BT-AF	.50	.51	.11	NR	10	5.50	55.00	- 3.162	.002	HS
				PR	0	.00	.00			
				Ties	10					

Table-24: Effect of Treatment on papillary reaction between Group A & Group B.

Papillary reactions	Group A		Group B		Mann- Whitney U	Z value	p- value	Remarks
	Mean rank	Sum of ranks	Mean rank	Sum of ranks				
BT	18.78	375.50	22.22	444.50	165.500	-1.06	.287	NS
AT	19.95	399.00	21.05	421.00	189.000	-.519	.604	NS
AF	19.95	399.00	21.05	421.00	189.000	-.519	.604	NS

No significant difference in between the groups statistically at BT, AT and AF (p value>0.05), however mean rank of group A is less, hence reduction of

papillary reaction in group A is comparatively better than group B.



Graph-8: Effect of Treatment on Papillary reactions between Group A & Group B

Shopha (edema of lids and conjunctiva)

Table-25: Effect of Treatment on Shopha (edema of lids and conjunctiva) Within Group A

Edema of lids and conjunctiva	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p- value	Re
BT-AT	.20	.410	.091	NR	4	2.50	10.00	- 2.000	.046	S
				PR	0	.00	.00			
				Ties	16					
BT-AF	.25	.444	.099	NR	5	3.00	15.00	- 2.236	.025	S
				PR	0	.00	.00			
				Ties	15					

Table-26: Effect of Treatment on Shopha (edema of lids and conjunctiva) Within Group B.

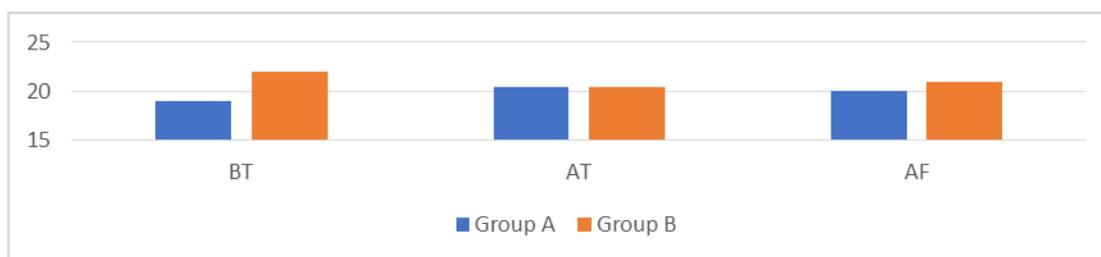
Edema of lids and conjunctiva	Mean	SD	SEM	Wilcoxon rank	N	MR	Sum	Z value	p- value	Re
BT-AT	.35	.489	.109	NR	7	4.00	28.00	-	.008	HS
				PR	0	.00	.00			
				Ties	13					
BT-AF	.35	.489	.109	NR	7	4.00	28.00	- 2.646	.008	HS
				PR	0	.00	.00			
				Ties	13					

Table-27: Effect of Treatment on Shopha (edema of lids and conjunctiva) between Group A & Group B.

Edema of lids and conjunctiva	Group A		Group B		Mann-Whitney U	Z value	p-value	Remarks
	Mean rank	Sum of ranks	Mean rank	Sum of ranks				
BT	19.00	380.00	22.00	440.00	170	-1.00	.317	NS
AT	20.50	410.00	20.50	410.00	200	.00	1.00	NS
AF	20.00	400.00	21.00	420.00	190	-1.00	.317	NS

No significant difference in between the groups statistically at BT, AT and AF (p value > 0.05), however mean rank of group A (AF) is less, hence reduction of

edema of lids and conjunctiva of group A is comparatively better than group B.

**Graph-9: Effect of Treatment on Shopha (Edema of lids and conjunctiva) between Group A & Group B.**

In both the groups (Group A & Group B) during follow up period sustained effect of medicine was observed.

DISCUSSION

According to Acharya Sushruta, *abhishyanda* is an *aupasargica roga* and it is the root cause for all the *Netra rogas*, if not treated properly, it may lead to further complications like, *Vathaja adhimantha*, *Hathadhimantha* and *Drishtinasha*.^[11] *Vathaja abhishyanda* is one among seventeen *sarvagatha netra rogas*. It is characterized by *Thoda*, *Sthambha*, *Romaharsha*, *Sangharsha*, *parushya*, *shirobhithapa*, *vishushka bhava* and *shishirashrutha*.

In classics no specific *nidanas* are mentioned for *Vataja Abhishyanda*.

Hence, *Agantuja* and *Nija karanas* can be considered as *Nidanas*.

Nija karana is due to vitiation of *Vata pradhana tridoshas* by *achakshusya ahara* like excessive intake of *Dadhi*, *madya sevana* and *Viharaja karanas* like *Vegadharana* (*Nidra*). *Agantuja karana* is exposure to external factors like *Dhooma*, *Anila*, *Raja*, contact with pollen, flower and animals, exposure to *AC*, which vitiates *Vata pradhana tridosha*.

Nistoda is considered as *vikruta vata dosha lakshana*. Increased *vata* triggers the nerve endings causing *sangharsha*, *prakasha asahishnuta*. The *drutatva* property of *vata* draws other *doshas* causing *shishirashrutha*. The increased *kapha* along with *vata* causes *vartma sophia*. Increased *kapha* leads to the manifestation of *Kandu*. The vitiated *rakta* due to increased *syandatva* hampers the normal functioning of *siras* causing *raga*.

Chikitsasutra of *Vataja Abhishyanda* is *Raktamokshana*, *Sneha virechana*, *tarpana*, *putapaka*, *aschyotana*, *nasya*.^[12] *Aschyotana* is being mentioned as the treatment of choice for *Netraroga* with *Raga*, *Ashru*, *Shopha*, *Toda*, *Kandu* and *Gharsha*.^[13] *Aschyotana* with *Shigrupallava arka* is mentioned in *Arka prakasha* in the context of *netra roga*. Here *Aschyotana* with *Madhu-Shigrupallava arka* was carried out for the study.

Shigra pallava,^[14] *madhu*,^[15] having the property of *Kashaya madhurarasa*, *Ushna veerya*, *Madhura Vipaka*, *Chakshushya*, *Krimighna*, *Srotoshodhana*, *Yogavahi*, *Ropana karma* and properties of *arka* which enhances the property of drug, were found to be helpful in reducing the signs and symptoms of *Vataja Abhishyanda*.

The components of *Madhu-Shigrupallava Aschyotana* has *Anti-microbial*, *Anti-inflammatory*, *Anti-bacterial*, *pittakapha shamaka*, *immuomodulator* properties. The drugs are having *katu*, *tikta*, *kashaya*, *madhura rasa* which pacifies *Tridoshas*. *Kashaya rasa* does *lekhana* of the *kapha dosha*. *Madhu* being *sroto shodhaka* clears the channels. So, by the above-mentioned properties, drug may help in subsiding inflammation.

CONCLUSION

- The study was conducted on 40 patients of *Vataja Abhishyanda* (Allergic conjunctivitis), assigned into 2 groups of comprising 20 patients each.
- In Group A, *Madhu-Shigrupallava swarasa aschyotana* was done and in Group B, *Madhu-Shigrupallava arka aschyotana* was done for 14 consecutive days.
- Based on observations and results the following hypothesis were accepted.
- Madhu-Shigrupallava Swarasa Aschyotana* is effective significantly in reducing the parameters of

- *Vataja Abhishyanda* w.s.r. to allergic conjunctivitis.
- *Madhu- Shigrupallava Arka Aschyotana* is effective significantly in reducing the parameters of *Vataja Abhishyanda* w.s.r. to allergic conjunctivitis.
- Though both the forms of drugs beneficial in management of *Vataja Abhishyanda* w.s.r. to allergic conjunctivitis, however *Madhu- Shigru pallava* swarasa was comparatively better than *Madhu- Shigru pallava arka aschyotana* in parameters like *Kandu, Vividha vedana* (Discomfort), *Sangharsha, Upadeha, Raga, Shopha* and *Papillary reactions*.

Madhu- Shigrupallava Arka Aschyotana was given better results in parameters like *Srava* and *Prakasha asahishnuta*.

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