



Research Article

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AN AYURVEDIC APPROACH OF ABHISHYANDA WITH REFERENCE TO SIMPLE ALLERGIC CONJUNCTIVITIS: A RETROSPECTIVE COHORT STUDY

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ABSTRACT

Allergic Conjunctivitis (AC) is an inflammatory response of the conjunctiva to an allergen. Abhishyanda which comes under Sarvagata Netraroga (types of eye diseases) exhibits similar features of Allergic conjunctivitis. This alone has been estimated in 6-30% of the general population. The Aim of this study is to observe the safety and efficacy of Triphala Seka, Bidalaka and Haridra Khanda orally in the patients suffering from Abhishyanda (Allergic Conjunctivitis) in the clinical setting. An Observational Retrospective Cohort study design was adopted for the study. The study included subjects of Abhishyanda (Allergic Conjunctivitis) treated with Seka and Bidalaka of Triphala along with Haridra khanda internally between July to November 2017. Subjects with follow-up time less than 4 weeks were excluded. Subjects were selected from the Eye OPD. The subjects were observed before (baseline) and 4 weeks after treatment for the Ayurvedic subjective parameters like Netra Kandu (eye Itching), Ragata (Redness), Ashru Srava (Lacrimation), Shopha (Edema), Sangharsha (foreign body sensation) using Visual Analogue Scale Scoring Method ranged between 0 (absent) to 100 (very severe). Observation showed that 20 patients were eligible for our study. There has been statistically highly significant result ($p < 0.0001$) and a higher percentage of relief in Edema (60%), followed by FBS (59.52%), Itching (55.04%), Redness (50.64%) and Lacrimation (43.09%) respectively. This Ayurvedic approach was found to be safe and effective in significantly reducing VAS Score parameters after 4 weeks of treatment.

Keywords: Ocular allergies; Ayurvedic Management; Seka; Bidalaka; Abhishyanda

INTRODUCTION

Allergic conjunctivitis is an inflammatory condition of conjunctiva of the eye and it greatly impacts the quality of life of the individual. In Ayurveda, Abhishyanda has a similar symptom of Allergic Conjunctivitis and is one of the Sarvagata Netra Roga (Eye diseases) and is Sadhya (curable). Symptoms primarily consist of redness, edema of the conjunctiva, burning eyes, itching and increased lacrimation (production of tears). Previous studies have shown a worldwide variation in the prevalence of allergic conjunctivitis and it may be related to ethnic, genetic and environmental difference. Ocular allergies affect 6%–30% of the general population. Allergic conjunctivitis, which may be acute or chronic, is associated with allergic rhinitis (AR) in 30%–70% of affected individuals, where majority have few episodes of mild conjunctivitis annually. Up to 30% of Allergic conjunctivitis sufferers may have frequent episodes with intense and persistent symptoms (especially seasonal Allergic conjunctivitis). Ocular allergies can be broadly classified into seasonal (SAC) or perennial allergic conjunctivitis (PAC), vernal keratoconjunctivitis (VKC), atopic keratoconjunctivitis (AKC) and giant papillary conjunctivitis (GPC). SAC is the most common of these ocular allergies. This immune-mediated disorder involves the conjunctiva and in severe cases like in VKC and AKC, corneal involvement may have sight-threatening consequences. These two eye conditions are mediated by mast cells. Current treatment aims include nonspecific measures to subside the symptoms of allergy like cold compresses, eyewashes with tear substitutes and avoidance of allergens by treating with antihistamines, either topical (in the form of eye drops), or systemic (in the form of tablets). Corticosteroids are another option but are reserved for more severe forms of Allergic Conjunctivitis considering its side-effects¹. Seka and Bidalaka²⁻⁴ with Triphala along with Haridra

Khanda is a safer and effective treatment protocol in managing allergic conjunctivitis since long time. Data on this combination and its use is not much available. Hence a retrospective study was carried out to observe its safety and efficacy in the patients suffering from Abhishyanda (Allergic Conjunctivitis).

Aims and objectives

To observe the safety and efficacy of Triphala Seka, Bidalaka and Haridra Khanda orally in the patients suffering from Abhishyanda (Allergic Conjunctivitis) in the clinical setting

Patients and Methods

An Observational Retrospective Cohort study design was adopted for the study. A retrospective review of medical records with the diagnosis of allergic conjunctivitis was performed at eye OPD between July to November 2017.

Cases were eligible for the study if they had Allergic Conjunctivitis (Abhishyanda) with symptoms like itching (kandu), lacrimation (Accha ashrusrava), redness (raga), edema (Shopha) and foreign body sensation (Sangharsha) treated with Seka, Bidalaka of triphala⁵ and Haridra khanda⁶ orally for 4 weeks. Those with incomplete clinical data, having complications like marginal corneal ulcer, dacryocystitis, trachoma, keratoconjunctivitis, Infective conjunctivitis and follow up duration less than 4 weeks were excluded.

The following data were recorded: age, sex, systemic allergic diseases, ophthalmic diagnoses, symptom duration, previous and current medications, follow-up duration, and the visual analogue scale score for signs and symptoms like itching (kandu),

lacrimation (Accha ashrusrava), redness (raga), edema (Shopha) and foreign body sensation (Sangharsha) which was recorded before (baseline) and 4 weeks after treatment. VAS score is a self-

reported score with a 0–100 numeric rating scale for signs and symptoms, with 100 being the most severe.

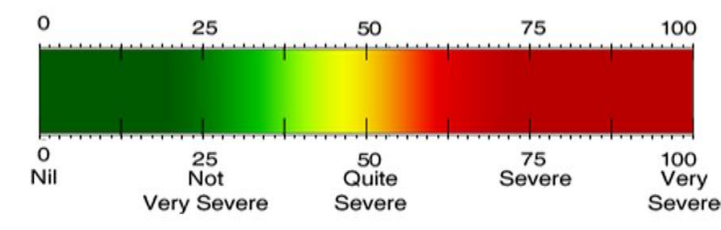


Figure 1: Visual analogue Scale Score

Assessment Parameters

- Itching (Kandu)
- Redness (Ragata)
- Lacrimation (Accha ashrusrava)
- Edema (Shopha)
- Foreign body sensation- FBS (Sangharsha)

The data collected were statistically analyzed using Graph Pad Prism Software and mean percentage relief, S.D., S.E., and ‘t’ value by using the Student paired ‘t’ test was calculated at

baseline and 4 weeks after treatment. Value was considered statistically significant.

RESULT

A total of 20 patients were observed for this study. The demographic data showed that the maximum number of patients were of age group of 40-65 years (55%) and 50% of the patients were male and 50% female. All patients were local, 35% of the patients gave the family history of allergy and a majority of the patients (65%) suffered from Mandagani (low-digestive fire). A majority of the patients (60%) had the history of seasonal followed by the perennial form (40%).

Table 1: Incidence of signs and symptoms before treatment (VAS Score)

S. No.	Signs and Symptoms (n = 20)	Total patients (n)	Percentage (%)
1	Itching (Kandu)	20	100
2	Lacrimation (Srava)	18	90
3	Redness (Raga)	18	90
4	Edema (Shopha)	14	70
5	Foreign body sensation (Sangharsha)	18	90

Values are expressed as mean (%). Out of 20 patients on individual grade basis before treatment Itching (Kandu) was found in 20 (100%) patients, Lacrimation (Accha ashrusrava) was seen in 18 (90%), Redness (Raga) was observed in 18 (90%), Edema (Shopha) was seen in 14 (70%) patients whereas Foreign body sensation (Sangharsha) in 18 (90%) of patients (Table 1).

Table 2: Incidence of Signs and Symptoms after Treatment (VAS Score)

S. No.	Signs and Symptoms (n = 20)	Total patients (n)	Percentage (%)
1	Itching (Kandu)	19	95
2	Lacrimation (Srava)	13	65
3	Redness (Raga)	12	60
4	Edema (Shopha)	08	40
5	Foreign body sensation (Sangharsha)	13	65

Values are expressed as mean (%). Out of 20 patients on individual grade basis after treatment Itching (kandu) was found in 19 (95) patients, Lacrimation (Accha ashrusrava) was seen in 13 (65%), Redness (raga) was observed in 12 (60%), Edema (Shopha) was seen in 08 (40%) patients whereas Foreign body sensation (Sangharsha) in 13 (65%) patients (Table 2).

Table 3: Individual Study of the Parameters

S. No.	Signs and Symptoms	Mean		Diff. (d)	% Relief	SD	SE	*‘t’	*P value	Remarks
		BT	AT							
1	Itching	54.5	30	24.5	55.04	16.295	3.644	6.724	< 0.0001	HS
2	Lacrimation	45.25	19.5	25.75	43.09	19.186	4.290	6.119	< 0.0001	HS
3	Redness	39	19.75	19.25	50.64	14.352	3.209	5.998	< 0.0001	HS
4	Edema	25	15	10	60	10.942	2.447	5.109	< 0.0001	HS
5	FBS	31.5	18.75	12.75	59.52	11.154	2.494	5.714	< 0.0001	HS

Values are expressed as mean (%); *p-value < 0.05 has been considered as significant (Table 3).

Comparison using t-test at baseline and 28th day

Analysis of the Itching shows that mean score before treatment was 54.5 which reduced to 30, there was 55.04% of improvement, with t value 6.724, the result was statistically highly significant ($p < 0.0001$), analysis of the lacrimation shows that mean score before treatment was 45.25 which reduced to 19.5, there was 43.09% of improvement, with t value 6.119, the result was statistically highly significant ($p < 0.0001$), Analysis of the Redness shows that mean score before treatment was 39 which

reduced to 19.75, there was 50.64% of improvement, with t value 5.998, the result was statistically highly significant ($p < 0.0001$), analysis of the Edema shows that mean score before treatment was 25 which reduced to 15, there was 60% of improvement, with t value 5.109, the result was statistically highly significant ($p < 0.0001$) and analysis of the Foreign body sensation shows that mean score before treatment was 31.5 which reduced to 18.75, there was 59.52% of improvement in the symptom, with t value 5.714, the result was statistically highly significant ($p < 0.0001$).

Table 4: Overall assessment of the therapy

Overall Assessment	No. of Patients (n = 20)	%
Completely cured (90%)	10	50
Markedly improved (75%)	09	45
Moderately improved (50%)	01	05
No improvement/ unchanged (25%)	00	00

Values are expressed as mean (%). On Comparison of overall (including all parameters) assessment of the therapy, 10 patients (50%) had more than 90% relief in signs and symptoms of the disease; 09 (45%) patients had more than 75% relief in signs and symptoms; 01 (5%) patient had more than 50% relief in signs and symptoms whereas no improvement were none among the 20 patients (Table 4).

DISCUSSION

Ocular allergic reaction is a type I hypersensitivity reaction with a series of IgE mediated inflammatory reactions involving mast cells, neutrophils, eosinophils, macrophages, and basophils, over the course of time⁷. Triphala being a metabolic stimulant helps in reducing the abhishyandatva of the Srotas (block in the channels) by its properties like tridoshahara, Chakshushya, rasayana, anulomana and deepana. It is a good immunomodulatory which could be attributed to flavonoids, alkaloids, tannins, saponin, glycosides and phenolic compounds. It is rich in gallic acid, vitamin C, ellagic acid, chebulic acid, bellericanin, beta-sitosterol and flavonoids. It acts as an antioxidant, anti-inflammatory, anti-bacteria and anti-microbial⁸. Triphala kwatha which is used as Seka poured directly on to the closed lids⁹. Duration of contact time and continuous flow of dravyas of Seka with Vartma increases the Rakta sanchara (blood circulation) in Netra siras and removes srotosanga (obstruction). As mentioned in classical literatures, it is the Virya of the drug which acts in bahirparimarjana chikitsa when it comes in contact with Bhrajaka pitta present in the skin of the eyelids by undergoing paka (absorption) and some amount may get absorbed through the hair follicles (roma kupas) of eye lashes⁹. In Bidalaka medicated paste is applied to the eye lids (externally except at eye lashes). Here the medicine is absorbed through skin same as in seka¹⁰. There is also considerable effective concentration at the site of action for a sufficient period of time due to increased residence time and tissue contact; hence desired action can be elicited. As Seka and Bidalaka is suggested more to manage amavastha i.e., inflammatory conditions of eye and so used in Simple Allergic Conjunctivitis (Abhishyanda).

Haridra khanda administered orally was taken in the study because Allergic Conjunctivitis is an ocular manifestation of systemic disease. It is mainly having properties like vata kapha shamaka (mitigates vata and kapha dosha), rasayana (antioxidant), agnideepan (digestive), pachana, Shotha hara (anti-inflammatory), Jivaniya (rejuvenating), Balya and brimhaniya (nourishing), ojovardhaka (immuno-modulator) and dhatuposhaka (nourishes tissues) through which it can increase vyadhikshamatva (immunity) and hence correct the pathology and invariably helps in regeneration of the tissues. It also augments the process of tissue resistance or repair, helps in reducing allergy, inflammation and assists in proper functioning of cells due to its active constituent's like beta sitosterol,

lactoferrin, piperine, tannin, gallic acid, vitamin C, D and E, iron and other essential nutrients¹¹.

Ayurveda finds difficult to fit to a particular design to prove for its evidence of interventions as this is more acceptable to the modern research world although Ayurveda is based more of empirical treatment. We should also understand that there is always a gap between Research, Evidence and Practice. The final outcome of any clinical works is to provide benefit with least or no risks to the participants¹². Hence this Retrospective cohort study was selected to monitor the safety and efficacy of the particular intervention mentioned in Ayurveda.

By considering all relevant points into considerations the observation was carried out on 20 patients. The observations made during the study were discussed below. The incidence of age in the trial group 's shows higher incidence (55%) in age group 40-65 years and next in age group of 18-40 years. It would be conclusive if the study was carried out on larger sample size. 35% had family history of AC and rest 65% had no any such history. But there is increased risk with positive family history of allergy. A total of 18 patients (90%) had Allergic Conjunctivitis in their both eyes, only left eye was affected in 1 patient (5%) and Right eye in 1 patient (5%) This clearly indicates higher incidence of bilateral nature of the disease. A majority of the patients (65%) suffered from Mandagani (low-digestive fire) and this signifies that Mandagani is the predisposing factor in Allergic Conjunctivitis. Among 20 patients taken for the study a majority of patients (60%) had the history of seasonal followed by the perennial form 40%. This is probably due to increased incidence of seasonal Acute Allergic Conjunctivitis. Of 23 patients, 20 patients were taken for study and completed the trial. The diagnosis was based on the signs and symptoms described in Ayurvedic and modern texts. While assessing the clinical features of Allergic Conjunctivitis, itching was found in all the patients (100%), followed by lacrimation (90%), redness (90%), FBS (90%) and edema in 70% of patients out of 20. This indicates that Itching in eyes is most probably the presenting symptom in all Simple Allergic Conjunctivitis patients. Results obtained were also statistically analyzed and mean percentage relief, S.D., S.E., and 't' value by using the 't' test was calculated. On individual study of parameters, all have shown statistically highly significant result ($p < 0.0001$) in the treatment of Allergic Conjunctivitis and there was a higher percentage of relief in edema (60%) followed by FBS (59.52%), itching (55.04%), redness (50.64%) and lacrimation (43.09%) respectively. There is no reporting of any

adverse effects during the treatment period. On Overall assessment of therapy there was 10 patients (50%) who had more than 90% relief in signs and symptoms of the disease; 09 (45%) patients had more than 75% relief in signs and symptoms; 01 (5%) patients had more than 50% relief in signs and symptoms whereas no improvement were none among the 20 patients. Even though the recurrences were seen it was observed that symptoms and signs were not as severe as it was seen in the beginning of the treatment, but it also necessitates for a prolonged duration of therapy and follow up to avoid recurrence.

As the study was limited to the relatively small sample size, single centre, short follow-up and the lack of a control group as it was observational study, I suggest further randomized-control clinical trials with a larger sample size and longer follow-up duration which would provide us with more information about the long-term efficacy of these treatments for allergic ocular conditions. Nevertheless, our study demonstrated the clinical usefulness of Seka, Bidalaka and Haridra khanda orally for simple allergic ocular conditions without significant side effects.

CONCLUSION

Owing to the problems and adverse effects of different medicaments employed to manage Allergic Conjunctivitis, it is imperative to explore a potent Ayurvedic drug schedule which could tackle effectively this problem at biological level without any adverse effects. Hence this study was taken up at the clinical setting. The observational study was aimed at evaluating a most efficacious treatment in managing Allergic Conjunctivitis. The following conclusion was drawn after considering the clinical aspects and theoretical facts. Allergic Conjunctivitis was correlated with Abhishyanda as it comes under Sarvagata Netra Roga and the treatment schedule was adopted accordingly. After observing the results of the t-values of individual parameters of the study it was observed that Allergic Conjunctivitis can be managed effectively with these treatment protocols as all the patients responded well and there was satisfactory improvement in signs and symptoms. We can also conclude that Triphala Seka, Bidalaka along with Haridra khanda orally works effectively in amavastha (acute stage), and due to the prolong tissue contact time of drug and higher bioavailability there is effective therapeutic drug absorption within the eye and adnexa and hence this may be considered as primary evidence for further studies.

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