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ROLE OF TRIPHALA EYE DROPS IN THE MANAGEMENT OF ABHISYANDA (ACUTE CONJUNCTIVITIS)

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Abstract

Eye is an important sense organ. The Abhisyanda if not treated properly may lead to several other eye diseases. To avoid such complications Vagabhatta has stressed on the importance of immediate need of treatment in this disease.

Conjunctivitis is the most common disease worldwide. It is usually of two types infective and allergic. The present study is a trial to explore a unique herbal drug which has efficacy to help the patients of acute conjunctivitis without unwanted side effects.

Sushruta has described that Triphala pacifies mainly kapha and pitta doshas which are the main causative factor of the disease i.e. acute conjunctivitis. He has also emphasized analgesic and wound healing properties. Haritaki is one of the active ingredients of Triphala which is most effective in viral conjunctivitis because its fruits have antiviral properties

According to Vagabhatta Haritaki pacifies mainly Kaphaj and Vataj diseases. On the other hand Amalki has astringent property exudation from incision on the fruits used as an external application in ocular diseases. On the basis of above description we may conclude that the Triphala eye drops is most effective drug for the treatment of acute conjunctivitis.

The 50 patients were randomly selected from the out patients department of Shalakya and Ophthalmology S S hospital IMS BHU Grouping of patients: - 50 patients were distributed equally into two groups viz. Group I-ayurvedic drug treated group and Group II - Placebo group.

Group I: 25 patients of Abhisyanda were kept in this group. They received triphala eye drop two drops 6 times a day for 15 days. This group was considered as Ayurvedic Drug treated group. All the patients were given strict instructions regarding their ocular hygiene. Group II: 25 patients of Abhisyanda were kept in this group. They received placebo eye drops (tearplus solution) two drops 6 times in a day for 15 days. This group was considered as Placebo group.

All the cases were examined initially in outdoor patients department and were selected for the study on the basis of clinical presentation and diagnostic criteria.

Symptoms:-Foreign body sensation (FBS),Burning sensation (BS), Lacrimation (L), Eyeache(E) ,Headache(H),Photophobia(Pho),Itching (It),Lidoedema(Lo),
Signs:-Discharge (Di), Chemosis(c), Hyperaemia (H), Papillary Hyperplasia (Ph), Follicles

On the observation of the symptoms foreign body sensation it was revealed that in foreign body sensation decreased in both T and P group but it was highly significant in treated group. The mean of foreign body sensation at entry level was 1.12 ± 0.78 and it becomes 0.76 ± 1.01 after 15 days treatment.

The mean grade of burning sensation before treatment was 0.32 ± 0.47 whereas after treatment mean grade was 0.08 ± 0.27 the reduction being 0.24 ± 0.43 which is significant statistically. Similarly reductions of mean grade of other symptoms and signs are as follows

Serial No	Symptoms & Signs	Before treatment mean grade	After treatment mean grade	Reduction in mean grade
1	Foreign Body sensation	1.12 ± 0.78	0.76 ± 1.01	Less significant
2	Burning sensation	0.32 ± 0.47	0.08 ± 0.27	0.24 ± 0.43
3	Lacrimation	1.24 ± 0.83	0.92 ± 0.8	0.32 ± 0.47
4	Eyache	0.92 ± 0.90	0.52 ± 0.71	0.28 ± 0.45
5	Headache	0.32 ± 0.55	0.2 ± 0.5	Not significant
6	Photophobia	0.32 ± 0.47	0.12 ± 0.33	0.2 ± 0.4
7	Itching	0.56 ± 0.71	0.28 ± 0.61	0.28 ± 0.45
8	Lidoedema	0.48 ± 0.71	0.24 ± 0.52	0.28 ± 0.54
9	Discharge	1.96 ± 0.73	1.28 ± 1.1	0.84 ± 0.8
10	Chemosis	1.0 ± 0.76	0.68 ± 0.9	0.32 ± 0.69
11	Hyperaemia	2.28 ± 0.54	1.2 ± 1.19	1.08 ± 1.1
12	Papillary Hyperplasia	1.8 ± 0.57	1.08 ± 0.99	Not significant
13	Follicles	0.08 ± 0.27	0.08 ± 0.27	Not significant

Clinical study highlights the role of Triphala eye drops in the management of acute conjunctivitis. It was found that:

- The drug gives relieve the various symptoms of acute conjunctivitis i.e. foreign body sensation, burning sensation, lacrimation , Eyeache, Itching and lidoedema.
- The drug diminished the various signs of acute conjunctivitis i. e. conjunctival discharge, Chemosis of Conjunctiva, Hyperemia, Papillary hyperplasia.
- Drug has poor response on Conjunctival follicle and is effective against Staphylococcus aureus, E. Coli, and Streptococcus etc.
- Drug is effective in viral conjunctivitis.

During the course of therapy and after withdrawal of drug, no adverse effects were noted.

INTRODUCTION:-

Eye is an important sense organ. It has been enjoying privilege as the main sense organ because its loss of function leads to serious disability of a man by keeping him in the darkness. Life without eyesight is miserable and valueless. Hence, it is very important to protect vision from various diseases.

Sushruta emphasized this fact in Uttartantra.

प्रायेण सर्वे नयनामयास्तु भवन्त्यभिष्यन्दनिमित्तमूलाः ।
तस्यादभिष्यन्दमुदीर्यमाणमुपाचरेदाशु हिताय धीमान् ॥ (सु. 30/5)

The Abhisyanda if not treated properly may lead to several other eye diseases. To avoid such complications Vagabhata has stressed on the importance of immediate need of treatment in this disease.

Abhisyanda is one of the most common disorders that involve whole of the eye. It has been counted under communicable by Acharya Sushruta . Dust and smoke are indicating of allergic origin of conjunctivitis. Abhisyanda are of four types- Vataja, Pittaja, Kaphaja and Rakataja according to Sushruta. The word Abhisyanda is derived from two words viz Abhi and Syandan . Abhi means profuse or more, and syandan means discharge or secretions combined meaning is profuse discharge from all parts of conjunctiva. In modern ophthalmology it is known as conjunctivitis. In this disease conjunctiva becomes inflamed, reddish mostly found in summer season and affects poor patients. It is of two types 1) Infective Conjunctivitis 2) Allergic Conjunctivitis.

Even though the conjunctivitis may manifest in various form, in the present study we have included only the cases of acute conjunctivitis.

The management of this condition is based on various measures like Aschyotana (eye drops), Putpaka (Lubrication), ointment etc, and mostly carried out by different medicinal plants according to demand with respect to predominance of various etiological factors. Acharya Sushruta has mentioned 167 types of herbs for the management of different ocular diseases.

Among these medicines triphala is one of the home remedy for the various eye problems according Acharya Sushruta, Vagabhata and other acharyas.

Triphala is a potent astringent, which has anti inflammatory, haemostatic and wound healing property according to Sushruta. In these situations there is a need of a relatively cheaper and easily available drug and having no adverse effects. Triphala is such a drug having multicentric effects. It is thought to be effective in the acute conjunctivitis

The present work is mainly clinical one. It is carried out on fifty patients of various type of acute conjunctivitis. Patients are selected from outdoor patient of department of Shalakyas Sir Sunderlal hospital and department of Ophthalmology Bhuwalika eye Hospital, IMS, BHU, Varanasi.

Triphala drug is given topically as Triphala eye drops. Triphala eye drop is prepared from Ghanasatva of Triphala by following standard method of Ayurvedic Classics.

The clinical study has been done by dividing the total cases into two groups of 25 each. First group i.e, T group (Treated group)-Treated with Triphala 5% eye drops locally. Second group i.e. P group (Placebo group) - Treated with tears plus solutions locally.

The results observed in above two groups have been assessed on the basis of relief clinically observed and is confirmed by laboratory investigation including culture of conjunctival discharge.

METHOD AND PROCESS: -

Drug Review – Triphala is combination of ripen, healthy and dried fruits of

Amalaki (Phyllanthus Emblica/emblica officinalis)

Haritiki(Terminalia chebula)

Vibhitaka (Terminalia bellerica).

Equal quantities of these three fruits should be taken in either equal amount by weight or in number. One Haritiki, two Vibhitaka and four Amalaki fruits are said to be taken which are equal in weight too.

Triphala pacify the Kapha and Pitta Dosa. It is beneficial in the diseases of eye, as for as oral disorders, wound healing, Shothahara and also used as Rasayana in Prameha roga. According to Sushruta it improves visual acuity; appetite and cures kustha, meha and vishamjwara . All other samhita texts show its wound healing and anti inflammatory property.

Preparation of eye drops-

Triphala Eye drops were prepared from triphala Ghansatva dissolved in tear plus solution. Ghanasatva was prepared in Ayurvedic Pharmacy, of Institute of Medical Sciences, Banaras Hindu University.

For the preparation of Triphala Eye drops 500mg of dried water extract of triphala was taken and dissolved in 10ml tearplus eye drops which is a buffer solution having pH nearly equal to lacrimal secretion. Tearplus eye drops contains Polyvinyl alcohol 14mg, povidone

6mg and chlorbutanol 5mg in each 500mg of dried Ghansatva of Triphala was added in 10ml of tear plus solution and was dispensed to the patients for instillation in affected eye. This is 5% Triphala eye drops. Patients were advised to instill the drops in to the affected eye six times a day in a quantity of two drops each time.

AIM OF STUDY-The present study was conducted to evaluate the efficacy of Ayurvedic compound Triphala as eye drops on the course of Abhisyaanda(Conjunctivitis)

METHODS: 50 cases were randomly selected from the outdoor patients of Department of Shalakya and modern Ophthalmology sir Sunderlal Hospital IMS BHU, Varanasi.

Grouping of patients: - 50 patients were distributed equally into two groups viz.

Group I-Ayurvedic drug treated group and Group II –Placebo group.

Group I: 25 patients of Abhisyaanda were kept in this group. They received Triphala eye drop two drops 6 times a day for 15 days. This group was considered as Ayurvedic Drug treated group. All the patients were given strict instructions regarding their ocular hygiene.

Group II: 25 patients of Abhisyaanda were kept in this group. They received placebo eye drops (tearplus solution) two drops 6 times in a day for 15 days. This group was considered as Placebo group.

All the cases were examined initially in outdoor patients department and were selected for the study on the basis of clinical presentation and diagnostic criteria.

I. Sign and Symptoms

Symptoms:

Foreign body sensation (FBS)
Burning sensation (BS)
Lacrimation (L)
Eyeache (E)
Headache (H)
Photophobia (Pho)
Itching (It)
Lidoedema(Lo)

Sign

Discharge (Di)
Chemosis (c)
Hyperaemia (H)
Papillary Hyperplasia (Ph)
Follicles

II. Past history

Patients were asked about any previous attack of the disease.

III. Family History

Relevant family history was noted.

IV. Socio economic status

Enquired about income and social status, occupation etc. to ascertain their nutritional condition and psychological problems

V. Systemic Examination

Systemic examinations were done to rule out the involvement of other systems like cardiovascular system, Respiratory system, Urogenital system, central nervous system by this disease. Apart from the above finding B P and Pulse was also recorded.

VI. Ocular Examination was carried out in good illumination of lamp or torchlight. After routine checkup of visual acuity, general examination of the eye was performed. General inspection of the lids, eye lashes, position and symmetry of the eye balls, lacrimal apparatus etc. Conjunctiva was examined for any

swelling, alleviation, scar, congestion, secretion, color changes in all the subdivisions of the conjunctiva.

Examination of the cornea, anterior chamber, iris, pupil and lens, funds, patency of the naso lacrimal duct, intraocular pressure etc was also done. Examination with Slit lamp also conducted.

VII. Laboratory Examination

For the confirmation of acute conjunctivitis culture and sensitivity of conjunctival discharge was carried out.

VIII. Follow up

As mentioned earlier the duration of the therapy was for a period of fifteen days. Patients were examined on an interval of 5th day, 10th day and 15th day. Hence the patients were examined 3 times during the total period of therapy. At the 15th day, the drug administration was stopped and the Ayurvedic drug treated group patients only were asked to review after five more days. This was done in order to see the effect of the drug withdrawal on various components of conjunctivitis.

OBSERVATIONS:-As earlier stated, this study was conducted on 50 eye's patients. The following observations were made:

1. Distribution of patients according to age:

The patients were ranging from years 10-50 of age. All the patients were divided into the age groups of ten year each, starting from 10 year of age. It was found that majority of patients (44%) were in the age group of 21-30 years.

Age group in year	No of cases		Total no of Cases (25+25)	Percentage
	T	P		
10-20	3	3	6	12
21-30	11	11	22	44
31-40	5	6	11	22
41-50	6	5	11	22

2. Distribution of patients according to sex:

Overall analysis based on sex incidence revealed that in both the groups, the number of male and females was 64% and 36% respectively as shown in following table.

Sex	Group T		Group P		Total no of Cases (25+25)	Percentage
	No	%	No	%		
Male	16	64	16	64	32	64
Female	9	36	9	36	18	36

3. Distribution of patients according to addiction:

Over all analysis based on addiction of patients, revealed that addiction is not significant.

Addiction	Group T		Group P		Total	Percentage
	No	%	No	%	No	%
Tobacco	9	36	6	24	15	30
Drug	1	4	2	8	3	6
Alcohol	3	12	4	16	7	14
No addiction	12	48	13	52	25	50

4. Distribution of patients according to religion:

The overall analysis based on religion of patients, revealed Hindu and Muslims ratio approximately (1:9).

Religion	Group T		Group P		Total	Percentage
	No	%	No	%	No	%
Hindu	24	96	21	84	45	90
Muslims	1	4	4	16	5	10

5. Distribution of patients according to Occupation:

In this study, 19(38%) patients were students, 9(18%) patients were farmers, and 9 (18%) patients were in service, 10(20%) patients were house wives and 3(6%) patients were businessman.

Occupation	Group T		Group P		Total no of cases (25+25)	Percentage
	No	%	No	%		
Students	9	18	10	20	19	38
Farmer	6	12	3	6	9	18
Service	4	8	5	10	9	18
House wives	4	8	6	12	10	20
Businessman	2	4	1	2	3	6

6. Distribution of patients according to educational status:

Out of 50 cases, 36(72%) patients were literate, 16 patients in treated group and 20 patients in placebo group, while 14(28%) patients were illiterate in which 9 in treated group and 5 in placebo group.

Education	No of Cases		Total no of cases (25+25)	Percentage
	Group T	Group P		
Literate	16	20	36	72
Illiterate	9	5	14	28

7. Distribution of patients according to Family history

It was found that out of 50 cases 28(56%) cases were presents family history of disease, 13 and 15 cases in T and P group respectively. While 22(44%) cases have not shown family history in which 12 patients were in treated group and 10 patients in Placebo group.

Family History	No of Cases		Total no of cases (25+25)	Percentage
	Group T	Group P		
Present	13	15	28	56
Absent	12	10	22	44

8. Distribution of patients according to type of acute conjunctivitis

The majorities (54%) of patients were acute bacterial conjunctivitis and rests of (46%) patients were acute viral conjunctivitis.

Type of conjunctivitis	Group T		Group P		Total no of cases (25+25)	Percentage
	No	%	No	%		
Acute Bacterial Conjunctivitis	13	52	14	56	27	54
Acute viral Conjunctivitis	12	48	11	44	23	46

9. Distribution of patients according to culture and sensitivity

Organisms	Group T		Group P		Total no of cases (25+25)	Percentage
	No	%	No	%		
Staphylococcus A	5	20	4	16	9	18
E.Coli	2	8	1	4	3	6
Streptococcus	2	8	4	16	6	12
Acinobactor	1	4	0	0	1	2
Beta H. streptococcus	0	0	5	20	5	10
Sterile	15	60	11	44	26	52

The mean grades of the sign and symptoms for both the groups at entry are given below.

	Symptoms								Signs				
	FBS	BS	L	E	H	Pho	It	Lo	D	C	H	PH	F
T Group	1.12	0.32	1.24	0.92	0.32	0.32	0.56	0.48	1.96	1.0	2.28	1.8	0.08
	±	±	±	±	±	±	±	±	±	±	±	±	±
	0.78	0.47	0.83	0.90	0.55	0.47	0.71	0.71	0.73	0.76	0.54	0.57	0.27
P Group	1.2	0.52	1.28	0.72	0.32	0.24	1	0.56	2.08	0.88	2.36	1.84	0.12
	±	±	±	±	±	±	±	±	±	±	±	±	±
	0.91	0.71	0.79	0.67	0.55	0.43	1.4	0.76	0.75	0.72	0.56	0.55	0.33

RESULT:

Clinical study consists of observation of incidence of acute conjunctivitis and management of various types of acute conjunctivitis by an Ayurvedic drug Triphala as eye drops.

The study has been conducted on 50 patients of various type of Acute Conjunctivitis.

Acute conjunctivitis of either sex (male and female) in the age range from 10 to 50 years was included in this study to evaluate efficacy of the drug. Total cases were diagnosed clinically on the basis of the disease. The patients were divided into 2 main groups.

- 1) Treated group (treated with Triphala Eye drops)
- 2) Placebo group i.e.(tear plus solution)

Treatment was continued for 15 days, during this period careful assessment was done on 5th day, 10th day and 15th day.

In this study it was observed that incidence of acute conjunctivitis is more common in the age group of 21 to 30 years i.e. (44%), in males i.e.(64), people belongs to family history(56%).

The effect of treatment in both groups was evaluated by decreasing in sign and symptoms of the disease like foreign body sensation, burning sensation, eyeache, itching, discharge, hyperaemia, papillary hypertrophy etc. Observation of the clinical study clearly indicating that the patients of group T (Triphala Eye drops treated group) were showed better results as improvement in subjective sign and symptoms in comparison to the placebo group, It means that this therapy effectively preventing acute conjunctivitis.

CONCLUSION:-

Clinical study highlights the role of Triphala eye drops in the management of acute conjunctivitis. It was found that:

1. The drug gives relieve the various symptoms of acute conjunctivitis i.e. foreign body sensation, burning sensation, Lacrimation , Eyeache, Itching and lidoedema.
2. The drug diminished the various signs of acute conjunctivitis i. e. conjunctival discharge, Chemosis of Conjunctiva, Hyperaemia, Papillary hyperplasia.
3. Drug has poor response on Conjunctival follicle.

4. Drug is effective against Staphylococcus aureous, E. Coli, and Streptococcus etc. and is effective in viral conjunctivitis.
5. During the course of therapy and after withdrawal of drug, no adverse effects were noted

DISCUSSION:-

Effect of Drug on various sign and symptoms are discussed as follows with the help of tables. Tables showing all the data about cured, improved, no change of worsening of the signs and symptoms.

Symptoms: -

Showing the results after 15 days therapy F B Sensation

Results	Group T		Group P	
	Eyes 19	%	Eyes 18	%
Cured	8	42.2	1	5.6
Improved	4	21	9	50
No change	6	31.5	7	38.8
Worsening	1	5.3	1	5.5

Showing the results after 15 days therapy burning sensation

Results	Group T		Group P	
	Eyes 8	%	Eyes 10	%
Cured	6	75	3	30
Improved	-	-	2	20
No change	2	25	5	50

Showing the results after 15 days therapy Lacrimation

Results	Group T		Group P	
	Eyes 20	%	Eyes 20	%
Cured	5	25	-	-
Improved	5	25	3	15
Worsening	2	10	1	5
No change	8	40	16	80

Showing the results after 15 days therapy Eyeache

Results	Group T		Group P	
	Eyes 17	%	Eyes 15	%
Cured	27	42.2	4	26.7
Improved	-	-	2	13.3
No change	10	58.8	9	60

Showing the results after 15 days therapy Headache

Results	Group T		Group P	
	Eyes 7	%	Eyes 7	%
Cured	3	42.9	3	42.9
Improved	-	-	-	-
No change	4	57.1	4	57.1

Showing the results after 15 days therapy Photophobia

Results	Group T		Group P	
	Eyes 8	%	Eyes 5	%
Cured	5	62.5	3	60
No change	3	37.5	2	40

Showing the results after 15 days therapy Itching

Results	Group T		Group P	
	Eyes 11	%	Eyes 14	%
Cured	6	54.6	3	21.4
Improved	1	9.0	3	21.4
Worsening	-	-	1	7.2
No change	4	36.4	7	50

Showing the results after 15 days therapy Lidoedema

Results	Group T		Group P	
	Eyes 10	%	Eyes 24	%
Cured	5	50	3	27.3
Improved	1	10	2	18.2
No change	4	40	6	54.5

Signs:-

Showing the results after 15 days therapy on Conjunctival discharge

Results	Group T		Group P	
	Eyes 25	%	Eyes 24	%
Cured	11	44	2	8.3
Improved	4	16	7	29.2
No change	10	40	12	50
Worsening	-	-	3	12.5

Effect on Chemosis results after 15 days therapy

Results	Group T		Group P	
	Eyes 18	%	Eyes 17	%
Cured	9	50	6	35.3
Improved	1	5.6	2	11.8
No change	8	44.4	9	52.9

Effect on Hyperemia results after 15 days therapy

Results	Group T		Group P	
	Eyes 25	%	Eyes 25	%
Cured	11	44	4	16
Improved	2	8	4	16
No change	12	48	16	64
Worsening	-	-	1	4

Effect on Hyperplasia results after 15 days therapy

Results	Group T		Group P	
	Eyes 25	%	Eyes 25	%
Cured	10	40	4	16
Improved	3	12	5	20
No change	12	48	14	56
Worsening	-	-	2	8

Effects on Follicles results after 15 days therapy

Results	Group T		Group P	
	Eyes 2	%	Eyes 3	%
Cured	-	-	-	-
No change	2	100	3	100

In short reductions of mean grade of other symptoms are as follows

Serial No	Symptoms	Before treatment mean grade	After treatment mean grade	Reduction in mean grade
1	Foreign Body sensation	1.12±0.78	0.76±1.01	Less significant
2	Burning sensation	0.32±0.47	0.08±0.27	0.24±0.43
3	Lacrimation	1.24±0.83	0.92±0.8	0.32±0.47
4	Eyache	0.92±0.90	0.52±0.71	0.28±0.45
5	Headache	0.32±0.55	0.2±0.5	Not significant
6	Photophobia	0.32±0.47	0.12±0.33	0.2±0.4
7	Itching	0.56±0.71	0.28±0.61	0.28±0.45
8	Lidoedema	0.48±0.71	0.24±0.52	0.28±0.54
9	Discharge	1.96±0.73	1.28±1.1	0.84±0.8
10	Chemosis	1.0±0.76	0.68±0.9	0.32±0.69
11	Hyperemia	2.28±0.54	1.2±1.19	1.08±1.1
12	Papillary Hyperplasia	1.8±0.57	1.08±0.99	Not significant
13	Follicles	0.08±0.27	0.08±0.27	Not significant

Triphala eye drop is effective in foreign body sensation, burning sensation, Lacrimation, Eyeache, photophobia, Itching, Lidoedma, Discharge, Chemosis, Hyperemia and ineffective in Papillary hyperplasia, Follicles.

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