



**“STUDY THE EFFICACY OF TRIPHALA KWATH ASCHOTAN IN THE
MANAGEMENT OF ACUTE CONJUNCTIVITIS”**

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ABSTRACT

Ayurveda is an ancient medical science from which we can get lot of things through the various Samhita's. Among the samhitas which are available now, Sushruta samhita gives a wide description about Netraroga. In all five Dnyandriyas Sushrutacharya gives prime importance to Netrendriya. Abhishanda is one of Netra roga, comes under Sarvagata roga and can be compared with conjunctivitis. Many of Netrarogas are taking place because of this Abhishanda, so Sushrutacharya has advised to treat the Abhishanda as early as possible to avoid further complications. Conjunctivitis is inflammation of the Conjunctiva. It is Contagenous and comes with Epidemics. Negligence in treating, the Conjunctivitis becomes chronic and may cause serious complication like blindness. So the Conjunctivitis is selected for the present research work. The Triphala is Tridoshaghna, Chakshushya and easily available throughout year and it is cheap. Aschotan that is local installation of eye drops is a primary basic line of treatment for every eye disease. Efficacy of Triphala kwath eye drops is same as that of Chloramphenicol eye drops. Between Triphala kwath eye drops and N. S., Triphala kwath eye drops proves to give better results.

KEYWORDS: Sarvagat roga, Abhishanda, Conjunctivitis, Triphala, Aschotan.

INTRODUCTION

Ayurveda is an ancient medical science from which we can get lot of things through the various Samhita's.

In all five Dnyandriyas Sushrutacharya gives prime importance to Netrendriya. Conjunctivitis (Abhishanda) is one of eye disease (Netra roga), comes under Sarvagata roga.

The doshas are oozed from all urdhwajatrugata strotasas, the condition is called Abhishanda.^[1]

Many of Netrarogas are taking place because of this Abhishanda, so Sushrutacharya has advised to treat the Abhishanda as early as possible to avoid further complications. The complications are development of Sandhigata roga, Vartmagata roga, Shuklagata roga and krishnagata roga. Hence the condition Abhishanda is mentioned in detail.^[2]

Conjunctivitis means inflammation of the Conjunctiva. It is characterised by conjunctival hyperemia, associated with a discharge which may be watery, mucoid, mucopurulent or purulent.^[3] Allergy, injury, external factors like dust, smoke, insects, foreign bodies, various organisms and allergens are the main causes.^[4]

The common disease, Conjunctivitis is occurs with following Signs and Symptoms

- Conjunctival Congestion
- Stickiness with Sticky Discharge
- Pain
- Foreign Body Sensation or Grittiness
- Photophobia
- Lacrimation
- Burning Sensation
- Mild Lid Edema
- Slight Blurring of Vision (Not in all cases)

CLASSIFICATION OF CONJUNCTIVITIS

Based on onset

- Acute
- Sub acute
- Chronic

Based on type of exudates

- Serous
- Catarrhal
- Purulent
- Mucopurulent

- Membranous
 - Pseudo membranous Based on Conjunctival response
 - Follicular
 - Papillary
 - Granulomatous Based on aetiology
 - Infectious
1. Bacterial
 2. Viral
 3. Chlamydial
 4. Fungal
 5. Parasitic
-
- Non infectious
 - 1. Allergic
 - 2. Irritants
 - 3. Endogenous or autoimmune
 - 4. Dry eye
 - 5. Toxic
 - 6. Factitious or self-inflicted
 - 7. Idiopathic

ACUTE CONJUNCTIVITIS

Acute Conjunctivitis is usually self limiting.

BACTERIAL CONJUNCTIVITIS

Acute Purulent and Mucopurulent Conjunctivitis.

Purulent and Mucopurulent Conjunctivitis caused by a number of bacteria and is contagious, being transmitted directly by the discharge. Among the most common etiological organisms is *Staphylococcus aureus*, *S. pneumoniae*, *H. influenzae*. A particularly severe form of acute purulent Conjunctivitis is that due to *Neisseria gonorrhoeae*.^[5]

In more severe cases, the whole Conjunctiva is fiery red (pink eye). All the Conjunctival vessels are congested. Flakes of mucus and eventually pus are seen in the fornices and often on the margins of the lids, matting the lashes together with dirty yellow crusts and if involvement of the cornea hypopyon ulcer may develop.

It is associated with moderate to severe pain and lid swelling with copious purulent discharge and tender, sometimes suppurative, preauricular lymphadenopathy. In typical cases, the discharge reaccumulates within the seconds of cleaning. This form of Conjunctivitis is also termed hyper acute conjunctivitis or acute blenorrhoea.

The eyes should not be bandaged, as this prevents drainage of the secretion, but if there is any discomfort in bright light a sun-shade or dark goggles should be worn. The disease is contagious care must be taken to prevent its spread. The patient must keep his hands clean and no one else should be allowed to use his towel,

handkerchief, pillow or other fomites.

Mixture of equal amount of Haritaki, Bibhitaki and Amalaki is called Triphala or Phalatrik or Vara.^[6]

In Triphala, Haritaki is Vataghna, Bibhitaki is Kaphaghna and Amalaki is Pittaghna. Therefore the Triphala is Tridoshaghna. And the prabhav of Triphala is Chakshushya.^[6] Also Triphala is easily available throughout year and it is cheap. So the Triphala Kwath is selected for the treatment of Acute Conjunctivitis that is Abhishanda.

Aschotan that is local installation of eye drops is a primary basic line of treatment for every eye disease,^[7] because pricking sensation, lacrimation, redness, burning sensation, kandu and other symptoms decrease with use of Aschotan. And Aschotan process is easiest so the Aschotan (local installation of eye drops) is selected.

Triphala Kwath Aschotan is useful in all types of Abhishandas and it is cost effective comparing to routinely available antibiotic eye drops.^[8]

OBJECTIVES

Conjunctivitis is an inflammatory, contagious and very common disease of the eye.

As it is contagious it spreads earlier and it requires prompt and vigorous treatment.

At present some available medicines for Conjunctivitis are costly and using repeatedly it gets resistance.

According to Ayurveda Abhishanda is contagious disease. There are many remedies regarding its treatment. Among them Triphala Kwath eye drops is one remedy.

We are going to study whether the Triphala Kwath eye drops is useful for Acute Conjunctivitis.

Also

- To study Abhishanda, according to Ayurvedic science and Acute Conjunctivitis according to modern medical science.
- To study the comparative efficacy of Triphala Kwath Aschotan and Chloramphenicol eye drops in the management of acute Conjunctivitis and,
- To study the efficacy of Triphala Kwath Aschotan in the management of Acute Conjunctivitis.

MATERIALS AND METHODS

MATERIALS

- 10% Triphala Kwath eye drops
- Chloramphenicol eye drops
- 0.9% Normal Saline

To maintain pH of the Triphala Kwath and to reduce the irritation of the solution we made 10% Triphala Kwath

eye drops and used for trial group. Direct installation of Triphala Kwath without dilution, it may be harmful to the cornea and it may produce irritation.

A market available branded Chloramphenicol eye drops I. P. (Chlorocol) of Jawa Pharmaceuticals (India) Private Limited were used for the control group.

0.9% Normal Saline was used of Claris Pharmaceuticals (B. No. 1704091). That was used in the same type of container that of 10% Triphala Kwath eye drops. This Normal Saline was used for the placebo control group.

METHOD OF COLLECTION OF DATA SOURCE OF DATA

Daily O.P.D. based patients of Shalakyta tantra department Bharati, Ayurved Rugnalaya, Pune. Patients having sign and symptoms of conjunctivitis.

TOTAL NO. OF PATIENTS

Total 90 patients were selected for the study based on signs and symptoms of Acute Conjunctivitis like,

ASSESSMENT CRITERIA

PAIN, REDNESS, PHOTOPHOBIA AND DISCHARGE.

NO. OF GROUPS

Three groups, 30 patients in each group having signs and symptoms of Acute Conjunctivitis.

Trial Group

Triphala Kwath 10% Eye Drops Instillation, Control Group- Chloramphenicol Eye Drops I. P. Instillation, Placebo Group - Normal Saline Instillation, Dose – 3 drops in affected eye three to four times in a day for 7 days.

The dose was same for all groups in affected eye only. If both eyes were affected of the same patient then the more affected eye was taken in to consideration for grades and drops were instilled in both eyes.

INCLUSION CRITERIA

- Age group above 10 years,
- Irrespective of sex and religion,
- Acute Conjunctivitis only,
- Not any other major illness,
- Patient with good compliance.

EXCLUSION CRITERIA

- Age group below 10 years,
- Chronic and specific Conjunctivitis,
- Patients having corneal involvement,
- Recently eye operated patients,
- Complicated eye disorders.

WHY 10% TRIPHALA KWATH USED?

- To maintain the pH of the solution,
- To reduce the irritation

The pH of the fresh prepared Triphala kwath is nearly 4. Installation of this in the eye produces irritation. The pH of 10% Triphala Kwath is 6.8, this is almost equal to the pH of the tear film. The tear film pH is 7.4. 10% Triphala kwath eye drops instillation produces less or no irritation, so we used the 10% Triphala kwath eye drops.

Specific gravity of the 10% Triphala kwath eye drops is 1.003. The viscosity of the solution is 1.14cp. A solid content is 8.21%. Also tannins are present in the solution.

PREPARATION METHOD OF 10% TRIPHALA KWATH EYE DROPS

First we collected the dry samples of each drug from the three well known Ayurvedic Aushadhalayas from Pune city. Then we selected the best sample with the help of our Dravyaguna Department.

Authentication of these drugs was done in Agharkar Research Institute, Pune. Cleaning of drugs was done with water and then drying was done in Sunlight.

Then we separated the seeds from that dry fruits. Afterwards we made bharad of each fruit. After weighing we took equal amount of each fruit for the preparation of the kwath.

According to Sharangdhar Samhita we made Triphala Kwath by addition of 16 times double distilled water in to it and then slowly and constantly heated to reduce 1/8 of the kwath.

Triphala bharad + 16 times double distilled water reduced to 1/8.

Then we filtered the kwath through Whatman paper no. 1. Again filtered with 0.45 micro meter filter under vacuum in Poona College of Pharmacy, Pune (Filter name - Ultipor n66, nylon 6, 6 membrane, lot no. 04-05 id 000154, Pall Life Sciences).

Then the available solution was particle free.

There after we made 10% concentration of it by adding 0.9% normal saline volume to volume (v/v).

Then we filled the bottles of 5 ml each. Then labelled the bottles.

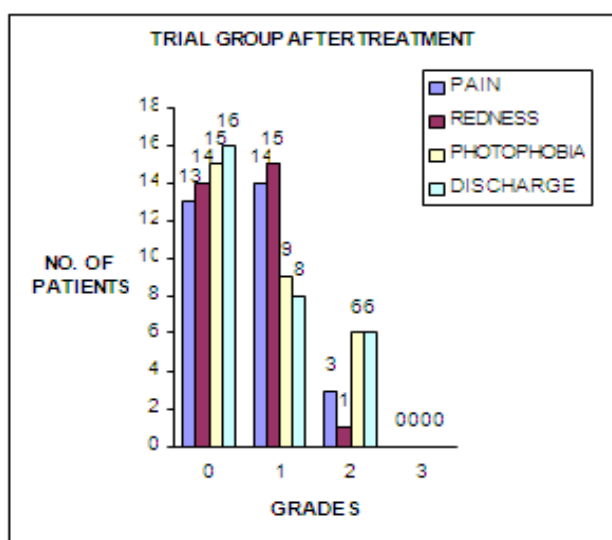
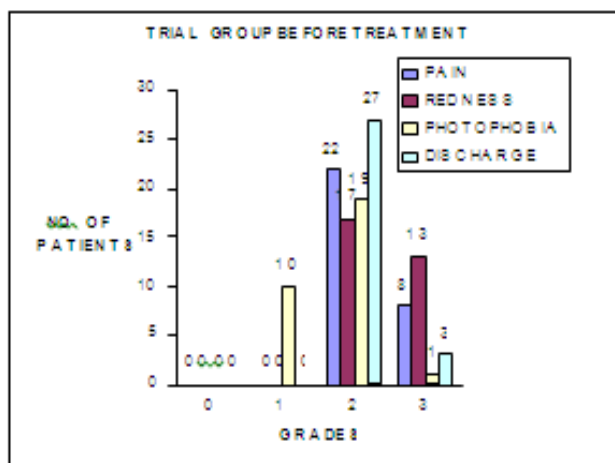
Mucous membrane test (eye irritation test) of the solution was done.

(Result – No irritation or lacrimation observed after instillation of the sample for 7 days.

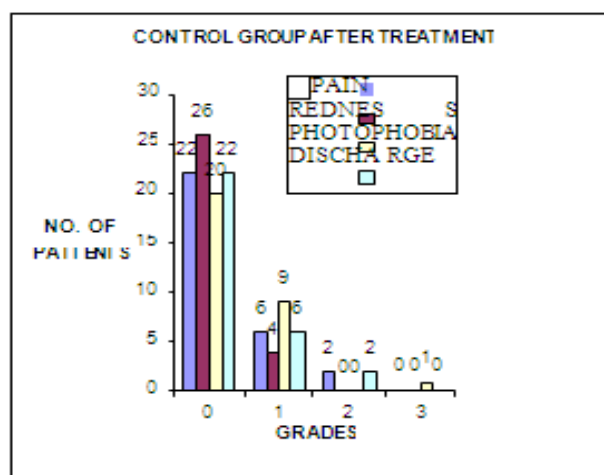
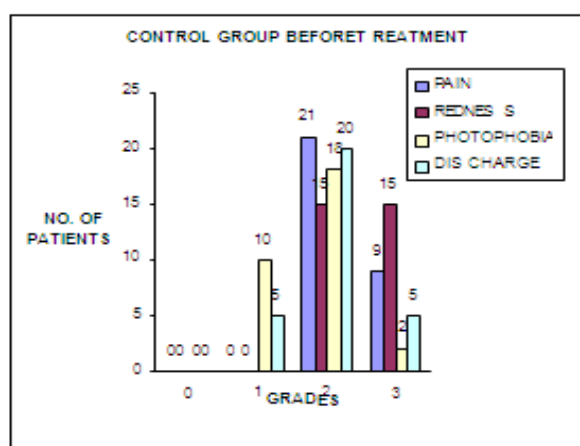
Redness, inflammation or edema were not observed during the observation period of 15 days).

Culture result was no growth in the solution then it was ready to use for trial group.

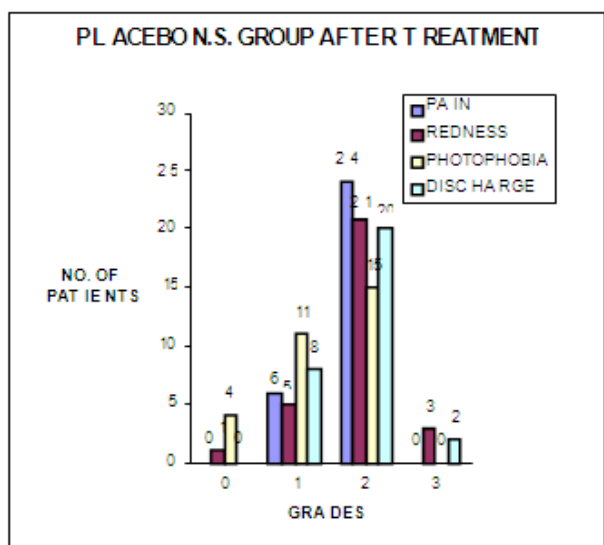
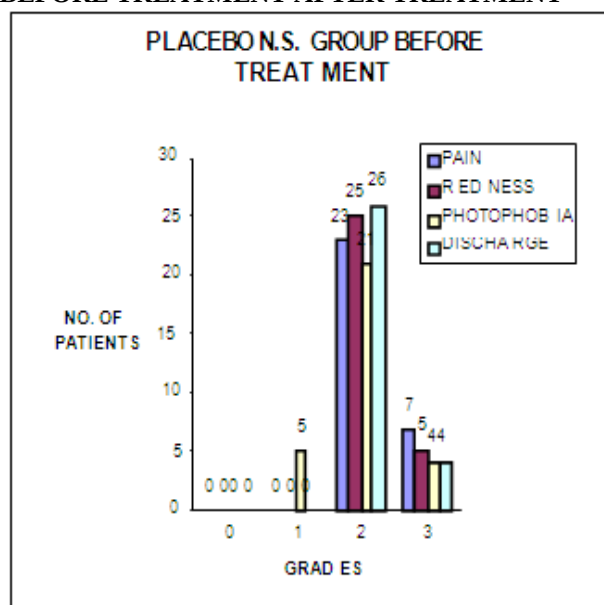
COMPARISON OF TRIAL GROUP BEFORE TREATMENT & AFTER TREATMENT



COMPARISON OF CONTROL GROUP BEFORE TREATMENT AFTER TREATMENT



COMPARISON OF PLACEBO N. S. GROUP BEFORE TREATMENT AFTER TREATMENT



TRIAL GROUP

Sign. & symptoms	M 1	M 2	S. D.	S. E.	T. Cal	T.table @ df 58	Result
Pain	2.26	0.6	0.565	0.14	11.85	2.38	SIGNI FICANT
Redness	2.43	0.5	0.537	0.13	13.95	2.38	SIGNI FICANT
Photophobia	1.70	0.7	0.677	0.16	05.91	2.38	SIGNI FICANT
Discharge	2.10	0.6	0.600	0.15	09.93	2.38	SIGNI FICANT

CONTROL GROUP

Sign. & symptoms	M 1	M 2	S. D.	S. E.	T. Cal	T. table @ df 58	Result
Pain	2.30	0.30	0.540	0.13	14.81	2.38	SIGNI FICANT
Redness	2.50	0.13	0.434	0.10	21.94	2.38	SIGNI FICANT
Photophobia	1.73	0.36	0.569	0.14	09.64	2.38	SIGNI FICANT
Discharge	2.00	0.30	0.596	0.14	11.40	2.38	SIGNI FICANT

PLACEBO N. S. CONTROL GROUP

Sign. & symptoms	M 1	M 2	S. D.	S. E.	T. Cal	T.table @ df 58	Result
Pain	2.23	1.80	0.490	0.12	0.74	2.38	NOT SIGNIFICANT
Redness	2.16	1.86	0.520	0.13	0.41	2.38	NOT SIGNIFICANT
Photophobia	1.96	1.36	0.643	0.16	0.76	2.38	NOT SIGNIFICANT
Discharge	2.13	1.80	0.460	0.11	0.82	2.38	NOT SIGNIFICANT

M 1 indicates mean of symptom grades of before treatment M 2 indicates mean of symptom grades of after treatment
S. D. denotes standard deviation of the data.

S. E. denotes standard error of the data.

AFTER TREATMENT COMPARISON OF SYMPTOMS IN TRIAL GROUP & PLACEBO N.S. GROUP

Sign. & symptoms	M 1 Trial	M 2 N. S.	S. D. Trial	S. D. N. S.	T Cal	T table df 58	Result
Pain	0.66	1.80	0.565	0.490	6.40	2.38	SIGNI FICANT
Redness	0.56	1.86	0.51317	0.520	7.22	2.38	SIGNI FICANT
Photophobia	0.70	1.36	0.677	0.643	3.30	2.38	SIGNI FICANT
Discharge	0.66	1.80	0.600	0.460	6.33	2.38	SIGNI

T. Cal means t value calculated of the available data by applying Students T test.^[9]

Here T. Cal value is greater than the T. Table value, hence the result obtained from the AFTER TREATMENT COMPARISON OF TRIAL GROUP AND PLACEBO N. S. GROUP WAS STATISTICALLY SIGNIFICANT.^[9]

DISCUSSION

Conjunctivitis is an infectious and common disease in the Ophthalmic practice. If it is in primary status then it is easy to treat. When it becomes chronic, it is difficult to treat.

Abhishanda is common disease. The discharge comes from all urdhwajatrugata strotasas and settles in netrendriya, develops abhishanda.

Triphala kwath eye drops are Ayurvedic preparation used for the Acute Conjunctivitis. If we use it for Acute Conjunctivitis then chances of recurrence of it is less.

No question of resistance, if we use it repeatedly and

frequently. And in 7 days treatment, signs & symptoms of conjunctivitis get decreased.

Triphala is cheap & easily available throughout year. Manufacturing cost of 10% Triphala kwath eye drops is low.

Triphala kwath eye drops are much better. It is Sterile Ayurvedic Ophthalmic preparation. The relief obtained from the 10% Triphala Kwath eye drops is long lasting.

All available data of Triphala Kwath eye drops is clinically significant compared to control group (Chloramphenicol e/d).

A better result occurs of trial group than N. S. group. No any side effect of Triphala kwath eye drops is noted.

CONCLUSION

For treatment of Acute Conjunctivitis 10% Triphala kwath eye drops is best effective & safe.

Modification in pharmaceutical method of 10% Triphala kwath eye drops is easy & cost effective. Culture study

indicates better self life of preparation.

Mucous membrane test (Eye irritation test) shows non irritability of the formulation.

Efficacy of Triphala kwath eye drops is same as that of Chloramphenicol eye drops.

Between Triphala kwath eye drops and N. S., Triphala kwath eye drops proves to give better results.

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