

ASSESSMENT OF ADD-ON-EFFECT OF ANJANA BY HARIDRADI GHRIT IN THE MANAGEMENT OF DRY EYE SYNDROMEAlte Priyanka Pandurang¹, Gopnarayan Atul Ramesh²

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**ABSTRACT**

In today's life, due to change in environment, food habits and life style it gives rise to different eye diseases. Now a days we see there is excess use of computers and over exposure to visual display terminals, which lead to birth hazard named Dry eye syndrome. In modern science there is not effective treatment for Dry Eye Syndrome. Recently there is increase in number of patients coming in OPD having complaints of foreign body sensation, feeling of dryness, burning sensation, itching, photophobia, tired eye, redness, discomfort etc commonly. In modern science the group of above mentioned symptoms is named as Dry eye syndrome. It is disorder of tear film due to tear deficiency or excessive tear evaporation which leads to damage to outer ocular surface. Incidence of dry eye is 14.3% in Clinical practice (pub med medical line index). In modern pharmacology the available regimen for the dry eye is using lubricating. But this gives only temporary relief.

While in *Ayurveda* these symptoms are seen in vitiated *vata pitta* doshas in eye and will be taken into consideration of title *Netrashushkta*. In *Ayurveda* some preparations are there, which can be used as local external application in eye. *Ghrith* is one of the drug among them which is *chakshusya*, easily available and more economical to patients. Taking into consideration snehan property of ghrith and vata- pittaghna properties of

Haridra and Daruharidra I thought use it in Dry eye syndrome. Hence, I take this topic for research work under the title - *To Study The Effect Of 'Haridradi Ghrit Anjana' In The Management Of 'Dry Eye Syndrome'*.

Keywords: *Kriyakalpa, Anjana, Tear film, Dry eye syndrome, Haridradi Ghrita*

INTRODUCTION

Now a day's peoples are more exposed to pollution due to industrialization. Due to outdoor jobs and prolonged computer work eyes get dry. The factors such as more exposure to wind, sunlight, dust and lack of blinking during computer work hampers the formation of uniform tear film. This results in dryness of cornea which lead to blurring of vision during continuous work. It is a very common condition characterized by disturbances of tear film. This abnormality may result in disruption of ocular surface, causing a variety of symptoms and signs which interfere with the quality of life. Approximately 8% of the world population is suffering with this eye disorder. The symptoms of dry eye include irritation, foreign body sensations, feeling of dryness, itching, non-specific ocular discomfort. In long standing cases there is conjunctival xerosis, corneal changes in the form of punctuate epithelial erosions and filaments. If left untreated it may lead to many serious complications like corneal ulcer. Hence there is a need to find a safe and effective medication by the form of *Ayurvedic* formulation. In *Ayurvedic* classics, we find the concept of *Chakshushya* and many therapeutic procedures like *kriyakalpas* explained. *Ghrit* is one of the *Chakshushya*. Taking into consideration *Snehan* property of *Ghrit* and *Vata- Pittaghna* properties of *Haridra* and *Daruharidra*, *Haridradi Ghrit* is used in "*Anjana*" form because it is convenient & acceptable mode for local instillation of drug.

Aim:

- To study the efficacy of *Haridradi Ghrit anjana* in the management of Dry Eye Syndrome.
- The study will be aimed to review the literature about Dry Eye Syndrome (*Netrashushkta*) through the *Ayurvedic Samhitas* and other classical texts and literature of modern surgical texts.

Objectives:

- To evaluate the effect of *Haridradi Ghrit Anjana* in the management of Dry Eye Syndrome.
- To solve today's Dry eye syndrome problem which is now growing day by day due to computers, TV, Air pollution etc. with *Ayurvedic* line of treatment.

Literature Review:

Ayurvedic Review

- ❖ According to *Acharya Sushruta* there are 76 eye diseases.
- ❖ In *Ayurveda*, nomenclature of disease itself denotes self-meaning. every word has some meaning which is introductory and interrelated.
- ❖ *Netrashushkta* is made up of two words *netram* and *Shushkaha*, that means the sense organ eye with deficiency of oiliness.
- ❖ In *Ayurvedic Samhitas* *Netrashushkta* is not described as disease, it is described as a symptom in other diseases. But the two words i.e. *Netram* and *shushkaha* are described in *Ayurvedic* literature.
- ❖ Means *Netrashushkta* is the loss of oiliness and absence of aqueous.

Modern Review

Dry eye syndrome is the commonest and frequently complaint of patient faced by eye doctors. It is a chronic syndrome due to insufficient lubrication and moisture in the eye. and cause ocular inflammation due to constant irritation of the anterior tissue of eye. It causes damage to the interpallebral ocular surface and is associated with symptoms of ocular discomfort. Predisposing factors are hot dry and windy climate, excess use of computers, exposure to the dry weather, air conditioning, Cigarette smoke, contact lens wearing, Vitamin A deficiency. There is Tear film instability due to damage of the corneal epithelial cells, mucins which hold to the eye surface. Hence water repellent corneal surface is exposed, and aqueous compo-

nents are forcefully flushed away. Thus, due to destabilization of tear film increases evaporation and diffusion of tears, Dry eye syndrome develops.

Ayurvedic Review of *Anjana*:

Kriyakalpa is the main therapeutic process for ophthalmology in *Shalakya tantra*, as the *Panchkarma* is the base of *Kayachikitsa*. In *Sharangdhar samhita*, seven *Netrakriyakalpas* are mentioned as

“*Sekam Aschotanam Pindi Bidaltarpanam Tatha Putpaka Anjanam Chaibhi Kalpai Netam Upachret*”..... *Sharangdhar Samhita 13/1*

The Local application of different kinds of medicine in eye is called as *Anjana* i.e. collyrium. *Anjan* is the *kriyakrama* in which medicine is applied in the eye to internal surface of lid margin from *Kaneenika sandhi* to *Apanga sandhi* using *Shalaka* (probe) or by using finger. The references of *Anjan* is also available in *Rigveda*. In Ayurvedic *samhitas* *Anjana* is the preventive measure and also is a treatment in the speciality of *Netraroga*.

Procedure of Anjana:

There can be three steps to do *Anjana* for better effect and free from side effects:

1. *Poorva Karma* – preparation of *Anjana*
2. *Pradhana Karma* – application of *Anjana* in the eyes with applicator
3. *Pashchata Karma* – *Netra Prakshalana* and *Pratayanjana* application.

Method of application of Anjana:

1. An elaborate description of how to apply *Anjana* is given by *Acharya Sushruta*.
2. *Vartma* should be held firmly with left hand so that the patient cannot blink.
3. Hold the *Shalaka* in right hand and apply the *Anjana* from *Kaneenaka* to *Apanga* where *Dalhana* commented it should be applied either from *Kaneenaka* to *Apanga* or *Apanga* to *Kaneenaka* in one shot.
4. After application of *Anjana* the eyes should remain closed and patient should be asked to mildly rotate the eyeball inside the lids.

Pashchat Karma of Anjana: The eyes look clear and patients see clearly. Then eyes should be washed

properly. The *Anjana* should be removed with the cotton wrapped in the thumb of right hand when it is to be removed from left eye and vice versa.

Material and Methods:

Materials -

The trial drug selected for study is *Haridradi Ghrita* having Constituents as “*Haridra, Daruharidra, Saindhava, Ghrita, Jal*”

Method of preparation of *Haridradi Ghrit* –

“*Kalkat Chtaturguneekrutya Ghritam Va Tailamevav Chaturgune Drave Sadhyam Tasya Matra Palonmita*” *Haridradi Ghrit* is prepared according to *Snehakalpanavidhi* mentioned by *Sharangdhara* samhita. 1 part of each of *Haridra, Daruharidra, Saindhav Kalka*, 4 parts of *Goghrit* and 16 parts of water are boiled together till water gets evaporated and only *Ghrit* remains behind. This suspension is then filled properly which is ready for use.

Methodology

Selection of Patients:

Total Sample size of my study is 60, selected from those attending the *Netrarog* O.P.D. It was done after taking proper written informed consent of the patient and explaining to him the whole work to be done, provided the information of the subject to be confidential.

Inclusion Criteria:

- Patients willing for trial.
- Patients suffering from Dry eye syndrome.
- Patients of age group between 10yrs to 60 years was chosen

Exclusion Criteria:

- Patients not willing for clinical trials.
- Age below 10yrs and above 60 yrs.
- Immunocompromised patients and patients with any systemic disorders, Diabetes Mellitus & hypertension.

Clinical Study

A single blind, prospective study was conducted for 60 patients. *Anjana* with *Haridradi Ghrit* is applied two times in a day morning and evening for 30 days.

Criteria of Assessment-

Improvement in the patient was assessed on the basis of relief in the signs & symptoms of Dry eye syndrome.

1) Dryness of eye (Schirmer I test)

0 (No)	value>15 mm
+ (Mild)	value 10
++ (Moderate)	value 5
+++ (severe)	value<5mm

2) Foreign body sensation –visual analogue scale

0	No pain
1-3	Mild pain (Occasionally present)
4-7	Moderate pain (intermittently present)
8-10	Severe pain (frequently present)

3) Itching -

0	Absent
+	Mild – patient does not complain itching but have some feeling of itching
++	Moderate- patient complains of itching for some duration of day
+++	Severe – same amount of itching that has before treatment

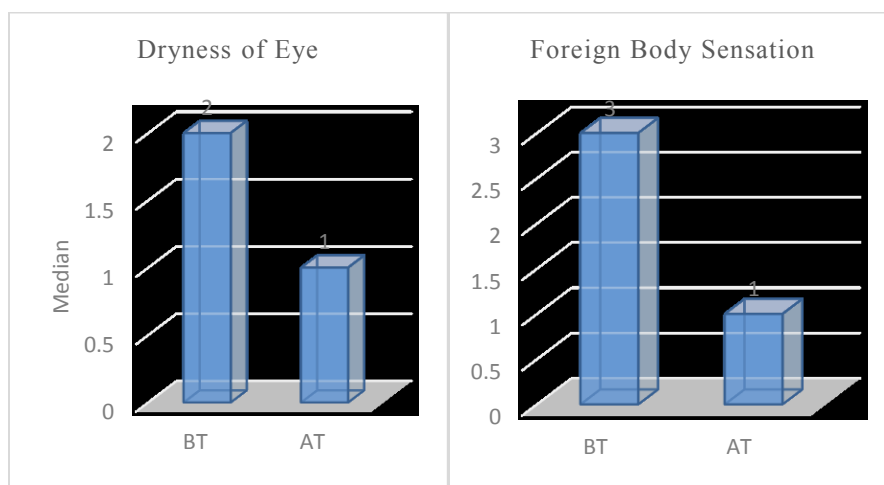
4) Redness-

0	No congestion
1	Occasional congestion with clear pattern blood vessel.
2	Intermittent congestion with clear pattern blood vessel
3	Congestion with disturbed pattern blood vessel.

Observations

1 Statistical analysis of relief in Dryness of eyes before and after treatment

dryness of eyes	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
	2	1	-7.508 ^a	0.000	51.7	Significant

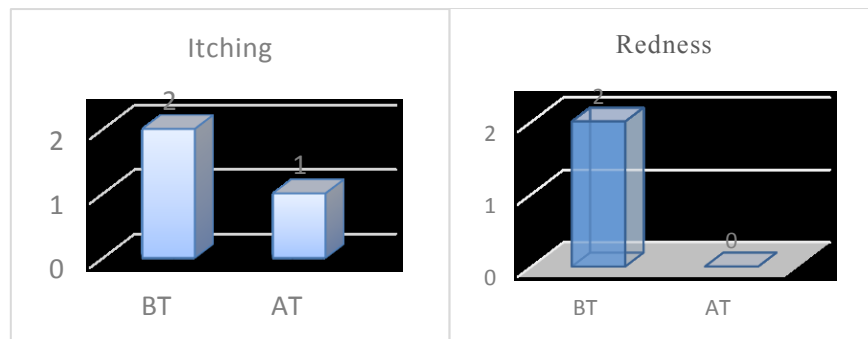


2. Statistical analysis of relief in Foreign body sensation before and after treatment

foreign body sensation	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
	3	1	-6.936 ^a	0.000	80.8	Significant

3. Statistical analysis of relief in Itching before and after treatment:

Itching	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
	2	1	-6.861 ^a	0.000	46.3	Significant



4. Statistical analysis of relief in Redness before and after treatment:

Redness	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
	2	0	-6.685 ^a	0.000	77.2	Significant

Relief in Percentage –

The average overall relief of the mentioned symptoms is summarized in a single table given below. It is described with the help of percentage parameter.

Sr. No.	Symptom	Relief in %
1	Dryness of eye	51.7%
2	f.b sensation	80.8%
3	Itching	46.3%
4	Redness	77.2%

Statistically there is highly significant relief ($p < 0.01$) observed in Foreign body sensation of eyes after treatment.

DISCUSSION

There are various formulations which are prescribed for the treatment of Dry eye syndrome in modern medicine. But, *Anjana* with *Haridradi Ghrit* is more effective in treatment of dry eye. *Haridradi Ghrit* contains *Haridra*, *Daruharidra*, *Saindhav*, *Goghrit*. *Haridra* and, *Daruharidradra* has anti-inflammatory, antiallergic properties. Its chemical composition *Curcumin* is useful in reducing inflammation, burning sensation and redness in the eyes due to its anti-inflammatory property. While *Saindhav Lavan* is *Pachak*, *Deepak*, *Laghu*, *Snigdha*, *Heema Gunatmak*. It also has *Rochak*, *Vrishya* and *Tridoshaghna* properties. Due to its all above properties it is most useful in

eye diseases. Having *Lavana with Madhur Rasa*, *Madhur Vipaka*, *Sheetavirya* does not produces burning sensation and it is *tridoshghna* so it is best among the *Chakshushya*. *Ghrita* is best among four *snehana dravya* having *Yogavahi & Sanskaranuvartan Guna* i.e. it takes the *Gun*s (Qualities) of other *Dravyas* not without changing its own property. *Yogavahi guna* of *ghrita* which is explained by *Charakacharya* goes upto the depth of *Netragatadhatu* with its own properties. Due to its *Sneha guna* it is *Vataghna* in nature. & *pittaghna* property is due to its *madhura Rasa*. *Ghrit* contains K2 and lionelic acid. It is also having anti-inflammatory and anti-cancer property. *Ghrit* is also rich in vitamin A. Supplementation of Vitamin A re-

duces and treats dryness which occurs due to its deficiency. For immediate *Netrasnehan Ghrith* should combine with *Saindhava*. This occurs due to *Sukshma, Abhishyandi, Snigdha, Vyavayi guna* of *Saindhava* & *Yogvahi guna* of *Ghrith*. In *Netra-Anjana* all these properties nourish the conjunctival as well as corneal layers and avoid dryness and inflammation of tissue of conjunctiva and cornea. So, it gives smoothening to layers of conjunctiva and cornea. Its *Chakshushya Guna* improves the health status of eyes.

CONCLUSION

The clinical study revealed that use of *Netra Anjana with Haridradi Ghrith* in patient of Dry eye syndrome helps to cure dryness. It also improved the health status of eyes. By *Haridradi Ghrith Anjana* it is proved that Dry eye syndrome can be managed with conservative line of treatment in the initial stages. Overall relief was also better in Dry eye syndrome. All patients got marked improvement in symptoms of Dry Eye Syndrome. No adverse effect was found after application of *Anjana with Haridradi Ghrith*. At the end of the treatment it is observed that in future this work may be valuable clue for further study. Hence, we can conclude that use *Haridradi Ghrith Anjana* as topical medication can be effective in the management of dry eye syndrome.

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