

## EFFECT OF AYURVEDIC TREATMENT ON DRY EYE SYNDROME

## (SHUSHKAAKSHIPAKA): A REVIEW

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Gujarat, India.**ABSTRACT**

Dry Eye Workshop 2007, Dry eye is a multifactorial disease of the tears and ocular surface that results in symptoms of discomfort, visual disturbance, and tear film instability with potential damage to the ocular surface. It is accompanied by increased osmolarity of the tear film and inflammation of the ocular surface. In *Ayurveda* it can be correlated with *Shushkaakshipaka* on the basis of symptoms like *Kunitavartma*(narrowing of palpebral aperture), *Daruna-Rukshavartma*(hard and rough lids), *Aviladarshana*(blurring of vision), *Gharsha*(foreign body sensation), *Toda*(pricking pain), *Bheda*(tearing pain), *Upadeha*(mucoid discharge), *Krichronmeelana*(difficulty in

opening the lids), *Vishushkatwa*(dryness), *Shoola*(crucifying pain) and *Paka*(inflammation). *Vata* is the chief culprit and other *Doshas* are associated with it. Present study is aimed to review clinical research works which were carried out on Dry Eye in *Shalaky Tantra* Department of IPGT and RA, Gujarat Ayurved University, Jamnagar to find out the effect of *Ayurvedic* treatment. In these studies, *Dashmuladhya Ghrita*, *Triphaladi Yoga* as internal medicine and *Vasanjana* as locally and *Anu Taila Nasya* and *Mridweekadi* eye drop, *Nayanaamrita* eye ointment topically were used as treatment. These treatment modalities showed highly significant results in relieving the signs and symptoms of disease with no adverse reaction.

**KEYWORDS:** Dry eye, *Nasya*, *Shushkaakshipaka*.

## INTRODUCTION

Dry eye syndrome is recognized as clinical disorder in 1920 and described clinically in early 1930's, the greatest amount of information both from an epidemiological and pathogenetic perspective has accrued during the last 10 years<sup>[1]</sup>, which indicates that the awareness and incidence of this disease is increasing in recent times. Prevalence of dry eye syndrome is estimated to be 14 to 33% world wide i.e. 1 out of every 3 to 7 patients could have this condition.<sup>[2]</sup> A recent survey conducted in year 2002, based upon a well characterized population of adult men and women in USA identified a prevalence of 6.7% in women over the age of 50 and 2.3% in men over the age of 55. These rates extrapolate to potentially 9.1 million dry eye patients in USA alone. Even though no authentic prevalence survey has been carried out in India, it is estimated that 45% of patients older than 40 years may have this problem i.e. one out of every 5 above 30 years attending OPD could have this condition.<sup>[3]</sup> If this condition is not properly diagnosed and treated in time, it may lead to various complications like keratitis, iridocyclitis, glaucoma, endophthalmitis etc.

Signs and symptoms of Dry eye syndrome like dryness, itching, burning sensation, foreign body sensation, sandy sensation, tearing and mucus discharge which simulates with signs and symptoms of *Shushkaakshipaka* explained in our classics, that are *Kunitavartma*, *Daruna-Rukshavartma*, *Aviladarshana*, *Gharsha*, *Toda*, *Bheda*, *Upadeha*, *Vishushkatwa* etc. Regarding the treatment options, tear substitutes and tear stimulants are the main stay of the medical management. These drugs can give lubrication to the ocular surface but will not correct the underlying tissue.

Present study is aimed to highlight effect of *Ayurvedic* Treatment. In this study review of previous research works which were carried out in IPGT and RA, Gujarat Ayurved University, Jamnagar, under department of *Shalaky Tantra* on Dry Eye is done. Therapies like *Kriyakalpa* (Ocular therapeutic procedure), *Snehapana* (Internal administration of medicated ghee), *Rasayana* (Rejuvenating drugs) and locally eye drops were used in these studies.

## MATERIALS AND METHOD

Works carried out at IPGT and RA, Gujarat Ayurved University, Jamnagar, under department of *Shalaky Tantra* during 2011–2018 were compiled and screened to assess the impact of *Ayurvedic* treatment modalities in Dry eye syndrome.

**OBSERVATIONS****Eye drops In Dry eye syndrome**

*Mridweekadi* eye drop was used topically in the dose of 1 drop three times a day along with *Nayanaamrita* eye ointment at night time daily for two months. Total 51 patients completed the treatment. Statistically highly significant result was found on all chief complaints like foreign body sensation, photophobia, burning sensation, lacrimation, stickiness of lids, mucus discharge, blurring of vision, feeling of dryness, coloured halos, itching, heaviness of lids, pain in the eyes and OSDI score in 51 patients.<sup>[4]</sup>

*Hingvashtaka Churna* 3 gm before meal twice a day with Lukewarm water for *Deepana* (Stomachic) was given for three days and *Koshthashodhana* was done with *Erandabrusht Haritaki* 5gm at bed time with lukewarm water for 2 days. Then *Drakshadi Ghrita* 25 gms at bed time with hot milk for 24 days was given along with *Vasanjana* 1 drop two times a day for 1 month along with *Anu Taila Nasya 6 Bindus* in each nostril once in a month followed by *Pratimarsha Nasya 2 Bindus* in each nostril two times a day for 24 days. Total 50 patients completed the treatment. Effect of therapy was significant on all chief complaints such as discomfort, irritation, redness, sandy gritty sensation, photophobia, blurring of vision, burning sensation, lacrimation etc.<sup>[5]</sup>

*Mridweekadi* eye drop was used topically in the dose of 1 drop four times a day along with *Nayanaamrita* eye ointment at night time daily for two months along with *Dashmuladhya Ghrita* orally 10 gm at night daily for two months which was compared with *Mridweekadi* eye drop (1 drop four times a day) and *Nayanaamrita* eye ointment (night time) for two months. Total 31 patients completed the treatment. Statistically significant difference were found on burning Sensation and tear film break up time. This study has established that *Mridweekadi* eye drop, *Nayanaamrita* eye ointment and *Dashmuladhya Ghrita* orally showed better results in the clinical symptoms of Dry eye but still the results obtained in *Mridweekadi* eye drop and *Nayanaamrita* eye ointment are also encouraging.<sup>[6]</sup>

*Shunthyadi* eye drop was used three times a day for 6 weeks along with *Triphaladi Yoga* orally 500 mg capsule (three times a day for 6 weeks) and *Anu Taila Pratimarsha Nasya* (two drops each nostril for 6 weeks). Total 53 patients completed the treatment. Effect of therapy was significant on all the chief complaints such as blurring of vision, burning sensation, discomfort, feeling of dryness, heaviness of lids, increased frequency of blinking, itching, mucus discharge, pain in eyes, stickiness of lids, photophobia.<sup>[7]</sup>

## RESULT

Table 1: Overall effect of therapy.

Studies	Therapies	Overall Effect %				
		Cured	Marked improvement	Moderate improvement	Mild improvement	Unchanged
1	<i>Mridweekadi</i> eye drop & <i>Nayanaamrita</i> eye ointment	0	13.73	52.94	25.49	7.84
2	<i>Anu Taila</i> ( <i>Marsha</i> & <i>Ptatarimarsha Nasya</i> ), <i>Vasanjana</i> and <i>Drakshadi Ghrita</i>	18	64	8	10	0
3	<i>Mridweekadi</i> eye drop <i>Nayanaamrita</i> eye ointment & <i>Dashmuladhya Ghrita</i>	0	12.50	50	31.25	6.25
	<i>Mridweekadi</i> eye drop & <i>Nayanaamrita</i> eye ointment	0	0	20.00	73.33	6.67
4	<i>Shunthyadi</i> eye drop <i>Triphaladi Yoga</i> & <i>Anu Taila Pratimarsha Nasya</i>	0	32.08	54.72	13.20	0

## DISCUSSION

In Ayurveda classics, specific treatment has been mentioned for *Shushkakshipaka* such as *Snehana* (intake of Ghee), *Tarpana* (~retention of ghee over eyes), with *Jivaniya Ghrita*, *Nasya* (~Nasal medication) with *Anu Taila* and *Pariseka* (~ocular irrigation) with warm milk added with *Saindhava*.<sup>[8]</sup> References of the trials used in the studies are listed in Table 2. Among these treatments *Anu Taila Nasya* and *Ghritpana* were used in studies.

*Mridweekadi* eye drop was used for *Snehana Aschyotana* (lubricating eye drops) in *Shushkakshipaka*. Because it has *Chakshushya*, *Vata-Pitta Shamaka* properties which is helpful in strengthening the first *Patala*(cornea & conjunctiva) and reconstruct the *Ashru* (tear film) to provide the tear film stability. *Nayanaamrita* eye ointment is specially mentioned for *Anjana* in many of the chronic inflammatory diseases of the eye including *Akshipaka* and *Pilla Rogas*. *Nayanaamrita* eye ointment is having *Laghu*, *Snigdha Guna*, *Sheeta Virya*, *Madhura Vipaka*, *Vata-Pitta Shamaka* properties. Thus it acts on *Shushkakshipaka*.

*Anu Taila Nasya* removes vitiated *Vata Dosha* from *Murdha* and gives strength to the supracalvicular organs. *Drakshadi Ghrita* & *Dashmuladhya Ghrita* are having *Madhura*

*Rasa, Sheeta Virya, Snigdha-Guru* properties and are mainly *Vata-Pitta Shamaka* so can be successfully implied in *Vata-Pitta* disease like *Shushkakshipaka*.

*Shunthyadi* eye drop was used by virtue of its *Snigdha Guna* and *Sheeta Virya* along with unique actions like *Preenama, Brimhana, Jeeavana, and Tarpana* will give lubrication to the ocular surface along with the control of inflammation. *Triphaladi Yoga* as oral compound used as *Rasayana* containing drugs like *Amalaki*<sup>[9]</sup>, *Guduchi*<sup>[10]</sup>, *Gokshura*<sup>[11]</sup>, *Haridra*<sup>[12]</sup>, etc are reported for their immunomodulatory action. Hence, to correct the disease from its root level, local as well as oral formulations were used that proved to be helpful in pacifying sign and symptoms of *Shushkakshipaka*.

No adverse effects of *Ayurvedic* treatment were reported in any of these studies. Hence all studies validate the potential of *Ayurvedic* treatment principles in the treatment of *Shushkakshipaka*.

**Table 2: References of drugs under trails.**

<b>Trial drug attempted</b>	<b>References</b>
<i>Mridweekadi</i> eye drop	<i>Sahastra Yoga Netra Roga Chikitsa</i> :379-380
<i>Nayanaamrita</i> eye ointment	<i>Chikitsa Manjari Netra Roga Chikitsa</i> : 81-84
<i>Anu Taila</i>	Harishastri P, editor. Ashtanga Hridayam of Vagbhata, Sutra sthana; Nasya vidhi, chapter 20, verse 38. Chowkhambha Surbharati Prakashan; Varanasi: reprint 2017; 294
<i>Vasanjana</i>	Ashtanga Hridaya. Sarvangasundara & ayurvedarasayan commentary edited by Pt. Hari Sadasiva Sastri Paradakara Reprint 2015, Chaukhamba publications Varanasi uttarashthanam 16/29, page 832
<i>Hingvashtaka Churna</i>	Ashtanga Hridya by Pandit Hari Sadashiva Shastri, chikitsasthana ch-14/35, page 687
<i>Erandabrusht Haritaki</i>	<i>Anubhuta Yoga</i>
<i>Drakshadi Ghrita</i>	Ashtanga Hridaya. Sarvangasundara & ayurvedarasayan commentary edited by Pt. Hari Sadasiva Sastri Paradakara Reprint 2015, Chaukhamba publications Varanasi uttarasthanam 13/4-6, page 819
<i>Dashmuladhya Ghrita</i>	Ashtanga Hridaya. Sarvangasundara & ayurvedarasayan commentary edited by Pt. Hari Sadasiva Sastri Paradakara Reprint 2015, Chaukhamba publications Varanasi uttarasthanam 13/49, page 822
<i>Shunthyadi</i> eye drop	<i>Anubhuta Yoga</i>
<i>Triphaladi Yoga</i>	<i>Anubhuta Yoga</i>

## CONCLUSION

In nutshell, all *Ayurvedic* therapies were found to be significantly effective and clinically safe as no adverse events of adverse drug reactions were reported during treatment period. It was concluded that *Mridweekadi* eye drop, *Nayanaamrita* eye ointment & *Dashmuladhya Ghrita* treatment protocol yield more significant result than only applying *Mridweekadi* eye drop & *Nayanaamrita* eye ointment in this disease.

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