EFFECT OF AYURVEDIC TREATMENT ON DRY EYE SYNDROME

(Shushkaakshipaka): A REVIEW

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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 Shalakya 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\(^1\), 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.\(^2\) 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.\(^3\) 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, Darunara-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 *Shalakya 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 *Shalakya 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.[4]

*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 1month 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.[5]

*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.[6]

*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.[7]
RESULT

Table 1: Overall effect of therapy.

<table>
<thead>
<tr>
<th>Studies</th>
<th>Therapies</th>
<th>Overall Effect %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Cured</td>
</tr>
<tr>
<td>1</td>
<td>Mridweekadi eye drop &amp; Nayanaamrita eye ointment</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Anu Taila (Marsha &amp; Ptatimarsha Nasya), Vasanjana and Drakshadi Ghrita</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Mridweekadi eye drop Nayanaamrita eye ointment &amp; Dashmuladhya Ghrita</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Mridweekadi eye drop &amp; Nayanaamrita eye ointment</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Shunthyadi eye drop Triphaladi Yoga &amp; Anu Taila Pratimarsha Nasya</td>
<td>0</td>
</tr>
</tbody>
</table>

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. 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\(^9\), Guduchi\(^10\), Gokshura\(^11\), Haridra\(^12\), 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.

<table>
<thead>
<tr>
<th>Trial drug attempted</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mridweekadi eye drop</td>
<td>Sahastra Yoga Netra Roga Chikitsa :379-380</td>
</tr>
<tr>
<td>Nayanaamrita eye ointment</td>
<td>Chikitsa Manjari Netra Roga Chikitsa: 81-84</td>
</tr>
<tr>
<td>Hingvashtaka Churna</td>
<td>Ashtanga Hridaya by Pandit Hari Sadashiva Shastri, chikitsasthana ch-14/35, page 687</td>
</tr>
<tr>
<td>Erandabrusht Haritaki</td>
<td>Anubhuta Yoga</td>
</tr>
<tr>
<td>Shunthyadi eye drop</td>
<td>Anubhuta Yoga</td>
</tr>
<tr>
<td>Triphaladi Yoga</td>
<td>Anubhuta Yoga</td>
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</table>
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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