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A Case Study on Management of Dry Eye Disease

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ABSTRACT

Introduction: Dry eye is a multifactorial ocular surface disease characterized by symptoms of discomfort, irritation and visual disturbance. The symptoms of dry eye can be correlated to *Shushkakshipaka* which is one among the *Sarvagata netra rogas* affecting all parts of eye as explained in Ayurvedic texts. A patient with the signs and symptoms of dry eye disease was treated according to the treatment principles of *Shushkakshipaka* as explained in *Ayurvedic* classics and the same has been presented in this article.

Materials and methods: A patient was selected from Shalakyta Tantra OPD of Sri Jayachamarajendra Institute of Indian Medicine Hospital, Bangalore with signs and symptoms of Dry Eye Disease for the study. He was treated according to *chikitsa sutra* of *Shushkakshipaka* i.e *Snehapana*, *Akshi Tarpana*, *Nasya*, *Netra Parisheka* and *Ksheerabala taila matrabasti* mentioned in the classics.

Results: Subject showed marked improvement subjectively and in diagnostic tests like Schirmer-I test, Tear film Break up time and Fluorescein staining in both eyes.

Discussion: The dry eye disease can be considered as *Shushkakshipaka* and can be treated according to its treatment principles.

KEYWORDS

Shushkakshipaka, *Ksheerabala taila Matrabasti*, *Sarvagata netra roga*



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INTRODUCTION

Eye is considered as an organ of the visual process. For maintaining the structural integrity and functioning of the eye, tear film plays an important role. Dry eye occurs when there is inadequate tear volume or function resulting in an unstable tear film and ocular surface disease¹. The impairment caused due to the dry eye affects the occupational functioning and day to day activities of an individual. The prevalence of Dry Eye Disease in India is higher than that of global prevalence². Pollution, global warming, over exposure to visual displays are some of the causes of Dry Eye Disease. If it is not properly treated it will lead to visual disturbances, corneal ulceration and may end up in blindness. This suggests the importance of therapeutic research for this condition.

This disease has been described in Ayurveda as *Shushkakshipaka*. It is a disease affecting all parts of the eye and is characterized by dryness initially, followed by inflammation. A patient with these signs and symptoms was treated according to the treatment principles of *Shushkakshipaka* as explained in Ayurvedic classics and the same has been presented in this study.

Objectives of the study

1. To understand dry eye disease under the purview of *Shushkakshipaka*.

2. To study the effect of Ksheerabala taila *matrabasti* in dry eye disease.

MATERIALS AND METHODS

Case Report: A male patient aged 25 year old consulted Shalakyta Tantra OPD of Sri Jayachamarajendra Institute of Indian Medicine Hospital, Bangalore on 5/02/2019 complaining of irritation, burning sensation and reddish discoloration in both eyes since 2 years.

History of present illness: The subject was apparently normal 2 years ago. He gradually experienced dryness of eyes, sticky discharge in both eyes and burning sensation in both the eyes. For these complaints he approached an ophthalmologist where he was diagnosed as having Dry Eye Disease. He was prescribed with artificial tear drops. He experienced difficulty in blinking and irritation in his eyes whenever he stopped the eye drops. With all these complaints he approached the Shalakyta Tantra OPD to get Ayurvedic treatment.

History of past illness: No past history of any systemic diseases like Asthma, Hypertension or Diabetes. No Surgical history.

Family History: Nothing Significant.

Personal History:

Appetite: Good



Sleep: Sound

Bowel: Once a day

Micturition: 4-5 times/ day

Habits: None

Occupation: Engineer

Ashta Sthana Pareeksha:

Nadi: 72/min

Mutra: 4-5times/day

Mala: Parkrutha

Jihwa: Alipta

Shabda: Prakrutha

Sparsha: Prakrutha

Drik: Shuskatha

Akriti: Madhyama

Vitals:

Pulse Rate: 72/min

Respiratory Rate: 16/min

Temp.: 98.6⁰ F

Systemic Examination:

All systemic examination was within normal limits.

Ophthalmic Examination: findings are explained in Table 1.

Table.1 Ophthalmic Examination:

Ocular structures	Right Eye	Left Eye
Adnexa	No abnormalities	No abnormalities
Conjunctiva	Congested	Congested
Sclera	No abnormalities	No abnormalities
Cornea	No abnormalities	No abnormalities
Anterior chamber	Normal depth	Normal depth
Pupil	Round, regular, reactive to light	Round, regular, reactive to light
Lens	Greyish black	Greyish black

IOP	Normal	Normal
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Diagnostic Test: The test for dry eye was evaluated and the findings are mentioned in table no 2.

Table 2 Diagnostic Test

Test Name	Right Eye	Left Eye
Schirmer I Test	0mm	3mm
T BUT	2 sec	5 sec
Fluorescein stain	Conjunctival epithelial defect seen	Conjunctival epithelial defect seen
Visual acuity	6/9p	6/9
NV	N6	N6

Treatment given

Treatment protocol was planned and given in 2 sittings.

- 1st sitting starting from 6/2/2019 to 7/03/2019
- 2nd sitting starting from 10/4/2019 to 5/5/2019

The adopted treatment is mentioned in table no 3

Table 3 Treatment adopted

TREATMENT	MEDICINE	DOSA GE	DURATION
Sadyovire chana	Gandharvah asthadi Eranda Taila	40 ml	1 day
Netra seka (2 sittings)	Yastimadhu Ksheera paka	Quantity sufficient	7 days
Nasya (2 sittings)	Anutaila	6 drops to each nostril	7 days
Tarpana (2 sittings)	Jeevanthyadi Ghrita	Quantity sufficient	5 days
Matra basti (2 sittings)	Ksheerabala Taila	60ml	7 days.

There was a gap of 1 month between first and second sittings of the treatment, during



which, the patient was given *Ashchotana* with Jeevanthyadi Ghrita 2 drops for each eye in the morning and evening. Jeevanthyadi Ghrita was given internally 10ml twice a day with milk. Subject was assessed 15 days after the completion of 2nd sitting of treatment on 20/5/2019 during the

gap, patient was advised to stop all the medications.

RESULTS

The study showed marked improvement in signs and symptoms of the patient after the treatment as shown in table no. 4. There was no recurrence in signs and symptoms at the time of follow up of the patient.

Table 4. Result

Diagnostic Test	Before Treatment		After Treatment	
	Right Eye	Left Eye	Right Eye	Left Eye
Schirmer Test	0mm	3mm	14mm	16mm
T BUT	2 sec	5 sec	12 secs	13 secs
Flourescein stain	Conjunctival epithelial defect seen	Conjunctival epithelial defect seen	Negative	Negative
Visual acuity	6/9p	6/9	6/6	6/6
NV	N6	N6	N6	N6

DISCUSSION

Rasa dhatu contributes to the aqueous part of tear film whereas the non-aqueous part is contributed by *mamsa* and *medho dhatu*. Any factor which destabilizes the *Vata-pitta* and *dhatu*s will lead to the instability of the tear film resulting in *Shushkakshipaka*. The symptoms of *Shushkshipaka* are irritation, pricking pain, sticky eyes, difficulty to blink, craving for cold items and suppuration³. The line of treatment of *Shushkshipaka* includes *Snehapana*, *Akshi Tarpana*, *Nasya* and *Netra Parisheka*⁴. The rationality behind selection of medicines is mentioned in table no. 5.

Table 5 Rationality behind the selection of medicines for the treatment.

Medicine	Properties
Yastimadhu, Ksheerapaka for Netra seka	<i>Madhura Rasa</i> and <i>Vipaka</i> , <i>Sheeta Veerya</i> , <i>Snigdha</i> and <i>Guru Guna</i> , <i>Vata-pittahara</i> and <i>Rasayana</i> ⁵
Anutaila for Nasya	<i>Tridosahara</i> , <i>Bruhmana</i> , <i>Balya</i> and <i>Rasayana</i> ⁶
Jeevanthyadi ghrita <i>pana</i> and <i>Ashotana</i>	<i>Balya</i> , <i>Rasayana</i> , <i>Drishtivardhaka</i> ⁷
Ksheerabala taila for <i>matrabasti</i>	<i>Rasayana</i> , <i>Indriya prasadana</i> , <i>Bruhmanaa</i> and <i>Jevaneeya</i> ⁸

In this subject, *Sadhyovirechana* was given initially to clear the *koshta* for better assimilation of the medicines in the body. Yastimadhu Ksheerapaka *netra seka* and *tarpana* with Jeevanthyadi ghrita helps in reducing the inflammation thereby does the healing of conjunctival and corneal epithelial defects. Anutaila *nasya* helps in removal of *doshas* from *urdhwajatru* repairs the



weakened lacrimal apparatus thus aiding in their proper functioning. The internal administration of Jeevanthyadi ghrita will help in nourishment of depleted *dhatu*s. Ashotana with Jeevanthyadi ghrita will help in proper movements of the eyelids, reduces burning sensation, discoloration and eye irritation caused due to the dry ocular surface. Owing to the chronicity of the disease, there is a need for adoption of a treatment which will help in removing the pathology of the disease from its roots hence, *matrabasti* has been adopted. Ksheerabala taila *matrabasti* stabilizes the *rasa*, *mamsa* and *medho dhatu*s and pacifies the *Vata* and *Pitta dosha*. Most of the medicines used in the treatment of *Shushkakshipaka* have *rasayana* property, which increases *deha* and *indriya bala* thus; it normalizes the *dhatu*s which in turn results in the normalization in functions of tear film.

CONCLUSION

In chronic cases of dry eye, along with first line of treatment in eye diseases like *nasya* and *tarpana*, *matrabasti* can be given. Basti is told in the classics as *chakshushya*. Since *sneha* is the *dravya* in *matrabasti*, there is oleation of the body as a whole. In this study oleation is provided to the body both internally and externally. Internally in the

form of *Snehapana*, *Akshi Tarpana* and, *Nasya*. Externally, through *Netra Parisheka* and *matrabasti*. Ultimately the aim of the treatment was to provide oleation to the body which is antagonist to *Vata dosha*.



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