

# Ayurvedic Management of Dry Eye Disease: A Case Report

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## ABSTRACT

**Introduction:** Dry eye has been defined by the International Dry Eye Workshop as a “A multifactorial disease of the ocular surface characterized by a loss of homeostasis of the tear film, and accompanied by ocular symptoms, in which tear film instability and hyperosmolarity, ocular surface inflammation and damage, and neurosensory abnormalities play etiological roles”. Prevalence of dry eye disease is estimated to be 5% to 35% worldwide i.e., 1 out of every 3 to 7 patients could have this condition and is higher in India than the global prevalence, ranging from 18.4% to 54.3%. Contemporary medicine is by instillation of artificial tear supplements and preservation of natural tears, mainly this has a local effect only and, it can't break the root cause of pathology which often results in recurrence. In Ayurveda it can be correlated with *Shushkaakshipaka*.

**Materials & Methods:** A 62-year-old female patient complaining of Dryness, foreign body sensation, difficulty to open and close eyes from 3months and diagnosed as severe dry eye disease. Ayurvedic assessment of the condition revealed impaired *Agni* and the presence of *Ama*. She underwent *Ayurveda* treatment Which consist of *Deepana Pachana* with *Amruthotharam Kashaya*, *Koshta Sodhana* with *Avipathikara churna*, *Netra Seka* with *Saindhava Lavana* and *Godugdha*, *Shunthyadi Aschyotana*, *Marsha Nasya* with *Anutaila Tarpana* with *Ghrita Manda* and orally *Mahatriphaladi Ghrita* and *Rasayana churna*.

**Results:** At the end of the study, improvement in dryness, foreign body sensation, difficulty to open and close eyes, Schirmer'1 test and tear film breakup time in both eyes were found.

**Discussion & Conclusion:** The Ayurveda protocol encompassing *Vatapitta shamana* line of treatment was found to be effective in severe dry eye disease.

**Keywords:** Shushkaakshipaka, Dry Eye Disease, Ayurvedic management, Seka, Nasya, Tarpana

## INTRODUCTION

One of the most common Ocular disorders affecting the general population is dry eye disease (DED), It may result in consequences that are mildly irritating to debilitating. DED A multifactorial disease of the ocular surface characterized by a loss of homeostasis of the tear film, and accompanied by ocular symptoms, in which tear film instability and hyperosmolarity, ocular surface inflammation and damage, and neurosensory abnormalities play etiological roles”.<sup>i</sup> A study from north India reported 32% prevalence of dry eye disease (DED), and based on symptoms 81% were severe DED.<sup>ii</sup> study from south India reported 1.46% DED incidence.<sup>iii</sup> 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. The mainstay of management of Dry Eye Disease in contemporary medicine is by instillation of artificial tear supplements

and preservation of natural tears, mainly this has a local effect only and, it can't break the root cause of pathology which often results in recurrence. In Ayurveda, On the basis of signs and symptoms it can be correlated with *Shushkaakshipaka* and it classified as *Sarvagata Netraroga* among all the 76 *Netrarogas* by *Acharya Susruta* and mentioned it as *Vata* predominant *Vyadhi* characterized by *Kunita Vartma* (Narrowing of palpebral aperture), *Daruna Ruksha Vartma* (Hardness and dryness at lid margin and cilia), *Aviladarshana* (Blurring of vision), *Sudarunam Yat Pratibodhane* (Difficulty to open the eyes/ Photophobia)<sup>iv</sup>. According to *Acharya Vagbhata* it is a *Vata-Pitta* predominant *Vyadhi* and has additional features such as *Gharsha* (foreign body sensation), *Toda* (pricking pain), *Bheda* (Tearing pain), *Upadeha* (Discharge/stickiness of lids), *Rukshatwa*, *Darunatwa* of *Vartma* and *Akshi* (hardness and roughness of the eyelids and eye), *Sheetecha* (desire for cold), *Shula* (Pain) and *Paka* (Inflammation).<sup>v</sup> According to *Acharya*, treatment has been mentioned for *Shushkaakshipaka* such as *Snehana* and *Tarpana* with *Jivaniya Ghrita*, *Nasya* with *Anutaila* and *Pariseka* with Milk and *Saindhava Lavana*.<sup>vi</sup> This study aims to develop a treatment protocol for *Shushkaakshipaka*.

### PATIENT INFORMATION

A 62-year-old female patient was visited the outpatient department in July 2023, complaining of dryness, foreign body sensation, difficulty to open and close eyes from 3month.

### OCCULAR EXAMINATION

The anterior segment examination was within normal limit OU (oculus uterque-Bilateral eyes). Pupillary reaction was normal and pseudo phakic lens OU. Intra ocular pressure (IOP) within normal limit OU. Posterior segment examination using direct ophthalmoscopy was normal.

### VISUAL EXAMINATION

Unaided Distant Visual Acuity (DVA) was 6/9 in OD (oculus dexter-the right eye) and 6/12 in OS (oculus sinister-the left eye), aided DVA was 6/6 in OU. Near visual acuity (NVA) was N 18 in OU without aid and N.6 with aided.

### TIMELINE

Patient reported at the OPD on July. She underwent one course of outpatient treatment from July 15<sup>th</sup> - October 14<sup>th</sup> and attended one follow up consultation on November 5<sup>th</sup>.

### DIAGNOSTIC ASSESSMENT:

Schirmer 1 test, Tear film break up time (TBUT), Fluorescein staining and Rose Bengal test was done and diagnosed as severe Dry eye in OU.

### Therapeutic Intervention:

Name of test	OD	O
Schirmer- 1 test	6mm	7mm
Tear film break up time	3sec.	5sec.
Fluorescein staining	Positive	Positive
Rose Bengal staining	Negative	Negative

Visit	Summary	Diagnostic tests and results	Medicine
July 15 <sup>th</sup> -18 <sup>th</sup>	Patient reports to OPD	Unaided DVA-6/9 OD, 6/12 OS. Aided 6/9 OU. Schirmer 1 test, Tear film break up time, Fluorescein staining, Rose Bengal staining were done	1. <i>Amruthotharam Kashaya</i> 15ml twice before meal with luke warm water
July 19 <sup>th</sup>			2. <i>Koshta Sodhana</i> with <i>Avipathikara Churna</i>
July 20 <sup>th</sup> – 27 <sup>th</sup>			3. <i>Mahatriphaladi Ghrita</i> 10 ml BD 4. <i>Netra Seka</i> with <i>Saindhava Lavana</i> and <i>Godugdha</i> 5. <i>Shunthyadi Aschyotana</i>
July 28 <sup>th</sup> - 03 <sup>rd</sup>	Patient feels better with this treatment Reduced Dryness and foreign body sensation		Continued 3, 5 6. <i>Marsha Nasya</i> with <i>Anutaila</i> (8 drops in each nostril)
August 6 <sup>th</sup> -12 <sup>th</sup>			Continued 3, 5 7. <i>Tarpana</i> with <i>Mahatriphaladi Ghrita</i>
August 13 <sup>th</sup>	Patient feels 80% improvement from previous complaints		Continued 3, 5
Sep. 1 <sup>st</sup> -7 <sup>th</sup>			Continued 3, 5,6
Sep 8 <sup>th</sup> - 14 <sup>th</sup>			Continued 3, 5,7
Oct. 1 <sup>st</sup> - 7 <sup>th</sup>			Continued 3, 5,6
Oct 8 <sup>th</sup> - 14 <sup>th</sup>			Continued 3, 5,7
Nov 5 <sup>th</sup>	Patient had no recurrence of symptoms after 1month of follow up		Started <i>Rasayana Churna</i> 3g twice daily with lukewarm water

## RESULTS

There was improvement in both signs and symptoms. Schirmer's 1test, Tear film breakup time and fluorescein staining showed marked improvement. No adverse events occurred during treatment.

Diagnostic criteria	OD		OS	
	Before Treatment	After Treatment	Before Treatment	After Treatment
Schirmer I test	6mm	15mm	7mm	20mm
Tear film break up time	3sec	12sec	5sec	13sec
Fluorescein staining	Positive	Negative	Positive	Negative
Rose Bengal staining	Negative	Negative	Negative	Negative

## DISCUSSION

*Snehana, Nasya, Tarpana* and *Seka* are included in the line of management for *Shushkaakshipaka*. *Deepana* and *Pachana* correct the *Agni* and further aid in the digestion of *Sneha*. For this purpose, *Amruthotharam Kashaya* was used. *Kayasodhana* is required before performing *Nasya*. *Avipattikara Churna* was used as the *Prakriti* and *Vikriti* of the Patient were *Vatapitta*. *Shamana Sneha Pana* and *Tarpana* were done with *Mahatriphaladi Ghrita*<sup>vii</sup>. It helps to decrease *Rukshata* of *Vata* and *Ushnata* of *Pitta* through *Snigdha* and *Sheeta Guna* respectively. Primarily, it is *Vata-Pitta Shamaka* and Pacifies vitiated *Dosha* at a systemic level. It nourishes the ocular tissue locally by improving the *Sneha* properties like lustre and moisture content of eyes and repair the tissue damage occurred due to excessive evaporation. *Paya Saindhava Parisheka* is mentioned in the management of *Sushkakshipaka*<sup>viii</sup>. It contains Milk and *Saindhava* and both of which have *Vata-Pitta* hara and *Chakshushya* property. The *Snigdha Guna* and *Brimhana* property is very much helpful in the movement of eye lids. *Shunthyadi Aschyotana (Anubhuta yoga)* which contains *Shunthi, Go-ghrita* and *Saindhava Lavana*, is topically used as *Snehana Aschyotana*. *Go-ghrita* and *Saindhava Lavana* both are *Guru* and *Snigdha* in *Guna* and *Vatapittashamaka* whereas *Shunthi* is *Ushna Veerya* and *Madhura Vipaka*.<sup>ix</sup> *Anutaila Nasya*<sup>xi</sup> mentioned in the management of *Shushkaakshipaka* and has the property of *Vatapittahara, Snehana* and *Bruhmana*. The *Sneha* on reaching the *Srotas* performs *Snehana* and *Bruhmana* on the upper part of the Body. *Acharya Vagbhata* explained that *Nasya Dravya*, after coming in contact with the *Shleshmika kala* of *Nasa*, reaches the *Shringataka Marma* and spreads in the *Murdha* reaching the *Marmas* of *Netra* (eye), *Shrotra* (ear), *Kantha* (throat), *Shiramukhas* (opening of the vessels, etc.). By its potency, it then scratches the morbid *Urdhwa Jatrugata Doshas* and expels them from *Uttamanga*<sup>xii</sup> and it also provides strength to all sense organs. All of these helps to break the pathology of the *Shushkaakshipaka*.

## CONCLUSIONS

Dry eye disease was managed by Ayurveda protocol. By observing the Patient, the given protocol was useful in reducing the signs and symptoms like Dryness, Foreign body sensation and difficulty in open and close the eye. Hence can be concluded that Dry eye disease ie. *Shushkaakshipaka*, a single case study proves the effectiveness in the Ayurveda treatment protocol. The study has to be carried out in a larger sample size to establish the efficacy of this treatment.

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