



Research Article

A CLINICAL STUDY ON EFFICACY OF *JIVANIYA GHRITAPANA* IN *SHUSHKAKSHIPAKA* (DRY EYE SYNDROME)

Kalpna Khanduri^{1*}, Gunjan Sharma², Priyanka Chauhan³, Ram Agochar Bhatt⁴

¹Assistant Professor, Department of Shalaky Tantra, Dev Bhoomi Medical College of Ayurveda and Hospital,

²Professor and HOD, ³Assistant Professor, P.G Department of Shalaky Tantra, Rishikul Campus, Uttarakhand Ayurved University, Dehradun

⁴Assistant Professor, Department of Shalya Tantra, Dev Bhoomi Medical College of Ayurveda and Hospital, India.

Article info

Article History:

Received: 27-05-2022

Revised: 12-06-2022

Accepted: 22-06-2022

KEYWORDS:

Shushkakshipaka,
Dry eye syndrome,
Ghratapana.

ABSTRACT

Dry eye syndrome is a disease commonly seen in all age groups with a greater ration in elderly population. Large scale studies have determined that increasing age, female sex, and Asian race are all associated with higher DED prevalence. Their occurs tear deficiency and ocular surface disorders, which produces symptoms like discomfort, visual disturbance and tear film instability. Clinically and etymologically, similar entity to Dry eye syndrome is *Shushkakshipaka*. In modern ophthalmology, conventional approach for Dry eye syndrome is lubricating eye drops which are not satisfactory. Ayurveda has a holistic approach to deal with this problem. This clinical study was done to evaluate the effect of *Jivaniya Ghratapana* in *Shushkakshipaka* (dry eye syndrome). An open clinical trial for 10 patients was planned. They were presenting with clinical features of *Shushkakshipaka* (dry eye syndrome). *Snehapana* was done in all patients with *Jivaniya Ghrita*. **Results:** On assessing the selected criteria, significant results were found in subjective parameters like *Rukshta* (feeling of dryness), *Gharshana* (gritty sensation), *Daruna vartmakshi* (hardness of eyelids), *Karachaunmilana* (difficulty in opening and closing of eyes), *Daha* (burning sensation) & intolerance to light. Significant result was found in all objective parameters. **Conclusion:** Thus we can conclude that, for successful treatment *Shushkakshipaka* (Dry Eye Syndrome), *Snehapana* can be advised in such patients.

INTRODUCTION

Dry eye is 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^[1]. Large scale studies have determined that increasing age, female sex, and Asian race are all associated with higher DED prevalence^[2]. It is characterized by dryness, grittiness, blurring of vision, burning sensation, stinging sensation, mucoid discharge, photophobia, etc^[3].

In Ayurvedic texts, clinical features of *Shushkakshipaka* can be remarkably correlated with characteristic features of dry eye syndrome. *Shushkakshipaka* is one among the *Sarvagata*, *Sadhya Netra Roga*. It is characterized^[4] by *Vishushkta* (dryness), *Aavila darshanam* (blurred vision), *Koonitam* (narrowing of palpebral aperture), *Daruna ruksha vartma* (hardness and roughness of eyelids), *Sudarunam yata pratibodhanam* (difficulty in opening and closing of eye), *Gharshana* (gritty sensation), *Paka* (inflammation), *Updehavata* (stickiness), *Toda-Bheda* (pain sensation), *Sheetecha* (liking for cold)^[5], *Sandahaytein* (burning sensation)^[6]. It is described as *Vataja* according to *Acharya Sushruta*^[7], *Vata-pittaja* according to *Acharya Vagbhata*^[8], and *Vata-Raktaja netra vikara*, according to *Acharya Karala, Madhav*. Many contributory factors affects the severity of dry eye syndrome. It may be anatomical features, autoimmune disease, environmental surroundings, contact lens use, unmodified life styles, hormonal

Access this article online

Quick Response Code



<https://doi.org/10.47070/ijapr.v10i6.2398>

Published by Mahadev Publications (Regd.)
publication licensed under a Creative
Commons Attribution-NonCommercial-
ShareAlike 4.0 International (CC BY-NC-SA
4.0)

changes, chronic inflammation, infection, iatrogenic factors, such as medications or surgery.^[9] With the advancing age, the increasing prevalence of the disease decreases the quality of life. In modern science, Dry eye syndrome is treated with artificial tears, ointments, gels, topical antibiotics, oral tetracycline, biological tear substitutes, etc^[10]. Many researchers have been carried out, but the curative treatment of the disease is still not known. Only palliative measures are available, which is in the form of artificial tears solutions. Patient got dependent on it for lifelong. Later on these palliative measures also get fail, due to preservative induced damage to the corneal epithelium.

In Ayurveda, there are various treatment modalities for *Shushkakshipaka*. It includes both local as well as systemic measures. *Ghritapana* is indicated as a first line of treatment for *Shushkakshipaka* along with other topical regimes^[11]. In *Shushkakshipaka*, lack of proper *Rasa dhatu* formation leads to depletion of *Ashru* (tears), therefore systemic administration of *Ghrita* is essential for normalization of *Rasa dhatu*. Hence the present study is done to evaluate the effect of *Jivaniya Ghritapana* in the management of *Shushkakshipaka* (dry eye syndrome).

AIMS AND OBJECTIVES

To evaluate the effect of *Jivaniya Ghritapana* in *Shushkakshipaka* (Dry Eye Syndrome).

MATERIAL AND METHODS

Selection of Patients: Patients presenting with clinical features of *Shushkakshipaka*- Dry Eye Syndrome were selected from the OPD & IPD of P.G. Dept. of Shalaky Tantra, Rishikul Campus Haridwar. A total of 10 patients were registered irrespective of their sex, religion, occupation, education etc.

Plan of the Study

1. Criteria for selection of patients
2. Criteria for diagnosis
3. Study design
4. Criteria for assessment.
5. Follow up study

Criteria for Selection of Patients

Inclusion Criteria

- Age 20-60 years
- Patients presenting with signs and symptoms suggestive of dry eye syndrome like irritation, foreign body sensation, feeling of dryness, itching, non-specific ocular discomfort and classical symptoms of *Shushkakshipaka*.
- Visual Acuity 6/6 (with or without glasses)
- Tear film break up time less than 10 second.
- Schirmer 1st test positive <15 mm
- Fluorescein staining positive.

Exclusion Criteria

- Patients not willing to participate in the study.
- Systemic diseases DM, HTN, R.A.
- Patients having infective eye diseases corneal ulcer, trichiasis, dacryocystitis, acute conjunctivitis etc.
- Patients suffering from specific eye lid disorders like skin allergies, ectropion, entropion, lagophthalmos, etc.
- Patients having any fundus pathology like optic atrophy, retinal disorder, diabetic retinopathy, hypertensive retinopathy, papilledema, etc.

Withdrawal Criteria

- Personal matters.
- Inter current illness.
- Cases complicated with superadded infections

Criteria for Diagnosis

Subjective Parameter

- *Rukshta* (feeling of dryness)
- *Gharshana* (gritty sensation)
- *Aviladarshanam* (blurring of vision)
- *Darunvartmakshi* (hardness of eyelids)
- *Karachaunmilana* (difficulty in opening and closing of eyes)
- *Daha* (burning sensation)
- Intolerance to light.

Objective Parameter

- TBUT (Tear Film Break Up Time)
- Schirmer's 1st Test
- Fluorescein Staining

Functional Examination of Eyes

External examination, visual acuity, slit lamp examination, funduscopy.

Investigations

- Blood sugar (fasting and PP)
- Erythrocyte sedimentation rate (ESR)
- Complete blood count
- Serum uric acid, Blood urea, Serum creatinine
- R.A factor
- Lipid profile test
- LFT

Study Design

The method adopted in present study is open randomized clinical trial.

Sampling

A total number of 10 patients with signs and symptoms of *Shushkakshipaka* (dry eye syndrome) was registered. Patients were advised *Snehapana* with *Jivaniya Ghrita* 15ml HS with milk for 28 days. Results

of therapy were assessed on the basis of subjective & objective parameters.

Plan of Work: The study was carried out as follows.

Proforma

On the basis of signs and symptoms of *Shushkakshipaka* and dry eye syndrome, especial proforma was prepared, to maintain the records of all

Criteria for Assessment

findings (before and after treatment) regarding the patients.

Informed Consent: The purpose of the study, nature of the study drugs, the procedures to be carried out and the potential risks and benefits were explained to the patients in detail. Thereafter their written consent was taken before starting the procedures.

Table 1: Subjective Parameters Were Assessed with the Help of Following Scoring Pattern

<i>Rukshta</i> (Feeling of dryness)	0- No Dryness 1- Occasional feeling of dryness 2- Persistent does not disturb routine work 3- Disturb routine work
<i>Gharshan</i> (Gritty sensation)	0- No Gritty sensation 1- Occasional Gritty sensation 2- Persistent does not disturb routine work 3- Disturb routine work
<i>Avildarshanam</i> (Blurring of vision)	0- No Blurring of vision 1- Occasional Blurring of vision 2- Persistent does not disturb routine work 3- Disturb routine work
<i>Daruna vartmakshi</i> (Hardness of eyelids)	0- No Hardness of eyelids 1- Occasional hardness of eyelids 2- Persistent does not disturb routine work 3- Disturb routine work
<i>Karachounmilana</i> (Difficulty in opening and closing of eye)	0- No difficulty in opening and closing of eye 1- Occasional difficulty in opening and closing of eye 2- Persistent does not disturb routine work 3- Disturb routine work
<i>(Daha)</i> Burning sensation	0- No burning sensation 1- Mild burning sensation 2- Persistent does not disturb routine work 3- Disturb routine work
Intolerance to light	0- No Intolerance to light 1- Occasional intolerance to light 2- Persistent does not disturb routine work 3- Disturb routine work

Table 2: Objective Parameters were Assessed with the Help of Following Scoring Pattern

TBUT Test (Tear Film Break Up Time)	0- Normal >10 sec 1- Mild >8sec and ≤ 10 sec 2- Moderate >5sec and ≤ 8sec 3- Severe ≤ 5sec
Schirmer 1 ST Test	0- Normal >15mm 1- Mild >8mm and ≤15mm 2- Moderate >4mm and ≤8mm 3- Severe ≤4mm
Fluorescein Staining	0- No staining of corneal epithelial surface 1- Staining occupying ≤1/3 of corneal epithelial surface. 2- Staining occupying >1/3 and ≤1/2 of corneal epithelial surface 3- Staining occupying >1/2 of corneal epithelial surface.

Statistical Analysis

Wilcoxon's signed rank-Test (W-value) was applied to the statistical data

OBSERVATIONS AND RESULTS

Out of all 10 patients registered for the present study maximum number of patients i.e. 60% belonged to 20-30 years Age group, 70% were Female, 90% were from Hindu religion, 50% were students, 50% were Post-graduated, 40% were from Upper middle class followed by 40% from Poor class. In terms of *Prakriti*, maximum patients i.e., 70% were having *Vataja-Pittaja prakriti*. In chronicity, 60% patients were having chronicity of less than one year.

Chief complaints reported were feeling of dryness 100% (R/E & L/E), gritty sensation 90% (R/E & L/E), blurring of vision 40% (R/E & L/E), hardness of eyelids 100% (R/E & L/E), difficulty in opening and closing of eye 90% (B/E), burning sensation 100% (B/E), intolerance to light 60% (B/E).

Objective parameters wise distribution showed Schirmer's 1st test reading 100 % (B/E), TBUT 100% (B/E), and Fluorescein staining 60% in RE and 70% in LE.

Table 3: Statistical Analysis Showing the Result on Subjective & Objective Parameters

Parameters	Median		30 day Median	(BT-AT)				Follow up (AT-30 Day)		
	BT	AT		Wilcoxon Signed Rank W	P-value	% Effect	Result	Wilcoxon Signed Rank W	P-Value	Result
Feeling of dryness RE	2	1	1	2.889	<0.05	66.66	Sig	1.727	>0.05	NS
Feeling of dryness LE	2	1	1	2.889	<0.05	66.66	Sig	1.990	<0.05	Sig
Gritty sensation RE	1.5	0	1	2.792	<0.01	88.23	Sig	2.000	<0.05	Sig
Gritty sensation LE	1.5	0	1	2.792	<0.01	88.23	Sig	2.000	<0.05	Sig
Blurring of vision RE	0	0	0	1.000	>0.05	25	NS	-	>0.05	NS
Blurring of vision LE	0	0	0	1.000	>0.05	25	NS	-	>0.05	NS
Hardness of eyelids RE	1	0.5	1	2.920	<0.01	62.5	Sig	1.732	>0.05	NS
Hardness of eyelids LE	1	0	1	3.051	<0.01	68.75	Sig	2.000	<0.05	Sig
Difficulty in opening and closing of eyes RE	1	0	0.5	3.000	<0.01	75	Sig	1.732	>0.05	NS
Difficulty in opening and closing of eyes LE	1	0	0.5	3.000	<0.01	75	Sig	1.732	>0.05	NS
Burning sensation RE	1	0	1	2.862	<0.01	80	Sig	2.236	>0.05	NS
Burning sensation LE	1	0	1	2.862	<0.01	80	Sig	2.449	>0.05	NS
Intolerance to light RE	1	0	0	1.985	<0.05	58.33	Sig	1.000	>0.05	NS
Intolerance to light LE	1	0	0	1.985	<0.05	58.33	Sig	1.000	>0.05	NS

Table 4: Statistical Analysis Showing the Result of Therapy on Objective Parameters

Objective Parameters	Median		30 day Median	(BT-AT)				Follow up(AT-30 day)		
	BT	AT		Wilcoxon Sign Rank W	P-value	% Effect	Result	Wilcoxon Sign Rank W	P-value	Result
Schirmer 1st test RE	2	1	1.5	2.407	0.01	42.10	Sig	1.342	>0.05	Sig
Schirmer 1st test LE	2.5	2	2	2.423	0.01	29.16	Sig	1.414	>0.05	NS
Tear Film Break Time RE	2.5	2	2	2.423	0.01	30.43	Sig	1.342	>0.05	NS
Tear Film Break Time LE	2.5	2	2	2.423	0.01	29.16	Sig	0.577	>0.05	NS
Fluorescein stain RE	1	0	1	1.732	>0.05	37.5	NS	1.414	>0.05	NS
Fluorescein stain LE	1	1	1	1.414	>0.05	18.18	NS	1.000	>0.05	NS

DISCUSSION

Effect of therapy

Feeling of Dryness

Before treatment median score of dryness was 2 in right eye and 2 in left eye which after treatment reduced to 1 in both right and left eye with a relief of 66.66% in right eye and left eye which is statistically significant ($P < 0.05$).

Gritty Sensation

Before treatment median score of Gritty sensation was 1.5 in right eye and 1.5 in left eye which after treatment reduced to 0 in both right and left eye with a relief of 88.23% in right eye and left eye which is statistically significant ($P < 0.01$).

Blurring of Vision

Before treatment median score of blurring vision was 0 in right eye and 0 in left eye which after treatment remains 0 in both right and left eye. This way treatment provide 25% relief in right eye and left eye but it is statistically not significant ($p > 0.05$). Blurring of vision was found only in 40% patients.

Hardness of Eyelids

Before treatment median score of hardness of eyelids was 1 in right eye and 1 in left eye which after treatment reduced to 0.5 in right eye and 0 in left eye with a relief of 62.5% in right eye and 68.75% in left eye which is statistically significant ($P < 0.01$).

Difficulty in Opening and Closing of Eyes

Before treatment median score of Difficulty in opening and closing of eyes 1 in right eye and 1 in left eye which after treatment reduced to 0 in both right and left eye with a relief of 75% in right eye and left eye which is statistically significant ($P < 0.01$).

Burning Sensation

Before treatment median score of Burning sensation was 1 in right eye and 1 in left eye which after treatment reduced to 0 in both right and left eye with a relief of 80% in right eye and left eye which is statistically significant ($P < 0.01$).

Intolerance to Light

Before treatment median score of Intolerance to light was 1 in right eye and 1 in left eye which after treatment reduced to 0 in both right and left eye with a relief of 58.33% in right eye and left eye which is statistically significant ($P < 0.05$).

Schirmer's 1st test

Before treatment median score of Schirmer's 1st test was 2 in right eye and 2.5 in left eye which after treatment reduced to 1 in right eye and 2 in left eye with a relief of 42.10% in right eye and 29.16% in left eye which is statistically significant ($P < 0.05$).

Tear Film Break up Time

Before treatment median score of Tear Film Break Up Time was 2.5 in right eye and 2.5 in left eye

which after treatment reduced to 2 in both right and left eye with a relief of 30.43% in right eye and 29.16% in left eye which is statistically significant ($P < 0.05$).

Fluorescein Staining

Before treatment median score of Fluorescein staining was 1 in right eye and 1 in left eye which after treatment reduced to 0 in right eye and remains 1 in left eye. This way treatment provide with a relief of 37.5% relief in right eye and 18.18% relief in left eye but it is not statistically significant ($P > 0.05$).

Probable Mode of Action of Jivaniya Ghritapana

The *Jivaniya aushadhi* present in *Jivaniya Ghrita* possess the property of *Madhura rasa*, *Snigdha*, *Guru guna*, *Sheeta veerya*, *Madhura vipaka* and having *Vata-pitta shamaka* property predominantly^[12].

Shushkakshipaka is *Vata/Vata-Pitta* predominant condition where *Ashru* has been depleted due to the lack of proper *Rasa dhatu* formation. The contents^[13] present in *Jivaniya Ghrita* (*Vidarikanda*^[14], *Shatavari*, *Ashwagandha*, *Mudgaparni*, *Mashaparni*, *Jeevanti*, *Mulethi*), *Goghrita* and *Godugdha* is having the properties like *Dhatu Vardhana*^[15], *Pushtivardhana*, *Dhatu-Poshana*, *Dhatu-Prasadana*, *Agnibala vardhanam*, etc. Hence for normalization of *Rasa dhatu*, systemic administration of medicated *Ghrita* is essential. After *Pana*, the *Ghrita* gets absorbed into the systemic circulation. Due to *Chakshushya* properties, it has an affinity towards ocular tissues and due to its lipid soluble property crosses blood ocular barriers. By active and passive transport the ingredients of the *Ghrita* crosses the cell membranes and reach the targeted tissue. The drug is having the properties like anti-inflammatory^[16], anti-bacterial^[17], antioxidant^[18], antimicrobial, rejuvenating and detoxifying property^[19], thereby correcting the abnormalities of ocular tissues, lubricating and rejuvenating it.

CONCLUSION

Jivaniya Ghritapana has shown significant result in reduction of sign and symptoms of *Shushkakshipaka*. Oral administration of *Sneha Dravya* prevents further vitiation of *Vata*, provides proper nourishment and lubrication of ocular tissues. No adverse effect was observed during the study. However, study should be carried out in large number of sample and for longer duration to establish the efficacy of *Snehapana*. Thus, it can be concluded that *Snehapana*, as a systemic and holistic approach of Ayurvedic system of medicine provide significant relief in subjective and objective parameters of the disease *Shushkakshipaka* (dry eye syndrome)

REFERENCES

1. N Venkatesh Prajna, Payman's principles and practice of ophthalmology, Chapter dry eye, Second Edition Volume 1, 2019 Jaypee Brothers medical publishers, page no.456
2. James P.Winebrake et al. the TFOS dry eye workshop 2: key updates, American academy of ophthalmology, November 2017
3. N Venkatesh Prajna, Payman's principles and practice of ophthalmology, Chapter dry eye, second edition Volume 1, 2019 Jaypee Brothers Medical Publishers, Page no.456
4. Kaviraj Ambika Dutt Shastri, Ayurveda Tattva-Sandipika, Commentary on Sushruta Samhita Part Second, Chapter Sarvagata Rogvigyanaya, Uttar Sthana, Shloka 26, Reprint Edition 2011, Chaukhamba Sanskrit Sansthan Varanasi, Page No.39
5. Kaviraja Atrideva Gupta, Ashtanga Hridayam Vidyotini Hindi Commentary, Uttar Sthana, Chapter Sarvakshiroga Vigyanaya, Shloka 16, Reprint Edition 2014, Chaukhamba Sanskrit Sansthan, Varanasi, page no. 684
6. Vaidya Shree Laxmipati Shashtri, Yog Ratnakar Vidyotini Hindi Commentary, Uttarardha, Chapter Netrarognidanam, Shloka 15, Reprint Edition 2011, Chaukhamba Sanskrit Sansthan, Varanasi, Page No. 360
7. Kaviraj Ambika Dutt Shastri, Ayurveda Tattva-Sandipika, Commentary on Sushruta Samhita Part Second, Chapter Aupdravikam Adhyayam, Uttar Sthana, Shloka 30, Reprint Edition 2011, Chaukhamba Sanskrit Sansthan Varanasi, Page No.16
8. Kaviraja Atrideva Gupta, Ashtanga Hridayam Vidyotini Hindi Commentary, Uttar Sthana, Chapter Sarvakshiroga Vigyanaya, Shloka 16, Reprint Edition 2014, Chaukhamba Sanskrit Sansthan, Varanasi, Page No. 684
9. Nguyen T, Latkany R. Review of Hydroxypropyl Cellulose Ophthalmic Inserts for Treatment of Dry Eye. Clinical Ophthalmology 2011; 5: 587-91
10. Zia Chaudhary, Murugesan Vanathi, Post Graduate Ophthalmology, Volume 1, Chapter Disease of Ocular The Surface, First Edition, 2012, Jaypee Brothers Medical Publishers, Page No. 604
11. Kaviraj Ambika Dutt Shastri, Ayurveda Tattva-Sandipika, Commentary on Sushruta Samhita Part Second, Chapter Vatabhishyanda Pratishedha, Uttar Sthana, Shloka 23, Reprint Edition 2011, Chaukhamba Sanskrit Sansthan Varanasi, Page No.53
12. Pandit Kashinath Pandey, Dr. Gorakhnath Pandey, Vidyotini Vyakhya on Charak Samhita Part-1, Nidana Sthana, Chapter Jwar Nidan Adhyaya, Reprint Edition 2009, Chaukhamba Bharti Academy, Page No. 617
13. Pandit Kashinath Pandey, Dr. Gorakhnath Pandey, Vidyotini Vyakhya on Charak Samhita Part-1, Sutra Sthana, Chapter Shadvirechanshatashritya Adhyaya, Reprint Edition 2009, Chaukhamba Bharti Academy, Page No. 71
14. Shri Bhav Misra, Vidyotini Hindi Vyakhya On Bhav Prakash Nighantu, Part-1, Chapter Haritkyadi Varga, Reprint Edition 2004, Chaukhamba Bharti Academy, Page No. 63
15. Pandit Kashinath Pandey, Dr. Gorakhnath Pandey, Vidyotini Vyakhya on Charak Samhita Part-2, Chikitsa Sthana, Chapter Deerghamjivitiya Adhyaya, Reprint Edition 2009, Chaukhamba Bharti Academy
16. Kambhoja S, Murthy, K.R.K. Wound Healing and Anti-Inflammatory Activity of Peuraria Tuberosa, 2007 Vol.2, Page No.229-232
17. Dr.J.L.N. Sastry, Dravyaguna Vigyana, Vol.2, Chaukhamba Orientalia, Varanasi, Page No.375
18. Dr.J.L.N. Sastry, Dravyaguna Vigyana, Vol.2, Chaukhamba Orientalia, Varanasi, Page No.375
19. Dr.J.L.N. Sastry, Dravyaguna Vigyana, Vol.2, Chaukhamba Orientalia, Varanasi, Page No.375

Cite this article as:

Kalpana Khanduri, Gunjan Sharma, Priyanka Chauhan, Ram Agochar Bhatt. A Clinical Study on Efficacy of Jivaniya Ghritapana in Shushkakshipaka (Dry Eye Syndrome). International Journal of Ayurveda and Pharma Research. 2022;10(6):9-14.

<https://doi.org/10.47070/ijapr.v10i6.2398>

Source of support: Nil, Conflict of interest: None Declared

*Address for correspondence

Dr. Kalpana Khanduri

Assistant Professor,
Department of Shalakyta Tantra,
Dev Bhoomi Medical College of
Ayurveda and Hospital, Dehradun,
India.

Email:

kalpanakhanduri2017@gmail.com

Contact no: 9927175547

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.