



Case Study

EFFICACY OF HARIDRADWAYADI RASAKRIYANJANA IN SHUSHKAKSHIPAKA W.S.R TO DRY EYE SYNDROME- A CASE REPORT

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ABSTRACT

Tear secretion is an integral component of the ocular surface physiology; when compromised (quantitatively or qualitatively) lead to Dry eye syndrome with several ocular symptoms and ultimately the patient may end up in corneal blindness. The symptoms of Dry eye syndrome are similar to the disease *Shushkakshipaka* (ocular surface inflammatory syndrome) in Ayurveda. *Vata & Pitta* vitiation as per Ayurveda viewpoint are the major contributing pathological factors in its manifestation. Although a number of researches have been carried out and are still continuing, no curative treatment has been achieved yet. This paper aims to establish the efficacy of *Haridradwayadi Rasakriyanjana* during the clinical observation of a 55 years old female subject who was diagnosed with *Shushkakshipaka*. She was administered with the drug *Haridradwayadi Ghrita* in the form of *Rasakriyanjana* (semi-solid collyrium) drops topically for 30 days, by using subjective and objective assessment criteria which showed a significant result. After the treatment, majority of the symptoms reduced considerably and during the follow up concluded that there was no aggravation of the same.

INTRODUCTION

Dry eye syndrome is one of the burning issues of the present society. The climate of tropical India, globalization along with the sprouts of millions of IT professionals are making Dry eye syndrome, a fast growing disease.

The signs of Dry eye syndrome encompass presence of stringy mucus and particulate matter in tear film, lustreless ocular surface, conjunctival xerosis, reduced or absent marginal tear strip and changes in cornea in the form of punctuate epithelial erosions and filaments.^[1]

On the basis of clinical features and principles of treatment, *Shushkakshipaka* seems to be nearer to the description of Dry eye syndrome.

Shushkakshipaka is explained under *Sarvagata Rogas* by Acharyas and categorized under *Pilla rogas* (chronic illness) by Acharya Vagbhata.^[2]

Acharya Sushruta considers *Shushkakshipaka* as *Vata* predominant disease^[3] whereas *Acharya Vagbhata* considers *Shushkakshipaka* as *Vata pitta* predominant condition.^[4]

The *Lakshanas* of *Shushkakshipaka* are *Gharsha* (Foreign body sensation), *Toda* (Pricking pain), *Bheda* (Piercing pain), *Upadeha* (Stringy mucous discharge), *Ruksha* (Dryness of eyelid and eye), *Daruna vartma* (Hardening of eyelid), *Krichronmeela* (Difficulty in opening of eyelids), *Krichra nimeela* (Difficulty in closing eyelids), *Akshi vikoonana* (Photophobia), *Shushkatwa* (Dryness), *Sheeta iccha* (Desire for cold comforts), *Shoola* (Pain) and *Paka* (Inflammation) and *Avila darshanam* (Blurred vision).^[3,4]

To address this issue, Ayurveda drug *Haridradwayadi Rasakriyanjana* has been chosen to treat *Shushkakshipaka*.^[5]

AIMS AND OBJECTIVES

To study the efficacy of Ayurveda management in *Shushkakshipaka* with special reference to Dry eye syndrome.

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MATERIALS & METHODS**CASE STUDY**

A case of *Shushkakshipaka* visited OPD of Shalaky Tantra, Sri Sri College of Ayurvedic Science and Research Hospital, Bangalore.

Chief complaints

A female subject of age 55 years old approached our OPD complaining of foreign body sensation, sticky discharge, dryness, photophobia and itchy eyes since 8 months.

History of present illness

She had developed the symptoms for the first time before 2 years for which she had consulted an Ayurveda physician and diagnosed as *Shushkakshipaka*. She was under medications for 3 months for the same. The symptoms were on and off since then. But from last 8 months the symptoms aggravated and the frequency increased.

She had associated complaint of disturbed sleep occasionally.

Past history

The subject was not having relevant history of any past illness or relevant family history. After getting her personal history it was revealed that she has disturbed night sleep occasionally. Watching TV even though not frequently would also trigger the condition. No other specific causative factor was found relevant in this present clinical condition.

Ocular examinations**Visual Acuity****Table 1: Visual acuity on right eye and left eye with Spectacles**

Vision	Distant vision	Near vision
Both eyes	6/9	N6
Right eye	6/9	N6
Left eye	6/9P	N6P

Table 2: Other ocular examinations on right eye and left eye

Examinations	Right eye	Left eye
Lids	Normal	Normal
Conjunctiva	Mild congestion (Bulbar)	Mild congestion (Bulbar)
Cornea	Clear	Clear
Sclera	Clear	Clear
Iris	Clear	Clear
Pupil	NAD	NAD
Lens	Clear	Clear
Lacrimal apparatus	Normal	Normal
Ophthalmoscopy	NAD	NAD

Diagnostic Criteria

Based on history, the manifested symptoms and clinical findings, the case was diagnosed as *Shushkakshipaka*. Informed consent was taken from the subject before treatment.

Treatment history

- *Seka* with *Yashtimadhu Ksheerapaka* for 7 days - in the year of 2018
- *Triphala Ghrita* orally- 1 tsp at bed time for 1 month- In the year of 2018
- Ophthacare eye drops- topically 1 drop to each eye 3 times a day for 3 months- In the year of 2018.

She has been using Ophthacare eye drops whenever she feels aggravation in symptoms.

Assessment criteria**Subjective parameters**

The following symptoms were present on both right eye and left eye for the patient before treatment (23.08.2020).

- *Gharsha* (Foreign body sensation)
- *Vishushkatwa* (Dryness)
- *Kandu* (Itching)
- *Daha* (Burning sensation)
- *Kunita vartma* (Photophobia)
- *Upadeha* (Mucous discharge)

Objective parameter

Schirmer's test reading on right eye and left eye before treatment (23.08.2020).

- Right eye- 7 mm
- Left eye- 6 mm

Treatment**Table 3: Treatment plan**

Treatment	Dose	Duration	Assessment & Follow up period	Study period
<i>Haridradwayadi Rasakriyanjana</i>	1 drop, twice a day (morning and evening)	30 days	1 st assessment- 0 th day 2 nd assessment- 30 th day 1 st follow up- 45 th day 2 nd follow up- 60 th day	60 days

RESULT

Considerable positive changes were seen in subjective parameters as well as objective parameter as shown below.

Table 4: Observations before the treatment (23.08.2020) after the treatment (22.09.2020) first follow up (07.10.2020) and second follow up (22.10.2020) with grading on right eye and left eye

Subjective parameters	Assessment & follow up days	Right eye	Left eye
Foreign body sensation	BT (0 th day)	Grade 2 (Frequent)	Grade 2 (Frequent)
	AT (30 th day)	Grade 1 (Occasional)	Grade 1 (Occasional)
	FU 1 (45 th day)	Grade 1 (Occasional)	Grade 1 (Occasional)
	FU 2 (60 th day)	Grade 0 (Absent)	Grade 0 (Absent)
Dryness	BT (0 th day)	Grade 2 (Frequent)	Grade 2 (Frequent)
	AT (30 th day)	Grade 0 (Absent)	Grade 0 (Absent)
	FU 1 (45 th day)	Grade 0 (Absent)	Grade 0 (Absent)
	FU 2 (60 th day)	Grade 0 (Absent)	Grade 0 (Absent)
Itching	BT (0 th day)	Grade 1 (Occasional)	Grade 1 (Occasional)
	AT (30 th day)	Grade 1 (Occasional)	Grade 1 (Occasional)
	FU 1 (45 th day)	Grade 1 (Occasional)	Grade 1 (Occasional)
	FU 2 (60 th day)	Grade 0 (Absent)	Grade 0 (Absent)
Burning sensation	BT (0 th day)	Grade 2 (Moderate)	Grade 2 (Moderate)
	AT (30 th day)	Grade 1 (Mild)	Grade 1 (Mild)
	FU 1 (45 th day)	Grade 1 (Mild)	Grade 1 (Mild)
	FU 2 (60 th day)	Grade 1 (Mild)	Grade 1 (Mild)
Photophobia	BT (0 th day)	Grade 1 (Mild)	Grade 1 (Mild)
	AT (30 th day)	Grade 0 (Absent)	Grade 0 (Absent)
	FU 1 (45 th day)	Grade 0 (Absent)	Grade 0 (Absent)
	FU 2 (60 th day)	Grade 0 (Absent)	Grade 0 (Absent)
Mucous discharge	BT (0 th day)	Grade 1 (Mild)	Grade 1 (Mild)
	AT (30 th day)	Grade 0 (Absent)	Grade 0 (Absent)
	FU 1 (45 th day)	Grade 0 (Absent)	Grade 0 (Absent)
	FU 2 (60 th day)	Grade 0 (Absent)	Grade 0 (Absent)
Objective parameter	Assessment & follow up days	Right eye	Left eye
Schirmer's test	BT (0 th day)	Grade 2 (7 mm)	Grade 2 (6 mm)
	AT (30 th day)	Grade 1 (10 mm)	Grade 2 (8 mm)
	FU 1 (45 th day)	Grade 1 (11 mm)	Grade 1 (10 mm)
	FU 2 (60 th day)	Grade 1 (11 mm)	Grade 1 (10 mm)

BT: Before treatment; AT: After treatment; FU 1: Follow up 1; FU 2: Follow up 2

After the treatment, the patient had absence of most of the previously existed symptoms and reduction in others. Improvement in tear level was also evidently seen through Schirmer's tear test.

DISCUSSION

Acharya Sushruta considers *Shushkakshipaka* as *Vata* predominant disease^[3] whereas Acharya Vagbhata considers *Shushkakshipaka* as *Vata Pitta* predominant condition.^[4] This incongruity in attribution of *Dosha* reflects that probably Acharyas have described different stages of the same disease pathology. Descriptions of *Sushruta Samhita* details the early phase of the disease, while the descriptions of *Vagbhata* point towards the advanced phase of the disease with preponderance of *Paka* (Inflammation).

Rooksha (Dry), *Laghu* (Light), *Sookshma* (Subtle) properties of *Vata* and *Teekshna* (Sharp), *Ushna* (Hot), *Laghu* (Light) properties of *Pitta* are increased. As a result eyes become dry.^[6]

Occasional disturbed night sleep is the only etiology that could reveal from this patient. This could be a factor for *Vata Prakopa*. An age above 50 years also would be a contributing factor for *Vata Prakopa*. Another probability is the unknown environmental factors that would have contributed for the condition.

Probably the *Roga* manifestation in this patient could be due to the *Vata prakopakara Nidanas* (causative factors increasing *Vata*), mainly *Viharas* (physical practices) and environmental factors, that has increased the *Rooksha guna* of *Vata*, which has led to an increase in *Rookshata* of *Netra* (eye), followed by *Vata Chhaya* (accumulation of *Vata*) in the ocular surface. This might have led to *Ashru Shushkatwa* (drying up of tears) and thus *Shushkakshipaka*.

Medicine used in the study

Haridradwayadi Rasakriyanjana: It is a formulation mentioned for *Shushkakshipaka* containing *Haridra* (*Curcuma longa*), *Daruharidra* (*Berberis aristata*), *Saindhava* (Rock salt), *Goghrita* (Ghee) and *Goksheera* (Milk). It is prepared according to *Samanya Ghrita Kalpana* (General method of preparation of *Ghrita* formulations).

It has *Rasayana* (Anti-ageing, Rejuvenation), *Chakshushya* (beneficial for eye health) and *Vata-pitta shamaka* (which reduce *Vata* & *Pitta*) properties which are helpful in strengthening the ocular surface (cornea & conjunctiva) and reconstruct the tear film to provide tear film stability. It also nourishes and strengthens ciliary muscle.

Probable mode of action

This formulation is *Madhura-Tikta Rasa* (Sweet-bitter taste), *Ushna Veerya* (Hot potency), *Madhura Vipaka* (Metabolic effect) and *Laghu-Snigdha Guna* (light & unctuous properties), thus having *Doshakarma* of *Vata-Pitta Shamana* (*Vata-Pitta* decreasing). It is a

type of *Prasadana* (nourishing) *Rasakriyanjana* as it is prepared with *Sneha Dravyas* (oleaginous medicine) like *Ghrita* and *Ksheera* which will be beneficial because of its *Snigdha Guna* which can reduce the symptoms of Dry eye.

- **Haridra**-Due to its *Vrana ropana* (wound healing), *Chakshushya* and anti-inflammatory properties, effect in *Gharsha*, *Kandu*, *Vishushkatwa*, *Raga*, *Daha* and *Kunita vartma*. Because of its *Ushnaveerya*, it acts as *Vata hara* also.
- **Daruharidra**- Due to its *Kandughna* (anti-pruritic), *Vranahara* and anti-inflammatory properties, effect is seen in symptoms like *Kandu* and *Upadeha*.
- **Saindhava**- Due to its *Chakshushya*, *Tridosahara*, *Vedanahara* (analgesic) and anti-oxidant properties effect is seen in symptoms like *Toda*, *Kandu* and *Upadeha*.
- **Ksheera**- Due to its *Vatapittahara*, *Kledakara* (moisture) and *Dahaghna* (relieves burning sensation) properties effect is seen in symptoms like *Daha* and *Kandu*.
- **Ghrita**- Due to its *Chakshushya*, *Vatapittahara*, *Baladayaka* (strengthening) and anti-oxidant properties effect is seen in symptoms like *Gharsha*, *Daha*, *Vishushkatwa*, *Toda* and *Kandu*.

Basal secretion of tear is activated by hypothalamus and reflex secretion of tear is activated by trigeminal nerve and in this stage effect of *Godugdha* and *Goghrita* showed great result due to its *Vatashamaka*, *Snehana* (unction) and CNS stimulant properties.

Moreover, by *Aschyotana* (eye drops), the drug is employed in the conjunctival sac in the form of lipophilic solution since the formulation is made out of *Ghrita* as the base, due to which evaporation of the medicine will be less and the period of tissue contact is more; hence the bio-availability will be more. Major portion of each drop is instantaneously drained through the naso-lacrimal duct (NLD) in case of aqueous form; whereas drainage through NLD is reduced here.

Thus, the overall effect of the compound drug is *Vatapitta Shamaka* and hence it disintegrates the pathology of the disease *Shushkakshipaka*.

CONCLUSION

- Dry eye syndrome consists of a wide spectrum of symptoms with different causes. It has become one of the most common eye disorders in the present era.
- This case shows that, merely with a topically administered medicine in the form of eye drops can give better result if not indulging in *Nidanas* more.
- *Anjana* in the form of eye drops are easy to administer and have more bio-availability. *Haridradwayadi Rasakriyanjana* provides more

tissue contact since it is in the form of lipophilic solution.

- Thus it is concluded that Ayurveda management by *Haridradwayadi Rasakriyanjana* has provided a significant result in *Shushkakshipaka* in reducing the signs and symptoms and preventing complications.

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