

## EFFECT OF JEEVANTYADI GHRITA TARPANA AND SHIGRU NAVANEETA BANDHANA IN PRATHAMAPATALAGATA TIMIRA (KERATOCONUS)

Manju Sree R. P. Ashwini M. J.

Dept. of Shalaky Tantra, SDM College of Ayurveda & Hospital, Hassan, Karnataka, India

### ABSTRACT

Achievement of scientific integrity and credibility of the concepts can only be with well designed and conducted research studies. Keratoconus is a common corneal disease that leads to progressive dimness of vision due to central corneal thinning. So a study has been done with *Jeevantyadi ghrita Tarpana* and *Shigru Navaneeta Bandhana*. *Jeevantyadi Ghrita* is told in *Astanga Hrudaya* specifically for *Timira*, and *Shigru* and *Navaneeta* are in the top list of *Chakshushya dravya* group. The study was done in 30 cases. Data was tabulated and analyzed using Student 't' test, which showed moderate improvement in Keratoconus.

**Keywords:** Keratoconus, jeevantyadi ghrita, Tarpana, Shigru navaneeta, Bandhana

### INTRODUCTION

*Ayurveda*, the ancient system of medicine gives valuable guide lines not only in treatment aspects but also in preventive line. Keratoconus is corneal disorder in which there is a progressive thinning of the central part leading to conical protrusion and there by uncorrected visual error, usually found in 2<sup>nd</sup> and 3<sup>rd</sup> decade<sup>1</sup>. The contemporary science advocates Power glasses, contact lense, corneal implants, corneal collagen crosslinking with ribloflavin(C3R), Laser assisted sugeries and Keratoplasty in Keratoconus. The later procedures are unsafe comparatively. *Timira* comes under *dristigata roga* which further leads to *kacha and linganasha* as its complication. So it is better to intervene at the earliest to arrest the progression. Considering the concept of *vata vridhi*, in pathology, and *vata* predominance of the affected structure, *brumhana* line of treatments are adopted. *Tarpana* is one among the *Netra Kriyakalpa* which gives nourishment to the eyes and cures the *Vata Pitta* diseases. It may be very much useful

in the management of Keratoconus due to its *Snehana and Vata and Pitta hara* actions.

### OBJECTIVES OF THE STUDY

1. To evaluate the effect of *Jeevantyadi Gruta Tarpana* and *Shigru Navaneeta Bandhana* in Keratoconus.
2. To understand Keratoconus in *Ayurvedic* aspects

### MATERIALS AND METHODS

Source of Data:

The patients with signs and symptoms of Keratoconus and previously diagnosed cases were selected from OPD and IPD of *Shalaky Tantra* department of S. D. M. C. A. H. Hassan, and Sreedhareeyam eye hospital and research centre, koothattukulam, Kerala.

Sampling Method and Research Design:

30 Patients were randomly selected on the basis of signs and symptoms of Keratoconus. They were grouped into single group. 53 eyes were affected among 30 patients. The group was assessed after a period of one month after completion of treatment.

**Jeevantyadi Grita:** Was prepared as per mentioned in *Ashtanga Hridaya*

**Method of Tarpana**

*Seka* is carried out with *triphala kashaya* as *poorva karma*, a wall is constructed around the eyes at a height of 2 *angulas* and *Jeevantyadi Ghrita* in luke-warm condition is poured into that, retained for a stipulated time period and taken off. After *Tarpana*, *Bandhana* procedure is done to prevent the exposure to bright light around. Here it is done with a combination of *sighru patra* ground with *navaneeta* to add effect to *Bandhana*.

**Criteria for Assessment:**

Assessment was based on relief found in the clinical signs and symptoms of the disease. For this purpose main clinical signs and symptoms were graded according to their severity, and assessment was done. Before treatment (BT) is the first day of treatment and after treatment (AT) is 30<sup>th</sup> day of completion of last course.

**Statistical Analysis of the Result:**

Effect of therapies is assessed on the basis of values obtained before treatment & after treatment with paired 't' test. The results having P value less than < 0.05 were considered as statistically significant in this study.

## RESULTS

BT/ AT	Mean BT	Mean AT	% of Relief	SD	SE	T	df	P Value
Blurred Vision	0.29	0.15	48	0.127	0.019	7.024	52	0.000 HS
Photophobia	0.62	0.26	58	0.623	0.086	4.189	25	0.0001 HS
Headache	0.83	0.30	64	0.723	0.099	5.317	10	0.000 HS
FB Sensation	0.91	0.38	58	0.668	0.092	5.757	31	0.000 HS
Headache	0.83	0.30	64	0.723	0.099	5.317	10	0.000 HS
Watering	0.15	0.04	75	0.320	0.044	2.57	9	0.013 S
Eyestrain	0.77	0.13	83	0.736	0.101	6.243	32	0.000 HS
Ghosting	0.04	0.13	83	0.137	0.019	1.000	1	0.000 HS
Night vision defect	0.06	0.02	50	0.192	0.026	1.428	1	0.321 NS
Itching	1.23	0.51	58	0.794	0.109	6.577	43	0.000 HS

## DISCUSSION

The treatment principle derived is purely based on *dosha* predominance. *Tarpana* is a nourishing procedure done in *Ghrita* base. The *Ghrita* has the quality of trespassing into minutest channels of the body. Absorption is very high as drugs are lipid soluble penetration is high irrespective of molecular size.

While selecting the drug, consideration is given equally to *Vata* and *pitta* as eye is the seat of *alochaka pitta*. It is well tolerated by the patients and provides a totally new therapeutic approach providing steady levels of medication to the ocular surface which of-

fers additional benefits in the management of keratoconus.

*Jeevantyadi Ghrita* has high levels of antioxidants<sup>2</sup> which can reduce the oxidative stress and damage of thinned out cornea<sup>3</sup>. *Shigru* is proven to have *abhi-shyandahara* nature; *navaneeta* is a *chakshushya dravya* in *sneha* form. So this *Chakshushya sneha* combination is helpful in bringing down the corneal protrusion by *doshasamana* and mechanical pressure.

**Discussion on Results**

*Avyakta darshana*, the commonest symptom of *Timira* was found to be improved with Highly Significant p value during the treatment. This can be ex-

plained with *Vata pitta hara* properties of *Jeevanthyadi Ghrita*<sup>4</sup> by which it normalizes *Vata*, *alochaka pitta* and thus increases the *indriyabala*.

Watering and irritation are due to the progressive exposure of corneal nerves due to the process of thinning. The highly significant improvement in this can be explained with the *Snigdha*, and *Brumhana* predominant properties of the drug.

Foreign body sensation can be explained due to dryness, follicles and papillary reaction due to chronic dryness. The improvement in the aspect of follicles and papillae, by the enhanced corneal and conjunctival hydration level by *Ghrita* can be understood.

Headache and eye strain- As there is a high degree of irregular astigmatism, patient will be having asthenopic symptoms. The basic cause here also is the increasing conicity of cornea. This can be explained due to *Vata vrudhi* which might be compensated with *madhura rasa and ushnaveerya pradhana* drugs in the medicine.

Ghosting is due to the mono ocular involment (pt will have clear image in one eye and multiple or spread image in the effected eye). So by apt measures to reduce the curvature defect automatically improves the condition.

Night vision defect and haloes can be understood due to the same curvature defect and improvement could be due to the improvement in corneal thickness. Itching may be due to dryness- *sushkata* caused by *Vata*. The *Vata pitta hara* nature of the drug can be understood better by retrospective analysis on the symptoms.

Continuous itching which was told as a cause,<sup>5</sup> get decreased after the treatment. Improvement in Clarity of vision with pinhole and refractive correction indicate the improved corneal health.

The significant changes in cylindrical power and K reading indicate the positive changes in corneal curvature ie *brumhana* property of the drug. There was no significant changes in the axis, may be due to the suppression of cone in same dimension. The improvement in central corneal thickness fortifies the *brumhana* property of *Jeevantyadi Ghrita*. There are no significant results in peripheral corneal thickness-superior, medial and lateral. But inferior part is found to be improved in thickness .this may be due to the high incidence of inferior cone among all types. 100% result in the congestion of sclera and cornea can be due to *abhishyandahara* nature of *sighrupatra*.<sup>6</sup>

## CONCLUSION

On the basis of literature, observations, and analysis it can be concluded that Keratoconus can be understood as *Prathama patalagatha Timira*<sup>7</sup> in pathological changes and major symptom. The retrospective analysis of the effect of *vata hara* line of treatment also supports the *vata* involvement in this disease.

The demographic observations are supporting the contemporary studies of incidence of age<sup>8</sup>, association with VKC, and Dry eyes.

Majority had a predominance of *vataja deha prakruthi*, supports *Acharya Vagbhata's* view. The treatment plan was found effective in improving corneal thickness and overall associated symptoms of Keratoconus. There were insignificant changes in peripheral thickness, and spherical power. No patients had any complications during the period of treatment.

## REFERENCES

1. Karseras AG, Rubin M: Aetiology of Keratoconus. Br J Ophthalmol 1976; 60:522-525.
2. Antioxidant activity of active tannoid principle of emblica officinalis.indian

journal of experimental biology vol137, july 1999. p676.

3. Investigative Ophthalmology & Visual Science www.iovs.org, Published online before print October 3, 2011, doi: 10.1167/iovs.11-7732 Invest. Ophthalmol. Vis. Sci. November 3, 2011 vol. 52 no. 12 8592-8597

4. Vruddha Vagbhata. Ashtanga Samgraha with Sasilekha commentary of Indu, Editor Shivprasad Sharma. 2<sup>nd</sup> edition. Varanasi: Chaukhambha Sanskrit Series; 2008.p.706

5. Olivares Jiménez JL, Guerrero Jurado JC, Bermudez Rodriguez FJ, Serrano Laborda D. Source Department of Optics, University of Granada, Spain

6. Ambili K. Dissertation on Role of Shigru Pallava Arka Ashchyotana in the management of Kaphaja Abhishyanda With special reference to muco purulent conjunctivitis, SDMCAH, 2006

7. Acharya JT. Susrutha Samhita with Nibandhasangraha commentary of Dalhana. Reprint ed. Varanasi (India): Chaukhambha Sanskrit Sansthan; 2009.p604, 5.

8. Olivares Jiménez JL, Guerrero Jurado JC, Bermudez Rodriguez FJ, Serrano Laborda D. Source Department of Optics, University of Granada, Spain

---

**CORRESPONDING AUTHOR**

Dr. Manju Sree R. P.

PG Scholar of Shalakyta Tantra

SDM College of Ayurveda & Hospital, Hassan, Karnataka, India

Email: manjusreejith25@gmail.com

---

Source of support: Nil

Conflict of interest: None Declared