



REVIEW ARTICLE OF NETRA TARPANA - A UNIQUE OCULAR THERAPY IN AYURVEDA

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ABSTRACT

Netra (eye ball) is an important sense organ. In spite of remarkable progress and advances in the field of modern ophthalmology, there is some limitations. Modern medicine doesn't have any definite treatment for the particular problem of the eye. Most of the inflammatory eye diseases are managed well in western system of medicine. However, neurological diseases of the eye as well as degenerative conditions of the eye are resistant to even advanced new generation procedures. Thousands of patients in India alone are affected by neurological and degenerative conditions of the eye. Although modern medical science has made tremendous and remarkable progress and advance in the field of ophthalmology in recent times, the importance of *ayurvedic* treatment in the diseases of eyes cannot be ignored. *Ayurveda*, the ancient system of medicine gives valuable guide lines not only in treatment aspects but also in preventive line. There is a great need to find out an ocular procedure for prevention and treatment of eye diseases having no or least adverse effect. *Tarpana* karma is one of the local therapeutic procedure which if promptly used shows objective evidences of excellent responses. In this article there is a review on *netra tarpana karma*, their indications, contraindications and possible mode of action is discussed.

Keywords: *Tarpana, kriyakalpa, netra, ayurveda, ghrita, chikitsa.*

INTRODUCTION

The Eye is the main sense organ gifted by God to human beings. *Ayurveda* has stated the importance of an eye with quote "*Sarvendriyanam nayanam pradhanam*" i.e. eye is the prime sense organ among the all sense organs. It is described by *Sushruta* in detail. *Sushruta* has written nineteen chapters in *Uttartantra* explaining the medical, surgical and preventive

aspect of *netra*. *Netra* is an important organ for *indriya janya gyana* (sensory knowledge) which is considered as a source of *pratyaksha gyana* (direct perception). We acquire doubtless knowledge with the help of *indriya* (sense organ) and out of five *indriyas*, the most important is the *netra*. Ancient Indian philosophy is of opinion that all materials, living or nonliving are made up of five fundamental elements called *panchamahabhutas*, and

all parts of body are also made up by the combination of these *mahabhutas*. In case of *netra*, there is a dominance of *teja mahabhuta*, therefore *netra* organ has always a threat from *kapha dosha*, which has exactly opposite qualities that of *teja mahabhuta*. ² Eye is the seat of *Alochaka pitta*. As quoted in *Ashtanga Hridaya*, sincere efforts should be made by every individual to preserve his / her vision till the last breath of life, because for an individual

who is blind, day and night are the same the *netra*. Ancient Indian philosophy is of opinion that all materials, living or nonliving are made up of five fundamental elements called *panchamahabhutas*, and all parts of body are also made up by the combination of these *mahabhutas*. In case of *netra*, there is a dominance of *teja mahabhuta*, therefore *netra* organ has always a threat from *kapha dosha*, which has exactly opposite qualities that of *teja mahabhuta*. ² Eye is the seat of *Alochaka pitta*. As quoted in *Ashtanga Hridaya*, sincere efforts should be made by every individual to preserve his / her vision till the last breath of life, because for an individual who is blind, day and night are the same the *netra*. Ancient Indian philosophy is of opinion that all materials, living or nonliving are made up of five fundamental elements called *panchamahabhutas*, and all parts of body are also made up by the combination of these *mahabhutas*. In case of *netra*, there is a dominance of *teja mahabhuta*, therefore *netra* organ has always a threat from *kapha dosha*, which has exactly

opposite qualities that of *teja mahabhuta*. 2 Eye is the seat of *Alochaka pitta*. As quoted in *Ashtanga Hridaya*, sincere efforts should be made by every individual to preserve his / her vision till the last breath of life, because for an individual who is blind, day and night are the same. and this beautiful world is of no use to him even if he possesses a lot of wealth.³ All

efforts should be made for the strength of eyes, by resorting to *nasya*, *anjana*, *tarpana* etc. Once vision is lost the versatility of the world will all become merged to one, of unified darkness.⁴ Although modern medical science has made tremendous and remarkable progress and advance in the field of ophthalmology in recent times, the importance of *ayurvedic* treatment in the diseases of eye cannot be ignored. Each wing of ayurveda has come out with

visishtachikitsa apart from *samanyachikitsa*. For instance, *Bastichikitsa* happens to be the *chikitsardha* in *Kayachikitsa*, *Rakthamokshana- chikitsardha* in *Shalyachikitsa*, similarly *Kriyakalpas* form *chikitsardha* in *Shalakyachikitsa*. *Kriyakalpas* are unique procedures practiced in *Shalaky Tantra* having wide range of implications in the management of *netra vikaras*. *Kriyakalpas* are meant to alleviate the *sthanika khavaigunya* resulted out of vitiated *doshas* & their impact on *netraavayavas*. *KriyaKalpas* can also be used as *swasthya sanrakshaka prayoga* to maintain functional integrity of the sense organs & overcome age related disorders. *KriyaKalpas* includes *Seka*, *Aschyothana*, *Tarpana*, *Putapaka*, *Anjana*, *Bidalaka*, and *Pindi*. 5 Among all *kriyakalpas*, *Netra Tarpana* is the foremost procedure for eye disorders. *Netra tarpana* is one of the specialized treatments for various eye disorders. *Netra tarpana* acts as both preventive and curative therapy for maintaining normal healthy condition of eyes. It is *brimhana* in nature. The phrase *Akshitarpana* (also called *Netrabasti*) is from sanskrit where *Akshi* refers to eye (*Netra=eyes*) and *tarpana* stands for nourishment or rehydration process. So accumulatively the term means nourishment of eyes or in a way rehydration of eyes. *Netra Tarpana* is the ayurvedic purification and rejuvenation treatment provided especially as part of *Panchakarma* treatment in ayurvedic care facilities. *Netra Tarpana* is a procedure wherein lukewarm medicated *ghee* is made to stay stagnant in the eyes for a speculated time in a specific formed frame. The therapy is quite beneficial for the relaxation of eyes and the treatment of various ailments related to eyes. *Netra Tarpana* has been used from the ancient times in *ayurveda* for improving the eyesight and is highly beneficial to people working late in front of computers and on the machineries affecting the eyes. It is the most revered *KriyaKalpa* extensively used in *Netra* practice. It nourishes the eyes, improves & strengthens the *drishti shakti*. It is a very effective, preventive & curative procedure in *vataja* & *pithaja vikaras*.

INDICATIONS FOR TARPANA

KARMA:

- When a patient sees darkness in front of eyes
- Dryness of the eyes
- Roughness of the eyes
- Stiffness of eyelids
- Falling of eyelashes
- Dirtiness of the eyes
- Deviated eyeball or squint
- In extreme aggravation of the diseases of the eye
- Injury/traumatic condition of eye
- *Vata –pitta* predominant diseases⁶

Vagbhatta has further added a list of diseases specifically selected for *tarpan karma*. They are *Kricchronmilana* (difficulty in opening eyes), *Siraharsha* (congestion of conjunctival blood vessel), *Sirotpata* (episcleritis), *Tama* (blackout), *Arjuna* (subconjunctival haemorrhage), *Syanda* (conjunctivitis), *Adhimantha* (glaucoma), *Anayatovata* (referred pain in the eye or sphenoidal sinusitis), *Vataparyaya*, *Avrana shukra* (corneal opacity).⁷

CONTRAINDICATIONS FOR TARPANA

KARMA:

According to *Acharya Sushruta tarpana* is not indicated:

- On a cloudy day
- Extreme hot or cold seasons
- In conditions of worries and anxiety
- In conditions of tiredness and giddiness of eyes
- In complications of eyes
- In the condition of acute pain, inflammation, redness etc. ⁸

PROCEDURE:**Poorva Karma:**

Appropriate *shodhanakarma* is carried out according to procedure. Later *sthanika abhyanga* & *mridu swedan* is done.

Pradhana Karma:

Netra tarpana should be carried out in the forenoon or in the afternoon on an auspicious day after the food (taken by the patient) has been digested and after the head and the whole body of the patient have been treated with purification measures properly. Patient is made to lay supine position in a good lighted, ventilated room free from dust & smoke. Then the eyes are encircle with firm, compact leak proof *pali* (wall) made up of paste of powdered *masha*.

According to *Vagbhatta pali* is made upto a height of two *angulas*. The patient is asked to close the eyes and over the closed eyes, *ghrita* processed with appropriate drugs and liquefied in lukewarm water should be poured to the orbit, till the level of tip of eyelashes. Patient is asked to open & close the eye intermittently & steadily.

Paschata Karma:

After retaining of *ghrita* for a stipulated period, the *ghrita* is drained out through a hole made at the bottom of dough wall, near the outer canthus of the eye and the eye is irrigated with lukewarm water fomentation. The *kapha* which has already been stimulated by the potency of *ghrita*, should be eliminated by *shirovirechan* (*nasya*), and fumigation (*dhoompana*) with the *kapha*-suppressive drugs. Patient is instructed to keep away from exposure to bright lights, wind, sky, mirrors and luminous bodies.⁹

SNEHADHARAN KALA OR PERIOD OF RETENTION OF GHRITA:

Snehadharanakala is implimented considering *Adhishtana* of diseases & Severity of *dosha prakopa*.^{10, 11, 12}

Snehadharanakala according to dosha prakopa:

| Doshabheda | Sushrut Samhita | Ashtang hrudaya | Sharangdhara Samhita | Bhawaprakash |
|-------------------|-----------------|-----------------|----------------------|--------------|
| Healthy eye | 500 | 500 | 500 | 500 |
| Kapha predominane | 600 | 500 | 500 | 500 |
| Pitta predominane | 800 | 600 | - | 600 |
| Vata predominane | 1000 | 1000 | 1000 | 1000 |

Snehadharana kala according to Adhishthan of diseases:

| Adhishthana | Sushrut Samhita | Ashtang hrudaya | Sharangdhara Samhita | Bhawaprakash |
|-----------------|-----------------|-----------------|----------------------|--------------|
| Sandhigata | 300 | 300 | 500 | 500 |
| Vartmagata | 100 | 100 | 100 | 100 |
| Shuklagara | 500 | 500 | 600 | - |
| Krushnaccgaccta | 700 | 700 | 700 | 700 |
| Drushtigata | 800/1000 | 800 | 800 | 800 |
| Sarwagata | 1000 | 1000 | 1000 | 1000 |

DAYS OF PROCEDURE OR TARPANA**AVADHI:**

Acharya Sushruta without clarifying the condition of the eyes simply asks to perform the procedure for one day, three days, or five days or till the *samyaka tarpita lakshanas* are seen.¹³ According to *Acharya Jejjata* for *vataja* diseases *tarpana* has to be done for 1 day,

for *pittaja* diseases *tarpana* has to be done for 3 days, and for *kaphaja* diseases *tarpana* has to be done for 5 days. According to *Acharya Videha tarpana* can be carried out daily or *niranthara* or alternate day or with two days break or three days break depending on *dosha* & *teevratha* of *vyadhi* as well in *Swasthya*. According to *Acharya Vagbhatta tarpana* should be done daily in vitiation of *vata*, on alternate days in *pitta*, with an interval of two days in *kapha* and in *swastha* (healthy person) or till the eyes become fully satiated.¹⁴

SAMYAKA TARPITA LAKSHANA

- *Sukhaswapana* - good (sound) sleep
- *Avbodhatva* - blissful awakening
- *Vaishadhya* - clearness of the eyes
- *Varnapatava* - discernment of individual colours
- *Nivriti* - feeling of comfort
- *Vyadhividhvansa* -cure of the disease
- *Kriya laghvama* - easiness in closing and opening the eyes
- *Prakash kshamta* - ability to withstand bright light¹⁵

ATI- TARPITA LAKSHANAS:

- *Netragaurava* - heaviness in eyes
- *Avilta* - indistinct vision
- *Atisnigdhatva* -excessive oiliness
- *Ashru srava* - lacrimation
- *Kandu* - itching
- *Upadeha* - stickiness
- *Dosha-samutklishhta* - aggravation of dosha¹⁵

HEENA TARPITA LAKSHANAS:

- *Netrarukshata* - dryness of eye
- *Avilta* - indistinct vision
- *Ashrusrava* - lacrimation
- *Asahyam roopdarshan*- difficulty in vision
- *Vyadhivridhi* - aggravation of disease ¹⁵

TREATMENT OF INADEQUATE AND EXCESSIVE TARPANA:

Dhoompana, *nasya*, *anjana*, *seka* either *ruksha* or *snigdha* are to be done for treating both inadequate and excessive *tarpana* conditions according to predominance of *dosha*. *Snigdha seka* in disease of *vata* predominance, *ruksha* in *kapha* and *sheeta seka* in *pitta* predominance *dosha*.¹⁶

FORMULATIONS USED FOR TARPANA:

- *Triphala ghrita*
- *Mahatriphla ghrita*
- *Patoladi ghrita*
- *Jeevantyadi ghrita* ^{17,18}

PRIME INDICATIONS OF TARPANA:

- Computer vision syndrome
- Dry eye syndrome
- Nonspecific corneal Disorders
- Allergic conjunctivitis
- All types of glaucoma
- Early cataract
- Degenerative disorders e.g. Age related macular degeneration

- Refractive errors
- Diabetic Retinopathy
- Hypertensive Retinopathy
- Optic Neuritis

MODE OF ACTION OF NETRA TARPANA KARMA:

In modern sciences the ocular therapeutics includes the medicines in the form of drops, ointments, gels and ocuserts. These are the modes of topical installations of medicines in the eye. Eye drops are the easiest and most convenient method of topical application. Aqueous solutions and aqueous suspensions are the two forms of drug instillation in eye. In aqueous solution form the drug is totally dissolved, so the drug is completely available for immediate

action. But it gets quickly diluted by tears and drains through naso-lacrimal duct. Hence, it causes low tissue contact time. Whereas in suspension forms the drug is present as small particles suspended in aqueous medium and these do not leave the eye as early as solution. Hence it increases the tissue contact time. Ointments and gels have more bioavailability

of drug which increases tissue contact time and prevents dilution and early absorption. **Ocuserts are placed in upper and lower fornix** for up to one week and allows a drug to be released at a constant rate. The drug is delivered through a membrane. In cornea the epithelium and endothelium is lipid permeable i.e. lipophilic whereas stromal layer is hydrophilic. Hence the lipophilic and hydrophilic drugs are effectively delivered to cornea,

whereas the drug permeability across the sclera depends upon the molecular size and weight of the drug. The drugs used in *Tarpana* procedure is the combination of *Ghrita* and decoction of medicines, hence the drug can easily cross the corneal epithelium (being lipophilic) and endothelium (being hydrophilic). Also due to more contact time the active component of drug used in *Tarpana* will be absorbed more to cure the diseases. The *ghrita* with decoction of medicines has the quality of trespassing into minute channels of the body, hence when applied in the eyes, it enters deeper layers of *dathus* and cleans every minute part. The lipophilic action of *ghrita* facilitates the transportation of the drug to the target organ and finally reaches the cell because the cell membrane also contains lipids. This phospholipid nature of medicine facilitates the entry of the drug into the eye ball through the corneal surface. Since the corneal epithelium is permeable to lipid soluble substances and lipid soluble substances crosses the corneal epithelium irrespective of the molecular size. Moreover, the medicine preparations used in *netra tarpana* is in the form of suspension containing different particles of the drug and the particles do not leave the eye as quick as a solution. Tissue contact time and bioavailability is more and hence therapeutic concentration is achieved by *netra tarpana*. This facilitates the action of drug by two ways, first by allowing more absorption of the drug, by the corneal surface, and secondly by exerting direct pressure up on the cornea. There may be changes of refractive index of the cornea causing less convergence of light rays.

Mode of action of *Tarpana karma*:

Transient local vasodilatation of conjunctival vasculature (by *sthanik mridu sweda & sukhoshna Ghrita*) and Epithelium- endothelium of cornea lipophilic in nature



Enhanced absorption of drugs in the deeper of layers and Absorption through cornea irrespective mol. Size



Intra ocular drug absorption to anterior lens capsule, ciliary muscles, cornea and other tissue



Desired therapeutic action



Relief in symptoms

CONCLUSIONS:

The Eye is the main sense organ gifted by God to human beings. An individual who is blind, day and night are the same and this beautiful world is of no use to him even if he possesses a lot of wealth, so sincere efforts should be made by every individual to preserve his / her vision till the last breath of life. In spite of remarkable progress and advances in the field of modern ophthalmology, there is some limitations. Ayurveda, the ancient system of medicine gives valuable guide lines not only in treatment aspects but also in preventive line. *Netra*

Tarpana karma is one of the local therapeutic procedure which if promptly used shows objective evidences of excellent responses.

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