



Review Article

MODE OF ACTION OF AKSHI TARPANA - A CRITICAL REVIEW

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ABSTRACT

Ayurveda is the oldest scientific systems of medicine. *Shalaky Tantra* is one of the branches of *Ashtanga Ayurveda* which deals with the diseases arise above the clavicle region. This stream of *Astanga Ayurveda* mainly comprises of etiology, histopathology, symptomatology and treatment in the form of local and systemic administration related to eyes, nose, ears and mouth etc. *Kriyakalpa* is the treatment method usually adopted in *Netra Vikaras*. *Netra Tarpana* is one among the *Kriyakalpas* which is advised in many *Netra rogas* to normalize the vitiated *Doshas*. *Akshi Tarpana* splits into two words “*Akshi*” means eye and “*Tarpana*” means nourishment. *Tarpana* is a *Snigdha Kriya* indicated in *Vata Dusta* ophthalmic conditions mainly in *Dristigata Rogas*. It is commonly indicated in macular degeneration, computer eye strain, degenerative conditions, myasthenia gravis, drooping of eyelid. The therapeutic effect is advocated for patients suffering from diseases of eye. In healthy people Eye Care Treatment is carried out to protect the eyes from degeneration due to ageing process and to improve the eye sight. Thus *Akshi Tarpana* is an excellent soothing, relaxing eye treatment to rejuvenate eyes and surrounding tissues. This Review study was performed with the aim to study the concept of *Akshi Tarpana*, understand the standard procedure of *Akshi Tarpana* and its efficacy.

INTRODUCTION

Ayurveda is the oldest scientific system of medicine. *Shalaky tantra* is one among the *Ashtanga Ayurveda*, specialized in treating diseases occurring above the clavicle. The eye is the main sense organ with the prime function of vision perception. Ayurveda is of the opinion that, all the things, living or non-living are made up of *Panchamahabhutas*, similarly eye is also formed out of *Panchamahabhutas*.^[1] Eye is the seat of *Alochaka pitta* and *Tarpaka kapha*.

Each branch of Ayurveda has *Vishishta chikitsa* apart from *Samanya chikitsa*. For instance *Basti chikitsa* happens to be the *Chikitsardha* in *Kayachikitsa*. Similarly *Kriyakalpas* form the *Chikitsardha* in *Shalaky tantra*.

The Ayurvedic therapeutic measures comprise of many topical treatments along with systemic ones. The reason might be non-crossing of the blood aqueous, blood vitreous and blood retinal barriers by the drugs administered systemically. The topical measures in *Shalaky tantra* are called as ‘*Kriyakalpas*’. The term *Kriyakalpa* is comprises of two words *Kriya* and *Kalpa*. *Kriya* means the therapeutic procedures adopted to cure the disease without causing any adverse effects. *Kalpa* indicates the specific form of medicinal preparations used to treat different *Netra Vikaras*. These are specifically designed, according to the stage and severity of the disease. These *Kriyakalpas* are *Akshi Tarpana*, *Putapaka*, *Seka*, *Aschyotana*, *Anjana*, *Pindi* and *Bidalaka*.^[2]

Kriyakalpas are unique procedures practiced in *Shalaky tantra*, having wide range of applications in the management of *Netra vikaras*. *Kriyakalpas* are very useful in restoring the normalcy of *Netra* by alleviating the *Sthanika khavaigunya* produced due to vitiation of *Doshas*. Hence *Kriyakalpas* are not only used to maintain the *Swasthya* of *Netra* and to avoid age related eye disorders but also used to cure the various

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Netra vikaras. Among all the *Kriyakalpas*, *Akshi tarpana* is the foremost procedure mentioned in the management of eye disorders. *Netra tarpana* is a type of *Bahya Snehana* or *Brimhana chikitsa* and acts as both preventive and curative therapy.

Tarpana

In the word *Akshi Tarpana*, *Akshi* refers to eye and *Tarpana* means nourishment. Hence *Akshi Tarpana* means nourishment of eyes. It is also called as *Netra Basti*. *Akshi Tarpana* is a procedure in which *Sneha* is retained in the eyes. This therapy is very useful in strengthening of all the ocular structures thus improves the functioning capacity of the eyes. *Tarpana* also provides relaxation to the eyes and helps in the treatment of various ailments of *Netra*. It is one of the effective preventive, curative procedures useful in *Vataja* and *Pittaja netra vikara*.^[3]

➤ **Indications for Tarpana Karma**

- When a patient perceives *Tama* in front of eyes,
- *Netra Vishushkata*
- *Daruna Netra*
- *Sheerna Pakshma*
- *Kathina Vartma*
- *Stabdha Netrata*
- *Avila Netrata*
- Deviated eyeball or squint
- *Vata Pitta* predominant diseases.^[4]

Acharya Vagbhata has further indicated *Tarpana Karma* in some other ocular conditions. They are as follows.

- *Kricchronmilana*
- *Siraharsha*
- *Sirotpata*
- *Tama*
- *Arjuna*
- *Syanda*
- *Adhimantha*
- *Anyatovat*
- *Vataparyaya*
- *Avrana Shukra*
- *Naktandhya* ^[5]

Contraindications for Tarpana Karma^[6]

- On a cloudy day
- Extreme hot or cold seasons
- In conditions of worries and anxiety
- In conditions of tiredness of eyes
- In ocular complications
- In the condition of acute pain
- Inflammation

Tarpana Dravya: *Ghrita* is commonly used *Sneha* during *Tarpana Karma* because it is *Yogavahi* and it gets enriched with the properties of the drug used during *Sanskara* and at the same time it retains its own properties. *Ghrita* is having *Madhura rasa* and *Madhura vipaka*, *Sheeta virya* in nature and it possesses properties like *Tridoshaghata*, *Ojovardhaka* and *Rasayan*. Because of all the above characters it is commonly used for *Netra Tarpana Karma*.

Procedure ^[7,8]

Purvakarma

1. Preparation of the Patient

- **Kaya Shuddhi:** includes– *Vamana* and *Virechana*
- **Shiro-Shuddhi:** i.e., *Nasya* or *Shiro-virechana*
- Later *Sthanika Abhyanga* and *Mridu Swedana* is done. (*Tarpana* should be performed after the meal, taken earlier and is fully digested).

2. Sambhara Sangraha: *Ghrita*, flour of black gram for the construction of *Netra Tarpana* socket (ring/cabinet), water, stove, bowls, vessels, spoons, sterile cloth/cotton.

Pradhana Karma

After explaining the method of treatment to the patient in detail, he or she shall be taken to a place devoid of heavy breeze or air to conduct *Akshi Tarpana* treatment.

1. Season and Time of Tarpana treatment: The treatment shall be done in '*Sadharana Kala*' i.e. in a season which is neither too hot nor too cold and when there is no rain or sky enveloped with clouds.

2. Position of the Patient: The patient is made to sleep in supine position with support at the neck region with face upwards, in a room devoid of wind, sun and dust.

3. Construction of Akshi Tarpana cabinet (ring) around the eye: The rings of flour which were prepared in the *Purvakarma* are kept over the eye sockets, (one on each eye) such that the eyes are enclosed within their respective rings. The junctions of the rings with eye sockets are sealed with wet flour so that the medicament doesn't leak or escape during the process of the treatment. During this process the eye lids should be closed.

4. After the construction of Akshi Tarpana cabinet, any medicated Ghrita which is liquefied by hot water should be poured in to the well up to the level of tips of eye lashes. The patient should then be asked to blink slowly which allows the medicine to reach the target tissue. The medicine should be made to retain on the eyes for a specific time period, depending on the Dosha, Roga avastha and Sthana of the Netra vikara.

Table 1: Sneha Dharana Kala according to Dosha Prakopa (Matrakala) [9]

Doshanusara	Sushruta		AS	AH	Sh. Sa.	BP
<i>Kaphaja</i>	600 <i>Matra</i>	Once in 5 days	500	500	500	500
<i>Pittaja</i>	800 <i>Matra</i>	Once in 3 days	600	600	-	600
<i>Vaataja</i>	1000 <i>Matra</i>	Daily	1000	1000	1000	1000
<i>swastha netra</i>	500 <i>Matra</i>	2 days interval	500	500	500	500

Su. Sa. – Sushruta Samhita, AS- Astanga Samgraha, AH- Astanga Hrudaya,
Sh. Sa. – Sharangadhara Samhita, BP. – Bhavaprakash

Table 2: Sneha Dharana Kala according to Adhithana of disease (Matrakala) [9]

Roga Adhithana	Su. Sa.	AS	AH	Sh. Sa.	BP
<i>Sandhigata</i>	300 <i>Matra</i>	300 <i>Matra</i>	300 <i>Matra</i>	500 <i>Matra</i>	500 <i>Matra</i>
<i>Vartmagata</i>	100 <i>Matra</i>	100 <i>Matra</i>	100 <i>Matra</i>	100 <i>Matra</i>	100 <i>Matra</i>
<i>Shuklagata</i>	500 <i>Matra</i>	500 <i>Matra</i>	500 <i>Matra</i>	600 <i>Matra</i>	
<i>Krishnagata</i>	700 <i>Matra</i>	700 <i>Matra</i>	700 <i>Matra</i>	700 <i>Matra</i>	700 <i>Matra</i>
<i>Sarvagata</i>	800 <i>Matra</i>	800 <i>Matra</i>	800 <i>Matra</i>	800 <i>Matra</i>	800 <i>Matra</i>
<i>Drishtigata</i>	1000 <i>Matra</i>	1000 <i>Matra</i>	1000 <i>Matra</i>	1000 <i>Matra</i>	1000 <i>Matra</i>

Su. Sa. – Sushruta Samhita, AS- Astanga Samgraha, AH- Astanga Hrudaya,
Sh. Sa. – Sharangadhara Samhita, BP. – Bhavaprakash

Paschat karma [10]

- Removing the Medicine:** The medicine is removed by creating a small hole in the lower portion of the wall of the flour ring at the outer angle of the eye and draining the contents in a bowl.
- Wiping the eyes and the surrounding area:** The medicines sticking to the eye and the socket: are swabbed out by wiping them off with the help of a sterile cotton pad or a tissue paper. Later the eyes can be wiped off gently with a sterile cloth dipped in warm water or the same cloth is used to give a gentle fomentation to the eyes.
- Dhumapana:** *Dhooma varti* is used to give *Dhooma pana* to eliminate the *Kapha* which has been exaggerated due to the administration of *Ghrita* during *Akshi Tarpana*.
- Putapaka:** After the *Akshi Tarpana*, a procedure called *Putapaka* is done. The eyes get tired after *Tarpana* procedure. *Putapaka* is done to ward off the eyes tiredness. The method of treatment is similar to that of *Akshi Tarpana*. In *Putapaka*, *swarasa* is extracted by *Putapaka* method and *Mamsa*, *Patra* etc are used in this procedure.
- Patient is instructed to keep away from exposure to bright lights, high wind and avoid looking at bright sky, mirrors and luminous bodies.[11] patient is advised to avoid sleeping during day time, head bath, rubbing of the eyes, using mobiles, computers etc electronic gadgets and watching Television.

Samyak Tarpita Lakshana [12]

- *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 laghava* - Easiness in closing and opening the eyes
- *Prakash kshamatva* - Ability to withstand bright light

Ati Tarpita Lakshanas [12]

- *Netragaurava* - Heaviness in eyes
- *Netra Avilata* - Indistinct vision
- *Atisnigdhatva* - Excessive oiliness
- *Ashru Srava* - Lacrimation
- *Kandu* - Itching
- *Upadeha* - Stickiness
- *Dosha Samutklishtata* - Aggravation of *Dosha*

Heena Tarpita Lakshanas [12]

- *Netrarukshata* - Dryness of eye
- *Netra Avilata* - Indistinct vision
- *Ashrusrava* - Lacrimation
- *Asahyam Roopdarshan* - Difficulty in vision
- *Vyadhivridhi* - Aggravation of disease

Management of *Ati Tarpita* and *Heena Tarpita* *Netra*

Treatment should be planned according to the predominance of the *Dosha* vitiated.

In *Vatapradhana Dosha Dushti* – *Snigdha Seka*

In *Pittapradhana Dosha Dushti*- *Sheeta Seka*

In *Kapha pradhana Dosha Dushti* – *Ruksha Dhuma* etc.

Formulations used for *Tarpana*

- *Triphala Ghrita*
- *Mahatriphala Ghrita*
- *Patoladi Ghrita*
- *Jeevanti Ghrita*
- *Yashtimadhu Ghrita*
- *Durvadi Ghrita*

DISCUSSION

The *Kriyakalpa* are treatment procedures mentioned to cure *Netra vikaras* in Ayurveda. *Akshi Tarpana* is one of the *Kriyakalpa* used to strengthen eyes and to improve vision. *Akshi Tarpana* aims to provide optimum rejuvenation to the eyes.

Probable Mode of action of *Netra Tarpana Karma*

- *Netrendriya* is originated from *Majja dhatu*. *Ghrita* is having the properties like *Balya*, *Brimhana* and *Rasayana* and it nourishes *Meda*, *Majja* and *Shukra Dhatu*. Thus it gives strength to the eyes.
- *Ghrita* is having *Madhura Rasa* and *Madhura Vipaka*, *Sheeta Virya* which is useful in mitigating *Vata* and *Pittaja Vikara*.
- *Ghrita* contains vitamin A, D, E, K and carotene in it. Vitamin A and E are antioxidants and vitamin A also preserves the outer lining of the eyeball moist.
- Digestion, absorption and delivery to a target organ system are crucial in obtaining the maximum benefit from any formulation. This is facilitated by *Ghrita*, since active ingredients of drugs are mixed with *Ghrita* and they are easily absorbed. Hence it nourishes the ocular structures.
- In cornea, the epithelium and endothelium are 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 like darkness before the eyes, dryness, stiffness etc.

- 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 cleanses 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.

CONCLUSION

Eye is considered as the most important and noblest sense organ of human body, so sincere efforts should be made by every individual to preserve his/her vision till the last breath. 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. It is known fact, that prevention is better than cure. Ayurveda is found to possess vivid information about the life style leading to healthy life and also preventive strategies in general. *Akshi Tarpana* is one of the local therapeutic procedure which acts on the principle of *Bahya Snehana*. It can successfully cross the defensive barriers present in eye for absorption and nourishes the ocular and periocular structures and also strengthens the sphincters. *Akshi Tarpana* treatment rejuvenates and relieves the ocular stress and helps the eyes to function more efficiently and effortlessly.

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