

ASCHYOTANA THERAPY- A POTENTIAL OCULAR THERAPEUTICS IN AYURVEDA

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ABSTRACT

In spite of remarkable progress and advances in the field of modern ophthalmology the effective control is still a challenge. There is great need to be found out an ocular procedure for prevention and treatment of eye diseases having no or least adverse effect. *Aschyotana* is one of the local therapeutic procedure where exact amount, dosage schedule, frequency are already been mentioned by ancient authors. In this era, due to altered life styles and occupational hazards, it becomes essential to research those principles and practices of *Ayurvedic* ophthalmology to preserve the vision.

Keywords: ophthalmology, *Aschyotana*, dosage, hazards, vision

INTRODUCTION

As per *Ashtang Hrudaya* sincere efforts should be made by every individual to preserve his or 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. Tremendous advancement made in ophthalmic medicine in recent years has begun a new era in history of ophthalmology. Modern ophthalmologists and scientists have been able to convince the new generation about the significance of eye care and the right procedure to follow in order to ensure healthy vision. At the same time, there are various challenging problems, arising before modern ophthalmologists compelling them to find therapeutic procedures hidden in ancient medi-

cal manuscripts. Clinical *shalakya-tantra* manages eye ailments via topical and systemic measures. Among these two, topical applications play pivotal role. May be due to the limitations of systemic formulations to reach the target organ due to same blood-aqueous, blood-vitreous and the blood-retinal barrier, topical applications are inevitable in ophthalmology.

Kriyakalpa-

The word *kriya* means- therapeutic action and *kalpana* means- specific formulations

⁽¹⁾*Kriyakalpa-* the local ocular therapeutic procedure is group of special methods of drug administration, locally into the eye, for treatment of eye disease,

which provides nourishing effect to the eyes and improves visual acuity.

Etymology-

Kriya: kridhatu + sapratyaya

The variants of which are *arambha, shiksha, nishkruti, pujana, sampradharana, upay, karma, cheshta and chikitsa*. *Kriya* means to do, to per-

form or to practice; the word *kriya* refers here to medical treatment.

Kalpa: Klripdhatu+ ghanpratyaya-kalp.

It means practicable, feasible, proper or competent method of curing the disease or treatment of sick by performing proper treatment.

Table 1: Classification of *kriyakalpa*-

<i>Kriyakalpa</i>	<i>Cha.sa.</i>	<i>Su.sa.</i>	<i>A.H.</i>	<i>Sha.sa.</i>	<i>Bha.Pra.</i>
<i>Tarpan</i>	+	+	+	+	+
<i>Putpak</i>	-	+	+	+	+
<i>Seka</i>	-	+	+	+	+
<i>Aschyotana</i>	+	+	+	+	+
<i>Anjan</i>	+	+	+	+	+
<i>Pindi</i>	-	-	-	+	+
<i>Vidalaka</i>	-	-	+	+	+

Etymology of *Aschyotana*-^{2}

Instillation of few drops of medicines to the open eye from a height of two *anguls* is called as *aschyotana*.

Importance of *Aschyotana*-^{3}

Aschyotana is the first line of treatment in eye diseases which, will relieve

<i>Ruk, toda</i>	- painful conditions
<i>Kandu</i>	-scratching
<i>Gharsha</i>	-irritation or foreign body sensation
<i>Asru</i>	-excessive watering
<i>Daha-</i>	-burning
<i>Raga</i>	-redness or congestion
<i>Paka, sophia</i>	-features of inflammation

When *doshas* are not severely vitiated and the disease is in the early stage, it is beneficial. But it should be done on 4th day of disease manifestation or after *amalaksanas* are settled down (*Aacharyavideha*).

Types and number of drops in *Aschyotana*-^{4}

Snehanaaschyotana- 10 drops
Lekhanaaschyotana-8 drops
Ropanaaschyotana-12 drops

Nature of medicine on basis of *dosha-dushti*-^{5}

The treatment of liquid medicines is decided on the basis of *dosha-dushti*. The medicines should be –
 - Warm in *vataja* disease
 -Luke warm in *kaphaja* disease
 -Cold in *pitta* and *raktaja* disease.

Similarly the qualities like *rasa, guna* etc. are modified to counteract *doshadushti*.^{6}

Vata- tikta rasa, snigdha guna
Pitta-madhura rasa, sheeta guna
Kapha- tikta rasa, ushna- rukshaguna

Contraindications: *Aschyotana* is contraindicated in night and should be done only during day time.

Indications: *Aschyotana* should be done in
 -morning in *kaphaja* disease
 -afternoon in *pittaja* disease
 -evening in *vataja* disease

Aschyotanavidhi (Procedure)-⁽⁷⁾

-The patient should be comfortably lying down in supine position, in *kriyakalpa* theatre

-The eye is opened by stretching and pressing *apan-gapradesa* (lateral end)

-From the right hand, medicine is instilled into open eye

-These drugs can be held, either in a conch shell, small vessels or in a piece of cotton.

-The medicine fallen on the eye from a height of two *angulis*

-The medicines should fall on the eye, should be wiped out with a piece of cotton or soft cloth immediately (with in one or two min.)

-a mild fomentation with warm water is beneficial in *kaphaj-vataj* diseases

Complications-⁽⁸⁾

- If there is pressure on eyes, there is risk of redness.
- If the medicine has *tikshna* or *ushna* properties, there is a risk of burning, redness, suppuration and visual loss.
- If the medicines are very cold, they may produce immobility of the eye, excessive tears, foreign body sensation and pricking pain.
- If the quantity of the medicine is excessive, it can produce a strange feeling in the eye lids, complete closure of the eye lids, involuntary lid movements, foreign body sensation and inability to open lids and withstand blowing wind
- If the medicines are not wiped out properly, it may induce discomforts like tears, foreign body sensation and pain

Drugs of Aschyotana-

Charaksamhita has selected following drugs on the basis of *dosha-dushti*

- *Vatajnetrarogharaaschyotana-* *Erandmula, Jayanti, Bramhi, Bilwadipanchmula* are boiled in water and instilled as hot eye drops.
- *Pittajnetrarogharaaschyotana-* *Prithwika, Darvi, Manjishtha, Laksha and Madhuka* are boiled

in water with sugar and instilled as cold eye drops.

- *Kaphajnetrarogharaaschyotana-* *Shunhti, Triphala, Musta, Nimba, Vasa* are boiled in water and instilled as warm eye drops.

According to *Sushrutasamhita-*

- For *Abhishyanda-Triphala*
- For diseases due to *vata, pitta, rakta- Stristanya*
- For painful diseases due to *vata* and *rakta-* milk and ghee

Basic principles of ocular pharmacology-

The mechanism of action of *kriyakalpa* can be understood in light of the following basics in modern pharmacology.

Routes of drug administration-

In *kriyakalpa* mucosal and coetaneous routes are commonly used. Mucous membrane is good absorbing surface.

Solubility and Bioavailability-

For the drug to be absorbed through mucous membrane and skin, it should be water and lipid soluble. In suspension the drug is present as small particles kept suspended in aqueous medium by dispersing agent.

Vascularity of Absorbing surface-

The drug absorption is directly proportional to the vascularity of absorbing surface. Increased blood flow is brought about by massage or local application of heat enhances absorption of drug.

Two types of absorption mechanism-

- a) Vascular
- b) Corneal

Water soluble drugs are easily absorbed through the vessels wall i. e. permeability and vascularity. So in disease where blood vessels especially external eye are not involved, medicines which are in the watery form are better. Therefore modes of

applications modulated watery preparations are *aschyotana* and *seka*, specially in anterior chamber of eye is *aschyotana*. Fat soluble factors easily gets absorbed through cornea. So in *vata* and *pitta* predominant diseases *ghrita* is perfect for *aschyotana*. Honey has both vascular as well as corneal absorption and *kaphashamaka* property so used in *kapha* predominant disease.

In case of ocular therapeutics conjunctiva and cornea form the main absorbing surfaces. The corneal epithelium is lipophilic so fat soluble drugs readily penetrates through it. The stroma is hydrophilic so water soluble drugs easily cross stroma. Therefore a drug should be amphipathic having both lipophilic and hydrophilic nature to penetrate all layers of cornea.

Physical state of drug-

According to the Richardson, substance with molecular weight less than 100 can pass readily through all membranes and those of more than 500 do not. To overcome this limitation in molecular size same ophthalmic drug are prepared in higher concentration, so that by the law of mass action, a small amount will reach the anterior chamber and an effect will be obtained.

CONCLUSION

Eyes are most dominant sense organ and 'Right to sight' is one of the basic human rights. To achieve this, various measures mentioned in our classics like *aschyotana* which is the simple and effective should be adopted for preventive and therapeutic purpose. *Aschyotana* is one of the therapeutic medicines where exact amount, dosages, schedule, frequency etc. have already been standardized by ancient authors. It is up to science to correlate observations with their scientific explanations

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