

## A CRITICAL ANALYSIS OF NETRA KRIYA KALPA

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### ABSTRACT

Ayurveda is one of the oldest medical sciences in the world. It says sarvendriyanam nayanam pradhanam. That is eyes are the most important organ in human body and so care should be taken to protect them. In classical texts of Ayurveda, Shalaky Tantra is a specialized branch, where Netra rachana, kriya shareera, Netra roga nidana, samprapthi and chikitsa have been explained in detail. Great Acharyas of Ayurveda have given an elaborative description not only about curative but also about preventive aspects of eye diseases. Netra kriya kalpas are the main therapeutic procedures that are explained for both management and prevention of eye diseases. In this article an effort has been made to analyse the mode of action of netra kriya kalpas.

**KEYWORDS:** Ayurveda, Shalaky Tantra, Netra kriya kalpa, Therapeutic procedures

### INTRODUCTION

Eyes are the finest gift of god to mankind; the world appears beautiful through the vision which he perceives through his eyes .without eyes the whole world appears dark, however rich or sophisticated he may be. For a blind man the day and night makes no difference.

The importance of netra among all sense organ is well known to mankind. Ayurveda quotes ‘Sarvendriyanam nayanam pradhanam’ indicating the significance of eyes<sup>1</sup>. Shalaky Tantra is a branch of Astanga Ayurveda which deals with the study of eyes, ears, nose, oral cavity, head and neck. It includes rachana and kriya shareera of urdwa-jatrugatha avayavas, with the nidana, samprapthi, chikitsa and

preventive aspects of diseases of these organs<sup>2</sup>.

To maintain the health of eyes, our Acharyas have explained some tropical treatments to eyes called as Netra Kriya Kalpanas. Kriya kalpa is a two letter word. The word kriya means therapeutic action and kalpana means specific formulations. So Netra Kriya Kalpana means Specific formulations having specific therapeutic action on Eyes<sup>3</sup>. In Ayurvedic Samhitha Acharyas has quoted many kriya kalpa yogas for eyes rather than internal medications<sup>4,5,6</sup>

The Netra kriya Kalpanas mentioned by different Acharyas are as follows;

**Table – 1- Showing Netra kriya Kalpanas mentioned by different Acharya**

SL NO	CHARAKA	SUSRUTHA	SHARANGADHARA
1	Bidalaka	Seka	Seka
2	Aschotana	Aschotana	Aschotana
3	Anjana	Anjana	Anjana
4		Tarpana	Tarpana
5		Putapaka	Putapaka
6			Pindi
7			Bidalaka

The details of kriya kalpas with their probable mode of action has been discussed here.

### **I. SEKA<sup>7</sup>**

It is indicated in acute condition of the diseases. Medicated liquids are poured on closed eye lids in a thin and continuous stream from 4" height, for a specific time, according to dosha. After the treatment, eyes should be washed or cleansed with Luke warm water and advised not to see the bright things and not to take kapha vridhikara ahara and vihara.

**INDICATIONS:** In the acute condition, it can be done at any time, like burning sensation of eyes, dry eyes, watery eyes, itchy eyes, conjunctivitis, foreign body sensation in eyes.

Benefits:

1. Roga nivrutti (relieved from disease)
2. Swabhavika Varna (getting natural color to eyes)
3. Karya padutwam (perfectness in the function of the part)
4. Vedhana santhi (relief from pain etc.)

**PROBABLE MODE OF ACTION:** As medicine is poured over the eyelids continuously for a specific time, it helps to improve the circulation locally thereby reduces the inflammation and strengthens the muscles, nerves of eyes.

### **II. AASCHOTANA<sup>8</sup>:**

Instillation of few drops of medicines to the open eye from a height of 2 angula is called as Aschotana.

**INDICATIONS:** Aschotana is the first line of treatment in the eye diseases. Aschotana is contraindicated in night & should be done only during day time:

Morning in Kaphaja diseases

Afternoon in pittaja diseases

Evening in vataja diseases

**BENEFITS:** This will relieve

Ruk, todha - Painful conditions

Kandu - Scratching

Kharsha - Irritation or foreign body sensation in eyes.

Asru - Excessive watering.

Dhaha - Burning sensation of eyes.

Raga - Redness or congestion.

Paka, sophia - Features of inflammation in eyes.

**PROBABLE MODE OF ACTION:** The drug mixes with tears, distributes uniformly over the eyes, giving lubrication, soothing and surface protection to eyes.

### **III. PINDI OR KAVALIKA OR PINDIKA<sup>9</sup>**

Pindi is the modification of bidalaka. Instead of directly applying the pastes to the eyelid, they are packed in thick cotton cloth & are kept tightly over the eyelids.

**IV. BIDALAKA<sup>10</sup>:** Bidalaka is the application of medicated paste to the outer surface of the eye lids. The indications and actions of both Pindi and Bidalaka are same.

**Indications**

Dhaha - Burning

Upadheha - Discharges in eyes.

Asru - Excessive tears

Sopha - Swelling

Raga - Redness/Congestion

Todha/Bheda/Ruk - Different types of pain

Kandu – Itching sensation of eyes.

Kharsha - Foreign body sensation

After the application of medicines, following measures are contraindicated.

> Excessive speaking, jokes, anger, grief, weeping etc.

> Wandering under the sun

> Day sleep

Otherwise they may produce complications like itching/dryness of the skin, peenasa and disturb vision.

**PROBABLE MODE OF ACTION:** The drug is absorbed through the skin of eyelids, leading to vasodilatation and improves circulation.

**V. ANJANA<sup>11</sup>:**

Application of medicine to the internal surface of lid margin from kaneenaka sandhi to apanga sandhi, with anjana salaka is known as anjana.

**INDICATIONS:**

In pitta pradhana - tikta-kashaya rasa

In kapha pradhana - katu-tikta kashaya rasa

In rakta pradhana - kashaya-tikta rasa

**BENEFITS:** Anjana scrapes and expels the dosha from netra, vartma, sira, netra kotha, and asru vaha srotas, through the mouth, nose, and eye. It is also used for dushti prasadhana (improvement of vision), and to

remove the roughness of dushti (dushti snehana)

In vata roga at evening, pitta roga at nights and in kapha roga morning anjana has to be done.

**PROBABLE MODE OF ACTION:** The drug penetrates through the conjunctiva, increases the lacrimal secretions and improves the circulation.

**VI .NETRA TARPANA<sup>12</sup>:**

It is one among seven kriya kalpa; it gives nourishment to the eyes and cures the vata pitta vikara (preventive as well as curative aspects).

**INDICATIONS:**

- |                     |                |
|---------------------|----------------|
| • Tamyata           | Abhikhata      |
| • Stabdata          | Katina vartma  |
| • Krichronmeela     | Rookshata      |
| • Vata pitta vikara | Sushkata       |
| • Jihvata           | Sirotpata      |
| • Sira harsha       | Arjuna         |
| • Abhishyanda       | Anyatovata     |
| • Vata paryaya      | Seerna pakshma |
| • Adhimanda         | Sukra roga     |

**Samyak tarpita lakshana**

1. Prakasa kshamatha (tolerance to light)

2. Swasthyam (health)

3. Vishada netram (lightness in the eyes)

4. Laghu lochana (sound sleep)

5. Swabhavika nidra (normal color and complexion of the parts)

6. Swabhavika Varna of netra anga (normal colour and complexion of the parts)

7. Vyadhi nivaaranam (health gain)

8. Lagutva in nimeshonmeshanam (easy in closing and opening of eyes)

**VII.PUTAPAKA<sup>13</sup>:** Indications and procedure is like tarpana but the medicine

preparation is specific. i.e, the medicine is (swarasa) extracted by puta paka vidhi

### **Indications**

Visual disturbances - timira, avila darsana  
Dry eye conditions - rooksha, parisushka, ativisushka  
Allergic conditions - klishtha vartma  
Diseases of eye lids - hardened painful eyelids and damaged eyelashes  
Structural deformities - squint, Shrunken eyeball.  
Difficulty in the movement of eyeball and eyelids: Stabdhatta, krichronmeelana  
Diseases of Sukla mandala – Sirotpata, Siraharsha, Arjuna  
Diseases of Krishna mandala – Savrana sukla, Avranasukla,  
Diseases of Sarvagatha – Abhisyanada, Suskakaksi paaka, Anyatovata, Vataparyaya  
Diseases of Drushtimandala – Timira, Kacha, Linganasha, Hruswajadya, etc  
**BENEFITS:** Same as Tarpana.

**PROBABLE MODE OF ACTION:** In Tarpana and Putapaka sneha dravyas are used, so it will cross corneal epithelium easily as it is having lipophilic and hydrophilic property<sup>7</sup>. Even contact time is more, so drug absorption is more. These procedures enhance lubrication and do nourishment of all structures of the eyes.

### **DUSCUSSION**

Netra kriya kalpas has several advantages over oral administration.

1. The drugs given orally will undergo digestion under the influence of pachaka pitta. The drugs administered through kriya kalpa are not digested by it and possibly rectify accumulated dosha.
2. The oral drugs find it difficult to cross the 3 major anatomical barriers in the eye such

as blood-aqueous, blood-vitreous and blood-retinal barriers to reach the target tissues of the eye. The topical drugs can cross and reach the target tissue and achieve higher bio-availability and desired action<sup>14</sup>.

3. The corneal layers have a special absorption mechanism - pharmacokinetically. Corneal epithelium is lipophilic; stroma- hydrophilic, endothelium behaves lipophilic<sup>15</sup>. Hence for issues of drug absorption across cornea one must consider the tri-laminar i.e. lipid – water –lipid, domain of various anatomical layers. So ghrita preparations which are mrudupaka or madhyamapaka are used for all netra kriya kalpas<sup>16</sup>.

4. The tissue contact time of the drugs can be controlled in kriya kalpa and they are selected depending upon the stage and severity of the disease.

5. The medications can be judiciously selected. i.e, to increase ushna or sheeta, snigdha or rooksha in the local area. Thus high concentration of the drug can be achieved by applying the medicines.

6. The action of kriya kalpas is faster whereas the action of internal medicine is time consuming and late.

Thus high concentration of the drug can be achieved by applying the medicines to eye. Seka, Aschotana, Pindi and Bidalaka procedures are mainly used for external segmental disorders of eye (vartma gata sandhi, shukla, Krishna mandala diseases) and as a purva upakrama of anjana tarpana and Putapaka. Anjana, putapaka, tarpana for internal segmental disorders of eye (sarvagata and drustimandala).

## CONCLUSION

Kriya-kalpas are well designed procedures to treat ocular disorders outlined by our Acharyas. They were aware of the mechanism of blood- aqueous, blood-vitreous, blood-retinal barriers. Thus topical application of drugs is more beneficial than oral route especially in ophthalmic disorders. This may be the reason that kriya-kalpas are mentioned only in netra vikaras section and not in any other sections.

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