



## Role of Kriyakalpa in Maintaining Eye Health-Review

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### Abstract

*Shalaky Tantra is one among 8 specialities of Ashtanga Ayurveda, which deals with the diseases occurring above the clavicle. So it mainly deals with the sense organs; disease affecting them and their management. In Ayurvedic Samhitas the local treatment procedures of Netra are explained in the name of netra kriyakalpa. The promotion of the visual acuity was considered as one of the priorities in the branch of Shalaky tantra of Ayurveda. Many procedures and formulations have been described to cure the ophthalmic disorders. Present conventional system of medicine has topical and systemic administration of drugs to the eye which are highly inefficient and there is a need for controlled, sustained release, particularly for conditions that affect all parts of the eye. Sushruta, the father of ancient Indian surgery, advocated Kriyakalpa is the main therapeutic procedure for Netra Rogas, along with other forms of treatment. He has described this in a separate chapter in Uttartantra of Sushruta Samhita. Some of the proven principles of management procedures and medicaments include intake. of purified medicated ghee (Ghritapaana), nourishing eye bath therapy (Tarpana), and processed liquid instillation through nostrils by drops or powders (Nasya), eye bath therapy (Pariseka), application of medicated paste on eye lids (Bidalaka) and collyrium (Anjana). These procedures improve the vision by strengthening of the ciliary muscles, maintaining unctuousness of the eye ball, proper accommodation of the lens, delays the senile opacity of the lens etc. Thus Kriyakalpa can be done in healthy as well as diseased eye conditions to improve the ophthalmic health.*

### Introduction

The word 'Kriyakalpa' itself consists of two distinct and separate words which are 'Kriya' and 'Kalpa'. Kriya refers to the therapeutic procedures that are undertaken or carried out to cure the disease and the word Kalpa refers to the specific medicine or formulation that is selected for use in that specific disease indication.

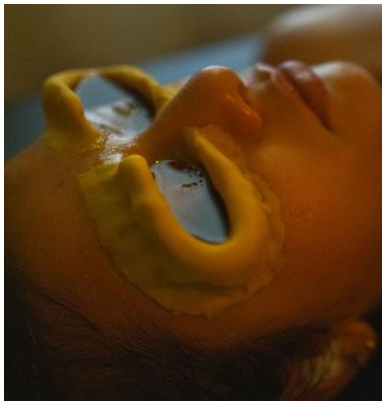
In Ayurveda, "Chikitsa" means the treatment that is used and it is classified into 3 types, known as Trividha Chikitsa. It consists of (1) Antahparimarjana- treatment done to cleanse or purify from within (ii) Bahyaparimarjana-treatment done to cleanse from external means and (iii) Shastrapranidhana - treatment that involves surgical intervention. Kriyakalpa is a

Bahyaparimarjana Chikitsa (External Therapy) and it has many advantages. Kriyakalpa procedures when adopted follow the protocol of Purvakarma (Pre-treatment), Pradhaankarma (Main treatment) and Paschaatkarma (Post-treatment). Purvakarma includes Panchakarma procedures to remove vitiated Dosha from the

body, following which, the selected Kriyakalpa is then administered to remove any remaining Dosha as Bahyaparimarjana Chikitsa. Pradhaankarma is the actual type of Kriyakalpa administered and Paschatkarma includes the rules and regulations to be followed after the procedure e.g. Samsarjana Krama (Dietary regime).

**Classification of Kriyakalpa:**

**(Tarpan)**



**(Ashchyotana)**



**(Putpaak)**



**(Anjan)**



**(Seka)**



**(Pindi)**



(Vidalka)



**Tarpan:** In this procedure the medicated ghee is kept in eye for a specific time by special arrangement. It gives nourishment to the eyes and cures vata and pitta eye disorders. Used in the management of Progressive refractive errors, Computer vision syndrome, tiredness of eyes and retinal diseases.

**Indication:** Useful in weak eye sight (myopia and hypermetropia).

Gives very good results in children up to 18 years of age in progressive myopia.

Glaucoma, Keratitis, Dry eye syndrome, Computer vision syndrome, Squint, Conjunctivitis, Optic nerve atrophy, Cellulitis, Entropion.

**Putpaak :** The procedure is same as tarpana but the medicine extracted from herbs by putapaka procedure, usually carried after tarpana.

**Indication :** Dry eyes, Refractive errors, Night blindness, Cataracts, Glaucoma, Conjunctivitis, Inflammatory lesions of the eye, Computer vision syndrome, Eye strain.

**Seka:-** In this procedure medicine is poured on closed eye continuously from four inches height for specific time according to doshas, it is indicated in acute inflammatory conditions.

**Indication :** Itching, Eye strain.

**Ashyotana:** In this process the medicated eye drops are poured into eye from a specific height. Eye drop concept in modern science are meant only to instil one or two drops that may stay on

the surface of the eye only for one or two second, but in aschyotana the drug which is in the form of an aqueous solution falls on the cornea and conjunctiva from a safe height of 3 to 4 inch continuously for about 10 minutes. Here the drug has an access of entering the conjunctival blood vessels about more than 100 times as compared to that of modern eye drops.

**Anjan:** Netra Anjana is part of a topical treatment called Netra Kriyakalpa, which is used to manage eye diseases. The active ingredients of the medicine are absorbed through the cornea and conjunctiva.

**Indication:** Refractive errors, Dry eyes, Conjunctivitis, Watery eyes, Computer vision syndrome, Eye strain, Cataract, Glaucoma, Night blindness, and Ptosis.

**Pindi:** Pindi vidhi, or Netra Pindi, is an Ayurvedic eye treatment that involves applying a medicated paste to the eye in a cloth. Combines herbs and oils to create a paste that nourishes the eyes. The paste is covered with cloth and placed over the eye in a small pottali. The eyes are allowed to rest and absorb the paste for a set amount of time. The pottali is carefully removed after the recommended time.

**Indication:** Conjunctivitis, Inflammatory eye diseases, Post-injury eye treatment, Eye swelling, and Itchy eyes.

**Vidalak :** Vidalaka is an Ayurvedic eye procedure that involves applying a medicated paste to the upper and lower eyelids, leaving the eyelashes out.

**Indication :** inflammatory conditions of the eyes, such as burning, discharge, watering, swelling, redness, and a foreign body sensation.

### Material and Methods

#### Preferred Time:

#### For Tarpana and Putapaka

**Anytime :** when the pain gets aggravated. Morning and evening are generally suitable.

#### For Anjana

#### For Aschyotana and Seka

Morning and evening

Based on vitiated Dosha, done as follows:

1. Kaphaja Roga : Morning
2. Pittaja Roga : Noon
3. Vataja Roga : Evening

### Mode of action of Tarpan

In this process the medicated ghee is made to

### Sneha Dharana Kal a according to DoshaPrakopa (Matrakala) and Adhishthan of Rog

Doshabheda	Su.Sa.	As.Hr.	Sh.Sa.	Bp
Healthy Eye	500	500	500	500
Kapha Prakopa	600	500	500	500
Pitta Prakopa	800	600	-	600
Vata Prakopa	1000	1000	1000	1000

*Su.Sa. - Susruta Samhita, As.Hr. - Ashtanga Hrudaya, Sh.Sa. - Sharangadhara Samhita, Bp - Bhavaprakasha.*

stand over the eye for a specific time which is in the form of suspension. So its particles do not leave the eye and contact time is more and more drugs are absorbed. It will cross corneal epithelium barrier easily due to its lipophilic property.

Adhishthana	Su.Sa.	As.Hr.	Sh.Sa.	Bp
Sandhigata	300	300	500	500
Vartmagata	100	100	100	100
Shuklagata	500	500	600	
Krishnagata	700	700	700	700
Drishtigata	800/1000	800	800	800
Sarvagatha	1000	1000	1000	1000

*Su.Sa. - Susruta Samhita, As.Hr. - Ashtanga Hrudaya, Sh.Sa. - Sharangadhara Samhita, Bp - Bhavaprakasha.*

### Mode of action of Putpaak

Mode of action Procedure is same as Tarpana but medicine preparation is different as Swarasa is extracted by Putpaka Vidhi. Contact time is same as Tarpana but absorption is more than Tarpana because it is a suspension of fat and water soluble contents so having both lipophilic and hydrophilic property to penetrate cornea.

### Retention time of Putapaka is

1. In Lekhana - 100 Matrakala
2. In Snehana - 200 Matrakala
3. In Ropana Putapaka - 300 Matrakala

### Mode of action of Sek and Achyotana

In this process medicine is poured on closed eye continuously from four inches height for specific time according to Dosha. The medicine is absorbed through the skin of eye lids. The active principle is aqueous extract so tissue contact time is very less as it get diluted with tears and drained to naso lacrimal duct.

There are 3 types of Seka mentioned in our classics like;

1. Snehanapariseka which is indicated in

Vatajanetraroga and 400 Matrakala duration.

2. Lekhanapariseka indicated in Kaphajanetraroga and 200 Matrakala.

3. Ropanapariseka indicated in Pitta and Raktajanetraroga and 600 Matrakala duration.

There are 3 types of Ascyotana and quantity mentioned in classics like

1. Snehana Ascyotana - 10 drops,
2. Lekhana - 8 drops,
3. Ropana - 12 drops.

### Mode of action of Anjan

Bioavailability is more due to more tissue contact time.

There are 3 types of Anjana mentioned in classics like

1. Lekhana,
2. Ropana
3. Prasadana
4. Astanga Sangraha added Snehana as 4th Upakrama

### Mode of action of Pindi

Medicine is absorbed through skin of eye lid and



due to heat of poultice local temperature is increased resulting in local vasodilatation.

### Mode of action of Vidalak

Mode of action Medicine is absorbed through skin as in Pindi and Parisheka. Mechanical effect of pressure helps in reducing IOP by vasodilatation and aqueous drainage.

### Discussion

Kriyakalpas are the boon to Ayurveda. Kriyakalpa has its own mode of action which helps in treating eye disease. The aim of Kriyakalpa procedures are seems to be tissue oriented where the therapeutic concentration of the drug can be achieved by concentration of drug, tissue contact time, molecular weight of drug, absorption of drug, bio-availability of drug. In Kriyakalpa, various drugs can be selected as per vitiated Dosas and types of diseases for the procedures. The procedures of medications are modulated to ensure maximum absorption of drug.

### Conclusion

Kriyakalpas are the bahiparimarjana chikitsa have the superiority over internal medicine in overcoming barriers like blood vitreous, blood aqueous and blood retinal barriers. The faster action of kriyakalpas compared to internal medicine and their bypassing of digestive processes contribute to their efficacy. Bhrajaka pitta's role in kriyakalpas is significant, and the control of tissue contact time allows for tailored treatment based on disease location, stage, and severity. Specific procedures like Aschyotana, Seka, Pindi, and Bidalaka prove effective for anterior segment disorders, while Anjana, Putapaka, and Tarpana are suited for diseases in the posterior segment, especially in non-inflammatory conditions.

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