



## Review Article

### TREATMENT PLAN IN SAMA AND NIRAMA AVASTHA OF NETRAROGA

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#### Article info

##### Article History:

Received: 17-05-2025

Accepted: 18-06-2025

Published: 25-07-2025

#### KEYWORDS:

Sama, Nirama,  
Netraroga,  
Kriyakalpa, Ocular  
Surface  
Inflammatory  
Disorders.

#### ABSTRACT

Acharya Sushruta have explained the use of Kriyakalpa and another Chikitsa according to Sama and Niram avastha of Netra Roga. The concept of Ama is the most important fundamental principle of Ayurveda in understanding the physiopathology of the diseases. Aamvichar has its unique significance in the Nidan and Chikitsa of disease. Sama avastha in Netraroga includes Udirna Vedana (acute pain), Rag (redness), Shotha (swelling), Nistoda (pricking sensation) etc. Whereas Nirama Netraroga lakshana include Kandu (itching), Mandvedana, Prasanna Varnata etc. Aqueous tear deficit, immune cell infiltration into the corneal stroma, loss of goblet cells in the conjunctiva, and increased cytokine levels in the tears and aqueous humour are among the changes that current research says occur in chronic inflammation of the eyes. Seka, Bidalaka and Ashchyotana are the procedures performed in Aama avastha of the disease which are advised in inflammatory process of eyes, whereas Tarpana, Putapaka and Anjana are performed in Nirama Avastha of the disease and has the ability to reach the posterior segment of eye. These topical treatments have transcorneal permeation and has ability to act by both lipophilic and hydrophilic pathway. It acts by decreasing Kapha in Netra Roga thereby decreasing symptoms of Netra Roga.

#### INTRODUCTION

In the context of Ayurvedic medicine, Ama refers to the events or factors which arise as a consequence of the impaired functioning of Kayagni. Inadequate Jatharagni power may ultimately lead to undigested Ahara Rasa.

Ama, or digestion, is the fundamental cause of all ailments.<sup>[1]</sup> According to Acharyas, Alpa Bala of Agni causes improper creation of Adhya Dhatu (Rasa Dhatu) in the Amashaya, leading to Ama production. Blockage of Strotasa promotes vitiation of Dhatu and Dosha, resulting in various illnesses.<sup>[2]</sup> The hypofunctioning of Ushma (Agni), according to Acharya Vagbhatta, results in the improper formation of the Rasa. The term "Ama" describes the state of Apakva Rasa.<sup>[3]</sup>

Sama Avastha in Netra produces symptoms like severe pain, pricking sensation, lacrimation, discharge etc.

Nirama Netra is characterized by minor swelling, itching, and an increase in eye color.

The Acharya have mentioned the therapeutic procedures to cure ocular diseases. These therapeutic procedures are given according to Sama Nirama avastha of Netra roga, which plays important role in management of ocular disorders.

Chronic inflammation results in a number of negative effects, including decreased aqueous tear production, immune cell infiltration into the corneal stroma, corneal nerve loss, goblet cell loss in the conjunctiva, limbal stem cell loss, and elevated cytokine levels in the tears and aqueous humor.

Seka, Aashchotana, Bidalaka given in Sama avastha of Netra roga advised in Inflammatory condition of eyes. With the ability to reach the posterior part of the eyes, Tarpana, Putapaka, and Anjana are employed in Nirama avastha of ocular illnesses.

#### AIMS AND OBJECTIVES

To elaborate and to discuss the treatment plan in Sama and Nirama Avastha of Netra Roga.

#### Access this article online

Quick Response Code



<https://doi.org/10.47070/ayushdhara.v12i3.1947>

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## MATERIAL AND METHOD

Literature will be gathered from periodicals, dissertations, and other traditional Ayurvedic textbooks.

The details of treatment plan in *Sama* and *Nirama* avastha of different *Netraroga* in *Shalakya tantra* are discussed in details.

*Sama Netra Lakshana - (Apakva Avastha)*

*Udirna Vedana* (acute pain), *Netra Lalima* (redness of eyes), *Shotha* (swelling of eyes), *Gharsha* (roughness), *Nistoda* (pricking sensation), *Ashrustrava* (watering from eyes).

*Lakshana of Nirama Netra (Pakwa Avastha)*

*Mand Vedana* (pain is reduced), *Kandu* (itching), *Sarambha* (swelling), *Ashru prashantata* (lacrimation reduced), *Prashasta Varnata* (enhancement of eye colour).<sup>[4]</sup>

## Ocular Surface Inflammatory Disorder (OSID)

OSID is characterized by inflammatory dry eye and is caused by systemic conditions which produce an extended inflammatory response in the ocular connective tissues, such as the conjunctiva, LA, and MGs. Sjögren's syndrome, cicatrizing conjunctivitis, graft versus host disease, and allergies are among the many systemic conditions that induce OSID. The multifactorial ocular surface condition known as dry eye disease (DED) causes symptoms and has a high estimated prevalence of 5 to 50% worldwide.<sup>[5]</sup>

The primary pathogenic feature of OSID is cellular inflammation, which repeatedly permeates the M and LG subconjunctival ocular surface tissues. This worsens the ocular surface's autoinflammatory insult, which disrupts homeostasis and causes DED symptoms. Among the results are:

1. Prolonged infiltration of leukocytes into the conjunctiva, resulting in transudation and dilatation of the conjunctiva.<sup>[6]</sup>
2. Penetration into the conjunctiva's subepithelial layer, which directly damages the conjunctival epithelium through inflammation.<sup>[10]</sup>
3. cellular infiltration into the LG acini, which causes decreased tear production and gland atrophy<sup>[9]</sup>.
4. Myeloperoxidase release from cellular infiltration around meibomian glands<sup>[7]</sup>, which results in meibomian gland diseases.<sup>[8]</sup>
5. The corneal nerve and corneal epithelium are both impacted by low-grade inflammatory invasion into the cornea's surface.<sup>[11-13]</sup>

## Damage to Target Organs in Inflammatory Disease and Complications of the Ocular Surface

The mucous membrane that covers the surface of the eye is called the conjunctiva. It is composed of an

underlying loose stroma composed mainly of Collagen IV and a stratified epithelium. Aquaporins<sup>[14]</sup>, mucins<sup>[15]</sup>, and proteins such lubricin<sup>[16]</sup> are the ways that conjunctival epithelial cells produce water. On the outermost layer of the epithelium, mucin is released from intraepithelial vesicles that create a glycocalyx that anchors the soluble mucin to the conjunctival surface and provides surface wettability to the hydrophobic epithelium. Because of its multiple roles, the conjunctiva is crucial to preserving ocular surface homeostasis.

## Treatment Plan for Sama Nirama Avastha of Netra Roga

In *Sama Netra Avastha* as a *Sarvadehika Chikitsa Langhana*, *Madhura Tikta dravya Sevana* and *Dipan Pachana Chikitsa* is given. For *Sthanik Chikitsa Seka*, *Aashchotana*, *Bidalaka* are used. In *Nirama Netra Avastha Shamana* and *Rasayana Chikitsa* used as *Sarvadehik* treatment. Procedures like *Tarpana*, *Putapaka*, *Parisheka*, *Anjana* used for *Sthanik Chikitsa*.

## Kriyakalpa use in Netra Roga

In *Shalakya tantra*, *Kriyakalpa* is the primary ophthalmic therapeutic procedure, whereas *Panchkarma* serves as the foundation for *Kayachikitsa*.<sup>[17]</sup> *Kriyakalpa* refers to a particular formulation utilized in Ayurvedic ophthalmology as a kind of treatment. It includes selection of specific procedures, preparation of special drug form and finally its proper application to the eyes. When we look at our standards for therapeutic methods used in the management of eye illnesses, we see that they contain both topical and systemic treatments. The reason could be that systemically delivered medicines do not cross the blood-aqueous, blood-vitreous, and blood-retinal barriers. Topical treatments, called '*Kriya Kalpa*', are currently in use.

## Tarpana

*Tarpan Dravyas Ghrita* is made with milk and *Kwatha* from *Kashmarya*, *Madhuk*, *Kumuda*, *Utpala*, *Urupaga*, *Kushtha*, *Brihati*, *Tamala*, *Mamsi*, *Sariva*, *Prapaundarika*, *Darbhamula*, and *Kasheru*. This *Ghrita* can be used. *Ksheerapaka* is prepared using *Aja Yakrita* by *Agaru*, *Priyangu*, *Nalada*, and *Devadaru*.

*Tarpana* duration: a) Based on *Dosha*- i. *Vata*- 1000 *Matra* ii. *Pitta* - 800 *Matra* III. *Kapha*-600 *Matra* b) According to *Adhisthana*: i. *Vartma* - 100 *Matra* ii. *Sandhi* - 300 *Matra* iii. *Shukla*- 500 *Matra* IV; *Krisna*-700 *Matra* V; and *Drishti*- 800 *Matra* VI. *Sarvagata* measures 1000 *Matra*.<sup>[18]</sup>

How *Netra Tarpana* Works: Because of its *Sanskaranuvartana* feature, *Ghrita* acquires the properties of components while maintaining its own. Along with *Balavardhaka*, *Ojovardhaka*, *Vayasthapana*, *Agni Deepana*, and *Dhatuposhaka*, *Ghrita* is the most

prominent in *Jangama Sneha*.

In *Sutrasthana Snehadhyaya*, *Acharya Charaka* identified *Akshi- Tarpana* as one of the 24 *Snehapravicharana* in the 13<sup>th</sup> chapter. *Charaka* suggests that *Ghrita* alleviates *Pittaja* and *Vataja* problems, promotes *Dhatu*, and enhances *Ojas*.<sup>[19]</sup>

### **Putapaka**

This technique uses a special arrangement to keep an oily (ghee) substance in the eye for a predetermined amount of time. Simple ghee or oil is utilized as a suspension form of medication. As a result, its particles do not leave the eye, and the contact time increases, allowing more medications to absorb. Because of its lipophilicity, it can easily pass the corneal epithelial barrier. *Putapaka* can be done in the same conditions as *Tarpana*. *Putapaka* can be administered to people who are eligible after the aggravation of *Doshas* has subsided.<sup>[20]</sup> Indications: It is used when the eyes become tired following *Tarpana*, or to rejuvenate the eyes. *Putapaka* is utilized to provide energy to the eyes and help them overcome weariness.

### **Seka**

*Seka* is a medicinal solution poured as a stream from four *Angulas* onto a closed eye for a specified amount of time based on *Dosha*. It is especially effective for severe disorders that cannot be treated with *Aschyotana*. In this technique, "medicine is poured on the closed eye (on eye lids) continuously from four inches height for a specific time according to *Dosha*," allowing the medicine to be absorbed via the skin of the lids.<sup>[21]</sup>

### **Anjana**

*Anjana* is a type of eye treatment that is given in the form of an ointment. When the patient has completed the *Shodhana* therapies of *Vamana* and *Virechana*, and the *Nirama Dosha* is producing eye problems, *Anjana* should be performed.

*Anjana* are classified into three groups since we must treat diseases caused by three distinct humours.<sup>[22]</sup> 1) *Lekhana anjana* is mentioned for *Kapha* prevalent conditions. 2) For conditions connected to *Pitta*, administer *Ropana Anjana*. 3) *Prasadana Anjana* is given in *Vataja Vikara*.

**Preparation of Anjanas:** *Ropananjanas* with *Tikta dravya*, *Prasadana* with *Madhura seeta dravya*, and *Dravya* with *Kashaya*, *Amla*, *Lavana*, and *Katu* in *rasa* comprise the *Lekhana anjanas*.<sup>[23]</sup>

### **Ashchyotana**

It is recommended as the first procedure in all eye problems. Instilling medicated ghee/drops into the eyes at regular intervals. This is beneficial for dry eyes, myopia, allergy and inflammatory eye problems.

*Aschyotana* is an *Adya upakrama* in which medicinal drops are injected into the open eye from the do *Angula* (about 2") height at *Kaninika Sandhi*. The most often used medicinal drop for *Aschyotana* is *Triphala Kwath*, which contains *Amalaki* (*Embllica officinalis*), *Bibhitaki* (*Terminalia bellirica*), and *Haritaki* (*Terminalia chebula*).

**Indications:** The first stage of eye disease occurs when the *Doshas* are not significantly vitiated, particularly *Pitta Dosha*. It is used to treat eye issues such as moderate pain, redness, watering, foreign body sensation, itching, burning sensation, and vessel congestion. It is not advised to take it at night.

### **Dosage and classification<sup>[24]</sup>**

- a) *Lekhana: Kapha Roga* (8 drops)
- b) *Ropana* (12 drops): *Rakta Roga* and *Pitta*
- c) *Vata Roga's Snehana* (10 drops).

**Pindi:** Bandaging a medicated bolus over the closed eye for a set period of time. *Abhishyandha* and *Adhimanth* also refer to it as *Kavalika*.<sup>[25]</sup> Indications include acute stages of various eye disorders, particularly *Abhishyanda*.

It lowers the inflammation caused by trauma or wounds.

### **Bidalaka**

Apply a medicinal paste to the eyelids for a set period of time. It is the application of medicinal paste to the eyelids, excluding the eyelashes.<sup>[26]</sup> Indications include acute phases of an eye illness, burning, swelling, discharge, redness, pain, foreign body sensation, and so forth.

### **DISCUSSION**

*Netra Roga* should be treated according to *Sama* and *Nirama avastha* using procedures like *Anjana*, *Tarpana*, *Bidalaka*, *Pindika* etc. Mode of action of these *Kriyakalpa* follows the transdermal pathway for absorption. As the eyelid skin has a thinner stratum corneum, there by showing lower impedance which could be a reason for higher drug permeation through eyelid skin. These topical treatments have transcorneal permeation. They act by both hydrophilic and lipophilic pathway. These therapeutic procedures work by decreasing *Kapha* in *Netra* and help in reducing symptoms.

### **CONCLUSION**

We use ophthalmic therapies, just like in Ayurveda, either systemically (oral *Chakshushya dravya*) or locally (*Kriyakalpa*). Any pharmacotherapeutic's primary goal is to achieve an effective concentration at the site of action for long enough to cause a reaction. Every kind of *Kriyakalpa* has a therapeutic impact in practice. It is up to the science to correlate the observations with their scientific



explanation. According to *Sama* and *Nirama avastha* of *Netra roga*, as a treatment approach, the current review research aims to correlate *Kriyakalpa*, an Ayurvedic ocular therapy. Numerous medications can be chosen based on the disease stage and type, and they can be employed in different *Kriyakalpa* treatments based on necessity. Drugs are administered topically and systemically to the eye in the current conventional medical system, which is very ineffective. Controlled, sustained release is required, especially for disorders affecting the posterior region. Since several implanted and non-implantable drug delivery devices have been created that are unsatisfactory and cause more negative side effects, researchers are focusing more and more on safe, efficient drug delivery techniques for all areas of the eye. *Sama* and *Nirama avastha* of *Netra roga* should be taken into consideration while enrolling patient into thesis which is mostly brush aside. *Sama avastha* in *Netra Roga* is similar to inflammatory conditions of eyes. *Kriyakalpa* like *Anjana*, *Tarpan*, *Putpaka* works efficiently in *Nirama Netra avastha* whereas *Bidalaka*, *Pindika*, *Ashchotana* in *Sama avastha* of *Netra Roga*.

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**Cite this article as:**

Pote Karishma Ravindra, Kotangale Sumedha Yogesh. Treatment Plan in Sama and Nirama Avastha of Netraroga. AYUSHDHARA, 2025;12(3):272-276.

<https://doi.org/10.47070/ayushdhara.v12i3.1947>

**Source of support: Nil, Conflict of interest: None Declared**

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