

## ***Kriyakalpa- Ayurvedic Therapeutics in Netra Roga***

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### **Abstract**

*Ayurveda* is science of life and its basic aim is to maintain health of human beings and cure the illness. It is one of the oldest scientific medical systems in the world, with long record of clinical experience. Eye is most important organ in the body, which is *Adhithana* of *Darshanendriya*. We must protect and take loving care of this delicate organ, because good vision is necessary for social as well as intellectual development of individual. Diseases of eye, nose, ear, throat comes under the heading of *Urdhwajatrugata Vyadhis*. Among all of them *Acharya Sushruta* in *Uttartantra* described eye anatomy, eye diseases and its treatment more in detail as compared to other *Indriyas*. *Kriyakalpa* is main therapeutic procedure of *Netra Roga*, described in separate chapter in *Uttartantra* of *Sushruta Samhita*. In this review article details about *Kriyakalpa*, their indication, types, mode of action and its importance in *Netra Roga Chikitsa* will be discussed.

### **Keywords**

*Ayurveda, Netra, Uttartantra, Kriyakalpa*



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## INTRODUCTION

Sight is precious gift of god. Eye is most important sense organ. The importance of *Netra* in all sense organ is described in *Ayurveda* as “*Sarvendriyanam Madhye Nayanasya Pradhanatavata*”<sup>1</sup>.

*Shalaky Tantra* is one among eight specialities of *Ashtang Ayurveda*. *Urdhwajatrugata Vyadhis* are explained in *Shalaky Tantra*. In *Sushruta Samhita Urdhwajatrugata Vyadhis* are explained in *Uttartantra*. *Acharya Sushruta* has described in detail about eye anatomy, 76 *Netra Roga* with their symptoms and treatment. To explain local therapeutic procedure for eye disorders *Acharya Sushruta* explained separate chapter named *Kriyakalpa Adhyaya* in *Uttartantra*.

The word *Kriya* means therapeutic procedure and *Kalpa* means special formulations. *Kriyakalpa* is local therapeutic used for various eye disorders. According to eye diseases, it includes selection of special drug, then its preparation procedure in specific form and finally proper application of eye.

*Acharya Sushruta* mentioned five *Kriyakalpas* as *Tarpana*, *Putapaka*, *Seka*, *Aschyotana* and *Anjana*<sup>2</sup>. *Acharya Sharangdhara* mentioned seven *Kriyakalpas*

among these five are same as *Sushruta* two added *Pindi* and *Bidalaka*<sup>3</sup>. *Vagbhata* also added some new concepts like *Avagunthana* for *Abhishyanda*<sup>4</sup>. Though *Acharya Charaka* has not described all *Kriyakalpa* in details but explain local treatment of eye in form of *Bidalaka*, *Aschyotana* and *Anjana* along with various formulation<sup>5</sup>. *Chakradatta* has described complete chapter for *Netraroga* with many formulations and *Bahirgunthana Vidhi* for acute eye condition<sup>6</sup>.

*Acharya Sharangdhara* described *Kriyakalpa* in successive order first procedure used in *Amavastha* (acute eye condition) like *Aschyotana*, *Seka*, *Bidalaka*, *Pindi* and then in *Niramavastha* (after subside of acute features) like *Tarpana*, *Putapaka*, *Anjana*.

### 1. *Aschyotana* :

*Aschyotana* is *Adya Upakrama* in which medicated drops are instilled into open eye from *do angula* (approximate 2”) height at *Kanineeka Sandhi*. Most commonly used medicated drop for *Aschyotana* is *Triphala Kwath* containing *Amalaki* (*Embllica officinalis*), *Bibhitaki* (*Terminalia bellirica*) and *Haritaki* (*Terminalia chebula*) in same proportion.

### Indications-

Initial stage of eye disease when *Doshas* are not severely vitiated specially *Pitta Dosha*.

It is used in eye condition like mild pain, redness, watering, foreign body sensation, itching, burning sensation, congestion of vessels etc.

It is contraindicated in night.

#### Classification and doses-

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

#### 2. *Seka*:

*Seka* is defined medicated solution poured as stream from 4 *angula* on closed eye continuously for specific time according to *Doshas*. It is more beneficial in those conditions which are strong and cannot cure with *Aschyotana*<sup>7</sup>.

#### Indications-

In acute and inflammatory condition of eye diseases and severe *Pitta* predominant diseases. It is used in condition like redness, oedema, watering, discharge, exudation, pain, foreign body sensation, photophobia, burning sensation etc.

#### Classification and doses-

- a. *Lekhna* (200 *Matra*)- *Kapha Roga*
- b. *Ropana* (600 *Matra*)- *Pitta* and *Rakta Roga*

- c. *Snehana* (400 *Matra*)- *Vata Roga*

#### 3. *Bidalaka*:

It is application of medicated paste to eyelids externally except at eye lashes<sup>8</sup>.

#### Indications-

Acute stages of eye disorder.

It is used in condition like burning sensation, swelling, discharge, redness, pain, foreign body sensation etc.

**Classification-** (according to thickness of medicated paste)

- a. 1 *angula* thick- *Uttam*
- b. 1/3 *angula* thick- *Madhyama*
- c. 1/4 *angula* thick- *Heena*

#### 4. *Pindi*:

It is medicated paste kept in thin cloth and applied on eye lid named *Pindi*<sup>9</sup>.

#### Indications-

Acute stages of all eye diseases in general and *Abhishyanda* in particular<sup>9</sup>.

It reduces inflammation produced due to trauma or wound.

#### 5. *Tarpana*:

Medicine mainly lukewarm medicated *Ghrita* or *Taila* is filled over eye upto complete immersion of eye lashes for specific time by making circular boundary around orbital fossa using dough or divers goggle. Eye should be closed and opened regularly.

**Indications-**

Mainly in *Vata* predominant condition like, Visual disturbances – *Timir, Aviladarshan*  
 Dry eye condition- *Shushkakshipaka, Parishushka, Darun vartma*  
*Abhishyanda, Adhimanth, Anyatovata, Siraharsha, Sirotkata, Stabdha*  
 Atrophic and degenerative changes of *Drishtipatal* and *Drishtinadi*, Palsies

**Tarpana duration:**

- a) According to *Dosha*-
  - i. *Vata*- 1000 *Matra*
  - ii. *Pitta*- 800 *Matra*
  - iii. *Kapha*- 600 *Matra*
- b) According to *Adhithana*-
  - i. *Vartma*- 100 *Matra*
  - ii. *Sandhi*- 300 *Matra*
  - iii. *Shukla*- 500 *Matra*
  - iv. *Krisna*- 700 *Matra*
  - v. *Drishti*- 800 *Matra*
  - vi. *Sarvagata*- 1000 *Matra*

**6. Putapaka :**

Procedure of *Putapaka* is same as *Tarpana*, but medicine prepared is *Swarasa* extracted by *Putapaka Vidhi*. Contact time is same like *Tarpana*.

**Classification-**

- a) *Snehana* ( 200 *Matra*)- *Vata Roga*
- b) *Ropana* (300 *Matra*)- *Pitta Roga*
- c) *Lekhana* (100 *Matra*)- *Kapha Roga*

**7. Anjana :**

It is topical application of medicinal paste to inner surface of lid margin or in conjunctival fornix with the help of *Anjana Shalaka* or finger from *Kanineeka Sadhi* to *Apanga Sandhi*.

**Indications-**

When *Doshas* are located only in eyes and acute symptoms of ocular problem has subsided.

Disease should be clearly manifested indicating its *Doshadushti* and *Adhithana*<sup>10</sup>.

**Classification-**

- a) *Lekhana* – *Kapha Roga*
- b) *Ropana* – *Pitta* and *Rakta Roga*
- c) *Prasadana*- *Swastha*

**MODE OF ACTION**

Various medicines used in *Kriyakalpa* are absorbed through *Akshiksha*, eye lid and orbit, *Sandhi* (junctional area), *Sira* (blood vessels), *Shringataka Marma* (vital point), *Grana* (nasal region), *Asya* (oral cavity), *Strotas* (minute channels). This absorption of medicine will expel vitiated *Doshas*<sup>11</sup>.

In *Aschyotana* and *Seka* medicine absorbed by mucous membrane, vascular system and through skin of lids. Decoction of raw drugs used as medicine so its tissue contact is very less and gets diluted with tears and drain into nasolacrimal duct.

In *Anjana* tissue contact time is high; drug concentration is also high hence absorption is maximum. Systemic route has limitation because of blood aqueous barrier larger size molecule cannot cross this barrier and do not enter in eye. Sclera allows free passage of big size molecules.

In *Tarpana* most medicine is absorbed through cornea and conjunctiva. Corneal epithelium and endothelium is lipophilic so only fat soluble drug readily penetrates. Stroma is hydrophilic hence only water soluble drug can penetrate the stromal layer. To penetrate all layers of cornea drug should be lipophilic as well as hydrophilic in nature.

Medicine used in *Pindi* is absorbed through skin of lids and due to heat of poultice local temperature is increased resulting in vasodilation, help to drain toxin from eye. In *Bidalaka* medicine is absorbed through skin as in *Pindi* and *Seka*. Mechanical effect of pressure helps in reducing IOP by vasodilation and aqueous drainage.

### **ADVANTAGES OF KRIYAKALPA**

*Kriyakalpa* has several advantages over oral administration.

The drugs administered through *Kriyakalpas* are not metabolized systemically, probably

will rectify accumulated *Doshas* locally and in less time.

*Kriyakalpa* can be selected depending upon stage and severity of diseases and so tissue contact time of drug can be controlled.

Many oral drugs have difficult to cross blood aqueous, blood vitreous and blood retinal barrier to reach target tissue. The topical drug made considering anatomy and physiology of ocular tissue can reach there and achieve higher bioavailability.

### **CONCLUSION**

For the eye disorders local therapeutic procedure is as much important as systemic management. Main aim of pharmacotherapeutics is to attain an effective concentration at site of action for sufficient period of time to elicit response. Various drugs can be selected according to stage and type of eye diseases and can be used in various *Kriyakalpa*. *Ayurvedic* ocular therapeutic procedures are relevant according to fundamentals of modern pharmacology. Through all above explanation and observation, it is very obvious to conclude that *Kriyakalpa* plays important role in *Netra Roga Chikitsa*.

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