



LITERARY REVIEW OF PINDI(POULTICE) KRIYAKALPA IN NETRA ROGA

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ABSTRACT

The great *Ayurvedic Acharya* mentioned in the *Samhita*: "*Sarvendriyanam Nayam Pradhanam*". The eye is the most critical organ, and it is essential to maintain eye health and effectively alleviate possible disorders. The *Acharyas* described detailed local treatments for managing and treating eye diseases using simple but effective methods called "*Kriyakalpa*". *Kriyakalpa* is a treatment method that refers to procedures where drugs/medications are used in or around the eyeball as a method of therapy. *Kriyakalpa* has more advantages over oral drug administration because it allows more time for bioavailability. Modern science also uses drug absorption through the skin and is considered an effective method of drug delivery, since *Pindi*(poultice) is the modified procedure of *Bidalaka*, and also follows the same route. This article discusses the literary review, mode of action and significance of *Pindi*(poultice) in *Netra Rogas*.

Keywords: *Kriyakalpa*, *Netra roga*, *Pindi*(poultice)

INTRODUCTION

Shalaky Tantra is the branch of *ayurveda* that deals with *Urdhwajatrugatha vikaras*, that is, *Netra*, *Karna*, *Nasa* and *Mukha roga* and various treatments are

explained for it in the classics. The *Acharyas* described detailed local therapies for managing and treating eye diseases using simple but effective meth-

ods called "Kriyakalpa". Kriyakalpas is the most effective, preventive and curative topical medicine for strengthening eyes and improving vision. It also plays a vital role in overcoming complications and avoiding disease progression. Kriyakalpas are topical treatments with trans-corneal permeability and the ability to cross the blood-eye barrier. Acharya Sushrut described five kriyakalpas: *Tarpana*, *Putrapaka*, *Seka*, *Ashchotana* and *Anjana*.^[1,2] Later, Acharya Sharangdhara added two more Kriyakalpa, *Pindi*(poultice), and *Bidalaka*.^[3] *Seka*, *Aschotana*, *Pindi*(poultice), and *Bidalaka* are used in *amavastha* and acute stages of the *netra rogas*. And *Tarpan*, *Putpaka*, *Anajana* is used in *niramavastha* of *netra rogas*.

AIMS AND OBJECTIVES: To study *Pindi*'s mode of action.

MATERIALS AND METHODS: A detailed review of modern and *Ayurvedic* literature was conducted.

Modern medical books, *Ayurveda* textbooks, previous studies, recent research writings, scientific articles, PubMed, Google Scholar, etc., were referenced for this purpose.

PINDI(POULTICE):

Introduction: *Pindi*(poultice) is the modification of *Bidalaka*. Instead of directly applying the pastes to the eyelids, they are packed in thick cotton cloth and kept tightly over them.

1. **kavalika:** A paste of medicines covered in cotton gauze/cloth and placed over the eyelid is called *kavalika*.^[4]
2. **Pindi(poultice):** Take Paste of medicines in 1 kol matra, tie it in cloth, and place it over the eyelid called *Pindi*(poultice).^[5]
3. **Avagutana:** It is a procedure in which powders of the drug are tied to a cloth and used in *Netra roga*.^[6]



Fig-01.kavalika



Fig-02.Pindi(poultice)

SYNONYMS: Avagutana, kawalika.

INDICATIONS:^[7]

Netrabhishyanda(conjunctivitis),Adhimantha
Netragat Vrana (eye injury), Netra Shoth(edema),
Netra Kandu(,itching),Vatakapha Netra Rog.
Pindi(poultice) procedure:^[8]

- Finely grind the ingredients specified for Pindika(poultice) kalk.
- After that, prepare kalk Kalpana by mixing the specified liquid medicine.
- By taking fresh medicines, there will be no or very little need for liquid.
- Then, take kalk in the form of a berry [1 kol=6 gm], tie it in a piece of cloth, or wrap it, and use it externally by closing the eyes.

Table 01: Netra Rog Dosha And Pindi(poultice) Guna(properties) ^[9]

Sr No	Netra Rog Dosha	Pindi(poultice) Guna (properties)
1	Vata	Singdha, Ushan
2	Pitta	Sheetal
3	Kapha	Ruksha, Ushan

Table 02: Different Pindi(poultice) Yogas for Specific Eye Conditions-

Sr No	Eye Conditions	Pindi(poultice) Yoga
1	Vataj Abhishynda	leaves, root, skin of Erand (<i>Ricinus communis</i>). ^[10,11]
2	Pittaj Abhishynda	Dhatri (<i>Phyllanthus emblica</i>)/ fruits of Mahanimba (<i>Melia azedarach</i>) ^[11,12]
3	Kaphaj Abhishynda	Leaves of Shigru (<i>Moringa olifera</i>) ^[13,14]
4	Pittakaphaj Abhishynda	leaves of Nimba(<i>Azadirachta indica</i>) / Triphala ^[14,15]
5	Vatkaphaj Abhishynda	Shunthi(<i>Zingiber officinale</i>), leaves of Nimba(<i>Azadirachta indica</i>), ,saindhava ^[15]
6	Tridoshaj Abhishynda	Triphala ^[16]
7	All Abhishynda	Triphala with ahifen jal (<i>Papaver somniferum</i>) ^[16]
8	Raktaj Abhishynda	[Lodhra (<i>Symplocos Racemose</i>). ^[17]
9	Shohta, Kandu And Vedana.	Shunthi(<i>Zingiber officinale</i>), leaves of Nimba(<i>Azadirachta indica</i>), ,Saindhava ^[17,18]
10	Non-specific Purva Rupa Lakshanas	Srivasa, Ativisha (<i>Aconitum heterophyllum</i>) and Lodhra(<i>Symplocos racemose</i>),Saindhava ^[19]
11	Burning eye	Leaves of Madayantika (<i>Lawsonia inermis</i>), Fleshy pulp of kumari (<i>Aloe vera</i>) ^[20]
12	pain, burning and watering of eye	Flowerbuds of Jatipuspa (<i>Jasminum grandiflorum</i>) ^[20]
13	prevention of eye infections.	Leaves of Shigru (<i>Moringa oleifera</i>) with honey ^[20]

14	Infections of eye	Tender leaves of <i>Amra Pallava</i> (<i>Mangifera indica</i>), Leaves of <i>Bhumyamalaki</i> (<i>Phyllanthus niruri</i>), Seeds of <i>kalonji</i> (<i>Nigella sativum</i>) ^[20]
15	Night blindness	Leaves of <i>Bhringaraja</i> (<i>Eclipta alba</i>) ^[20]
16	Nodular swellings of the eye lids	Roots of <i>Gunja</i> (<i>Abrus precatorius</i>) ^[20]
17	conjunctivitis	Leaves of <i>Babula</i> (<i>Acacia arabica</i>), Leaves of <i>Nimba</i> (<i>Azadiracta indica</i>) ^[20]
18	painful eyeball	Leaves of <i>Lajjalu</i> (<i>Mimosa pudica</i>) ^[20]
19	Painful eye, visual disturbances, Glaucoma	Leaves of <i>Bilwa</i> (<i>Aegle marmelos</i>), Root paste of <i>Yasti</i> (<i>Glycerrhiza glabra</i>) ^[20]

Mode of action:^[21,22,]

The skin of the eyelids is very fragile and delicate; it is attached to loose areolar tissue to cover the adjacent muscles and has no fat. The Mode of action depends on the route of administration. *Pindi*(poultice) is applied to the skin covered in a cloth. It quickly penetrates healthy skin. Since the epidermis acts as a lipid barrier, drug solubility depends on the lipid solubility of the contents. In contrast, the dermis is freely permeable to many dissolved substances. It promotes easy and fast absorption of drugs, leading to practical results.

Solubility and bioavailability: Drug absorption depends on solubility and local conditions at the use site. In *Pindi*(poultice), the drug's contact time with the tissues is longer than in *Ashchyotana* and *Seka*, which increases bioavailability. The longer the drug exposure time, the faster the absorption rate and the greater the effect. When *Pindi*(poultice) is applied hot, it increases the vasculature of the area and, therefore, absorption.

Recent studies of the role of Pindi(poultice) in eye disorders:

1. **Keratoconus:**^[23] *Pindi*(poultice) with *Triphala* and *Aamalaki*, which contain vitamin C and vitamin C, play a vital role in collagen synthesis and strengthen the cornea by reducing the distance between collagen fibrils and increasing bonding in the glass. It has also been reported

that increased oxidative markers and decreased antioxidant capacity in keratoconus suggest that oxidative stress may be involved in developing this pathology. *Triphala's* phenolic acids, flavonoids and tannins have antioxidant effects. In *Pindi*(poultice), the drug is absorbed through the skin of the eyelids, and the heat of *Pindi*(poultice)'s local temperature is increased, resulting in vasodilation. *Pindi*(poultice) will help flatten the corneal curvature through its mechanical pressure and strengthen the cornea through its medicinal effect.

2. **External Hordeolum:**^[24] *Nimbadi Pindi*(poultice) is used in *anjanamika* (stye). *Nimba* is *Chakshushya*, *Krimihara*, *Kandughna* and *Rakta Shodhaka*. *Pitta Shamana* occurs due to its *Tikta*, *Kashaya Rasa*, *Laghu*, *Ruksha Guna* and *Sheeta Veerya*. *Lodhra* has *Tikta*, *Kashaya Rasa*, *Laghu*, *Ruksha Guna* and *Sheeta Veerya*; it does *Pitta Shamana*. It also has *Chakshushya*, *Shothahara* and *Shleshmahara* properties. It is a route of drug delivery through the skin of the eyelids. So, tissue contact is more important and helps significantly absorb drugs, reducing the local temperature by relieving inflammation and itching, imparting a soothing effect and relieving pain. The drugs have anti-infective and anti-inflammatory properties so that patients can quickly relieve symptoms.

3. **Disiform Keratitis:**^[25] Pulp of *Aloe barbadensis* used in *Pindi*(poultice) reduces ocular discomfort with its highly cooling nature. Anthraquinone albin and emodin act as analgesics, antibacterials and antivirals. Beta carotene and vitamins C and E in the pulp act as antioxidants. Bradykinase helps to reduce excessive inflammation when applied topically to the skin.

CONCLUSION

Pindi(poultice) can be considered a practical and straightforward method for ocular absorption of medicine, mainly in the anterior part of the eyes, and used primarily in *abhishtyanda*, *anjanamika*(external hordeolum), keratoconus, keratitis and the first stage of the diseases (*Ama* condition). Apart from *Seka* (which can be done during *Amavastha*), these procedures help to keep the medicines on the eyelids for a long time and help control medication absorption through the eyelids. The contact time between the tissue and therapy can be monitored and will not undergo systemic digestion. Since *Pindi*(poultice) is directly kept on eyelids, contact time between medicine and tissue is more, and the bioavailability of the drug is more. Absorption during *Pindi*(poultice) may be higher than *Bidalaka* as a pressure factor that acts apart from all other aspects. Hence, *Pindi*(poultice) has proved to be significantly helpful in *netra rogas*.

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