BIDALAKA: A REVIEW ARTICLE

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ABSTRACT
Shalakya Tantra, the potent branch of Ayurveda which deals with the Urdhwajatrugata-vikaras, gives prime importance to eye diseases. As far as sense organs are concerned Eye stays at the top due to its irreplaceable function. Hence to treat eye disease and preserve the vision, one should always work on priority. Netra is said to be the Pradhana Indriya and to protect the eye sight should be the prime objective. One should make all sincere efforts to protect eyes and treat eye diseases. Sushruta has mentioned 76 eye diseases out of which treatable diseases are treated with systemic as well as local treatment. Kriyakalpas are one group of special methods of drug administered locally into the eye for the treatment of eye diseases. Being local therapeutic procedure, fast action and penetration of drugs through ocular tissue raises importance of Kriyakalpa in ocular diseases. Bidalaka is one of the important Kriyakalpa explained in ayurvedic texts, which is having a vivid utility in many Netra Rogas. Bidalaka is used in condition of Daha (burning sensation), Updeha (stickiness), Ashrusrava (watering), Shopha (oedema) & Raga (congestion) in the eyes. The probable mode of action of Bidalaka Kriyakalpas are yet to be explored. In this era of escalating of eye diseases, such an attempt is highly essential to uphold the scientific credibility of Bidalaka.

Keywords: Bidalaka, Kriyakalpa, Netrarogas, Ocular Treatments, Urdhwajatru-vikaras.

INTRODUCTION:
Ayurveda is a science of human well-being in physical, social as well as mental aspect. The treatment mentioned for every disease is not only to cure the disease but also to enhance the health and quality of life. Kriyakalpas, the specialized ocular treatment modalities, affirms the absolute necessity of unique approach towards Netrarogas, thus highlighting the importance of eye and eye diseases.

Ocular Therapeutics can be broadly divided into two i.e. either in the form of Kriyakalpa (local therapeutics) or systemic therapeutics. Kriyakalpas are the topical ocular therapeutics indicated in various Netra Rogas which has several advantages over oral administration of medicines as it provides more time for bio availability. Contemporary sciences also make use of transdermal absorption of medicines and are considered as an efficient method of drug delivery.

Kriyakalpa is a combined word of two distinct concepts which are Kriya which means therapeutic procedure and Kalpa which means medicinal formulation. The action of Kriyakalpa can be correlated with Panchkarma. Panchkarma is used for sharir parimarjan that is detoxification of body and settle tridosha. Kriyakalpa acts similarly locally. It settles the raised level of doshas and improves health of eyes. Before Kriyakalpa whole body shodhana with the help of panchkarma is important, that enhances the action and absorption of the Drug.

KRIYA
Kri + Sa prataya. The variants of which are arambha, shiksha, nishkriti, pujana, sampradhara, upaya, karma, cheshta and chikitsa. Kriya means to do, to perform or to practice: the word kriya refers here to medical treatment.

KALPA
Klip +Ghan pratay- kalpa Means practicable, feasible, proper or competent method of curing the diseases or treatment of sick. Hence, the word Kriyakalpa literally means to perform proper treatment.

DEFINITION OF KRIYA KALPA
No specific definition of Kriyakalpa has been given by the ancient scholars except the commentator Dalhana who opines as to prepare various preparations like Tarpana, Putapaka etc. for the treatment of eye diseases. Verily speaking, generally, Sushruta has advocated the line of treatment to all the diseases in the first stage, whereas, in case of failure in bringing down the disease process medically, he advises parasurgical interference.

There are 7 numbers of Kriyakalpas in Netra Vigyan explained by different acharyas. Sushruta mentioned 5 types of kriyakalpa. Acharya Sharangdhara added two kriyakalpa into it; named Bidalaka and Pindi. Types of kriyakalpa mentioned by different acharyas-

1. Tarpana- the word means feeling of satisfaction. In this procedure medicated ghrita is hold over eyeball with continuous blinking action of eyes for a stipulated time according to intensity and nature of aggravated dosha.

2. Putpaka- this procedure is similar to that of tarpana vidhi, except the drug used for this procedure is medicinal juice extracted with Putpaka vidhi instead of ghrita.
3. *Ashchyotana*- it is instillation of drops on an open eye from 2 *angula* height. The drops used may be in the form of *kwath*, *ksheera*, *sneha* or any *drava-dravya*.
4. *Seka/ Parisheka*- with eye closed, medicine is poured on eye in the form of *dhara* from the height of 4 *angula*.
5. *Anjana*- in this procedure paste or powder of medicines is used and applied over inner margin of lower lid with the help of applicator or finger tip.
6. *Pindi/ Kavalika*- this is nothing but a medicinal bandage. Paste of medicine is tied by a cloth and this pack is bandaged over the eye.
7. *Bidalaka*: *Bidal* means cat’s eye. In this *kriyakalpa* paste of medicine is applied over eyelids and periorbital area.

**AIM & OBJECTIVE:**
1. To provide detailed description of *Bidalaka* from different *Samhitas*.
2. To collect different references of *Bidalaka Prayoga* in various eye disorders in Ayurvedic texts.

**pirBaaYaa :**

ibaDalakao baihlaopao~ pxmaivavaia-t: || Saa.saM.\[.13

*Bidalaka* is defined as application of a paste over the eyelids; avoiding area of eye lashes; its procedure is similar to *mukhalepa*. *Bidal* means cat’s eye. Eye looks like cat’s eye hence called ‘*Bidalaka*’.

**Indications:**

wa%pnnamaa-o t$Nao nao~raogao ibaDalak: |

kayaao- daaopdohaEauSaaofragainavaarNa: || ca.ica.26/23

In the critical stage of the freshly occurring eye disease, *Bidalaka* (application of drugs in paste form over the closed eyelids excluding eye-lashes) should be applied to relieve burning sensation, stickiness (mucous discharge), lacrimation, swelling and redness.

**maa-a :**

tsya maa-a pir&oyaa mauKlopivaQaanavat\| Saa.saM.\[.13

*Bidalaka* is the modified forms of *Lepa Kalpana*.

*Matra*\[ of *Bidalaka* is same as *Mukhalepa* as –

*Kanishta Matra* – ¼ *angula*

*Madyam Matra* – 1/3 *angula*

*Uttam Matra* – ½ *angula*

**QaarNa kala :**

It should be removed before it get dried. If dried, it looses the property and spoils skin.

**Purvakarma :**

Before all the *Kriyakalpas*, whole body *shodhana* should be done. The medicine paste should neither be thick nor very thin. It should be semisolid paste. Before applying *Bidalaka*, patient should comfortably lying down in supine position. *Mrudu snehan* and *swedana* should be done on face and lids to relax patient and increase local vasodilatation for better absorption of drugs.

**Pradhan Karma :**

It is better to use luke warm paste for *Bidalaka*. Patient should be asked to close the eyes and paste of medicine should be applied over closed eyes in circle except on lid margin and eyelashes. Patient should be asked to keep his eyes closed. The thickness of *lepa* should be considered according to severity of disease and aggrivation of *doshas*.

**Paschat Karma :**

After *Bidalaka vidhi*, skin should be wiped out with cotton swab and lukewarm water. Wiping should be done before *lepa* gets dried.

After *Bidalaka* is applied following things are contraindicated: Sleeping during day time, being in sunlight for a long time and excessive speaking, laughing, weeping etc. If these measures are not followed it will cause itching, dryness, *Pinasa* and diminision of vision.
### Various Bidalaka Yogas

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Discussion:
As Bidalaka is applied in the form of paste over skin of periorbital area, skin permeability of drug should be taken into mind. As Bidalaka is applied over the skin. It rapidly penetrates the intact skin. Since the epidermis act as lipid barrier, the solubility of the drug depends upon the lipid solubility of the contents. Whereas the dermis is freely permeable to many solutes which helps in easy and fast absorption of drugs thus causing efficient results.

Skin thickness and permeability:
Absorption of drug has regional variation at different body sites. Skin thickness takes a large part in skin permeability. Periorbital skin and skin over lids is thinnest of all over body. Hence paste applied over this skin gets absorbed more rapidly than any other part of body.

Temperature and permeability:
The skin permeability can be changed by changing temperature. With increase in temperature and vascularity, absorption of drug increases. In Bidalaka, prior massage and mridu swedana increases temperature and vascularity of the skin area. Medicinal paste for Bidalaka should be sukhoshna i.e. warm which gives soothing effect and enhances drug permeability.

Water and lipid Permeability:
Paste for the procedure is made with either water or ghrita according to dravya solubility. Water and lipid permeability of skin enhances the drug permeability more. The epidermis layer of skin is selectively permeable for lipid and water content. Water soluble contents are absorbed through skin by a passive diffusion process. Drugs absorbed through physiological membranes finally enter the capillaries and blood stream and acts on target tissue.

Tissue contact time:
The Bidalaka is kept on skin for about 15-20 minutes depending on weather. It is wiped out before it gets dried. In Bidalaka the tissue contact time of the drug is more as compared to Ashchytotana and Seka. This increases the bioavailability. As more the contact time of drug more is the rate of absorption and more is the effect. This explains the use of Bidalaka in acute stage of disease to lower symptoms like burning, swelling, redness.

Vascularity of absorbing surface:
The absorption of drug is directly proportional to the vascularity of the applied surface. As Bidalaka is applied warm it increases the vascularity of the area hence increasing the absorption. The drugs mixed in Bidalaka possess their own property for eg. The drug mixed in Bidalaka possess their property and acts with their fundamentals for e.g. Yashtyadi lepa Bidalaka predominantly acts on raktu and pitta, its action is pitta and daha shamaka.

Bidalaka for cosmetology:
As Bidalaka is one of the type of Lepa Kalpana, it can nourish the skin and also increase its elasticity thus preventing ageing and wrinkling below the eyes. It can also be used in eye skin tag occurring with the increasing age.

According to Ayurveda:
As it is said Srotomaya Purasha the whole body consist of Sukhsma Srotasa or whole body is porous. Through this pores or channels the minute particles of drug applied in form of Bidalaka penetrates into the skin. At this stage the Upshoshana Guna of Vata Dosha contributes in the penetration and absorption of the drug. Bhrajaka Pitta present in skin is responsible for metabolism of the drug applied over the skin. Bidalaka when mixed with Ghrita can reach into the deeper tissues of the eye, as Ghrita is both hydrophilic and lipophilic in nature. Bidalaka mixed with Madhu can also reaches the deeper tissue because of its Sukshma Guna and its Yogvahi property.

CONCLUSION:
As Bidalaka is an external application procedure it can be used easily. It is useful in acute eye conditions or in Amavastha of the Netra Rogas. It gives soothing effect to the eyes, when used in appropriate condition in appropriate amount and for appropriate time it gives effective results.

Drugs taken systemically goes under digestion while drugs applied locally directly gets absorbed through blood stream and acts on target tissue. This makes Kriyakalpa selective line of treatment over systemic one. Oral drugs need to face various barriers like blood aqueous barrier, blood-vitreous barrier, blood-retinal barrier etc, while local therapy provides higher concentration in less
time. In *Kriyakalpa*, potency of drugs can be increased by altering temperature, concentration, tissue contact time and way of application while in systemic drug delivery one should treat according to *Pachaka pitta* and *jatharagni*. *Bidalaka* is useful to control acute symptoms and instant relief. It is user friendly and economic. Patient can carry on the treatment at home if once demonstrated. The side effects are comparatively less or negligible as there is no actual contact with ocular structures like conjunctiva or cornea. Thus *Bidalaka* treatment can be used widely in various eye diseases.

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REFERENCES –
2. Acharya Sushruta, *Sushruta Samhita with English translation of text and Dalhana’s commentary along with critical notes* Vol -3 ; Edited by P.V.Sharma;Chaukhambha Visvabharati Varanasi -1;Edition : Reprint 2005, Utttarantra, Chapter-18, Verse 4;pp210
6. Bhavaprkash of Shri Bhavamisra;Edited with the Vidyotini Hindi Commentary by Bhisagratha Pandit Sri Brahma Sanskara Mishra (Part II), Chaukhambha Sanskrit Sansthan,Varanasi;Uttarsthan Chapter 14,verse 10-18 ,pp. 982
7. Kaviraj shri Govindadas Sen Virachita Bhaishajya Ratnavali, Siddhiprada;By Prof. Siddhinandan Mishra, Chaukhamba Surabharati Prakashan, Varanasi, Chapter-64, Verse 10-18 ,pp. 982