

**ANCIENT OCULAR THERAPEUTICS: SCIENTIFIC BASE AND BOON  
FOR OCULAR DISORDERS****Dr. Pratibha Upadhyay\***

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Institute of Ayurveda, Jaipur,  
India.**ABSTRACT**

Ayurveda the science of life has its contribution in treating diseases as well as in prevention of diseases. Ophthalmology is getting advanced day by day in terms of precise knowledge of disease pathology, diagnosis and treatment but although it is lacking still behind in treating so many diseases too. There are very constraints in drug delivery system to eye that affect the treatment of ocular disease especially of posterior segment and retinal disorders. Keeping in view of these grievances ancient ayurveda procedures that are so meticulously described in ayurvedic texts can be better utilized in

modern science for the sake of human benefit. So in this article we give bird sight view of the all the procedures that are mentioned in ayurveda in a very meticulous way.

**KEYWORDS:** kriyakalpa, vataja pitaja, ophthalmology, netra, chikitsa, tarpana anjana,**INTRODUCTION**

Eyes are the windows to this beautiful world. Just close your eyes and then realize the feeling who don't possess it. So no one can praise the beauty of nature without eyes.

But there is more to nature other than beauty, nature provides cure from diseases too. Here in context to ocular therapy scientists from the world are continuously engaged in discovering the latest and most appropriate, site specific drug delivery route especially for retinal disorders and diseases of optic nerve.

On the other hand if we go through in depth knowledge of ayurvedic kriyakalpa procedures mentioned in our texts, we find immense and precise procedures for all kinds of eye diseases.

So now a days the whole world is facing towards ayurveda for fulfilling the gray areas of modern science.

Kriyakalpa is the basis of the ophthalmic disorders. Each wing of ayurveda has come out with visistha chikitsa apart from its samanya chikitsa, for instance basti chikitsa happens to be chikitsardha for kayachikitsa, raktamokshana for shalya chikitsa, likewise kriyakalpas are chikitsaardha in shalaky chikitsa. When we refer to our classics for the therapeutic measures adopted in the management of eye diseases, we find that the management includes many of the topical treatments along with systemic ones. The reason might be that the drugs administered systematically may not cross the blood aqueous, blood-vitreous and blood-retinal barriers. Now the topical measures came into play and these are called as 'Kriya Kalpas. Ayurveda has highlighted unique procedures taking into consideration the strength of prodromal symptoms (nidana), bodily humours (dosha), disease site (vyadhi adhisthan) and other causative factors (samprapti ghatak.).

The word Kriyakalpa built from two words: Kriya and Kalpa. Kriya means therapeutic procedures for chikitsa used to cure the disease and Kalpa means practicable, possible, manner of acting, a prescribed rule. So Kriyakalpa means specific formulation used for therapy in Ayurvedic Ophthalmology. It includes selection of specific procedure, preparation of special drug form and finally its proper application to the eyes.

### **Definition of Kriyakalpa**

No specific definition of Kriyakalpa has been given by the ancient scholars except the commentator Dalhana who opines that Kriyakalpa includes various preparations like Tarpana, Putapaka etc. for the treatment of eye diseases, as a local measure. Kriyakalpa are meant to alleviate the khavaigunya and sthansamsraya resulted out of vitiated doshas causing their impact on netra srotas.

### **Advantages of kriyakalpa**

It plays three roles –clinical, preventive and pharmaceutical.

- It provides increased accurate dosing to overcome the side effects of pulsed dosing produced by conventional system.
- It increases the ocular bioavailability of the drug by increasing the corneal contact time by effectively adhering to the corneal surface.
- It provides target within the ocular globe so as to prevent loss of other tissues.

- It also circumvent the barriers like drainage, lacrimation and conjunctival absorption.
- It provides comfort and better compliance to the patient and so improve therapeutic performance of drug.
- Kriyakalpas have major role in arresting the complications and progress of eye diseases.
- It also helps in assisting and maintaining the functional integrity of sense organ, and overcoming the age related disorders of eye.
- It also helps in assisting important role in preventing other urdhwajatrugata roga

### Classification

The classification of the drug is made on the basis of their action in the body as well as mode of application on different parts of the body whether locally (or) systematically. Acharya Susruta mentions Tarpan, Putapaka, Seka, Aschyotanam and Anjanam under the heading of Kriyakalp.<sup>[1]</sup> vaghbatta added vidalaka and sharangdhar added pindi.

### Seka

It is a procedure in which medicated liquid is poured over the closed eye from a height of four angulas in a thin stream. It can be used in morning, noon, evening.

### Types

snehana, ropana, lekhana.<sup>[5]</sup>

Useful in vataj, pittaja, kaphaja and raktaj disorders.

Indicated in chronic diseases.<sup>[4]</sup>

### Mode of action

Due to mechanical effect of pressure, vessels are dilated and drainage is facilitated.

Increase in local temperature causes drainage of toxins from the site of lesion.

### Ashyotana

Application of liquid medicaments in the open eye in form of eye drop into inner canthus, from height of 2 angula.

It can be used in morning noon and evening.<sup>[6]</sup>

Indicated in purvarupa stage of all ocular diseases and in complication of other kriyakalpa procedures.

It is of three types –snehana lekhana, ropana.

Doses –10, 12, 6-8 drops.

### **Mode of action**

kannanaka (inner canthus) is highly vascularised area medicine get absorbed through conjunctiva and cornea.

### **Anjana**

it is a Procedure in which medicaments- (collyrium) are applied into the eye through shalaka.<sup>[7]</sup> It is normally advised after aschyotana when amawastha is relieved.

It is applied when the doshas are located only in the eyes, vyaktaroopa. It is indicated in Pakwaawastha of eye disorders. It is indicated not only in diseased eye and also in the normal eyes to maintain the visual power properly.

Timings –morning and evening.

It is effective in symptoms like Vedana, Ragata, Daha, and Shotha.

As per texts it is drishtibala vardhana, drishti prasadana, and snehana.

### **Contraindicated**

Inflammatory condition of eyes, purvarupa of diseases, associated with jwara shirhashoola ajeerna, immediately after vamana, virechana and headbath.<sup>[8]</sup>

### **Mode of action**

Disposal time is minimum and contact time is more, absorption is maximum.

Nanoparticles diffuse rapidly and internalized in ocular tissues and cells of anterior and posterior segment to enhance their cellular penetration, protect against degradation, and allow long term delivery anjana acts in the same way.

### **Tarpana**

Tarpana is indicated especially in Vata-Pita dominating personalities suffering from eye disease.

### **Indications**

Dry eye, refractive errors, corneal opacity atrophic and degenerative condition of eye.

Contraindication—In extreme climatic condition, exhausted patients inflammatory eye diseases.<sup>[9][10]</sup>

### **Mode of Action of Tarpana**

Ghrita is supreme in Jangama Sneha and is Balavardhaka, Ojovardhaka, Vayasthapana, Agnideepana and dhatuposhaka. By virtue of its Sanskar anuvartana property, it attains the properties of ingredients without losing its own. Snehana is the supreme treatment for Vata Dosha. Grita is itself balya, chakshusya, rasayan along with other chakshyushya drugs both chakshu vaissheesika and budhivaishashika pitta enhanced, thus enhancing the power of optic nerve, and visual centres of brain. Thus causing overall improvement of visual status.,

### **Putpaka**

It is indicated when eye get fatigued after the Tarpana,<sup>[11]</sup> i.e. for rejuvenation of eyes. It is used to give energy to the eyes to overcome nourishment to the eye through Ghrita.

### **Pindi**

Medicated paste is kept in a fresh thin cloth applied on eye is named as pindi. Medicine is absorbed through skin of lid and due to heat of poultice local temperature is increased resulting in local vasodilatation. It is also called Kawalika . It is indicated in conjunctivitis, oedema, itching and ocular pain.

### **Bidalaka**

In this process medicated paste is applied to eye lids (externally except at eye lashes).medicine is also absorbed through skin as in pindi and seka.

Mechanical effect of pressure helps in reducing IOP by vasodilatation and aqueous drainage . It is also indicated in the early stage of disease.

Thus we can summarize that Inflammatory conditions of eye can be treated by seka, aschyotana, pindi, bidalaka can be done .and non inflammatory conditions are treated by tarpana putpaka, anjana.

For anterior segment disorders—tarpana putpaka, anjana aschyotana can be done and for posterior segment diseases tarpana, putpaka, anjana.

	Bioavailability	Disposal rate	Absorption
Aschyotana	+	+++	+
Seka	++	++	++
Pindi	++	+	+
bidalaka	++	+	+
Anjana	++	+	++
Tarpana	+++	+	+++
putpaka	+++	+	+++

These procedures are of immense use in and highly applicable in thirist areas of ophthalmology like progressive myopia, allergic condition of eye, posterior uveitis. cataract, glaucoma, retinitis pigmentosa, macular degeneration and other related pathologies, vascular diseases of retina, optic atrophy, diabetic retinopathy.

## CONCLUSION

In recent time the greatest challenge is to have such a treatment option that are readily acceptable to the physicians as well as patients .Drug delivery system should be such that it provides better therapeutic outcome for the respective disease concerned .Ophthalmic drug delivery is one of the most challenging endeavours facing the pharmaceutical scientists.<sup>[12]</sup>

The anatomy, physiology, biochemistry of eye render this organ exquisitely impervious to foreign substances.so the challenge is to circumvent the protective barriers of eye without causing permanent damage to the eye. In this context treatment modalities like kriyakalpa helps in serving the purpose.

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