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Review Article

THE SIGNIFICANCE OF KRIYAKALPA IN NETRA ROGA

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ABSTRACT

Ayurveda is one of the great gifts of the sages of ancient India to mankind. It is one of the oldest scientific medical systems in the world, with a long record of clinical experience. However, it is not only a system of medicine in the conventional sense of curing disease. It is also a way of life that teaches us how to maintain and protect health. Our eyes are the most important organs in *Urdhawajatrugata Sthana*. We must protect and take loving care of these delicate organs. *Urdhawajatrugata vyadis* includes the diseases of eye, ear, nose and throat. Among all of them only eye is only organ whose anatomy, diseases and their treatment are detailed described in *Uttar Tantra of Sushruta Samhita*. *kriyakalpa* is main therapeutic process for *netra roga* which is described in chapter 18 in *Uttar Tantra of Sushruta Samhita*. Different type of *Kriya kalpa*, their indications, probable mode of action and its importance in *netra roga* will be discussed in present review article.

Keywords: *Ayurveda, Kriya Kalpa, Netra, Netra Roga, Urdhawajatrugata.*

INTRODUCTION

The importance of *netra* in all sense organs is quoted in *Ayurveda* by “Sarvindriyanam madhye naynsya pradhanatavata”¹ *Shalakya tantra* is one among eight specialties of *Ashtang Ayurveda* which deals with *Urdhawajatrugata vyadis*². In *Ayurvedic samhitas*, the local treatment procedures of *netra* are explained in the name of *netra kriya kalpa*. The word *kriya kalpa* is built from two words *kriya* and *kalpa*. *Kriya* means therapeutic procedures used to cure the diseases and *Kalpa* means practical. Possible, manner of acting prescribed rule so *kriya kalpa* means specific formulation used for therapy in *Ayurvedic netra chikitsa*. It includes selection of drug specific procedure preparation of special drug from and finally its proper application to eye. *Acharya Charaka* mentioned three *kriya kalpa* in *chikitsa sthana* i.e *Bidalaka, Aaschyotana* and *Anjana*³. *Acharya Sushruta* mentioned five *kriya kalpa* i.e *Seka, Aaschyotana, Anjana, Tarpana* and *Putpaka*⁴. *Acharya Sharangadhara* mentioned 7 *kriya kalpa* five of them are same as *Sushruta* and added *Pindi* and *Bidalaka* to them⁵.

INDICATION OF KRIYA KALPA

Tarpana- It give nourishment to the eyes and cures the *vata – pitta vikara* it is indicated mainly in *Tamiyati, Rukshata, Sushka-netra, Ati-daruna, Pakshmpat* and *Ati-Rogunta*⁶.

Putpaka- Its indication is same as *tarpana*⁷.

Seka- It is indicated in acute conditions.

Aschyotana- It is indicated as first procedure in all eye diseases⁸.

Anjana- It is indicated when *doshas* are located only in eye and when the signs and symptoms get started. It has *lekhan* property.

Pindi- Also known as *Kavalika* it is indicated in *Abhishyandha, Adhimanth*⁹.

Bidalaka- Also called as *Varthma lepa*. It is indicated in early stage of diseases.

OCULAR PHARMACOLOGY

Ocular pharmacotherapeutics can be delivered by four methods¹⁰.

1. Topical instillation in to conjunctival sac as in the form of drops ointment gel and ocuserts.
2. Peri ocular injection – these include subconjunctival, subtenon, retro- bulbar and peri bulbar injection.
3. Intra ocular route-intracameral injection (into anterior chamber) intravitreal injection (into vitreous cavity)
4. Systemic administration –in the form of antibiotics and steroids.

Eye drops are the simplest and most convenient method of topical application. It is instilled in two forms i.e aqueous solution and aqueous suspension.

In solution drugs are totally dissolved but it's quickly diluted by tears and drains in to NLD. So tissue contact time is less in

suspension tissue contact time is higher than solution because the drug is presents as small particles and kept suspend in aqueous medium.

Ointments and gel increases bioavailability of drugs by increasing the tissue contact time and by preventing dilution and drainage of active ingredients. Ocuserts form a system of drug delivery through membrane .These can be placed in upper or lower fornix to a week. The corneal epithelial tight junction and lipid –water-lipid sandwich layer provides mechanical and chemical barrier for the drug absorption. The lipophilic and hydrophilic substance can be effectively delivered. Permeability across sclera depends on size and weight of molecules.

MODE OF ACTION OF KRIYA KALPA BASED ON OCULAR PHARMACOLOGY

Tarpana- In this process the oily (ghee) substance is kept in eye for a specific time by special arrangement. Simple ghee or oil is used as medicine which is the form of suspension. So its particles do not leave the eye and contact time is more and more drugs are absorbed. It will cross corneal epithelium barrier easily due to its lipophilic property.

Putpaka- Procdure is same as *tarpana* but medicine preparation is *Swarasa* extracted by put *paka vidhi*. Contact time is same as *tarpana* but absorption is more than *tarpana* because it is a suspension of fat and water soluble contents so having both lipophilic and hydrophilic property to penetrate cornea.

Seka- In this process “medicine is poured on closed eye (on eye lids) continuously from four inches height fir a specific time according to *dosha*” so the medicine is absorbed through skin of lids.

Aschyotana- The medicated drops are put into eye from the height of two inches on open eye. Decoctions of raw drugs are used as medicine so its tissue contact time is very less and it get diluted with tears and drains in to NLD.

Anjana- In this application of medicine to the internal surface of lid margin from *kaneenika sandi* to *apanga sandi* with the *anjana saalaka*. So its bioavailability is more due to more tissue contact time.

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.

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.

CONCLUSION

The main aim of any pharmacotherapeutics is to attain an effective concentration at the site of action for a sufficient period of time to elicit the response. In the light of above

fundamentals of modern pharmacology all the *Ayurvedic* therapeutics procedures can be understand by modern way. Various drugs can be selected according to the *doshas*, type of diseases and can be used in various ways by *kriya kalpa*. Through All the above explanations and observation it is very obvious to conclude that *kriya kalpa* plays a very important role in *netra roga chikitsa*.

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