

A CONCEPTUAL STUDY ON EFFICACY OF KOKILA VARTI IN THE MANAGEMENT OF PRATHAMAPATALAGATA TIMIRA WITH SPECIAL REFERENCE TO SIMPLE MYOPIA – A REVIEW

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ABSTRACT

Eyes are one among the sense organ which comprises of 70% of all our perception of the world around us. Hence, an obstruction in our eyes, which threatens our vision, is a very severe handicap indeed. Thus, our eyes are the precious gift from God and therefore deserve the best care. *Timira* is a disease of *Drishtimandala* attributing wide range of clinical condition starting from mild blurring of vision to the potential risk of permanent vision loss. Treatment modalities like *kriyakalpas* are mentioned in *Ayurvedic* Classics with the aim of promotion and preservative of vision. Much work, researches and clinical trials had been carried out in most of the Institutions, Hospitals across the globe, yet the clinical research on the promotion of eyesight from *Ayurvedic* drugs is still an initiative.

Hence this study is planned to assess the efficacy of *Varti kalpana*. The drug selected is *Kokila Varti*³ having *Chakshushya*¹ properties targeted on eye and visual apparatus.

Keywords: *Prathamapatalagata Timira, Kokila Varti, Simple Myopia*

INTRODUCTION

Ayurveda is an ancient holistic medical system that originated in India more than 5000 years ago. It is considered as the *Upavedha* of *Atharva veda*. Among eight branches of *Ayurveda* (*Ashtanga Ayurveda*) *Shalaky tantra* is one, mainly dealing with diseases occur above the clavicle specially related to sensory organs (*i.e* *Netra, Nasa, Karna, Mukha, Shiras*). It is also called as “*Urdhwanga Chikista*”.

Netra rogas have been given prime importance which is evident from the fact that 19 chapters among the 28 chapters of *Shalaky tantra* in *Sushruta samhita* are devoted to the eye diseases and their management. *Timira* is one among *Drishtigata Rogas*, which are 12 as per *Acharya Sushruta*¹ and 27 as per *Acharya Vagbhata*. According to classics, there are 6 *Patalas* (layers of eyeball) in which two are *Bahya* described as *Bahya Vartmagata Patalas*

and four covering the eye ball constitutes *Abhyantara Patalas*. *Shalaka* is an instrument used to pierce or to cut the *Netra Patalas* (Tunics of eyeball).

When the vitiated *doshas* will move in upward direction and reach the first *patala* of the eye, Patient will have blurred vision. This stage is characterized by *Avyakta darshana* by *Acharya Sushruta*¹. It is also termed as *Animitta avyakta rupa darshana* by *Acharya Vagbhata*². According to *Acharya Dalhana*¹, the innermost covering of *drushti* should be considered as first *patala*. The flow of *malas* will reach innermost region first and later gradually spread to other *patalas*.

The anatomical consideration of the *patalas* as symptoms of vitiated *doshas* situated in these constitutes *Timira*. The errors of refraction can be correlated with *Prathama patalagata Timira* i.e. Simple myopia⁹.

Myopia or short sightedness is a type of refractive error in which parallel rays of light coming from infinity are focused in front of retina when accommodation is at rest. Simple myopia or a subtype of myopia progresses during childhood and adolescent's exceeds 5-6D. Role of genetics is important in biological variation of the development of eye as prevalence of myopia is more in children with both

parents myopic. Overall reported prevalence is 20-40% of population since the sharpest rise occurs at school going age i.e. between 8years to 12years so it is called as school myopia.

As there is a great advancement in surgical ophthalmology, the treatment modalities remain expensive. The optical correction which constitutes prescription of appropriate concave lenses neither cures nor checks the progression of pathology. Not much medicine is invented to preserve the eyesight of myopic patients. Hence, there is a scope for further studies to evolve a new remedy or therapy in *Ayurveda*.

Kokila varti which comprises of *trikatu*, *loha bhasma*, *saindhava lavana*, *triphala* and *souviranjana*.

AIM AND OBJECTIVES

1. To assess efficacy of *Kokila Varti* in the management of *Prathamapatalagata Timira*⁴.
2. To review in detail about *Prathamapatalagata Timira*.

REVIEW OF LITERATURE AND DRUGS:

- Description of *Timira*, *nidana*, *laxana* and *chikitsa* in *Ayurvedic* classics
- Description of myopia in modern science

MATERIALS AND METHODS

Drug source

Table 1: *Varti Kalpana* is explained as one of the treatment principle in *Timira*. The drugs in *Kokila varti* are having *Chakshushya*¹ property.

Sl No.	Drugs	Botanical Name	Proportions
1.	<i>Maricha</i>	<i>Piper nigrum</i> Linn.	1 Part
2.	<i>Shunti</i>	<i>Zingiber officinalis</i>	1 Part
3.	<i>Pippali</i>	<i>Piper longum</i> Linn.	1 Part
4.	<i>Louha Bhasma</i>	Ferros oxide	1 Part
5.	<i>Saindhava Lavana</i>	Rock salt	1 Part
6.	<i>Haritaki</i>	<i>Terminalia Chebula</i> Retz.	1 Part
7.	<i>Bibhitaki</i>	<i>Terminalia belarica</i> Roxb.	1 Part
8.	<i>Amalaki</i>	<i>Emblia ribes</i> Gaertn.	1 Part
9.	<i>Souviranjana</i>		1 Part
10.	<i>Triphala kwatha</i>		q.s

All the above ingredients are taken in equal quantity and triturated along with *Triphala kwatha* for 1 day on attaining proper consistency *Vartis* are prepared. After drying in sunshade it is preserved in glass bottle. If applied in the form of *Anjana* along with little water it alleviates *Timira Roga*. This *varti* resembles like 'Kokila bird' and hence the name *Kokila Varti*.¹²

Maricha⁵:

Synonyms: *Ushna, Krshna, Dhanvantari, Dharma-pattana*.

Pharmacodynamics:

Rasa: Katu

Virya: Ushna

Guna: Laghu, Tikсна

Vipaka: Katu

Karma: Kapha-Vatahara, Avrsya, Dipana, Pramathi
Indications: *Peenasa, Kasa, Pravahika, Krimi, Svasa, Sula* by *katu rasa, ruksha guna* and *ushna veerya* it pacifies *kapha* and *vata dosha*. It contains the phytochemical called Piperine which has a great role in increasing the bio availability of the drug. It increases the absorption of the drug in the blood stream.

Pippali⁵:

Synonyms: *Kola, Capala, Tishna Tandula, Magadhi, Vaidehi*

Pharmacodynamics :

Rasa: Katu

Virya: Ushna (Arđra-Sita)

Vipaka: Madhura

Guna: Laghu, Snigdha, Tikсна (Arđra-Guru)

Karma: Vata Slesmahara, Dipana, Vrshya, Rasayana

Indications: *Uđara, Pliharoga, Prameha, Sula*, Eye diseases

Major Chemical Composition: Piperine, Piplatine, essential oils etc

Shunti⁵:

Synonyms: *Nagara, Srngavera, Vishva bheshaja, atubhadra*

Pharmacodynamics:

Rasa: Katu

Virya: Usna

Vipaka: Madhura

Guna: Guru, Ruksha, Tikсна

Karma: Vata-kaphara, Dipana, Bhedana

Major Chemical Constituents: Zingiberol, Geraniol, citronellol etc

Lohabhasma⁶:

Synonyms: *Krishna loha, Krshnayasa, Shilatmaja*

Pharmacodynamics:

Rasa: Tikta, Kashaya,

Virya: Sita

Vipaka: Madhura

Guna: Ruksha, Guru, Lekhana

Karma: Gulma roga, Krimi roga, Chakshushya, Varnya etc

Major Chemical Composition: Ferrous, Ferritin etc

Souvirañjana⁶:

Synonyms: *Souvira, Suviraja, Krishnanjana and Kalanjana*

Pharmacodynamics:

Guna: Grahi, Snigdha, and sheeta

Karma: Raktapitta, netra roga, visha dosha, hikka roga etc

Saindhava lavana¹:

Synonyms: *Panimantha, Sitasiva, Sindhuja*

Pharmacodynamics:

Rasa: Madhura

Guna: Laghu, snigdha, sukshma

Virya: Sita

Karma: Deepana, Pachana, tridoshagna, Vrushya

Indications: Eye disorders

Haritaki⁵:

Synonyms: *Amruta, Abhaya, Vayastha, Pathya, Vijaya, Shiva*

Pharmacodynamics:

Rasa: pancharasa except lavana, Kashaya mainly

Virya: Ushna

Vipaka: Madhura

Guna: Laghu, Ruksha

Karma: Tridoshara, Anulomana, Rasayana, Pra-jasthapana, Chakshushya, Lekhana

Therapeutics: *Sotha, Prameha, Netra rogas, vana, chardi, krimi, kasa, svasa* etc

Major chemical constituents:

Fruits: Anthraquinone glycoside, tannic acid, chebulic acid

Fruit Kernel: Archidic, behenic, palmitic

Flowers: Chebulin

Vibhitaki⁵:

Synonyms: *Akshaphala, Kalidruma, Karshaphala*

Pharmacodynamics:

Rasa: Kashaya

Virya: Ushna

Vipaka: Madhura

Guna: Rusha, Laghu

Karma: Kapha-pittahara, Keshya, Chakshusya, Bhedhana, Madaari (Phala majja)

Therapeutics: Jwara, Kasa, Atisara, Chardi, Netra vikaras etc

Major Chemical Composition:

Fruits: Fructose, Galactose, Glucose, Mannitol,

Seed: Edible oil

Bark & Heartwood: chebulagic acid, ellagic acid

Amalaki⁵:

Synonyms: Abhaya, Amruta, Dhatri, Vayastha, Sitaphala, Vrshya

Pharmacodynamics:

Rasa: Amla Pradhana pancharasa

Virya: Sita

Vipaka: madhura

Karma: Tridosahara, Vayasthapana, Rasayana, Chashusya, Vrshya

Therapeutics: Prameha, Raktapitta, ushta, Netra rogas, Soma, Arsha etc

Major chemical constituents:

Root: Ellagic acid, Lupeol, oleanolic aldehyde

Bark: Leucodelhinidin, Tannins

Fruit: Vit. C, phyllembin, linolic acid and salts etc

DISCUSSION

One out of Eight branches of *Ayurveda*, *Shalaky Tantra* deals with the aetiology, diagnosis, prognosis, prevention and treatment of diseases which are situated above the clavicle. *Vata prakopaka nidhana* could be considered as a main etiological factor to precipitate the clinical entity of Simple Myopia.

Maximum number of the people affected is from school going age group and having a habit of working on Computers and studying for long time. *Chakshushya Rasayana* is almost necessary to control the progression and management of Simple Myopia. The use of *Varti* in the form of *Anjana* with *Tridosha shamaka, Chakshushya, Rasayana* properties constitutes basic therapeutic approach in alleviating the symptoms of Simple Myopia. This review supports the theory which states that excessive use of accommodation will lead to the development of Simple Myopia.

PROBABLE MODE OF ACTION OF KOKILA VARTI⁷:

Basically, *Varti kalpana* come under *Vati kalpana* which differs in shape and usage. *Vartis* are elongated with tapering ends while *vatis* are round in shape.

Varti help in expelling the collected *mala, mutra, puya, rakta* etc *doshas* and thus helps in therapeutic field.

Tropical treatment is very unique effective in management of Eye Disorders. *Varti* which is applied on lower palpebral conjunctiva, the active principles may be transferred to interior of eye according to their Hydrophilicity and Lipophilicity respectively.

The PH, Viscosity, tonicity, molecular size and molecular weight of active ingredients are highly responsible for absorption of *Varti*. The phytochemical called 'Piperine' which has great role in increasing the bioavailability of the drug. Longer the drug and the tissue contact in the treatment carried out, better will be the drug absorption and higher bioavailability. Better rate of drug absorption is seen with lipid soluble drugs as their penetration rate will be higher irrespective of molecular size.

CONCLUSION

Timira one among the *Drishtigata roga* affecting the *Patalas* of *Netra* can be compared with Errors of Refraction treated with *Kokila Varti* followed by *Pathya* and *Apathya* of *Netra Rogas*. Hence, prophylactic measures for *Prathamapatalagata Timira*

mentioned in *Ayurvedic* classics along with *nidhana parivarjana* and suitable *kriyakalpas* will prevent age related eye diseases like Myopia, Cataract etc and will also delay its further progressive stages.

Higher corneal permeability during inflammatory conditions indirectly helps in better rate of drug absorption as a result higher therapeutic efficacy can be expected.

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