



SIGNIFICANCE OF AYURVEDA IN VARIOUS OPHTHALMIC DISEASES

Ayurveda

Dr Arti Panwar*	P.G.Scholar, Department of Shalaky Tantra, Rishikul Campus, Uttarakhand Ayurveda University, Haridwar, Uttarakhand, India. *Corresponding Author
Dr Arun Kumar	Assistant Professor, Department of Shalaky Tantra, Rishikul Campus, Uttarakhand Ayurveda University, Haridwar, Uttarakhand, India.
Dr Gunjan Sharma	Professor & HOD, Department of Shalaky Tantra, Rishikul Campus, Uttarakhand Ayurveda University, Haridwar, Uttarakhand, India.

ABSTRACT

There are five sense organs i.e. Eye, Ear, Nose, Tongue and Skin. Among these sense organs, *Ayurveda* gives prime importance to the eye. It says "*Sarvendriyaanam Nayanam Pradhanam*." *Ayurveda* is an integral form of medicine and gives a complete remedy to prevent the eye diseases by simply daily procedures like *Netraprakshalana*, *Snana*, *Padabhyanga*, proper dietary regimen etc. A regular sequential manner of ocular exercises for the relaxation of eyes are also aimed for the prevention of various eye disease, as these exercises provides nourishment to *Dhatu* and *Patalas*, thus improves the derangement of *Dhatu* and efficacy of sense organs in their perception. Along with these measures, the concept of *Marma* science is also said to be beneficial for the same cause. The stimulation of *Marma* points releases endorphins hormones, thus improving blood circulation, releasing anxiety causing a relaxation process. *Ayurvedic* drugs and therapies are exceedingly used in alleviating wide range of ocular conditions. *Shalaky Tantra* core engrossing specialty of *Ayurveda*, deals with management of ocular illness. *Kriyakalpa* procedures are described in classical texts and are applied according to the type of disease and stage of disease. In non-inflammatory condition (*Nirama Avastha*) *Tarpana*, *Putpaka*, *Anjana* and inflammatory condition (*Ama Avastha*) *Seka*, *Bidalaka*, *Aschyotana* and *Pindi* are use. The reason might be that the drugs administered systemically may not cross the blood aqueous, blood-vitreous and blood-retinal barriers. In *Ayurvedic* text the excess intake of *Aphyta ahara* results in *Tridosha dushti*. So the line of treatment according to *Ayurveda* is "*Sanshepatha Kriyayogo Nidana Parivarjanam*" which means avoidance of the causative factors is the best strategy of treatment of any diseases. Also *Dosha-Vyadhi Pratighaata Chikitsa*- when the diseases has been manifested specific *dosha* alleviating then diseases modifying treatments should be done along with effective medicines and immune- modulators.

KEYWORDS

Netra kriyapalpa, Ocular health, Lifestyle disorders.

INTRODUCTION

Eyes allow understanding and navigating the world around us. Suffering from eye disorders with uncorrected refractive error in children result in an adverse effect on quality of life & significantly affect their vision, education and psychosocial development. However the hours spent in reading, writing, watching TV, using multimedia mobile and working on computers affect eye health. From historical point of view *Acharya sushruta* & *Vagbhata* evident that *Ayurvedic* drugs (*Chakshusya dravyas*) *Triphala*, *Ghritha*, *Shatavari*, *Shighru*, *Ksheera*, *Yava*, *Dadima*, *Draksha*, *Patola*, *Kaaravellaka*, *Amalaki* and therapies are exceedingly used to prevention of ocular disorders and preservation of ocular health. As changing lifestyle has resulted in many eye disorders and brought miseries to daily life. To name a few diseases like Dry Eye Syndrome, Computer Vision Syndrome, Age Related Macular Degeneration, Glaucoma, Cataract, Diabetic Retinopathy, Hypertensive Retinopathy etc. *Ayurveda* found to describe vividly about ocular health and hygiene. So an attempt has been made to explore the significance of *Ayurveda* for preservation of eye health in relation to certain factors like relation of eye diseases with mind, diet and activities, sleep, daily and seasonal regimen related to eye health, occupational eye health and disorders, aging process and poor vision etc. *Rasayana* (rejuvenation) therapy for preserving good vision. Time tested procedures like *Anjana* (collyrium), *Aaschyotana* (eye drop), *Snana* (bath), *Padabhyanga* (foot massage with oil), *Nasya* (nasal application of drugs), *Abhyanga* (oil massage) are considered as highly effective daily procedures for the maintenance of eye health. Various *Yogasana* and *Satkriya* are also effective for ocular health and better eye sight. The study revealed preference of the patients towards *Ayurveda* for chronic and refractory ocular illness such as, Retinitis Pigmentosa, Age Related Macular Degeneration, Diabetic Retinopathy including other diseases of Retina, Glaucoma, Optic Neuropathy etc. In *Ayurvedic* samhitas, the local treatment procedures of *Netra* are explained by the name of *Netra Kriya Kalpa*. *Acharya Charaka* mentioned 3 *kriya kalpa* in *Chikitsa Sthana* i.e. *Bidalaka*, *Aaschyotana* and *Anjana*. *Acharya Sushruta* mentioned 5 *Kriya Kalpa* i.e. *Seka*, *Aaschyotana*, *Anjana*, *Tarpana* and *Putpaka*. *Acharya Sharangadhara* mentioned 7 *Kriya Kalpa* (*Pindi*, *Bidalaka*) the rest five of them are the same as *Sushruta*.

MATERIAL AND METHODS

All the relevant literature including classical *Ayurvedic* text with their

commentaries, journals, articles were explored for the concept of significance of *Ayurveda* in various ophthalmic diseases. *Ayurvedic* literature lays great emphasis on the preventive aspect of treatment. Therefore the first step to treating a disease should be aimed towards withdrawal of the disease contributing factors. Our *Acharyas* have described various modalities for the promotion of ocular health and prevention of eye disorders. *Nidana Parivarjana* is the first line of treatment for any disease. Lifestyle can be improved by following *Dincharaya*, *Ritucharaya* & *Achar Rasayana*. Proper following these principles can reduce stress and plays an important role in prevention and management of Hypertension, Diabetes and thus prevent various retinal disorders.

Ahara (dietary factors)-

Diet is the basic of all functions of the body. The dietary factors which adversely affect the eyes are called as *Achakshushya aahara* (*Apathya* for eyes) and these are as following: Sour items (curd, pickle etc), *Virudha ahara* (milk with fish, cooled and hot items together), *Adhyasanam* (eating before digestion of previous meal) will derange normal digestion mechanism, *Dushita agni* which derange the properties of *Raktadhatu* and in turn its function capacity become defective. According to modern science overeating predisposes to premature ageing which is an impediment to longevity.

Pathya ahara -

Healthy eyes should always adhere to the following dietary products like grains such as *Yava* (barley), *Godhoma* (wheat), *Lohitali* (red rice), *Shastika*, *Mudaga* (green gram) etc. which are old and mitigate *Kapha* and *Pitta*. *Ghritha* (butter fat), vegetables, meat of animals of *Jangala desh* (meat of animals dwelling in forests), *Dadima* (pomegranate), *Sita* (sugar), *Saindhava* (rock salt), *Triphala* (*Terminalia chebula*, *Terminalia bellerica*, *Emblica officinalis*), *Draksha* (grapes), Rain water (i.e. pure cold water) for drinking.

Rasayana for eye health promotion:

The main *Rasayanas* adopted in eye health promotion are *Naimitika Rasayana* and *Ahara Rasayana*. The appropriate use of *Chakshushya* and *Rasayana Dravyas* will help to maintain the health of the *Netra*. *Navaneeta* are extremely rich in vitamin A with a good amount of vitamin E, Riboflavin, Niacin and Pantothenic acid, Vitamin K, folate and Vitamin-B12 in small amounts.

Dinacharya (daily regimen):

Dinacharya for maintaining eye health is vividly described in *Ayurveda*. The daily regimen can be summarized in a more realistic manner as follows.

Eye Wash (Netraprakshalana):

Washing eyes with decoction of *Lodhra* (*Symplocos racemosa*), with *Amalaka* (*Embllica officinalis*), *Daaruharidra*, *Mulethi* And *Triphala* decoction or with cold water (*Hima*) helps in maintaining the constant clear vision.

Snana (Bathing):

Bathing with cold water or water with slightly less temperature than body temperature from the head always promotes eye health. But bathing with warm water on the head always has an unhealthy effect on the eyes.

Padaprakshalana (Feet wash)& Padabhyanga (oil Massage on feet):

As per literature, two *siras* (vein) are situated in the centre of feet (soles), which are significantly connected to the eyes. These transmit the effect of medications applied over the soles in the form of oil massage and promote eye health and prevent the diseases.

Yoga (eye exercises):

Movements of both eyes in up-down, sideways (right- left), rotational (clockwise-anticlockwise) directions, followed by palming is very effective in various eye disorders. Exercises provide nourishment to *Dhatu*s and *Patala*s, thus improving the derangement of *Dhatu*s and efficacy of sense organs in their perception.

Shatkarmas-

Neti and *Trataka* are the best for the eye among the *Shatkarma*. Purifying procedures like *Netikiryā* and *Trataka* help to promote clear eye vision and prevent the *dosa-sanchaya*. *Neti* is performed by a thin thread of 32 *Angulas*, inserting it through one nostril and taking it out through the mouth. It pacifies *kapha dosha* and gives clear vision. *Jala neti* (with a pinch of salt mixed with lukewarm water) is also in practice nowadays. *Trataka* is the continuous looking at some small object till eyes tear. It pacifies all eye disorders and is supposed to confer divine sight (*Divya drishti*).

Pranayama-

Pranayama means extension or expansion of the dimension of *Prana*. A good balance of mental status is essential for proper functioning of the eyes because sense organs can perceive the objects only in the presence of mind. Proper practices of *Nadi Shodhana* and *Bhramari* pranayama increases stress tolerance, calmness of mind, improves circulation & reduces muscles tension. All these may have promotive action in eye health.

Marma Chikitsa:

Marma-therapy is an ancient practice whose focus is the manipulation of subtle energy (*Prana*) in the body for the purpose of supporting the healing process. It is the art of touching an entity at exactly the same point so that energy blocked over there can be released. This is utilisation of 107 points in the body which are considered to be access points to body, mind and consciousness. It is being proved scientifically that in acupuncture and acupressure on pressing the Acupoints, it stimulates the nerve fibres there and causes Hypothalamic-pituitary-adrenocortical axis that releases Endorphins, Cortisol and Serotonin like hormone which in turn release anxiety, reduces pain, improves blood circulation and causes a relaxation response. Some *Marma* points *Kshipra Talahridya*, *Apanga* and *Avarta* are the *Marmas* mentioned in the context of *Drishti* by *Aacharya Sushruta*. *Sthapani Marma* is also mentioned in the context of *Netra*.

Indication Of Kriyakalpa Procedure In Various Ocular Diseases**Nasya-**

In the diseases of head and supraclavicular diseases i.e. *Siroraga*, *Nasaroga*, *Karnshoola*, *Karnashweda* etc *nasya* is the best and most specific procedure which is done by drug administered through the nose the doorway to *Shira* and reaches the *Shringataka marma* of the head (*Shira*), which is a *Sira marma* and is formed by *Siras* of the nose, eyes, throat, and ears. The drug spread by the same route scratches the morbid *doshas* of *Urdhwajatrigata* and extracts them from the nose and the mouth. *Nasya* is indicated in *Shudha Shukra* (corneal ulcer), *Pitta*

vidagdha drishti (Hemeralopia).

Tarpana -

Amongst all *Kriyakalpa*, *Tarpana* is attributed with most promising and potential benefits in various disorder of adnexa of the eye, surface lesion and visual disorder, i.e. *Jihatya* (squint), *Tamyata* (visual disturbance), *Rooshkata* (dryness), *Adhimantha* (glaucoma) etc. It is mostly contraindicated in inflammatory conditions of the eye. 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 a 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. *Akshitarpana* produces its effect by absorbing the drug through various layers of the eye after administered of medicated oil in the open eye, then the drug spreads into the deeper tissues through *Netra sira*. Due to *Rasayana*, *Balya*, and *Chakshushya* properties of *Ghrīta*, it activate the *Alochaka Pitta* (*chakshu vaisheshika*) which lead to increased power of *Drishtinadi* (optic nerve) and activate of *Alochaka Pitta* (*buddhi-vaisheshika*) lead to activation of visual center in brain (occipital lobe) lead overall improvement of visual status. It gives nourishment to the eyes and cures the *Vata -Pitta Vikara*. It is indicated mainly in *Tamiyati*, *Rukshto*, *Sushka-netra*, and *Daruna pakshmsat*.

Raktmokshana -

Siravedha (Venous puncture) can be applicable in diseases which are having dushti of *Tridosha* and *Jalaukavcharna* (application of leech) can be applicable in diseases which are having dusti of *Pitta* and *Rakta dosha* i.e. It is indicated mainly *Raktabhisyanada* (conjunctivitis) *Netrasoth*, *Netra daha*.

Seka -

Netraseka is a procedure where medicated liquids are poured on the closed eyes from a height of 4 *Angulas* in a thin and continuous stream and prescribed time. It gives the freshness to the eye and increase the circulation of the facial muscle and facial nerves and provide relief in watery eyes, burning eyes, dry eyes, conjunctivitis and mainly indicated in acute condition etc.

Putpaka-

Procedure is same as *Tarpana* but medicine preparation is *Swarasa* extracted by *Putpaka 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 and mainly indicated in *Abhisyanada*, *Adhimantha*, *Siraharsha*, *Sira-utpata*.

Aschyotana-

The medicated drops are put into the eye from the height of two inches on the open eye. Decoctions of raw drugs are used as medicine so its tissue contact time is very less and it gets diluted with tears and drains in to NLD. It is Indicated in *ie-Praklin Vartma*, *Pothki* and *Kukunaka*.

Anjana-

In this application of medicine to the internal surface of the lid margin from *Kaneenika sandhi* to *Apanga sandhi* with the *Anjana salaka*. So its bioavailability is more due to more tissue contact time. It is indicated when *doshas* are located only in the eye and when the signs and symptoms get started. It has *lekhana* property. *Sukla-arma* (*Pterygium*).

Pindi-

Medicated paste is kept in a fresh thin cloth applied on the eye is named as *Pindi*. Medicine is absorbed through the skin of the lid and due to heat of poultice local temperature is increased resulting in local vasodilatation. Also known as *Kavalika*. It is indicated in *Abhisyanada*, *Adhimanta*, *Netra-sotha*, *Netra-sula*, *Netra-kandu* etc.

Bidalaka-

In this process medicated paste is applied to eyelids (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. Also called as *Vartma lepa*. It is indicated in early stages of diseases i.e-*Sukapurnaabhata*, *Pitaabhisyanada*, *Ashrusrava* etc.

Sirodhara-

Pouring of warm herbal *Ayurvedic* oils on the forehead from a specific

height, for a specific time period in a continuous stream, allowing the oil to run through the scalp and down into the hair. It is indicated mainly in Macular degeneration and many Neurological disorders.

Shiro Pichu –

It is an *Ayurvedic* therapy procedure in which cotton swabs dipped in herbal oil are placed on the scalp. *It is indicated mainly in Netrastambhna etc.*

Sirolepa (Thalapothechil)-

Simple application of a paste of herbal formulations across the scalp and allowing the medications to permeate through the scalp for a specific period. ie Diabetic retinopathy.

Pertaining to eyes Cataract, ARMD, Degenerative myopia, early changes in eye due to Diabetes, HTN etc. are major challenging disorders. The present era is also witnessing new disorders like Corneal epithelial erosion syndrome, Dry eye syndrome, and smartphone syndrome and along with changing patterns of existing disorders. "चक्षुषे हितं चक्षुष्यं" That which is good for *Chakshu* is *Chakshushya* As per *Bhavaprakasha*. The drugs which are *Chakshushya* and *Indriya balapradha* can be advocated as *Rasayana* in order to arrest the progression of already existing disease and prevent occurrence of new disease.

RESULT AND DISCUSSION

There are a lot of powerful therapies explained in *Ayurveda* for eye disease treatment. All the procedures are aimed to detoxify the body as a whole as well as the eye in specific and rejuvenating the retina and optic nerves. Hence significance of *Ayurveda* in various ophthalmic diseases i.e. *Stye [Triphla eye wash]*, *Blepharitis [Seka]*, *Pterygium [Chedana, Pratisarna]* *Dry eye [Seka and Bidalaka]*, *Refractive error [Virechana nasya, Vamana and Basti]*. *External Therapies [locally i.e. -Anjana, Tarpana]* *Internal therapies [systemically ie- Saptamrita lauha]* *Activities i.e. [Asana, Pranayama, Trataka]* *cataract [Maha Triphala ghrta, Chandrodaya varti]* *ARMD Vata saman chikitsa [Brimhana nasya, Sirobasti, Sirodhara, Netratarpana, Diabetic retinopathy [Virechana, Netradhara, Takradhara]*. In *Ayurvedic Samhitas* these all treatment modalities are given which are doing implemented nowadays and giving good results as well.

CONCLUSION

By adopting these treatment modalities, we can protect our ocular health from any visual disturbances and vision loss. Various drugs can be selected according to the *doshas*, type of diseases and can be used in various ways by *Ayurveda*. Through All the above explanations and observation it is very obvious to conclude that *Ayurveda* plays a very important role in *netra roga chikitsa* "***Swasthasya Swasthya Rakshanam Aturasya Vikara Prashamanam***" which means *Ayurveda* aims at maintaining good health in a healthy persons and aims to cure the person who is diseased or sick.

REFERENCES

1. Comprehensive Ophthalmology fourth edition KHURANA.A.K Published by New Age international limited Publishers PG 272.
2. *Susruta Samhita*, Uttar tantra 18/7, Shastri Ambika Data seventh edition, Chaukhamba Sanskrit Sansthan, Varanasi seventh edition
3. Brad Bowling, Kanski's Clinical Ophthalmology, 8 th edition, Elsevier publications, 2016
4. Trikamji J, Ram N, editors. Commentary Nibandha Sangraha of Dalhana on *Susruta Samhita* of *Susruta*, Uttaratantra; Dristigata roga Vijnaneeyam. 1st ed.,
5. Trikamji J, Ram N, editors. Commentary Nibandha Sangraha of Dalhana on *Susruta Samhita* of *Susruta*, Uttaratantra; Dristigata roga Vijnaneeyam. 1st ed., Ch. 10, Verse 16. Varanasi: Chaukhamba Sanskrit Sansthan; 2012. p. 614.
6. Sahoo Prasanta Kumar, Fiaz Shamsa, Clinical study on efficacy of Panchatikta Basti, Tilaitaladi Nasya and Amrutadi Guggul in the management of diabetic retinopathy. *Int. J. Ayur. Pharma Research*, 2016;4(7): 58-64.
7. Sharma P.V. Classical uses of medicinal plants. Chaukhamba Visva bharti Publications, Edition: Reprint: 2004, page.No-663.
8. Rownak Jahan et al, Ethnopharmacological Significance of *Eclipta alba* (L.) Hassk. (Asteraceae), <http://dx.doi.org/10.1155/2014/385969>.
9. Chunekar K.C. *Bhavaprakash Nighantu*, Choukhamba Bharati Academy. Edition 2010, Reprint 2013, Taila Varga, Page.No-763.
10. *Charak Samhita*, vidhyotini hindi commentary by Pandit kashinath shastri and Pandit Gorakhnatha chaturvedi, chaukhamba bharti Akadmi, varanasi, 2013
11. Vagbhata: *Astanga hridayam*, pt Harishastri paradkar vaidya editor, with sarvanga sundara and *Ayurveda Rasayana teeka*, Reprinted 2000, varanasi krishnadas academy.