

ROLE OF AYURVEDA IN PREVENTION OF BLINDNESS

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ABSTRACT

Eye is the most precious organ in the body. Blindness is a lack of vision. Worldwide 39 million people are blind and 246 have low vision. Vision loss refers to the partial or complete loss of vision. The vision loss may happen suddenly or over period of time. Globally the major causes of visual impairment are uncorrected refractive errors, cataract and glaucoma. Visual impairment can limit people's ability to perform everyday tasks and can affect their quality of life and ability to interact with world. Blindness is the most severe form of visual impairment. Ayurveda is the ancient Indian system of natural and holistic medicine. Basic principle of Ayurveda is to protect health and prolong life. Management of preventable and curable blindness according to ancient science is important. According to Ayurveda to maintain a healthy and disease free life should follow a *dinacharya*. Healthy diet, eye exercises play major role in giving strength to the eyes. *Kriyakalpa* is the main therapeutic process for *netra roga*. It gives nourishment to the eyes and cures diseases. Ayurveda recommends *kriyakalpa* for preventive and curative benefits. *Shodhan Chikitsa* is a body purification therapy which eradicates toxins and balances *tridosha*. So purpose of this article is to enlighten role of Ayurveda in prevention of blindness and explain Ayurvedic management for visual impairment.

Keywords: Blindness-prevention, *Chakshushya*, *Dinacharya*, *kriyakalpa*, Visual impairment.

INTRODUCTION

Vision is the greatest gift for human. Globally 285 million people are visually disabled and 39 million people⁵ are blind among 15 million from India⁶. The burden of visual impairment is not distributed uniformly throughout the world. Developing countries carry the largest share. A distribution imbalance is also found with regard to age groups and gender. Adult above 50 years and females have a significantly higher risk of having visual impairment². In spite of progress

made in surgical techniques, Cataract remains the leading cause of blindness¹. Other main causes of visual impairment are uncorrected refractive errors, glaucoma¹. So it's time to know 'Right to sight'.

Ayurveda medicine is a system of medicine with historical roots in the Indian subcontinent. Ayurveda means "the science of life". The aim of this system is to protect health and prolong life, to prevent illness and to eliminate diseases. Ayurveda provides guidance on lifestyle like eating habits, daily routine, exercises and *yogas*. It will play major role in giving strength to eyes. *Kriyakalpa* is a *bahirparimarjana chikitsa* and has several advantages over oral administration. It is the specialized treatment for prevention of blindness. It acts as a both

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preventive and curative therapy for maintaining health of eyes. *Panchkarma* procedures are used to eliminate the vitiated *doshas* from the body.

Prevention of blindness and management of visual impairment with the help of ancient Ayurveda science is important. It will be a big challenge for Ophthalmologists to be aware and make conscious effort in preventing and treating avoidable blindness.

MATERIAL AND METHODOLOGY-

Study of literature – Study of literature was done with the help of books, *samhitas* and internet websites.

Study of blindness-

Definitions of blindness- 1.WHO: Visual acuity of less than 3/60, or a corresponding visual field

loss to less than 10⁰, in the better eye with best possible correction³.

-‘Visual impairment’ includes both low vision and blindness³.

2. National Program for control of blindness-

Inability of a person to count fingers from a distance of 6 meters or 20 feet or Vision 6/60 or less with best possible spectacle correction. Diminution of field vision to 20⁰ or less in better eye⁴.

Visually handicapped in India- Visual acuity in the better eye is less than 6/18.

CAUSES OF BLINDNESS IN WORLD AND INDIA-

Causes of blindness	World ¹ Vision <3/60	India ⁷ Vision <6/60
Cataract	47.9%	62.6%
Refractive error	3%	19.7%
Glaucoma	12.3%	5.8%
Corneal opacity	5.1%	0.9%
Trachoma	3.6%	0%
Onchocerciasis	0.8%	
Posterior segment disease		4.7%
-Age related macular degeneration	8.7%	
-Diabetic retinopathy	4.8%	
Posterior capsule opacification		0.9%
Surgical complication		1.2%
Childhood blindness	3.9%	
Misc/ undetermined	21%	4.5%

Avoidable blindness⁸ - 85% of total blindness.

This includes both **Preventable and Curable blindness.**

Preventable blindness- The blindness which can be easily prevented by attacking the causative factors at an appropriate time. e.g. corneal blindness due to Vitamin A Deficiency, Trachoma, Industrial blindness, Diabetic retinopathy etc.

Curable blindness- The blindness in which vision can be restored by timely intervention. e.g. cataract, glaucoma, inflammation of ocular tissues etc.

Prevention of blindness and Management of visual impairment

Prevention-

Follow *dincharya- Anjana karma*-Eyes mainly having *teja* property, they can easily get affected

by *Kapha dosha*¹⁴. *Rasanjana* should be done once in week¹⁴. *Anjana* scrapes and expel *dosha* from *netra*, *varthma*, *sira*, *netra kosha* and *ashru vaha srotas* through mouth, nose and eye¹⁵. It will help in avoiding ageing effects in *Netra*. It gives strength to the eyes. *Prasadan anjan* help in improvement of vision. *Anjana* used as treatment and also as preventive measures. It is useful in ocular growth, opacity, *kapha* predominant condition.

Regular *Padabhyanga* (Foot massage) - Acharya Vagbhata identifies 4 major nerves in the feet that connect to eyes. These nerves help to maintain good eye sight and relieve eye strain. It improves blood circulation. It controls & balances *Vayu*, as a *vata dosha* prominent in degenerative disorders.

Chakshushya Medicines-

Main properties- *Chakshushya*, anti oxidant, anti inflammatory and neuroprotective.

Triphala⁹ - *Amlaki (Emblica officinalis, Gaertn)*, *Haritaki (Terminalia chebula, Retz.)*, *Bibhitaki (Terminalia bellirica, Roxb.)*- Balances *tridosha*, *chakshushya*, anti ageing property.

Triphala ghrita- Drug which penetrates through cornea must have properties of lipid soluble as well as water soluble. *Triphala ghrita* which usually used for *netra tarpana* is saturated with decoction of various drugs and hence it contains both lipid and water soluble properties. It has got good penetration through various layers of cornea. It provides *chakshushya* effect.

Shigru (Moringa oleifera, Lam)¹⁰- Balances *kapha* and *vata dosha*, improve vision.

Healthy Diet (Hitakara aahara) - Proper food is an important factor in growth and development of human. The improper food or deficiency of nutrition will lead to several eye diseases.

Raisins- Antioxidant, protect eyes from a weakening vision.

Pomegranate- Antioxidant, anti inflammatory, anti bacterial, anti fungal properties.

Mudga (Phaseolus radiates, Linn.)- Antioxidant, source of vitamin A, alleviates *kapha*, *pitta* and blood.

Shatavari (Asparagus racemosus, Willd.)¹²- Balances *vata* and *pitta dosha*, anti ageing property, improve vision.

Ghee- Balances *tridosha*, acts as good *Rasayan*, rich in antioxidant, improve strength of eye.

Honey- Antioxidant, anti inflammatory, anti bacterial, it protects eyes from macular degeneration, its regular internal as well as external application will prevent glaucoma in the initial stage of disease.

Increase dietary intake of Vitamin A rich food-

Nutritional blindness is due to Vitamin A deficiency.

Vitamin A useful for scotopic vision means dim light vision and colour vision.

Vitamin A play major role in prevention of age related macular degeneration, stargardt disease.

Vitamin A with lutein and zeaxanthin prolong vision in retinitis pigmentosa.

Vegetable sources- Dark green leafy vegetables, spinach, carrot tomato, pumpkin etc.

Animal sources- Liver, meat, cod and shark liver oil, egg yolk etc.

Fortification of dietary items like milk, sugar, tea, cereal grains etc.

Daily requirement¹³-

School children, adolescent and adults-2250IU

Children (0-4 years)-1000-2000IU

Pregnancy and lactation-3000-3500IU

Periodic supplementation-

Orally 200,000IU and half dose for 6-11 months children.

Eye exercises- Palming, Distant and near focusing, Rotational movements of eye will help to improve blood circulations to eyes. So oxygen supply, nutritional supply to the eyes is increased. These exercises will strengthen the muscles of eyes and maintain vision level.

Yogic kriya- *Trataka* (concentrating on specific object/candle light), *Bhramari*, *Soorya Namaskara* useful to improve strength of eye.

Kriyakalpas- *Kriyakalpas* are specific procedures for eyes. They lubricate and rejuvenate the eyes. Impurities are expelled out. It helps to bring back brightness and clarity to the eyes¹⁶. *Kriyakalpa* has several advantages over oral administration. The drug given orally will undergo digestion under the influence of *pachaka pitta*. The drugs administered through *kriyakalpa* are not digested by it and possibly rectify accumulated *doshas*.

Tarpana- *Tarpana* is very effective *kriyakalpa*. It is used to treat early formation of cataract, glaucoma. It is indicated in all the degenerative disorders, inflammatory and chronic disorders of the eyes. It will play major role in giving strength to eye.

Putapaka- This is usually done after *tarpana*.

Seka- Indicated in inflammatory conditions, *Pitta*, *rakta dosha* vitiation.

Aschyotana- When *doshas* are not severely vitiated and the disease in early stage, it is useful.

Pindi- It is useful in *abhishyand* (conjunctivitis) and *vranas* (ulcers) of the eyes. It is beneficial in *kapha pitta* disorders.

Vidalaka- Initial symptoms of eye diseases like burning, discharge, swelling, pain, redness, congestion can be controlled by application of medicated paste to the outer surface of eye lids.

Nasya karma- It is indicated in several eye diseases as it eliminates *doshas* from the cranial

region. *Vaisesika nasya* is useful to improve eye sight. It is indicated in visual disturbances like *timira*²⁰.

Vamana- Usually *Vamana* is contraindicated in *drishtigata rogas*²¹. If done, it will increase *timira*.

Management -

CATARACT, GLAUCOMA, AGE RELATED MACULAR DEGENERATION- These are the main disorders occurring in old age and can grossly affect visual acuity. In old age *vata dosha*, *ruksha guna* are increased.

So management is *Vataghna Upakramas* like *Snehana*, *Snehapana*, *Ghritapana*, *mrudu virechana*, *basti*, *shiro basti*, *shiro pichu*, *nasya* (*snehana*), *snigdha anjana*, *parisheka* with *siddha dugdha*. *Shamana chikitsa* should be *Rasayana* and *Chakshushya* medicines.

For cataract surgical extraction of cataract and implantation of intraocular lens gives better visual acuity.

For Glaucoma regular check up of Intra ocular tension is important. Clinical features of *Adhimanth* can be correlating to Glaucoma. So management is,

In early stage- *Tikshn shirovirechan*, *Tikshn kawaldharan/gandush*, *dhumpan*, *lep/vidalak*.

In samawastha- For *aampachan-Langhan*, *Seka*, *Bashpsweda*, *Lepa*, *Madhur*, *tikta* things intake. Avoid *anjana*, *ghritpan*, *puran*, *kashaypan*, heavy food intake. It causes new *aama* formation.

In niramawastha- *Snehana*, *swedana* then *sirawedh* at forehead or at *apang*. Then *vaman*, *virechan*, *basti*, *shirobasti*, *nasya*, *dhumpan*. After this *shodhan chikista* internal *dosh shamak chikista* will helpful.

Locally- *Kriyakalpa*¹⁷, *pindika*, *agnikarma*.

REFRACTIVE ERRORS- Vision screening, best spectacle correction, treatment for strengthening of eyes-*Tarpana* especially with *Triphala ghrita*, *nasya*, *anjana*, *putpaka*, *panchkarma*.

CONTROL DIABETES- Effect of diabetes mellitus seen on retina causes diabetic retinopathy. So control of diabetes is essential. According to age, duration and strength appropriate treatment like *shodhan*, *santarpan*, *sanshman* will decide. Role of *pathyapathya* is also important.

OBSERVATION AND RESULT-

Avoidable blindness is 85% of total blindness⁸. Many people are blind because they

live in poverty. Blindness due to senile disorders is difficult to treat because of “*swabhavabala pravrutattva*”. For prevention of blindness diagnosis of their cause at right time is very important.

While allopathic medicine tends to focus on the management of disease; Ayurveda provides us with the knowledge of how to prevent disease and how to eliminate its route cause. Proper quantity of food is necessary for nourishment of sense organs. Only local treatment will not be helpful. Combined therapy like *Kriyakalpa*, *panchkarma*, internal medicines and preventive measures like following *dincharya*, healthy diet, eye exercises and *yogic kriyas* are helpful in the management of visual impairment. *Rasayan chikista* (rejuvenation) will helpful in prolonging degenerative changes in eye. For cataract surgical extraction of cataract and implantation of intraocular lens will gives better vision.

DISCUSSION AND CONCLUSION

Blindness is going to be a big challenge for us in future. Ayurveda prefers to prevention of any disease than cure. Delay treatment for visual impairment causes complications, many time irreversible loss of vision. Basic principles of ayurveda are helpful here for management. Ayurveda management is avoiding ageing effects in eye, rejuvenates the eyes, improve function of eye. Topical administration of drugs achieves higher bio-availability than oral drugs. Ayurvedic drugs and therapy controls the disease and prevent blindness. Good quality of management allows people with visual impairment to get fully profit from life and achieve their goals.

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