



Preventive Eye care in Ayurveda: A Review

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ABSTRACT

Ayurveda explained importance of eye considered as “*Sarvendriyaanam Nayanam Pradhanam*”. In children, suffering from eye disorders result adverse effect on quality of life & tremendously impact on vision, education and psychosocial development. However, improper spending of hours on reading, watching TV, use of multimedia mobile and working on computers for hours has great impact on eye health. As per statistics data of WHO, global blindness due to eye diseases is 37 million and refractive errors is 8 million. In *Ayurveda*, daily regimens like *Netraprakshalna* (eye wash), *Ushajalpana* (intake of water in the morning), *Anjana* (Collyrium), *Snana* (Bath), *Padabhyanga* (Foot massage with oil), *Nasya* (nasal application of drugs) and use of *Rasayana Dravya*, *Pathya* and *Apathya* dietetic are measures for the maintenance of eye care health. Various *Yogasanas*, *Pranayamas*, *Neti* and *Trataka* are also considered beneficial for the eye disorder. The aim of this review is to spreads the awareness among people of community and society about visual health promoting procedures mentioned in *Ayurveda Samhita*.

Keywords: Daily regimen, Eye care, *Kriyakalpa*, Preventive, *Yoga*

1. INTRODUCTION

Ayurveda most ancient system of science mainly focus on “*Swasthasya swasthya rakshanam aturasya vikara prasamanm cha* ¹” as mentioned by *Acharya*. The main motto or aim and objective of *Ayurveda*, is to preserve the health of a healthy person and cure the diseased one. Among all the sense organs, eye is considered one of the most important sense organ in

Ayurveda. References about Eye care mentioned in “*Shalaky Tantra*,” one of eight branches of *Astanga Ayurveda* mainly deals with Eye preventive care and management of eye disorders². As per statistics data of WHO, global blindness due to eye diseases is 37 million and refractive errors is 8 million³. The overall population-based analysis, prevalence of various eye disorders such as refractive errors, myopia, hyperopia ($\geq +2.00$ D) and astigmatism in children of age <15years were 8.0, 5.3, 4.0 and 5.4 percent, respectively and the respective figures from the school-based data were 10.8, 7.2, 2.6 and 1.8 per cent. Refractive error in children is one of the major public health issue and requires intensive efforts from health care department, education professionalism and also parents, to manage eye related problem in India⁴.

Necessary efforts should be adopted for prevention of various eye related diseases. Main etiological factors which exert or damage eye health are working on computer for long hours, stress and prolonged exposure to bright light, smoking, tobacco, alcohol, high oil and junk food, etc. Various eye related disorder such as Age Related Macular Degeneration (AMRD), Diabetic retinopathy, Computer Vision Syndrome, etc. are may be due to faulty life style adopted by the people in present era. Hence, for prevention and management of eye diseases and for maintenance ocular health issues should adopt or follow *Ayurveda* regimen such as *Dincharya* (daily regimen) and use of specific therapies like *Rasayana Dravya*, *Sadvritta-palan* and *Kriya kalpa* mentioned in *Ayurveda* are useful to restore eye health and improve proper vision of eye.

2. MATERIAL AND METHODS

Descriptions were collected from different Ayurvedic literature, modern texts as well as the data bases Google scholar, PubMed, AYUSH Research Portal, DHARA, studies available on Research Gate web-based search engines, journal, were used to searched and presented in an organized manner.

3. RESULT

Preventive modalities for Eye care in *Ayurveda*

Various *Acharyas* have mentioned in classical literature about preventive aspect for the maintenance and betterment of eye health care. *Nidana parivarjana* (Avoiding the causes) is first line of treatment and also preventive aspect in *Ayurveda*. Suppression of natural urges especially controlling tears, indulgence in anger, grief, sorrow, fear, etc., exposure to water after from sun heat and untimely sleeping habits, etc. should be avoided⁵.

Dinacharya (Daily Regimen)

In ancient literature such *Charak Samhita*, *Sushruta Samhita*, *Astang Hrudya*, *Yogratnakara* and *Bhaishjyaranavali*, all *Acharya* widely described about *Dinacharya* and *Pathya apathya* in relation to maintain eye care or health in *Ayurveda*. *Acharya Charak* mentioned that *Dincharaya* should be started with *Anjana* (eye salve) whereas *sushruta* advised *Netraprakshalana* (eye wash). The daily regimen can be summarized in briefly as follows:

Netra-prakshalana (Washing of eyes)

A cold water decoction of *Lodhra* or *Amalaki* after getting up from bed in the morning should be used which helps in cleansing of eyes by eliminating dust or foreign materials, in maintaining the constant clear vision. In various condition such as refractive errors like *Timira*, conjunctivitis, inflammation of eye, etc. decoction of *Triphla*, *Lodhra*, *Madhuyasti* are used as an eyewash⁶.

Ushajalapana or Nasa-Jalapana (water intake through mouth or nose)

Habit of intake of water daily in early morning either through mouth helps in cleansing of GIT and leads better vision of eye⁷.

Gandusha and Kavala

Gandusha- holding of liquid medicine orally 2-4 time a day in maintaining of good eyesight. The anatomical structure of the eye get nourishment, stimulation or maintained by the medicinal value of the drugs used in *Kavala*⁸.

Anjana (collyrium)

Acharya Charaka mentioned about daily use or apply of *Anjana* (collyrium) of *Sauviranjana* (a type of collyrium), beneficial to eyes and *Rasanjana* (aqueous extract of *Berberis aristata*) once in every fifth or eighth night for cleansing drainage of the eyes. *Vagbhata* described *Rasanjana* to be apply once in a week for secreting *kapha*. The eye is the element of *agni*. So, it is susceptible to vitiated *kapha*. Therefore, measures that pacify *kapha* are beneficial for keeping the vision clear. The collyrium meant for cleansing drainage is indicated exclusively at night and by regular use of *Anjana* (salves) leads to aspersions in the eyes, vision shines brightly like moon in the clear sky. Daily habit of practicing *Anjana* not only help and improve good vision of eyes but also removes or clears burning sensation, itching, dirt (excretion), moistness, pain of eyes and prevent development of diseases⁹.

Sheetodak Shira Snana (Bathing)

Bathing in extremely cold water and in cold season vitiates *kapha* and *vata* whereas bathing in too hot water and in hot season causes vitiation of *pitta-rakta*. Pouring warm water over the head leads to detrimental to the eyes. Bathing with normal temperature water promotes eye health¹⁰.

Abhayanga (Massage)

- ❖ **Shiroabhayanga (Head massage):** Daily application of medicated oil on head leads to *drishti prasadan* (strengthening of eyes) and preventive measure for sense organs disorders¹¹.
- ❖ **Padabhyanga (Foot Massage):** Application of medicated oil over soles region always maintains vision¹².

Padaprakshalana (Feet wash)

Habit of washing of feet with clean water leads to clear vision¹³.

Padatra Dharana (Foot wear)

Bare foot walking always harmful to eye, so use of footwear is beneficial for eye sight in *Ayurveda*. Hence, one should apply massage over soles with oil, washing feet well and use of foot wears as preventive and promotive approach towards eye care¹⁴.

Chatra dharana (Use of umbrella)

The carrying of umbrella serves as a shield against sun, wind, dust and rain leads to protection of eye and beneficial to eye (*chakshushya*)¹⁵.

Nasya (Nasal installation)

Nasya is a procedure in which medication in the form of *Taila*, *Ghrita*, *Swarasa*, etc are instilled into the nostril in a specific manner to nourish the sense organs which are located above the clavicle. Nasal cavity structures have direct link or communication with the structures of sensorineural of brain and also natural gateway to brain and due to anatomical communication, the medicine instilled through nasal cavity reaches to “*Sringataka Marma*” (cavernous sinus) which is also seat of all the centres of vision, hearing, smell and taste. Practice of instilling *Anutaila* as *Pratimarsh Nasya* (small dose of medicated oil) 1-2 drop in each nostril, improve vision and power of other sense organs remain firm and free from disorder. Accumulation of vitiated *kapha* in the eye can be prevented by application of *Pratimarsh Nasya* daily¹⁶.

Mukhalepa

Application of herbal medicinal face pack indirectly improves vision of eye. The facial artery, facial nerve and trigeminal nerve are lying along the cheek, having branches to the eye¹⁷.

***Dhumpana* (Medicated smoking)**

Relieves pain in eyes and strengthens the sense organs and help in improve better vision¹⁸.

Eye health and *Trayopasthambha* (three sub pillar of life)

Ahara, *Nidra* and *Brahmacharya*- are sub pillars of life which provide strength, good complexion and proper growth and continues throughout life, provided person does not get involved in regimens which are detrimental for health. *Ahara* (Food) should be taken at proper time otherwise suppression of hunger cause weakness in visual perception. *Virudha Ahara* (unwholesome food) affect vision and leads to blindness¹⁹. *Nidra* (sleep) is necessary for relaxation of eye. *Brahmacharya* is concerned to self-control of sense organs and sexual intercourse during the menstrual phase leads to disorder of visual health²⁰.

***Vegadharana* (suppression of natural urges)**

Suppression of natural urges has bad impact on body health especially suppression of tear and sleep leads to diseases of eye which in turn causes *vataprakopa*, leading to weakness of ocular tissues and strain to eyes. Faulty lifestyle such as prolonged watching TV, online office works, overuse of mobile, etc. nowadays affect the eye vision health²¹.

Stress and Eye Health

Vagbhata advised “*manaso nibrutti*” i.e. withdrawing mind from all the sensual functions for proper maintaining of eye health and vision.

Yoga practices and eye health

In Yoga asana, palming is the procedure in which rubbing of own palms and touching to eyes useful for prevention of eye disorder²². Asana such as *Savasana* and *Surya Namaskara* are also beneficial for eye sight. Proper practices of *nadishodhana* and *bhramri* pranayama improve circulation & reduce the muscles tension which in turn promote action on eye health.

***Ritucharya* (Seasonal regime)**

Various changes occur in the physiology of the eye which may lead to eye related diseases due to climatic changes. *Acharya* has mentioned *Ritu-charya* to follow for the prevention of *Netra Roga* in various *Ritu*²³.

***Rasayana* and eye health promotion**

Proper appropriate use of *Chakshushya* and *Rasayana Dravyas* help in maintaining, improving normal function and prevents any age related disorders of the eye. Use of *Yastimadhu*, *Patola*,

Ghrita, *Jivanti*, *Triphala*, etc. act as *Rasayana Dravyas*. *Vagbhata* advised, use of *triphala* along with honey and *ghrita* (in unequal quantity) should be consumed for strengthening of eye sight at night daily. *Haritaki* considered as “*Vayasthapani*” (antiaging), hence advised to use for the prevention of age related eye disorders. *Amalaki* also known as *Chakshusya*, means “*Rasayana* for strengthening eyes sight”²⁴.

Triphala having *tridoshashamaka* property, *Cakshushya* in nature and *kostha shodhaka* used in all *Netra vikaras*. Role of *triphala prayoga* as *shamana* indicated in *Drishtigata vikaras*.

Ahara (Diet) and Eye Health

Susruta, *Charaka*, *Vagbhata*, *Bhavmisra* explained in details about the dietary *Ahara* (food) *Vihara* (behavioural) which are responsible factors for eye diseases can be summarized as follows.

- ✓ Excessive use of *Amla* (sour edibles) which is *Ushna Virya* (hot in potency) and *Katu Vipaka* leads to *Ojaskshaya* and in turn manifest various eye diseases.
- ✓ Excessive intake of *Kulattha* (horse gram) which is *Kashaya Rasa* and *Katu Vipaka* vitiates *Rakta Dhatu* and *Pitta Dosha* leads to *Raktaja* and *Pittaja* eye problem.
- ✓ Excessive intake of *Māsa* (black gram) has *Madhura Rasa*, *Guru* and *Snigdha* in nature vitiates *Kapha Dosha* leads to *Kaphaja* eye diseases.
- ✓ Excessive use of *Ushna* (hot), *Kshara* (alkaline), *Katu Pradhana Rasa Ahara*, drinks²⁵.

Pathya-Apathya

Various *pathya* and *apathya* things for eyes vision has been explained by *Vagbhata* and *Yogratnakara* in detail which play an important role in preventing disorders of eyes²⁶.

Acharya explained *Chakshushya Ahara* items and drugs which can be used regularly for the beneficial of eye such as *Lohitasali* (Red rice), *Yava* (Barley), *Mudga* (Green gram), *Jeevanti* (*Leptadenia reticulata*), *Patola* (*Trichosanthes dioeca*), cow milk, *takra* (Butter milk), *Peya*, *Vilepi*, *Yusha*, *Swarna* (Gold).

Acharya Vagbhata recommended old grains like *Yava* (barley), *Godhuma* (wheat), *Shashtika shali* (Red rice) with ghee are beneficial for eye sight highlighted as *Chakshushya Dravya*.

Acharya Bhavaprakasha mentioned *Shali* (Red rice), *Mugdha* (green gram), *Yava* (barley), *Patola* (snake gourd), *Karkatoka* (spiny gourd), *Karavella* (bitter gourd), etc. should be used for preventive eye care diseases regularly. *Yogaratnakara* also mentioned *Ahara* which are *Madhura* and *Tikta Rasa* are beneficial for eyes.

Susruta explained barley boiled with plentiful decoction of *Triphala* and added ghee alleviates *Timira* as old *Ghrita* kept in an iron vessel is beneficial for *Timira* (immature cataract).

Kriya kalpa

Kriya kalpa mentioned in *Ayurveda* are also useful to restore eye health and proper vision as follow:

❖ *Tarpan*

Procedure in which medicated *ghrita* is kept in eye for a specific time period by special arrangement, gives nourishment and lustre to the eyes and cures *vata* and *pittaja netra rogas*.

❖ *Putapaka*

Through *putapaka* procedure, medicine extracted from herbs, usually carried after *tarpana* for rejuvenation of eyes.

❖ *Seka*

Medicine is poured on closed eye continuously from four inches height for specific time according to *doshas* in this procedure, indicated in acute inflammation of eye.

❖ *Aschotana*

In this procedure, medicated drops are put into open eye from the height of two inches, indicated mainly in infection and allergic condition of eye.

4. DISCUSSION

In modern present day lifestyle, due to less activity, sedentary lifestyle and increasing weight gain contributed in the development of metabolic syndrome, which indirectly affect vital organ of eye. Studies reported that active lifestyle were 70% less likely to develop neo vascular AMD compared with person without an active lifestyle²⁷.

The optic nerve connects the eyes to brain, which ends in Retina, as a result oil being applied to the skull, especially in the *moordha* area, works on the *dristi patalam*. The nerve endings in the foot are extremely sensitive and activation of the nerve endings in the foot causes sympathetic and parasympathetic supply to reflect in the eye²⁸. Research studies showed age-related macular degeneration (ARMD) and age-related cataracts are diseases develop as a result of oxidative stress in their daily lives. Application of *Anjana* dilates the blood vessels, increases the blood flow and maintains the integrity of *netrasrotas*. *Gandush* help in nourishing ophthalmic branch of the facial artery leads to improve eyesight. *Kriya kalpa* mentioned in *Ayurveda* are also useful to restore eye health and proper vision²⁹.

Emphasis on the comprehensive eye care, attention to eliminate avoidable blindness from the country is necessary. *Ayurveda* can play an important role in promoting care & restoring measures that neutralize the effect of today's stressed life style over eyes, strengthening eye muscles, making lens fibre elastic. The eye promoting regimen delays the degenerative process

in the retina & focal point and nourishes the visual structures. Hence, *Ayurvedic* measures are found to be supportive in eye care.

5. CONCLUSION

Various prevention modalities mentioned in *Ayurveda* such as *Anjana*, *Nasya*, *Snana*, *Aschyotana*, *Padabhyanga*, *Kriyakalpa*, etc. along with a few changes in behaviour including preventive practices are effective measures for maintenance and improvement of visual health and the prevention of ocular disorders among population. Yoga *Asanas* and *Satkriyas* are also beneficial for the health of eyes. Hence, *Ayurveda* offers a light of hope for resolving eye related issues in the society and at community level.

COMPETING INTEREST

Authors have declared that no competing interest exist.

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