



PREVENTION OF LIFESTYLE RELATED EYE DISORDERS - A CONCEPTUAL STUDY

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ABSTRACT The ancient science of Ayurveda is an integral form of medicine and health, which primarily aims at prevention of diseases and promotes positive well-being. The eyes are considered as one of the most vital organs of the body because vision plays a crucial role in social and intellectual development of a person. Moreover, about 80% of the knowledge we gain through the eye only. So, our existence and status in this universe are directly influenced by the eye. Many of the problems can be eliminated avoiding faulty lifestyles. Smoking, tobacco, and alcohol consumption, high fatty diet and junk food, chronic stress, prolonged exposure to bright light from computer and TV screen are few examples causing damage to eye health. Clinical conditions like CVS, diabetic retinopathy, dry eyes, ARMD, glaucoma may occur as a result. According to Ayurveda the eye diseases can be prevented for a long time by following specific points in life in form of Dinacharya, Ritucharya, Swasthivritta, and taking chakshyusya Rasayana etc. These preventive aspects along with some specific eye procedures explained in form of kriyakalpas can be practiced in everyday life to prevent lifestyle related eye disorder. Ayurvedic perspectives regarding of eye health are explored in the article.

KEYWORDS : Dry eye, Lifestyle disorders, Netratarpana, chakshyusha,

INTRODUCTION:-

Adoption of modern lifestyle affected ocular health and brought miseries to human society. Lifestyle diseases characterize those diseases whose occurrence is primary based on the daily habits of people and result of an inappropriate relationship of people with their environment.^[1] The main factors contributing to the lifestyle diseases are bad food habits, physical inactivity, wrong body posture, disturbed biological clock diet, chronic eye strain etc. An association between such defective life style measures and subsequent eye diseases was reviewed from Ayurvedic and biomedical literature and corresponding prevention strategies were searched. The Shalakya Tantra is one among Ashtang Ayurveda, which specializes in the treatment of Urdhvajatrugata (Parts of the body above the clavicle) Rogas^[2]. In Uttaratantra of Sushruta Samhita, 1-19 chapters have been devoted to the prevention and cure of eye diseases, which indicates the significance of Netraroga vigan. Eye disorders are much more important than any other physical disability, since loss of vision leads to the obliteration of the world. Various causative factors which are mentioned by ancient Acharyas thousands of years ago, are presently the most common cause for ocular disorders, some of which with their correlation with modern lifestyle are mentioned below:

Ushnabhitaptasya, Jalapraveshat^[3]- Sudden change in temperature may damage the functioning of vessels and lead to the weakness of the ocular tissues. It may interrupt with lacrimation, accommodation and fixation reflexes. In present time, drinking cold drinks immediately after exposure to hot environment, entering in air-conditioned area soon after exposure to sun are few reasons for eye disorders.

Klesha^[3] -Modern lifestyle has become other name of stress. Both physical and mental stress may lead to eye disorders. Blepharospasms may occur as a result of increased stress. The spasms cause the eyelid to switch uncontrollably which leads to poor depth perception and decreased vision. Stress may cause dilation of pupil. Dilated pupils allow light to enter in eye, need to react quicker, potentially leading to light sensitivity and headache.

Swapanaviparyayat^[3]- Means abnormal sleeping patterns like diva swapna and nisi jagarana. Suppressing the sleep causes dryness in eyes. In present era night shifts, night parties are few instances of altered sleeping habits. It may cause hyperaemia of conjunctiva, CVS, reflux lacrimation, styes.

Dhoomanishvanat^[3]- More exposure to smoke, noxious gases and other pollutants can cause many eye ailments. Smoking, air pollution

from vehicles, factories cause vata and pitta dushti which is a major cause of dry eye, age related macular degeneration, cataract, macular degeneration, uveitis etc.

Vega Vinigraha^[3] Suppression of natural urges lead to diseases of eye. It causes vataprakopa, leading to weakness of ocular tissues and strain to eye. Now a days prolonged office duties, meetings, travelling time are responsible for suppression of natural urges.

Sukshmanireekshanat^[3] watching minute objects for long duration. This causes strain to ciliary muscles, lens and extra ocular muscles leading to eye strain, headache, blurred vision, watering in eye and early need of presbyopia. In this present time more use of computers, mobile, reading on video display screens are some of the major causes.

Some of the lifestyle related eye disorders are as follow-

ARMD:-

ARMD is non-hereditary degeneration involving the chorio capillaries, retinal pigment epithelium, Bruch's membrane, and photoreceptors. It is most common cause of permanent central visual in the elderly and one of the leading causes of blindness in the world. Among the risk factor age, smoking, hypertension, Dietary factors, sun light exposure are main factors. These can be avoided by changing the life style.

Dry eyes:-

the causative factors for Dry eye syndrome are excessive computer use, pollution, auto immune disease, dry environment, air conditioner, aging, hormonal, Contact lens use, Blepharitis, LASIK, anti-depressant. Most common factor are related with occupation and lifestyle. With the minor changes in daily regimens, one can make life free from dry eye.

Diabetic retinopathy:-

the NPDR & PDR develops in more than 50% of cases. It occurs after 25 years of onset. As we know that by doing dietary and behavioural changes, one can minimize the chances of occurring diabetic retinopathy.

Pterygium:-

The causative factors are Dry heat, Abundance of dust, factory workers, sun (ultraviolet rays), farmers come across with all these factors. By using some of the preventive aids, one can prevent the disease to lend. Due to these characteristic features, it can be considered as occupational lifestyle disorder.

MATERIAL AND METHODS: -**Preventive aspects of eye related lifestyle disorders in Ayurveda...**

Vedic science offers many safe, effective and simple techniques for maintaining visual health. These primitive approaches can be easily practiced in everyday life to overcome various lifestyle related eye disorders.

Dinacharya (Daily Regimen): -

Dinacharya regarding the maintaining of eye health is vividly described in ayurveda. Acharya shussruta start daily regimen with netraprakshalan (eye wash) where Acharya Charak recommend Anjana.

Netra Prakshalana^[4]: -

After getting up from bed in the morning, washing eyes with the swaras of Amalaki or decoction of Lodhra with cold water help in maintaining the constant clear vision.

Ushajalpana (water intake in early morning)^[5]: -

Daily intake of water in early morning either mouth or through nose purify the whole GIT and ensure good vision. Gandusha-keeping mouthful of cold water 2-4 time a day will help to maintain eyesight.

Abhayanga^[6]: -

Daily application of medicated oil on head especially murdha region, is a preventive measure for eye disorders. It acts as drishtiprasadan.

Anjana:-There are two types of anjana, mainly practiced in daily regimen

- Medically processed antimony sulphide (sauveer anjana)
- Solid extract of barberisaristata (rasananjana).
The sauveeranjana type of anjana is applied to eyelashes every day and rasanjana is used once at interval of five or eight nights for stimulation and secretion^[7]. Daily habit of anjana practice found not only useful for good appearance of eye but also removes dirt, maintain moisture, burning sensation, itching, pain of eyes and support in proper accommodation to high or low light that prevent development of diseases.^[8]

Padabhyang^[9]: -

Regular massage of feet with oil is indicated as drishtiprasadan. As per two siras (vein) are situated in the center of feet (soles) which are significantly connected to eyes. These transmit the effect of medication applied over the soles in the form of oil massage and promote the eye health and prevent the diseases. Application of oil over soles always bestows sleep comfort and maintains vision.

Padaprakshalan^[10]: -

Washing of feet with clean water confers clear vision. Cleaning of foot also acts as drishtiprasadan.

Chatradharan^[11]: -

Use of umbrella prevents excessive light, dust particles, heat and sunshine. It acts as chakshushya. It is beneficial to eye.

Nasya^[12]: -

The procedure in which medication is applied through the nostril in a specified manner to nourish the organs above the clavicle known as nasya. Nasal cavity structures have direct communication with the sensorineural structures of brain and this is a natural gateway to brain. Due to anatomical communication, the medicine applied through nasal cavity reaches to sringataka marma cavernous sinus which is the seat of all the centers of vision, hearing, smell, and taste. One who practices Anutaila as pratimarsh nasya 2 drops in each nostril daily, gets a better vision and power of other sense organs remain intact and defect free.

Sheetodak Shira Snan^[13]: -

Bathing with cold water or water with slightly less temperature than body temperature from the head always promotes eye health and indicated to people until or unless other contraindications. But hot water for head wash may adversely affect hair & eye.

Netra-Tarpana: -

It is a restorative Ayurvedic treatment that bathes the entire eye socket in a pool of lukewarm ghrita. This helps to nourish dry eyes, cleanse and soothe itchy eyes, ghrita cools the pitta and lubricates vata dosha. It is recommended for many ocular disorders. It provides nourishment to ocular tissues.

Yoga Aasana for Healthy Eyes: -

Trataka and Netikriya help to promote clear vision and prevent the eye disorders. Trataka and Netikriya help to promote clear vision and prevent the dosasanchay^[14]. Suryanamaskara & Shirshasana are important Asanas, which are proven to be very beneficial for eyes. These Asanas boost circulation to the blood vessels and capillaries, relax the eyes, and even improve vision. In yogasana palming, shifting movement of eyes & swinging, Matsya Asana may give relief to eyes and prevent the refractive errors and other disorders. Palming is the technique in which rubbing of own palms & then touching them to eyes. Palming process when used after meal is very effective for prevention of refractive error (Timir)^[15]

Pranayama: -

It is an 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 nadishodhana and bhramri pranayama increases stress tolerance, calm to mind, reduce the muscle tension and improve circulation. All these may have promotive action in the eye health.

Rasayana: -

The main rasayanas adopted in eye health promotion are Achara rasayana and naimitika rasayana. The appropriate use of chakshushya & rasayana dravyas will help to maintain the health of Netra and prevents age related eye disorders. The use of Triphala & yastimadhu Ghrita act as Rasayana. Ghrita and navaneeta are extremely rich in vit. A and choline with good amount of vit.E, riboflavin, Niacin and pantothenic acid; vit. K Folate and vit. B12 in small amount. Anti-stiffness factor presents in butter prevent hardening of arteries and cataracts^[17]. Acharya Vagbhata has advised that triphala along with honey and ghrita should be consumed at night daily for strengthening of eye sight^[18]

Pathya And Apathya Aahara for Healthy Eye^[19-21]**Pathya Aahara**

Shukadhanya like, Lohitakashali (red variety of rice), sashtika, yava (barley) shimbidhanya like mudga (green gram) and other pulses, shaka (green vegetable) like, jeevanti (leptadenia reticulata) solanum nigrum, Aloe vera, unripe banana and redish, Allium sativum, fruits like Aamalaki, Vibhitki, Abhaya, Dadima (pomegranate), Draksha (grapes), dugdha (milk), milk obtained in evening time, cow's milk, ghrita prepared from cow's & goat milk, oil Tilatail (sesamum indicum) rasa, sweet, sita (sugar).

Apathya Aahara

Shukadhanya like, germinated cereals, shimbidhana like, kulattha (horse gram), masha (black gram), milk gotten in morning time, curd, oil Atasi (Linum usitatissimum) rasa, Amla, Lavana, Katu, Kshara. Over consumption of too spicy food, junk food, food which is stored for long duration, and stale food should be avoided.

DISCUSSIONS: -

In the present time the lifestyle of people is occupied of hectic schedules. Eyes are extremely delicate organs. These are the organs which should be free of stress, near watching activities for long time and polluted environment. But since of the present way of lifestyle, our eyes have to bear a lot of stress and limit resistant against eye issues. As a result, the person suffers from refractive errors, CVS, cataract, & other eye problems. Ayurveda focus mainly on three things for management of any disease like Ahara, Vihara, & Ausadha. So, this article has tried to summarize the works of generations contemporary Ayurvedic ophthalmologist for enhancing knowledge of future generation regarding lifestyle related eye diseases & their prevention. Ayurvedic medications with practice of yogic kriyas & eye exercise have shown significant results in some of the eye disorders. In Most of eye diseases Triphala, Haridra, Daruharidra, Shunthi, Yashtimadhu and Punarnava used as a single drug as well as in combined formulations.

Triphala is having adaptogenic, antioxidant, anti-diabetic, anti-cataract, immunomodulatory, free radical scavenger and hyperchlolesterolemia. Daruharidra (Berberis aristata) is having anti-oxidant, anti-inflammatory, anti-diabetic, anti-hyperlipidemia, immunomodulatory. Shunthi (zingiber officinale) is having immunomodulatory, anti-diabetic, anti-oxidant, anti-cataract, anti-hyperlipidemia, anti-ageing & free radial scavenger properties. Yashtimadhu (Glycyrrhiza

glabra) is having anti-oxidant, immuno modulatory activity. Also, punarnava is having immunomodulatory, anti-oxidant, potential nutrient source, adaptogenic, rasayana like actions. The basic concept behind the yogic kriyas are relaxation techniques. Relaxation of mind and eye improves the vision. Eye exercise & yogic kriyas also help in strengthen of eye muscle. Changes should be made in diet, behavior and lifestyle. Follow the principles of Dinacharya (daily regimen), Rasayana (anti-ageing regimen) and Achara Rasayana (good behavior changes). Refinements in lifestyle through Ayurveda can help us to get a new remoulded pair of eyes. Few modifications in our daily routine can keep us away from common eye problems.

CONCLUSION:-

Ayurveda gives careful consideration on staying away from the components causing diseased state. Giving emphasis on our daily routine and a few subtle changes in our lifestyle can result in optimum visual health. For eye in Ayurveda such as Anjana, Nasya, Snana (Bath), Padabhyanga, etc. Along with a few changes in behavior at personal, family, community level including preventive practices are promoted as effective measures for maintenance of visual health and prevention of eye related disorders. Ayurvedic visual health promotion and preventive measures as integral part of programmes to enhance community awareness may help to attain "The vision 2020: The Right to Sight" Global initiative goal of WHO.

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