



SCOPE OF AYURVEDA IN PREVENTIVE ASPECTS OF NETRA ROGAS

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ABSTRACT

Acharyas says that “Sarvendriyaanam Nayanam Pradhanam” among all the sense organs, the eyes are the most important. The eyes help us visualize objects and also help us with light, colour and depth perception. Eyes provide us with direction and guide most of our actions. Factors like too much screen time, nutritional deficiency, not getting enough sleep, not wearing sunglasses, staying dehydrated, rubbing your eyes, drinking, and smoking affect vision. One out of every three people in India is blind. Over 15million people are blind in India. The leading causes of vision impairment and blindness are refractive errors, cataracts, ARMD, glaucoma, diabetic retinopathy, hypertensive retinopathy, and retinal detachments. Vision impairment severely impacts the quality of life in all age groups. Young and school-going children experience lower levels of educational achievement, while adults have lower employment rates. In the case of older, visual impairment can contribute to social isolation, difficulty in walking, and a high risk of falls and fractures. To prevent all these effects, Ayurveda is the only choice. The primary aim of Ayurveda is the prevention of disease and the promotion of positive health. According to Ayurveda, to maintain a healthy and disease-free life, one should follow a dinacharya. So, the purpose of this article is to enlighten the scope of Ayurveda in the prevention of Netra rogas explained, especially in the form of dinacharya related to netra, pasta and apathy Sahara and vihara, eye exercise, rasayana therapy and the importance of virechana in neutral rogas.

Keywords: Netra, Dinacharya, Eye exercise, Rasayana, Virechana, Nasya, Pathya, Apathya.

INTRODUCTION

The basic principle of Ayurveda is based on tridoshas, which are responsible for the body's normal function and when vitiated lead to disease. The role of doshas is different from organ to organ. In the eye, tejas^[1](alochaka pitta) is considered the main factor. Acharya Vagbhatta gives a resemblance of the Netra with the metallic weapon. Just like the weapons extracted from stones, their sharpness is maintained by stone (whetstone), and the rocks destroy them. Similarly, the Netra (Dristi) originates from Tejas; its sharpness (chakshurendriya kriya) is maintained by the Tejas, and it is even destroyed by the Tejas (excessive and unwarranted exposure to irritants). So, the eyes are especially susceptible to kapha^[2]. The factors vitiating the pitta or kapha will lead to eye disease.

Nidana of Netrarogas^[3]

Ushna abhitapthasya jala Pravesh – it causes sudden variations in the body temperature.

Doorekshanath, sukshma Nirikshana - atiyoga of Netra indriya causes vata and pitta viharas in the eye.

Swapanaviparyayat cha – day sleep and night arousal cause vitiation of vata

Prasaktha samrodhana – continuous weeping washes away the tear fluid containing nutrients and bacteriostatic activity. Finally, it causes xerosis and various diseases.

Kopa and shoka cause vitiation of pitta and vata in the eye, respectively.

Klesha – physical and mental exhaustion vitiates both sharara and manasika doshas.

Abhighaatha – vitiation of vata and pitta

Suktha aaranala amla Kulatta Masha nishevana – taken excessively causes Netra viharas.

Veganigraha – out of 13 Vegas nidra, ashru and leads to Netra guarava, Akshiroga and Netra viharas, respectively.

Swedatatho – excessive cause pittaja and raktaja vikaras in eye

Dhoomanishevanat cha - vitiates pitta and rakta by increasing Tikshna guna, ushna and ruksha guna.

Vamanathiyogath- leads to vata prakopa.

General etiological factors in developing the disease Asatmyendriyardha samyoga (Improper contact between sense organs and objects), Kala/Parinama (Effects of Time), Prajnaparadha/Karma (Intellectual blemish), Suppression of Adharaneeya vegas (Natural urges), Nidra Vegadharana (Sleep deprivation), Ahita Aharas, Viharas, Acharas (faulty diet & lifestyle)
Samprapti of Netra yoga - In Ayurveda, the Acharyas described a generalized samprapti for all eye diseases. The Doshas vitiated by indulgence in foods and habits particularly harmful to the eyes (Achaksusya aahara- vihara) propagate through the channels (Sira) towards uttamanga (the head) and enter the parts of the eye to produce diseases^[4]. In traumatic lesions, vitiation of Doshas succeeds the disease.

Ayurvedic literature stresses the preventive aspect of treatment, especially in ophthalmology, because inadequate prevention of ocular diseases may lead to blindness. Therefore, the first step in treating a disease should be to withdraw the disease-contributing factors. In the form of these factors, ancient scholars prescribed Dinacharya, Rtucharya, aahara (specific diet), aushada (drugs), and vihara (daily regimen).

DINACHARYA RELATED TO NETRA

Brahma Muhurta (The Creator's Time)

The Creator or Brahma is the ultimate knowledge; Muhurta means time period. 1Muhurta = 48 minutes. Brahma Muhurta starts exactly 2 Muhurta before sunrise. Hence, it begins 1 hour and 36 minutes before sunrise and ends 48 minutes before. (Approx 4:30 AM)

It creates the most encouraging and conducive atmosphere. During this peaceful time, the universe's energy is in perfect balance and minimal distractions make it easier to concentrate on the practice.

Saucha vidhi

This will clean your mouth, oesophagus, and GIT and stimulate gastrocolic reflex, thus leading to perfect bowel movement. Suppressing the natural urges leads to vitiation of vata and many diseases.

Ushajalapana / Nasa Jalapana- The eyes rely on water as tears to keep them lubricated. Lubrication

is necessary to keep eyes moist and remove bacteria and dust particles. Drinking plenty of water will help flush out waste in the body and adequately hydrate your eyes to help reduce eyestrain.

Netra Prakshalana-

Wash your eyes With Triphala Kashaya/Lodhra Kashaya/Yastimadhu Kashaya/ Tankana/ Decoction of Kshiri Vriksha,

Benefits - It is helpful to tone up the muscles and surrounding tissues, clean the accumulated sebum, and improve vision.

Importance of Dhantadhawana in netra vikaras

Dental infections, including a severely decayed tooth, can sometimes spread to the orbital. The neurotoxic bacteria that cause damage to the root canal can travel from the mouth to the eyes through the lymphatic system and then damage the optic nerve, consequently leading to vision problems.

Importance of Shiro abyanaganam in netra vikaras^[5]

Daily application of medicated oil on the head, especially the forehead region, strengthens the eyes and is a preventive measure for sense organ disorders. It acts as Dristi prasadana. Applying Krishna Tila to the forehead is good for eyesight, Madhuka & Amalaki-pittaja rogas of the eye and enhances vision in Timira, Vachadi drugs- kaphaja Netra rogas.

Snana

A head bath with cold water will keep the eye fresh and functioning. It maintains temperature and blood circulation.

Chanting

Surya (the sun) is the superintendent lord of eyes and vision.

Cakusopanishat is devoted to the protection of eyesight and the cure of diseases. Cakusopanishat is a summary of prayers to the sun, the chanting of which is said to promote eyesight and better health.

Advised to the recitation of Adityahrudayam is a Hindu devotional hymn dedicated to Aditya or Surya mentioned in the Buddha Kanda of sage Valmiki's Ramayana. And the Stotra was recited by sage Agastya to Shri Ram.

Use of Anjana (collyrium)

Anjana applied by using shalaka. It should be applied from the inner canthus to the outer canthus. It cleans the human eyes, which makes them shine like the bright moon in the clear sky. Daily practice of Sauveeranjana is advised to prevent eye diseases and properly maintain visual power.

Aschyotana^[6]

Installation of **Ghrta /Navaneeta/Honey** into the eyes.

- ✓ Ghrta (ghee) and Navaneeta are extremely rich in Vitamin A and Choline, with Vitamin E, Riboflavin, Niacin and pantothenic acid; Vitamin K, foliate and vitamin b12 in small amounts.
- ✓ The anti-stiffness factor present in butter prevents the hardening of arteries and cataracts.
- ✓ Honey contains almost all micronutrients. It has a twenty-fold antioxidant capacity (water soluble) than vitamin C and is the wealthiest antioxidant supplier.

Netra Pancamrutam^[7]

1. Simultaneously fill the mouth and splash water on the eye thrice.
2. Clean the teeth from left to right and downwards to upwards.
3. Apply heat from the palm to the left side of the eye.
4. Look at the full moon.
5. After meals, we should clean the eyes with a handful of water.

Padaprakshalana, Padayatra dharana, also acts as Chakshusya – The foot is always connected with the eye; the foot is the end organ, so the nerve endings are highly sensitive. The stimulation of nerve endings of the foot reflects in the eye via sympathetic and parasympathetic supply. So, the foot should be kept clean, healthy and away from heat. In timira chikitsa paada puja also told by Acharya Vagbhatta

Pada abyanaganam^[8]

The application of oil over the foot enhances better sleep and visual acuity. Local action like snigdghata can be attained by the sneha used for abhyanga. The strokes that are done in pada abhyanga increase the local blood circulation.

- Acharya Vagbhatta has mentioned two siras situated in the centre of the foot, which is connected to the eyes.
- In Nadi Darpana, ten nadis are situated in the head, among which two are related to the eyes, i.e., Gandhari (left eye) and hastijihwa(right eye).
- According to Bhela Samhita, Alochaka Pitta is present in the eyes, and as per other references, Alochaka Pitta is present in the Pada. Padabhyanga stimulates the Alochaka Pitta and enhances visual acuity.

Padabhyanga, the somatic sensory area in the cortex, may get stimulated, and as areas of feet and eyes are the same, i.e. Area II of the cortex, its stimulant effect may improve the function of eyes by reducing eye strain. The interpretative (association) areas of feet and eyes meet at Wernicke's area. Padabhyanga, by nourishing or stimulating the effect of Padabhyanga, improves the function of the eyes. Padabhyanga normalises the two critical neurotransmitters, Serotonin and Norepinephrine, which regulate various Neuro-psychological processes and sleep. Thus, it induces relaxation and natural sleep and positively affects the eyes.

EYE EXERCISES^[9]

Aim – Rest/relaxation of the mind and eyes, as rest constantly improves vision.

Principle – relaxation and stimulation of the eye, elimination of doshas

The eye needs proper care, like Cooling and Lubricating regularly. The blinking maintains it. If disturbed, this process increases the chances of issues related to the eye.

Overly strained eyes can cause vision problems, dry eyes, anxiety, and headaches.

So, to overcome eye problems, simple eye exercises are beneficial for Relieving the Strain, Strengthening the eye muscles, improving visual reaction time and Enhancing Cognitive Performance.

Sunning – Procedure – face the sun with the eyes closed and move the eyes, head/face and body slowly side to side, left and right.

Benefits –

- Vitamin D plays an Immunomodulatory role in Innate and Adaptive Immunity.
- Megalin and Cubilin, considered vitamin D transporters, are expressed in lacrimal and accessory glands responsible for producing tear fluid.
- The vitamin D receptor has been found in the corneal, endothelium and retinal pigmentary epithelium, and vitamin D enhances corneal epithelial barrier function.

Moon Gazing-

Moon Gazing also transmits sunlight (because the moon doesn't have its light). So practicing Moon Gazing absorbs sunlight. During Moon gazing, the gravitational force that decreases body tension increases melatonin in the body and induces sound sleep.

Proper sleep

During sleep, the eyes retain functional capacity due to complete rest.

Blinking-

Sit comfortably with your eyes open and quickly blink 10-15 times. Close your eyes, relax for a few seconds and repeat 4-5 times. Frequent and effortless blinking lubricates and cleanses the eyes with tears and soothes the eye muscles.

Palming-It is an effective way to rest the entire visual system profoundly by reducing light stimulation and focusing the mind. The eye muscles will relax with the warmth, and the eyes will find relief in the darkness. Frequent and lengthy periods of palming will reduce muscular tension while also being beneficial for sight.

Shifting-Rapid eye-shifting (up and down, side to side, clockwise and anticlockwise, oblique, nose tip gazing, blinking) is considered beneficial for all cases of visual difficulties as loss of vision is often regarded as directly proportional to loss of eye motion. Shifting is moving or rotating eyeballs from one direction to another. It activates tiny eye muscles by promoting blood circulation, reducing strain and improving eyesight.

Focus shifting- Change the focus of both eyes by looking at a far-away object for 6 seconds until it becomes clear. Then turn gaze to a closed object for 6

seconds until it becomes clear. Do this exercise repeatedly until eyes feel slightly tired. Strengthens muscles responsible for accommodation.

Trataka means to gaze at a particular object (e.g., a candle) from a distance.

It Strengthens Eye muscles and stimulates the Rods and Cones through the mechanism of dark and light adaptation.

Figure of Eight

Sit comfortably in front of a blank wall and imagine a horizontally placed figure of eight on the wall. Trace a path along this figure with just your eyes and without moving your head. Repeat in clockwise and anti-clockwise directions. Reduces fatigue and strengthens the eye muscles.

Eye Exercise with Ball

Throw a ball with your hand and catch it with the left. Then, throw it in the reverse direction. One should watch the ball's movement as he throws it and blink every time, he catches it with one hand. One should remember to throw the ball at lower than eye level. It helps to relax the eye muscles and improves accommodation.

20-20-20 Rule

Take a 20-second break every 20 minutes and look at something 20 feet away.

To reduce fatigue and eye strain

Cold Pad- Keep cotton pads soaked and squeezed in cold water, Mridwikadi, or Triphala kasaya over closed eyes. It soothes the eyes.

Rasayan therapy^[10]

Triphala, honey and ghrta (unequal quantity) should be consumed at night daily to strengthen eyesight.

- It controls all three body humours, i.e. Haritaki- on Vata, Amalaki- on Pitta and Vibhitaki- on Kapha.
- Triphala, in the form of paste, decoction, or powder, is helpful in all visual disturbances. In kaphaja diseases, it should be taken with honey; in pittaja diseases, with ghee; and in vataja diseases, with oil.
- Polyphenols derived from triphala are transformed into bioactive metabolites that can pote

tially prevent oxidative damage. Triphala has Anti-VEGF Activity, Anti-inflammatory, analgesic, Antibacterial, and Immunomodulatory Properties.

Haridra, Amlaki and Gandhaka– In the lens, Glutathione is required to maintain the proteins in a reduced state and retain the lens pump integrity. Glutathione acts as an essential antioxidant which protects the body from damage to cells caused by free radicals. Sulphur is necessary for glutathione production (Gandhaka), vit c, selenium, cysteine (helps maintain adequate glutathione production), turmeric (curcumin -increases glutathione levels)

Honey contains almost all micronutrients. It has a twenty-fold antioxidant capacity (water soluble) than vitamin C and is the wealthiest antioxidant supplier.

Significance of Virechana Karma in Netra Rogas

Shodhana Chikitsa is a unique Ayurveda therapy that helps eliminate excessively vitiated Dosha from the body. It primarily includes Panchakarma viz. Vamana, Virechana, Vasti, Raktamokshana and Nasya. Acharya Charaka states that vitiated Dosha, which Langhana and Pachana Chikitsa manage, may re-aggravate and cause the recurrence of diseases; however, such recurrence is infrequent if managed by Shodhana Chikitsa. Virechana is a widely administered Shodhana Chikitsa for eliminating vitiated Pitta Dosha. It is relatively easy to administer, has a lesser possibility of complications and also has better patient compliance.

The procedure that eliminates Dosha from the Adhobhaga (lower body part) is termed Virechana (therapeutic purgation). The Sanskrit word Virechana means Mala Nissarana evacuation of waste products. Virechana is the best Shodhana Chikitsa for diseases caused by aggravated Pitta Dosha and vitiated Rakta Dhatu. It is also indicated in Pitta-Kaphaja Vikar. Virechana is beneficial not just as a curative measure but also as a preventive measure in Sharad Rutcharya. It is also a pre-requisite to Rasayana Chikitsa.

Probable Mode of Action of Nitya Virechana

With Triphala churna, Avipattikara churna in mrudu and Madhyama kosta and with Eranda Taila in krura kosta

Virechana pacifies the morbid Pitta, helps it function normally, and acts as vatanulomaka. Nitya Virechana removes toxic materials from the body and provides purification of the body at two levels: (1) gross level, where various organs and systems of the body are thoroughly cleansed, cardiovascular level and gastrointestinal tract, and (2) cellular level, where the purification and cleansing of the body are produced at the cell membrane and molecules. Gut absorption improves considerably, and metabolism is also corrected.

Nasya^[11]

Administration of lukewarm tila taila/ghrita (2 drops) through the nose is called Nasya.

It is explained that Nasa being the doorway to Shira (head), the drug administered through nostrils, reaches Shringataka marma and spreads in the Murdha (Brain)) taking the route of Netra (eye). Shrotra (ear), Kantha (throat). Siramukhas (opening of the vessels),

PATYA AND APATYA AHARA^[12]

Varga	Pathya	Apathya
Shuka dhanya	Lohita Sali, yava	Virudha dhanya(germinated sprouts)
Shimbi dhanya	Mudga	Masha, kulatha
Shaka	Shaka panchaka (jivanti, vastuka, matsyakshi, Meghanada and Punarnava)	Kutaja
Vegetables	kakamachi, karavellaka, Vartaka, nava mulaka	Kalinga
Kanda	Ardrak	-
Phala	Draksha, triphala, dadima	
milk and milk products	Cow's milk, ghee, butter	Dadhi
Mamsa varga	Jangala	Anupa
Lavana	Saindhava lavana	
Ahara upayogi	peya and vilepi prepared with 100-year-old ghee	Phanita, Vesavara
Jala	Kwatita Sheetala jala	Coffee (in glaucoma), Alcohol
Rasas	Tikta	Amla, lavana, katu

PATYA AND APATYA VIHARA^[13]

PATYA VIHARA	APATHYA VIHARA
Following above mentioned Dinacharya, Sadvritta, Achara Rasayana	Vegadharana
Eye exercises	Excessive sexual act
Wearing sunglasses	Diva swapna, ratri jagarana
Chatradharan	Rajo Dhuma nishevana
Surya namaskars	Immersing excessively in water
Pranayama	Krodha, shoka
Shatkriya (mainly tratata and jalaneeti)	Seeing very shining, fast moving and minute objects

etc., scrape the morbid Doshas in the supraclavicular region and extract them from the Uttamanga.

Actions of nasya: -Stimulation of vital centres/ prana vata actions. Nourishing the tissues and clearing the channels. Absorption through nasal mucosa is relatively rapid. Avoiding the problems met by the blood-brain barrier. Removes the congestion. Correcting the neuro-vascular anomalies. Avoidance of enzymatic inactivation, low pH, hepatic extraction, chemical degradation, etc. Improves oxygenation. Vatanulomana enhances the performance of neurotransmitters.

PATYA AND APATYA

The ahara vihara, which is beneficial and nutritional to the body and also gives happiness to the mind, is known as Pathya, and the opposite of that is known as Apathya.

PATYA AND APATYA UPACHARA^[14]

PATYA	APATYA
Langhana, Ascyotana, Anjana, virechana, raktamokshana, snehapana, nasya	Avoid Anjana in pregnancy

Chakshushya Dravaya^[15]

According to susruta and vagbhatta – Triphala, ghrta, ksheera, dadima, draksha, shatavari, shigru, yava, patola, karavellaka, yastimadhu
Rasa dravyas – Bhasmas of Swarna, abhraka, tamra, vanga, Yashada, loha, Swarnamakshika, Tutta, kharpara, kasisa, srotanjana, swarna Gairika, Karpardika.

CONCLUSION

Eyes are vital in our daily lives and are our most precious gift. For the man who is blind, this world is useless; day and night are the same, though he may have wealth^[16]. Unhealthy lifestyles are the principal causes of modern-day illnesses. Dinacharya (daily regimen) is an essential part of all healthcare protocols. We can prevent diseases and lead a healthy and disease-free life. It combats the harmful effects of environmental changes at the primary level and slows down the irreversible effects. Our daily routine creates uniformity in the body and the mind. It affects focus, clarity and stabilization in human emotions and hormonal balance. Body strength, immunity, and energy reach greater levels, and well-being begins to shine. With all of the positive effects of a healthy daily routine, it is no wonder this is one of the first lines of treatment to re-establish the homeostasis and health of an individual. Health management is accessible & enjoyable, but disease management is costly & painful.

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