

Ayurvedic Ophthalmology an Approach through Holistic Diet and Regimen

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Abstract: *Ayurvedic ophthalmology aims at individual and the community level protection of eyes. It targets the ocular ill health which need medical intervention like diabetic retinopathy and those which significantly affect the quality of life like computer vision syndrome. An Ayurvedic view of the pathophysiology and preventive measures through Ayurvedic diet and regimen is discussed in this article for giving the best possible ocular health for the individual and community.*

Keywords: *Life style disorders, Community Ocular Health, Retina, Glaucoma, Diabetic Retinopathy, Age-related Macular Degeneration (ARMD), Retinal Ganglion Cells, Chakshushya dravya, Ghrita.*

1. INTRODUCTION

An art of leading a holistic life is a necessity in this modern technological era with the people living in the glare and comfort of modern life. Ayurveda considers the atma, mana and sareera as one. While the pollution of air, water, and food, radiation and chemicals affect the body; work pressure, mental trauma, sleeplessness, etc. are affecting the mind. The effect of all these is creating a bad pressure on the sense organs. Eyes, being the most precious organs, is ultra-sensitive and it can't always withstand these pressures when it goes above the limits. So, Prevention is always better than cure.

2. CONTENT

2.1. The Major Diseases That Cause Blindness Or Ocular Ill Health In A Community

Developing world	Developed world	The possible causes
Cataract	Refractive errors	Unhealthy diet
Glaucoma	Glaucoma	Trauma and exposure to light
Trachoma	Cataract	Unwholesome sexual contact
Vitamin A deficiency	Diabetic retinopathy	Hereditary factors
Age related macular degeneration	Age related macular degeneration	Environmental toxins and infections
Diabetic retinopathy		Physical anomalies
Onchocerciasis		Smoking and Alcohol
		Work-related exposures ¹

2.2. Pathophysiology

The Diet we take and regimen we do is acting upon the body depending upon Agni (the metabolic fire). Agni concept in Ayurveda can be considered as the metabolism which takes place in the tissue, molecular and cellular levels. Unwholesome diet and practices alters the metabolism and resulting by products will be less in quality and those byproducts enter the circulation and reaches the eye, thus hampering the normal anatomical and physiological functioning of eyes². So when Agni is normal health is normal.

2.3. Holistic Ways To Improve Eye Health

Ayurveda, gives equal importance to both preventive and curative aspects because in this modern world where the world is more into business, stress and sedentary life, to protect Agni and to prevent and cure diseases a strict regimen of pathyapathya in aahara and vihara is essential in daily life.

2.3.1. Role of Diet and Nutrition and Holistic Lifestyle in Preventive Ocular Primary Care

The main problem with which a person seeks the attention of an ophthalmologist is Blurring of vision. According to Ayurveda and other Vedic literatures, we can see an extensive reference of drugs and

foods which are mentioned by acharyas for the protection of vision and preventing blurring of vision in cases like diabetic retinopathy, ARMD, Computer vision syndrome, Glaucoma, or dry eyes. Preventing Vit A deficiency in child hood is very important for the perseverance of night vision which can be best done through the administration of pathya chakshushya aahara.

2.3.2. Chakshushya Food and Regimens Mentioned by Different Acharyas

DIET AND NUTRITION			
	RECOMMENDED	NOT RECOMMENDED	
Yoga ratnakara	Ghee,Milk	Sour food items	
	Rock salt,Honey	Dry meat	
	Brown coloured sugar	Alcohols	
	Patola(snake guard),red rice	Selected sea fishes	
	Green gram	Curd	
	Wheat,Tripkala,carrots,Lodhra	selected leafy vegetables	
	5 Leafy vegetables,Jeevanti,	Tobacco	
Vagbhata	Matsyakshi,Punarnava,	Excessive hot ,sour heavy foods	
	Meghanada,Pure water	Urad dal	
	Ghee,milk,Tripkala,	Dry ,Rough food,Old food	
	Pomengranite,Black grapes	cold food,food which is infected	
	Goose berry,Meat of bird		
	Sushruta Samhita	Purana ghrita,Tripkala	
		asparagus,barley,snake guard	
small radish,small brinjal,bitterguard			
meat of home grown poultry			
Leaf of drum stick			
Bhavaprakasha		Ghee,Butter,Milk,urine,mustard	Pine apple ,sour mango
		Honey,Black grapes,sandal	
	jasmin oil,banana,kataka fruit		
sargadhara samhita	Tripkala,Ghrita		
Raja nighantu	bufallo urine		
	intake of minerals		
	prapaundarika		

3. DISCUSSION

Role of nutritional sources in preventive ophthalmology.

Discussing aahara Shadrasas (6 tastes), Triphala and Ghrita are some common examples which we can take in the life to prevent the eye diseases. Among them the concept of shadrasas are the most important because according to Ayurveda all the 6 tastes namely sweet, sour, salty, bitter, pungent, astringent has an effect on the eyes. Both physical and mental changes can be observed after the intake of different types of food.

Sweet taste builds tissue, calms nerves and improves clarity of the sense organs.eg, Honey, wheat, milk fruits etc. Sour taste cleanses tissue and increases absorption of minerals. Improper use of the sour taste causes constriction of the eyes and blurring of vision. eg.over usage of lime, lemon, vinegaretc. Bitter taste detoxifies and lightens tissues, pacifiesvata but it is the least practiced taste now a days, eg.bitter guard. Pungent taste is good for the cleansing of the eyes as it increasing the watering of eyes if consumed directly, but over usage can cause inflammation e.g. red chili, garlic etc. In Salty taste saindhava (rock salt) is best for eyes, overuse of the normal salt can cause loss of strength, wrinkles and water retention causing edema. e.g. .sea salt, Astringent taste is more cooling and is blood purifying. eg.chik peas, okra.

So a proper combination of all these tastes in the diet is very essential to maintain good ocular health. Improper or over usage of these tastes esp. sour and salty is one of the leading factors contributing to the ocular diseases in the present era.

Ghee is a potent medicine which is targeting on 3 main organs. Heart brain and the eyes. The chemical analysis of ghee shows good quality unsaturated fat which helps in the poshana of sapta dhatu and nourishment of neurons of brain preventing ocular neurodegenerative diseases. Ghrita manda (upper portion of ghee) which always remains in a liquid state is rich in unsaturated fatty acids, esp. omega-3 and omega-4, which are essential for vision.

For example, ghee with triphala enhances vision and ghee with bhrami enhances memory.

Triphala is a drug consisting of Terminalia chebula, Terminalia bellerica and Emblica officinalis in equal quantity. Taking the individual qualities terminalia chebula is having the property of cleansing the micro and macro channels, pacifies all doshas and is having an anti-aging property so it is advisable in Age related macular degeneration, senile cataract, retinal degeneration etc. Terminalia bellerica is a best homeostatic. Emblica officinalis is a powerful antioxidant and prevents ageing and degeneration. Various formulations of triphala used in eye are Triphala choorna, Triphala kwatha, Saptamruta loha tablet, triphala ghrita, chandanadivarti, Triphala arka etc.

Considering honey as chakshushya most of the compounds like Flavonoids, phenolic acids, ascorbic acid, tocopherols, catalase, amino acids, vitamins B1 B2, and B6, minerals, and enzyme .work together to give a synergistic, antioxidant, antibacterial, and anti-inflammatory effects. Applied daily in the eyes it improves eye sight.

Role of wholesome regimens in preventive ophthalmology

Coming to vihara some common preventive methods that can be adopted is

- Walking, wearing hat and sunglasses to protect from UV radiations, proper cleansing of the eyes etc.
- Proper sleep, waking up early in the morning, and offering prayers is a good start for a day as it fills the mind with positive energy. Applying oils on soles, feet, and head is protective for the eyes as the massage effect will stimulate the nerve endings.

Bath with hot water for the body and cold water for head is also protective for the eyes. People with active lifestyle including exercise were 70% less likely to develop neo-vascular AMD compared to others according to Beverdam studies. Sexual activity and diseases which accompany some unwholesome sex practices include the sexually transmitted diseases and some of the recreational drugs used for performance enhancement in sports and sex may influence the visual system and can be considered as a part of the lifestyle. So, considering the acharyas' words it is better to avoid unwholesome practices for better eye sight.

4. CURATIVE APPROACH

Role of nutritional sources in curative ophthalmology

Diet exclusively for timira (any eye disease with blurring of vision) has been explained by Acharya Consisting of:

- Triphala kashaya with ghee, steamed rice flour rolls
- Cakes made with triphala as an ingredient
- Dessert made with triphala and milk with sugar and honey.

This can be used daily as well. It is advised to take terminalia bellerica powder along with any of black grapes, sugar or honey daily. The dietary protein, vitamin A, Vitamin B, niacin, riboflavin, and thiamine in milk appears to be protective against nuclear and cortical cataract. Ayurveda Acharyas have highlighted the importance of breast milk as the best drug for eye protection and ocular disorders. Breast milk contains lots of lutein and zeaxanthin, which is necessary for the maturation of fovea based on metabolic effects. , the intake of fruits like Black Grapes, Pomegranate, banana, etc., and the vegetables like gooseberry, bitter gourd, snake gourd, elephant yam, green carrot, radish, small bringal, etc., rich in vitamin A has an effect on decreased risk of AMD. . In a cross sectional investigation a decreased risk in glaucoma was observed in the intake of veggies and fruits, especially carrots. A clinical trial conducted in animals showed that topically and internally used Omega 3 and 6 fatty acid (eg ghrita manda) have a good effect on dry eye syndrome due to their anti-inflammatory effects.

Role of wholesome regimens in curative ophthalmology.

In the new life style practices most important is avoiding smoking and drinking alcohol. In a Blue Mountains eye study, a cross sectional association of beer drinking was associated with early AMD, incidence of soft indistinct retinal drusen, drusen area, and pigmentary abnormalities in the retina.

20% of the blindness at or above the age of 50 is caused by smoking and the effect of smoking is influenced by the presence of specific gene polymorphisms which are involved in inflammation and immunity causing ARMD. So, following chakshushya food and practices may help in reducing the susceptibility for getting ARMD. Exposure to light, especially UV-B light has been examined and found to be a risk factor for cataract in some studies Applying of collyriums is helpful in proper cleansing of the doshas in the eye.

In one study with topical application of honey as ointment, 85% improvement was seen in non-responsive eye disorders. Internally, honey in diabetic patients stimulates insulin secretion, decreases blood glucose levels, elevates HB concentration, and improves lipid profile.⁸

Bhavaprakasa says the wearing of diamond will please Surya, the god of eyes, wearing the pearl pleases moon, and wearing coral pleases Saturn. Modern studies, though less, have showed that they help in the reduction of fibrous growths. Drinking water in tamra vessels. And instruments are mentioned in classics in the context of treatment. Loha stimulates functional activity of all organs. Charaka emphasizes that the medicinal use of lead and brass should be external. An instrument for applying collyrium called seesa shalaka is explained in the context of timira.⁷ Use of jasmine petals as eye pad and instilling drops of jasmine flower is soothing to eyes.⁹

5. CONCLUSION

Each nutrient plays a specific role in the physiological functioning of eyes. The need for the thinking of good nutrition and regimen and practicing is that there may be difficulty in controlling all other factors related to life both internal and external, that may lead to the formation of toxins in the eyes.

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