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ABSTRACT

Lifestyle means the way people live their life. Lifestyle disorders are result of an inappropriate relationship of people with their environment. To influence many disorders diet and lifestyle are major factors. Tobacco chewing, smoking, drugs, drinking of too much alcohol, excessive use of gadgets (mobiles and computers) and lack of exercise may increase the risk of developing diseases. The disorders which are not transmitted by person to person, air born particles or any vector but due to faulty lifestyle are called as lifestyle disorders. In this article we will enlighten the Shalakyia Tantra and role of lifestyle in disorders relating to Shalakyia Tantra.

KEYWORDS: Lifestyle, Shalakyia tantra, lifestyle disorders in Shalakyia Tantra and management of lifestyle disorders.

INTRODUCTION

Lifestyle means the way people live their life. Lifestyle disorders are result of an inappropriate relationship of people with their environment. Life style disorders are partly caused by unhealthy behaviors and partly by other factors. After several decades of technological developments our life style have become sedentary and dependant on machines. Our diets also have becomes unhealthy and we are addicted to use tobacco and alcohol and habituated to use coffee and tea in high frequency. As per WHO previously communicable disease were major contributors to higher morbidity and mortality but now there is a shift and non communicable disease or life style disorders are major contributors to morbidity and mortality. Unhealthy eating, consumption of alcohol, smoking abuse and lack

of physical activity are major contributors of life style disorders. Unhealthy eating, consumption of alcohol and beverages, smoking abuse, habituation Pan Masala and Gutakha chewing also affect on oral hygiene. In this article we will enlighten the Shalakya Tantra and role of lifestyle in disorders relating to Shalakya Tantra.

Impact of life style disorder on ocular diseases

Metabolic Syndrome – The components of metabolic syndrome include obesity, diabetes, hypertension & dyslipidemia. The association of diabetes and hypertension with retinopathy, cataract and raised intra ocular pressure is well known. Person with metabolic syndrome are known to be at risk of developing large vessels atherosclerotic disease. Prevalence rate of metabolic syndrome are 33.5% overall, 24.9% in males and 42.3% in females.

Obesity- Overweight or obese persons are at increased risk of diabetic retinopathy, age related macular degeneration and glaucoma. Other conditions such as retinal vein occlusions, floppy eye lid syndrome, stroke causing visual loss and thyroid related eye diseases have also been linked to obesity.

Diabetes mellitus- Diabetes mellitus is a metabolic disorder which can be characterized by high levels of blood glucose. Prolonged exposure in patients suffering from chronic uncontrolled hyperglycemias can lead to various complications in the eye like blepharitis, orbital cellulitis, recurrent styes, xanthelasma, dry eye, keratopathy, neovascularisation, uveitis, cataracts, endophthalmitis, retinopathy, macular oedema, diabetic papillopathy, optic neuropathy, glaucoma, cranial nerve palsies and stroke induced vision loss.

Hypertension- Hypertension can cause damage to the blood vessels in the retina, the area at back of the eye. This eye disease is known as hypertensive retinopathy. Hypertensive choroidopathy occurs as a result of choroidal ischaemia. Hypertensive optic neuropathy results from severely elevated blood pressure.

Dyslipidemia- Dyslipidemia is defined as having blood lipid level that is too high or too low. People with high level of LDL and triglycerides or very low HDL levels tend to have higher risk of developing atherosclerosis which causes vein occlusion disease of retina.

Dry Eye- Dry is a multifactorial disease of the tear and ocular surface that result in symptoms of discomfort, visual disturbance and tear film instability with potential damage to ocular

surface. This disease is developed due to prolong use of VDTs (Video Display Terminals) and heat exposure.

Diabetic retinopathy- Diabetic retinopathy the major reason of blindness in adults of 20-74 years of age is caused due to microangiopathy affecting all the small retinal vessels. It is characterized by increase vascular permeability, ocular hemorrhages, lipid exudates by vascular closure & also mediated due to the development of new vessels in the retina and the posterior vitreous surface. Studies suggest that the most consistent risk factors for the development and severity of retinopathy are duration of diabetes, diagnosed at a young age, high glycosylated haemoglobin levels and high systolic blood pressure.

Macular Degeneration- The macula of human eye progressively degenerates with age, more quickly in some people than in others. This degeneration involves the loss of photoreceptors in the macula of the eye. Several life style changes have been related to increase in rate of AMD.

Retinal Vein Occlusion Disease- RVO is a common vascular disorder of the retina and one of the most common causes of vision loss worldwide. Specifically it is the second most common cause of blindness from retinal vascular disease after diabetic retinopathy. Study shows that increasing age, systemic hypertension and hyperlipidemia are the three main factors which are associated with RVO.

Cataract- Although it is said that cataract is universal after age of 65, the onset of cataract increase due to life style changes. All patients with diabetes are at risk of early formation of cataract. Obesity is clear risk factor associated with cataract progression. Hormone replacement therapy in women increases 14% risk of cataract.

Glaucoma- According to Beaver Dam eye study obesity is linked to elevated pressure in the eye known as IOP which increased the risk of developing glaucoma in future. The interaction between blood pressure and IOP determines the ocular perfusion pressure which regulates blood flow to the optic nerve. Hypertriglyceridemia may lead to vascular dysfunctions which increase the risk of development of glaucoma.

Noise induced hearing loss – Every day we experience sound in our environment. Normally these sounds are at safe levels and do not damage our hearing. But too loud sound even for a short time or long lasting sound can be harmful. These sounds can damage inner ear

structures and cause *Noise induced hearing loss* (NIHL). It can be immediate or long time to be noticeable, temporary or permanent and can be affected one or both ears. Long or repeated exposure to sounds above 85 decibels' can cause hearing loss. The louder the sound shorter the amount of time it takes for NIHL to happen.

Tinnitus – A ringing, buzzing or rearing in the ears or head which may subside but sometime can continuous constantly or occasionally throughout life of a person. It can affect one or both ears. Excessive noise, yawning and blowing, smoking is the main aggravating factors. Because of smoking and ototoxicity cochlear pathologies results in tinnitus.

Metabolic presbycusis – It is a slowly and gradually progressive loss of hearing impairment that occurs mainly in 3rd decade of life. Degeneration of the vascular stria is believed to be the cause of metabolic presbycusis. It is accompanied by alterations in ion homeostasis and reduction in the vascularization of the stria which precedes changing in the hearing threshold or may be linked with a reduction in endocochlear potential. Peoples who have cardiovascular disease, insulin resistance and other metabolic diseases such as hyperlipoproteinemia, obesity, vitamins deficiency are more prone to this.

Vertigo – Diabetes complications can cause arteriosclerosis which may lead to lowered blood flow to the brain causing vertigo symptoms. Caffeine, tobacco or alcohol intake may also affect circulation which may cause vertigo. Anxiety and stress worsen the symptoms but it usually does not cause them.

Earwax – Hot and dry climate, dusty area work or frequently use of earphones are more likely to have wax buildup. Excessive use of earphones inadvertently prevents earwax from coming out of the external auditory canals and causes blockages. Other factors play minor role in earwax collection in external auditory meatus.

Exostosis – It is the abnormal bone growth within the external auditory canal and is more common in swimmers, divers or in surfers. So, it is also called surfer's ear. Irritation from cold wind and water exposure causes the bone surrounding of the ear canals to develop lumps of new bony growth which constrict the ear canal. It may affect at any age and time of appearance depends on the amount of time spent in cold, wet, windy weather without adequate protection.

Otalgia – Tooth cavities in tobacco addicts may develop referral pain in ears mainly when one of the molars has been affected. Because of nerve supply of both is same (5th C.N.). Benign and malignant ulcerative lesions of oral cavity may cause referral pain in ears.

Vestibulitis – Plucking of nasal hairs, frequent nose rubbing with fingers or nose pricking results in minor injury to skinned lined portion of nose i.e. vestibule. After this staphylococcus bacterial skin infection develops vestibulitis.

Nasal septal abscess – It is a rare condition and its main cause is trauma. But when trauma is excluded uncontrolled diabetes should be considered as a cause. In this cartilage is deprived of its blood supply and tends to be destroyed. When body is affected by high sugar levels even a short time we tend to get infection very easily. In diabetes weak immune system of the body also play a minor role. All these conditions destroy septum resulting in abscess formation. Because of weak immune system of body in diabetes it is easy to bacteria or fungus to act so in diabetes furunculosis is also more common.

Epistaxis – Epistaxis is commonly present in patients with high blood pressure but the exact relationship between hypertension and epistaxis is not understood clearly. Vascular fragility due to long standing hypertension may be the cause. Low humidity leads to mucosal irritation and dehumidification of the nasal mucosa causing epistaxis as in dry climate workers or during cold weather. Vitamin K deficiency, micro trauma by frequent nose pricking and alcoholism may cause epistaxis.

Rhinitis sicca – Persons who work in dry or dusty area or who exposed to dry and dusty environment are more prone to develop rhinitis sicca. Excessive dust leads to squamous metaplasia of ciliated columnar epithelium or periglandular fibrosis over the viscid and stagnant mucosa blanket resulting in formation of crust. Alcohol acts as predisposing factor to this.

Vasomotor rhinitis – Strong odor, inhaled irritants and fumes cause imbalance in autonomic system with parasympathetic over activity resulting in vasomotor rhinitis.

Allergic rhinitis – AC rooms, crowding, industrialization and urbanization causes an acute IgE mediated type-1 hypersensitivity reaction of nasal mucosa resulting in allergic rhinitis.

Tumours of nasal cavity & PNS – Malignant tumours of nasal cavity and paranasal sinuses are common in snuff users. Carcinoma of ethmoid sinus is common in leather workers. Paranasal sinus carcinomas are common in Nickel and chrome industry workers. Adenocarcinoma of ethmoid is common in wood industry workers.

Headache – In hypertensive crisis pressure in the cranium builds up. As a result of critical level of blood pressure inside the arteries of brain causes headache.

Post alcohol and caffeine withdrawal causes increased blood flow through key arteries in the brain causing headache. Caffeine induced headache usually starts behind the eyes then way up in front of foreheads as it further develops becoming quite debilitating.

Sleep apnea – Intermittent cessation of airflow at both nose and mouth during sleep is known as sleep apnea. In this apnic episodes may last for 20 to 40 seconds to 2 to 3 minutes. If episodes are 15 times or more per hour then significant disturbance is noted. Its main cause is obesity. In normal individual the muscles of the oropharynx and hypopharynx maintain the airway by the tonic activity of the dilators. Behavioral response of individual during awaking maintains its tonicity. When we sleep behavioral response is slow down causing relaxation of these muscles with resultant hypotonicity which results in narrowing of the airway. Musculature hypotonicity of the pharynx during rapid eye movement (REM) sleep facilitates collapse of the lumen of the pharynx leading to further obstruction of the airway. Because of obstruction of airway pathway a negative intra thoracic pressure causing increase in cardiac output. Increase cardiac output is associated with decreased oxygenation causing stimulation of respiratory center and cerebral cortex causing the patient arousal because it facilitates better ventilation and the patient goes to sleep again.

Malignancy of oral cavity – Tobacco and alcohol addiction and mainly the combined use of both is the main cause of oral cancer. Excessive use of tobacco increases the risk of oral cancer by directly exposing the mouth to carcinogenic chemicals either during chewing tobacco products or inhalation while smoking. After this an interaction occurs between radioactive metals in saliva and the low reactive free radicals in cigarette smoke. Due to this saliva loses its antioxidant capacity and instead becomes a potent pre-oxidant Willieu. Tobacco, alcohol, radiation, construction workers, plastic and metal workers are also prone to squamous cell carcinoma of larynx. Taking spicy foods also disturb oxidant capacity of saliva and oral mucous epithelium. Prolonged exposure to sunlight & the excessive use of sunscreen for

protection are implicated as causative factor for carcinoma of lips. Chronic sun exposure creates premature cutaneous aging and decrease immune response to environmental pathogens and increase the risk of premalignant and malignant neoplasm's due to damage to DNA and inhibition of protective mechanism within the skin.

Vocal cord nodules – These are thought to be the result of vocal fold tissue trauma caused by excessive mechanical stress in voice abusers e.g. in teachers, singers etc. Vocal overuse, abuse or misuse may produce excessive amount of mechanical stress by increasing the rate and force with which the vocal fold collide. Trauma may be caused by vocal cord fold collide that is focalized to the mid membranous vocal fold and subsequent wound formation, chronic or repeated mechanical stress is thought to lead to the remodeling of the superficial layer of the lamina propria. It is the process of tissue remodeling that result in the formation of benign lesions of the vocal fold such as nodules. Nodule may increase the mass of vocal folds especially along the medial edge where they are typically found. Increased mass may result in aperiodic or irregular vibrations, the perception of greater pitch and loudness and of increased hoarseness of voice. Exposure to cigarette smoke increase tissue permeability and places vocal folds at increased risk for damage from both the toxic constituents of cigarette smoke itself and other environmental pollutants. Cigarette smoke has been shown to elicit a significant inflammatory response in tissues and may cause diffuse vocal polyposis.

Dental caries- Sixty to ninety percent of school going children and nearly hundred percent of adults are suffering from dental caries.

Periodontal disease- Fifteen to twenty percent of middle aged group of population is suffering from severe periodontal gum disease.

Tooth loss- Dental caries and periodontal disease are major cause tooth loss. Complete loss of natural tooth is going to wide spread. Globally 65-74 age group of population have no natural tooth.

Oral cancer- In most countries the incidence of oral cancer is 1-10 cases per 100000 people. Prevalence rate of oral cancer is relatively higher in men in group of older people and in low income and low education group of people. Tobacco and alcohol are major causal factors of oral cancer.

Oral infections in HIV- Almost half of people who are suffering from HIV have oral fungal, bacterial or viral infections.

Oro-dental trauma- Across the world sixteen to forty percent of children in age group of six to twelve years are affected by dental trauma due to unsafe play grounds, unsafe schools, road accidents or violence.

Noma- Noma is a gangrenous lesion that affects young children living in extreme poverty primarily in Africa and Asia. Lesions are severe gingival disease followed by necrosis (premature death of cells in living tissue) of lips and chin. Many children affected by Noma suffer from other infections such as measles and HIV. Without any treatment about ninety percent of these children die.

Cleft lip and palate- Birth defects such as cleft lip and palate occur in average as one in per seven hundred of all births.

Management of lifestyle disorders – The two main goals of Ayurveda is to maintain the health of healthy person and treat the diseased one. So Ayurvedic physician's mainly concentrates for promotion of health of healthy one. To avoid lifestyle disorders Ayurveda describes dinacharya (ideal daily regimen), ritucharya (seasonal regimen), aahar vidhana (rules of eating), sadviritta and aachar rasyana. Panchkarma detoxification methods may give some help. Rasayana therapy may also rejuvenate body cells. Avoid the cause of lifestyle disorders and routinely exercise and other preventable measures should be used. If parents set their children on the correct path of living life then lifestyle disorders may be preventable. Ayurveda focus mainly on three things for management of any disease like Ahara, Vihar and Ausadha. So this article have tried to summarize the works of different contemporary Ayurvedic ophthalmologists for enhancing knowledge of future generations regarding lifestyle related ocular diseases & their management. Different types of Ahara like lohitasali, mudga, jeevanti, patola, draksha, cow milk, goghrita etc are helpful to decrease the risk of eye disorders. Regular physical activity has a protective effect in relation to a number of ophthalmological conditions. Kriya Kalpas have a major role as a remedy for life style induced eye diseases. Kriya kalpas such as Tarpan, Putpaka, Aschyotana, Anjana and seka etc are preventive as well as treatment modalities. Panchkarma also have a important role to reduce the progression of life style disorders. Chakshuya & Rasayana Dravyas described in different samhitas are helpful to avoid these problems or slow down the process of ocular

degeneration. Oral diseases can be controlled by addressing common risk factors. Prevention includes low sugar intake, well balanced nutritional intake, consuming fruit and vegetables, stopping use of tobacco, alcohol and other beverages, ensuring proper oral hygiene, using protective sports and motor vehicle. Dental caries can be prevented by maintaining a constant low level of fluoride in the oral cavity. Fluoride can be obtained from fluoridated drinking water, salt, milk and tooth paste as well as from professionally applied fluoride or mouth rinse. Long term exposure to an optimal level of fluoride results in fewer dental caries in both children and adults.

DISCUSSION

Ayurvedic medications with practice of Yogic Kriyas & eye exercises have shown significant results in some of the eye disorders. Most of the medications used for ocular diseases have *Triphala*, *Haridra*, *Daruharidra*, *Sunthi*, *Yashtimadhu* and *Punarnava* as its main ingredient or some times used as a single drug. *Triphala* (*Embllica officinalis*, *Terminalia chebula*, *Terminalia bellirica*) is having adaptogenic, antioxidant, anti-cataract, immunomodulatory, anti-diabetic, anti-hypercholesterolemic, free radical scavenger and rejuvenation properties. *Haridra* (*Curcuma longa*) is having adaptogenic, antioxidant, anti-cataract, immunomodulatory, anti-diabetic, anti-hypercholesterolemic, free radical scavenger and rejuvenation properties. *Daruharidra* (*Berberis aristata*) is having anti-diabetic, anti-hyperlipidemia, anti-oxidant, anti-inflammatory, adaptogenic, immunomodulatory, anti-cataract effect. *Sunti* (*zinggiber officinale*) is having immunomodulatory, anti-diabetic, anti-hyperlipidemia, anti-oxidant, anti-ageing, anti-cataract, free radial scavenger properties. *Yashtimadhu* (*Glycyrrhiza glabra*) is having anti-oxidant, immunomodulatory activity, anti-diabetic, Rasayana, anti-hypercholesteronemic enhancer of the bio- availability of drugs like actions. *Punarnava* (*Boerhavia diffusa*) is having immunomodulatory, anti-oxidant, antihypercholesterolemic, potential nutrient source, adaptogenic, immunopotentiating, Rasayana like actions. The basic concepts behind the eye exercise and yogic kriyas are relaxation techniques. A shedule of optimun exercise improves the efficacy of sense organ in their perception.

CONCLUSION

From the previous studies on ocular management of the lifestyle related diseases it can be inferred that regular practice of exercises with Yogic procedures have proven to be beneficial on both preventive & curative account of these diseases. They also act at systemic level to

minimize the other side effects of lifestyle disorders also. Oral medications & use of Kriya Kalpa, Panchakarma therapy, etc have further additive effects in controlling these conditions & cure it.

BIBLIOGRAPHY

1. Sushruta Samhita:(Motilal Banarasidas) by *Vd. Atridev Gupta*, 1984.
2. Sushruta Samhita: Text in Sanskrit with English Translation (Chowkhambha Sanskrit series) by *Kaviraj Kunjalal Bhishagratna* and *Laxmidhar Dwivedi*, July 1998.
3. Sushruta Samhita: Text with English Translations (Chowkhambha Sanskrit series) by *Kaviraj Bhishagratna* and *Jyotir Mitra*. December 1999.
4. Illustrated Sushruta Samhita 3 vol. (Chowkhambha Orientalia) by *Prof. K.R. Srikantha Murthy*, 2012.
5. Sushruta Samhita:(Chowkhambha Vishwabharati) by *Dr. P.V. Sharma*, 2013.
6. Sushruta Samhita: I &II(Chowkhambha Sanskrit Sansthan) by *Ambikadatta Sastri*, 1013-14.
7. Sushruta Samhita: I,II&III (Chowkhambha Surabharati Prakashan)by *Dr. Anantram Sharma*, 2015.
8. Sushruta Samhita (ancient Indian surgery): (Chowkhambha Sanskrit Pratisthan) by *Prof. G.D. Singhal*, 2015.
9. Sushruta Samhita of Sushruta with Nibandhasangraha commentary of Sri Dalhanacharya: (Chowkhambha Sanskrit Sansthan) by *Vd. Yadavji Trikamji Sharma Acharya* reprint, 2015.
10. The Carak Samhita of Agnivesa revised by Carak and Drdhabala with introduction by Vaidya Samrat Sri Satya Narayan Sastri Padmabhusana with elaborated Vidyotini Hindi commentary by Pt. Kashinatha Sastri and Dr. Gorakhnath Chaturvedi Volume I-II published by Chaukhambha Bharti academy Gopal Bhawan K 37/109 Gopal Mandir Lane Varanasi-221001, 2002 edition.
11. Acarya Yadavaji Trivikrama(ed.) Maharsina Punarvasunopadistatacchisyen Agnivesenapranita, CarakaDrdhabalabhyampratisamskrita Carakasamhita, Sri Cakrapanidatta viracitaya Ayurvedadipikavyakhyasamvalita Nirnaya Sagara Press, 1941.
12. Kaviratna Avinash C. Sharma P (1913). The Charaka Samhita 5 Volumes Sri Satguru Publications.

13. Sharma, P. V. Caraka-Samhitā: Agniveśa's Treatise Refined and annotated by Caraka and Redacted by Dṛḍhabala (text with English translation) Chaukhambha Orientalia, 1981–1994.
14. Evans J. Causes of Blindness and Partial Sight in England and Wales 1990-91. London: HMSO.
15. McLeod BK, Thompson JR, Rosenthal AR. The prevalence of retinopathy in the insulin-requiring diabetic patients of an English country town. *Eye*, 1988; 2: 424-30.
16. Klein R, Klein BE, Moss SE, *et al.* The Wisconsin Epidemiologic Study of Diabetic Retinopathy. III. Prevalence and risk of diabetic retinopathy when age at diagnosis is 30 or more years. *Arch Ophthalmol*, 1984; 102: 527-32.
17. Hawthorne K, Mello M, Tomlinson S. Cultural and religious influences in diabetes care in Great Britain. *Diabet Med*, 1993; 10: 8-12.
18. Unwin N, Alberti KGMM, Bhopal R, Harland J, Watson W, White M. Comparison of the current WHO and new ADA criteria for the diagnosis of diabetes mellitus in three ethnic groups in the UK. *Diabet Med*, 1998; 15: 554-7.
19. Tong L, Vernon SA, Kiel W, Sung V, Orr GM. Association of macular involvement with proliferative retinopathy in type 2 diabetes. *Diabet Med*, 2001; 18: 388-94.
20. The Diabetes Control and Complications Trial Research Group. The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *N Engl J Med*, 1993; 329: 977-86.
21. Vd. Vidhyadhar Shukla. Charak Samhita – Purvardh Varansi: Chaukhamba subharti Prakashan, 2012.
22. Vd. Vidhyadhar Shukla. Charak Samhita – Uttarardh Varansi: Chaukhamba subharti Prakashan, 2012.
23. Textbook of Ear, Nose, Throat and Head & Neck Surgery Clinical and Practical, P.Hazarika, D.R.Nayak, R.Balakrishnan -3rd edition.
24. Diseases of Ear, Nose, Throat: PL Dhingra and Shruti Dhingra – 5th edition.
25. Essentials of Ear, Nose and Throat: Mohan Bansal – 1st edition.