

TINY MOBILE SCREENS CAUSES BIG VISION PROBLEM I.E COMPUTER VISION SYNDROME – A REVIEW

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ABSTRACT

Children are becoming more prone to vision problem every year. Scientists say change in lifestyles and addiction to mobile phones at an early age is the main cause of rise in eye problems. According to the National Programme for Control of Blindness (NPCB) data, in 2013-14 the number of children with refractive errors stood at 81,690 which further rose to 82,029 the next year and 95,745 in 2015-16. According to the Directorate of Health Services, such cases rose from 158 to 628 from 2014-15 to 2015-16. The amount of time we spend staring at screens has increased dramatically in the last few years. Children are becoming tech-savvy at an increasingly early age. While the benefits

of technology cannot be denied, parents and caregivers need to understand how excessive exposure can impact the development and health of their young children. As we squint to read these miniature screens, our facial, neck and shoulder muscles tighten, eyes become fatigued and vision can be blurred or strained. This series of symptoms is known as Computer Vision Syndrome. *Ayurveda* is an effective solution to treat several eye problems so an attempt is made to explore various drugs and local therapeutic procedures like *Nasya*, *Anjana*, *Akshitarpan* to correct the major vision problems.

KEYWORDS: Vision problems, Ayurveda, Computer vision syndrome.

INTRODUCTION

Eyes are the most precious gift of God for everyone. A child needs many abilities to succeed in school. Good vision is a key. Reading, writing, chalkboard work and using computers are among the visual tasks student perform daily. A child's eyes are constantly in use in the classroom and at play. As children progress in school, they face increasing demand on their

visual abilities. in the present century, where we are living in a highly sophisticated environment, computer, cell phones, tablets are of the most developed technologies which are used presently by the children, the young and the old. More and more population are sitting in front of the computer for longer hours, which is a highly vision demanding task. Because of the high use of computer there has been a considerable increase in visual problems, leading to the risk of developing CVS. Computer vision syndrome (CVS) is a condition resulting from focusing the eyes on a computer or other display device for protracted, uninterrupted periods of time and the eye muscles being unable to recover from the strain due to a lack of adequate sleep. the application of *seka* and *aksitarpana* with *vatapittahara dravyas* constitutes the basic therapeutic approach in the management of CVS. Hence, it can be implemented in all places of computer utility.

Computer Vision Syndrome (CVS) – Computer Vision Syndrome, also referred to as Digital Eye Strain, describes a group of eye and vision-related problems that result from prolonged computer, tablet, e-reader and cell phone use. Many individuals experience eye discomfort and vision problems when viewing digital screens for extended periods. The level of discomfort appears to increase with the amount of digital screen use. Many of the visual symptoms experienced by users are only temporary and will decline after stopping computer work or use of the digital device. However, some individuals may experience continued reduced visual abilities, such as blurred distance vision, even after stopping work at a computer. At greatest risk for developing CVS or Digital Eye Strain are those persons who spend two or more continuous hours at a computer or using a digital screen device every day. CVS may be caused by: poor lighting, glare on a digital screen, improper viewing distances, poor sitting posture, Uncorrected Vision Problems. The most common symptoms associated with Computer Vision Syndrome (CVS) or Digital Eye Strain are – Eyestrain, Headache, Blurred Vision, Dry Eyes, Neck And Shoulder Pain.

Viewing a computer or digital screen is different than reading a printed page. Often the letters on the computer or handheld device are not as precise or sharply defined, the level of contrast of the letters to the background is reduced, and the presence of glare and reflections on the screen may make viewing difficult. Viewing distances and angles used for this type of work are also often different from those commonly used for other reading or writing tasks.

Even people who have an eyeglass or contact lens prescription may find it's not suitable for the specific viewing distances of their computer screen. Some people tilt their heads at odd

angles because their glasses aren't designed for looking at a computer. Or they bend toward the screen in order to see it clearly. Their postures can result in muscle spasms or pain in the neck, shoulder or back.

Diagnosis

Computer Vision Syndrome, or Digital Eye Strain, can be diagnosed through a comprehensive eye examination. **Patient history** to determine any symptoms the patient is experiencing and the presence of any general health problems, medications taken, or environmental factors that may be contributing to the symptoms related to computer use. **Visual acuity measurements** to assess the extent to which vision may be affected. A **refraction** to determine the appropriate lens power needed to compensate for any refractive errors (myopia, hypermetropia and astigmatism).

Management

The main concept of treatment of *Netra roga* is *Nidan parivarjan* and *Vatadi doshanashamak*. *Tarpan, Seka, shirodhara, Netra-prakshalan, virechan* etc. used as treatment of CVS.

Regular eye examinations and proper viewing habits can help to prevent or reduce the development of the symptoms associated with Computer Vision Syndrome.

- Individuals who do not require the use of eyeglasses for other daily activities may benefit from glasses prescribed specifically for computer use.
- Optimally, the computer screen should be 15 to 20 degrees below eye level (about 4 or 5 inches) as measured from the center of the screen and 20 to 28 inches from the eyes.
- Lighting - Position the computer screen to avoid glare, particularly from overhead lighting or windows.
- Anti-glare screens - If there is no way to minimize glare from light sources, consider using a screen glare filter. These filters decrease the amount of light reflected from the screen.
- Rest breaks - To prevent eyestrain, try to rest your eyes when using the computer for long periods. Rest your eyes for 15 minutes after two hours of continuous computer use.
- Blinking - To minimize your chances of developing dry eye when using a computer, make an effort to blink frequently. Blinking keeps the front surface of your eye moist.

Netra Prakshalan (Eye Wash): In one glass water add one tsp of *triphala* powder and keep it overnight. Next day strain the water and wash your eyes with this *Triphala* water atleast 2-3 times in a day. Triphala is very good herb for eyes and this method can give very good results.

Padabhyanga (Foot Massage) -Aacharya Vagbhata identifies 4 major nerves in the feet that connect to eyes. These nerves help to maintain good eye sight and relieve eye strain. It improves blood circulation.

Increase Dietary Intake Of Vitamin A Rich Food-Vegetable sources- Dark green leafy vegetables, spinach, carrot tomato, pumpkin etc. Animal sources- Liver, meat, cod and shark liver oil, egg yolk etc. Fortification of dietary items like milk, sugar, tea, cereal grains etc.

Virechana: After good lubrication of body with Ghrita, Sneha Virechana is given to patient to eliminate the toxins of body.

Nasya Karma- It is indicated in several eye diseases as it eliminates doshas from the cranial region. It is the application of herbal substances or medicated oils into the nose. Put 2 drops of pure almond oil in both nostrils at the bed time and then go to sleep , this helps in providing all the nourishment and lubrication to eyes.

Shirodhara: This therapy includes dropping of continuous stream of oil, milk or medicated buttermilk on the Third Eye for complete relaxation. Netradhara is also beneficial in treating computer vision syndrome and dry eyes.

Kriyakalpas- Kriyakalpas are specific procedures for eyes. They lubricate and rejuvenate the eyes. Impurities are expelled out. It helps to bring back brightness and clarity to the eyes.

Netra Tarpana: It is a specialized Ayurvedic treatment for eyes, that helps relieve tiredness and improves eyesight. Netra Means Eyes and tarpana Means Nourishment. Netra Tarpana is a procedure where the lukewarm medicated oil or ghee is made to stay stagnant in the eyes for a speculated time in a specific formed frame Netra Tarpana acts as both preventive & curative therapy for maintaining normal healthy condition of eyes.

Putapaka- This is usually done after tarpana.

Seka- Indicated in inflammatory conditions, Pitta, rakta dosha vitiation.

Anjana karma- Rasanjana should be done once in week 14. Anjana scrapes and expel dosha from netra, varthma, sira, netra kosha and ashru vaha srotas through mouth, nose and eye.

Chakshushya Medicines *Triphala ghrita, Shigru (Moringa oleifera), Pomegranate Mudga (Phaseolus radiates), Shatavari (Asparagus racemosus), Ghee, Honey* Have Main properties *Chakshushya, anti oxidant, anti inflammatory and neuroprotective*

Eye Exercises: Exercises will strengthen the muscles of eyes and maintain vision level. *Yogic kriya- Trataka* (concentrating on specific object/candle light), *Bhramari, Soorya Namaskara* useful to improve strength of eye.

DISCUSSION AND CONCLUSION

Basic principle of *Ayurveda* is to protect health and prolong life. Management of preventable and curable blindness according to ancient science is important. According to *Ayurveda* to maintain a healthy and disease free life should follow a *dinacharya*. Healthy diet, eye exercises play major role in giving strength to the eyes. *Kriyakalpa* is the main therapeutic process for *netra roga*. It gives nourishment to the eyes and cures diseases. *Ayurveda* recommends *kriyakalpa* for preventive and curative benefits. *Shodhan chikitsa* is a body purification therapy which eradicates toxins and balances *tridosha*. So, purpose of this article is to enlighten role of *Ayurveda* in prevention of vision loss and explain *Ayurvedic* management for Computer vision syndrome.

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