

## ROLE OF TRATAK KRIYA IN SUBJECTS WITH COMPUTER VISION SYNDROME

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### ABSTRACT

Computer is the most beautiful gift ever to the mankind from the modern day science. Most of us are exposed to the computers and work on it throughout the day. Some of us does it overnight also. Most of our day to day work depends on the use of computers. But at the end of the day our eyes get tired and sick. They do not recover even after adequate rest since we cannot avoid the cause i.e. the computers. This problem has become very common today. "Computer Vision Syndrome" (CVS) results from extended viewing of the video display terminals (commonly known as computer screen). Symptoms of the Computer vision syndrome can be correlated to symptoms of *Shushkakshipaka* of *Sarvaksiroga*. As per *Yogic* texts, *Trataka* eradicates all eye diseases, fatigue and sloth and closes the doorway creating these problems and can probably be used to alleviate symptoms of CVS. So this article reviews the role of *Trataka kriya* as a holistic approach in relieving the symptoms of computer vision

syndrome. *Bahiranga Trataka* technique is used to review the role of *Tratak* in subject having symptoms of Computer Vision Syndrome. In conclusion, it is re-empathised that Computer Vision Syndrome comes to existence due to excessive use of video display terminal in this modern era and *Trataka* is the best practice to deal with it.

## INTRODUCTION

CVS is a group of symptoms which crop up Eye holds the special status among all the sensory organs. Eyes are the most precious gift of God to the living things. Hence they were specialized for distant vision works that could enable the man to hunt in ancient times. With passage of time, science developed and today no longer does he require hunting in the forest, rather he has to hunt the internet on computer in a closed chamber. Computer is the most beautiful gift ever to the mankind from the modern day science. Most of us are exposed to the computers and work on it throughout the day. Some of us does it overnight also. Most of our day to day work depends on the use of computers. But at the end of the day our eyes get tired and sick. They do not recover even after adequate rest since we cannot avoid the cause i.e. the computers. This problem has become very common today.

Today in 21<sup>st</sup> century living in highly sophisticated environment Computer is one of the most developed technology, it is widely used in children young and old. Physical activity is becoming less day by day instead of playing outdoor games children playing video games by using computers, while moving towards urbanization and globalization it is need of time to do work with computer and video display terminals, more and more men are sitting in front of computer for longer hours, which is highly vision demanding task. But the eyes are still structured according to old hunting days and are unable to cope up with the newly acquired demand of computer work leading to ocular and systemic discomfort called as the “Computer Vision Syndrome” (CVS) from extended viewing of the video display terminals (commonly known as computer screen). According to the National Institute of Occupational Safety and Health, CVS affects some 90% of the people who spend 3 hours or more a day at a computer. Various studies estimated incidence of eyestrain or other visual problems attributable to computer use is between 70 and 80% Prevalence studies done in India and abroad suggest CVS and asthenopic symptoms ranging from 40 % to 70% in professions requiring continuous computer usage. This prevalence is definitely on rise as the need for computer use is significant.<sup>[1,2]</sup>

### Disease According To Modern Aspect

CVS is defined by the American Optometric Association as a complex of eye and vision problems related to the activities which stress the near vision and which are experienced in relation to or during the use of computers. The terms visual fatigue (VF) and digital eye strain (DES) are also used for the condition. CVS is characterized by a range of eye and vision-

related symptoms like blurring of vision, watering of eyes, burning, eye strain, headache, dry and irritated eyes, itching of eyes, etc. The American Optometric Association identifies three main causes of computer eyestrain: frequent, long saccadic movements, continuous accommodation changes, and continuous changes in alignment (vergence).<sup>[3]</sup> These movements stress the visual system, particularly the musculature and hence cause the visual fatigue. External symptoms of burning, irritation and dryness were noted to be closely related to dry eye, while internal symptoms of strain, ache and headache behind the eyes are linked to accommodative and binocular vision stress.<sup>[4]</sup>

### Ayurvedic Aspect

Though clear cut mention of the Computer vision syndrome is not found in Ayurvedic text, it can be correlated to symptoms of Shushkakshipaka of Sarvaksiroga.<sup>[5]</sup> An Ayurvedic approach can be given on the basis of fundamentals of Ayurveda. Nidana and Samprapti can be understood by

**Hetu-** Aastamya Indriyatha Samyoga, Pradnyanapradha, parinama) related to chakshurendriya (eye). Symptoms of CVS are related to vata pittapradhan tridosha vitiation at chakshurendriya leading to shushkakshipaka.<sup>[6]</sup> CVS can be named as "Sanganaka Atiyogajanya Netra Samlakshana".

**Samprapti** - Acharya Sushruta had given a general Samprapti of all Netra Roga as the vitiated Dosas, will course through the vessels and reach upwards, to produce diseases in different parts. In context of CVS, the Atiyoga (exposure to very bright light, long working hours, light from a short distance, concentrating more on the near work), Hinayoga (working in poorly illuminated room and without blinking) and Mithyayoga (seeing very small fonts against the bright light, constantly starring at computer) of Chakshurendriya leads to aggravation of vitiated Vata and Pitta Dosas and Sthanasanshraya of Dosas in the Bahya Patala, Shukla Mandala, etc which produces symptoms of CVS.

Sr. No.	Symptoms of CVS
1	Dry irritated eyes ( <i>Vishushka Netra</i> )
2	Eye strain ( <i>Netra klama</i> )
3	Blurred vision ( <i>Avila Darshanam</i> )
4	Redness of eyes ( <i>Netra Raga</i> )
5	Burning eyes ( <i>Netra Daha</i> )
6	Pain in Shoulder, neck, back ( <i>greeva bahu kati shool</i> )
7	Itching of eyes ( <i>netra kandu</i> )
8	Eye pain ( <i>Toad</i> )

## Trataka

Looking intently with an unwavering gaze at a small point until tears are shed is known as *Trataka*. *Trataka* means to gaze steadily. *Trataka* eradicates all eye diseases, fatigue and sloth and closes the doorway creating these problems. It should be carefully kept secret like a golden casket there are two forms of practice, one is *bahiranga trataka* or external *trataka* and other is *antaranga trataka*. *Bahiranga trataka* is simple practice because one just have to gaze at an object or symbol. *Antaranga Trataka* involves clear and stable inner visualization of an object the point of concentration is usually symbol or object which activates the inner potential and mind. There are other equally effective symbols or objects such as a crystal ball, a *shivalingam*, *yantra*, *mandala*, full moon, a star, the rising or setting sun (when it is an orange-red ball and not yellow), a *chakra*, the symbol of *Om*, or your own shadow. These are the most effective; but *trataka* can also be done on a rose, a tree, a mountain, the sea, *TRATAKA* (concentrated gazing) lightning. In fact, when people worship a particular deity and gaze steadily at the form, it is also *bahiranga trataka*. Of all the symbols and objects, the most suitable for general use is a candle flame because a symbol, *yantra* or *mandala* leaves an impression in the mind and stimulates particular centers.<sup>[7]</sup>

## Aim

To assess the role of *Trataka kriya* as a holistic approach in relieving the symptoms of computer vision syndrome.

## Technique

*Bahiranga Trataka* (external concentrated gazing) is Practice in a dark room which is free from draughts and insects.

## Pre Trataka Karma

For *trataka karma* room should be free from draughts and insect. Room should be quite and calm. Patient should prepare himself as for any meditative practice. Make him calm and quiet.

## Trataka Karma<sup>[7]</sup>

1. Place a candle two to three feet in front of patient with the flame at eye level. It is vital that the flame is still and does not flicker at all.
2. Patient should sit in a comfortable meditative pose, preferably *siddhasana/siddha yoni asana*.

3. Hands should be placed on the knees in either *jnana* or *chin mudra*.
4. Whole body should be relaxed.
5. Eyes should be closed and should prepare himself as for any meditative practice. Make calm and quiet and be prepared to keep your body perfectly still throughout the whole practice. Practice *kaya sthairyam* (steadiness of the body) for a few minutes.
6. Then open eyes slowly and gaze at the middle portion of the candle flame, just above the wick.
7. Try to keep the eyes perfectly steady.
8. Eyes should not blink. Lower the eyelids if the eyes become sore or tired. Stare as long as possible, five or ten minutes, or if you can gaze longer without closing the eyes, do so. Only when really need to, should close the eyes.
9. Try to keep the mind empty. If any thoughts come, put them out of the mind immediately. Remain the silent witness, *sakshi*, throughout the whole practice.
10. When finally close the eyes keep them fixed on the impression of the flame in front, in *chidakasha*. If it moves bring it back to the center and continue gazing until the impression disappears.
11. Once patient can stabilize the image, study it and look intently at the color. Sometimes patient may not see light, but an impression which is blacker than *chidakasha* itself. Keep the mind completely devoid of thought. Only be aware of the object of concentration. When thoughts come, let them pass and remain uninvolved.

### Practice Time

Trataka can be done at any time, but it is more effective when performed on an empty stomach.

### DURATION

It is said that if the object of concentration is physical in nature, such as a flame, *Trataka* should not be practised for more than five minutes. The duration in fact depends on the individual, but it is essential to obtain directions from a very experienced guide if intending to practise for longer. Five minutes of practice is sufficient to remove some types of eye defects. *Trataka* should be practised for alternative for a period of one month in the patients of computer vision syndrome. The most suitable time is between four and six a.m. after asana and pranayama practice. If you want to delve deeper into the mind, *trataka* should be done late at night before going to bed.<sup>[7]</sup>

## DISCUSSION

The eyes constantly move either in large movements – saccades, or tremors – nystagmus. Even when the eyes are focused on an external object the view perceived is always fluctuating because of these spontaneous movements. When the same object is constantly seen, the brain becomes accustomed or ‘habituated’ and soon stops registering that object. Habituation coincides with an increase of alpha waves indicating diminished visual attention to the external world; when they are produced, particular areas of the brain have ceased functioning. Vision depends not only on the eyes, but upon the entire optic tracts. The lens of the eye is only the medium of external visual perception. Via the lens, an image is projected onto the retina. This is a stimulus which excites the retina to fire impulses back to the visual cortex of the brain where an inner image is mapped out. If you close your eyes and gently push and release them, you will also see flashes of light, not because light is entering the eyes, but because the optic nerve has been stimulated. When the image of an external object is stabilized on the retina, after a period of time, perception of the image will completely disappear and a suspension of the mental processes occurs. In fact, if there is absolutely no visual stimulus, e.g. if you sit in a pitch black room or cover the eyes with opaque cups, after some time the mind will turn off just as in sleep. Therefore, during the practice of *trataka* it is essential to maintain the inner awareness so that when the mind is suspended all that remains is the awareness. This is not only in relation to *trataka* but in any practice of concentration; when the awareness is restricted to one unchanging sense stimulus, like touch or sound, the mind is ‘turned off.’ Complete absorption in a single perception induces withdrawal of contact with the external world. In *trataka*, the result is a ‘blinking out’ of visual perception, and in the wake of this suspension, the central nervous system begins to function in isolation.<sup>[7]</sup> *Trataka* stimulate external ocular muscles to work more efficiently, it also increases the blink reflex and aqueous humor circulation, which encourages nourishment of the ocular tissues.<sup>[8]</sup> *Trataka* able to improves blood circulation while also easing the strain that is placed on the eye muscles. Symptoms like eye watering, burning, redness, and eye strain improved. Visual discomfort, which included dryness, irritation, burning, redness, and photosensitivity were reduced in computer professionals in a research study.<sup>[9]</sup>

*Yogi Swatmaram* in *Hatayogapradipika* states that by regular practice of *trataka* one can get rid of all types of *netra roga*, *trataka* also creates a refreshment feeling by removing lethargy, fatigue, and tiredness. *Yogi Swatmaram* has considered *trataka* as “*gopyam*” and has advised to preserve it as “*hatakpatkam*” which means a box full of gold. According to him, *trataka*

should be practiced alone in a peaceful place away from any sort of disturbance or noise like we keep a gold box away from all eyes. It is very important because practicing *trataka* in “*ekagrata*” i.e. focusing which is the most important part of *trataka* can never be achieved and one can never get full benefits of *trataka* without this. *Trataka* is visual cleansing practices which increase visual perceptual sensitivity by decreasing optical illusion that leads to reduction in anxiety which is associated with a higher blinking rate. *Yoga* practice leads better self-rated relaxation as well as physiological relaxation. *Yoga* practices increases physical as well as mental health benefits via down regulation of the hypothalamic-pituitary-adrenal axis and the sympathetic nervous system. Studies suggest that yoga eye exercises improve ocular motility and relieve symptoms of asthenopia and eye fatigue.<sup>[8]</sup>

## CONCLUSION

Computer Vision Syndrome comes to existence due to excessive use of video display terminal in this modern era. *Trataka* is the best practice to deal with it.

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