



Effectiveness of Homoeopathic Medicines in management of Computer vision syndrome

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Abstract

The computer screens have become a part of our lifestyle with advancement of technology. Nowadays computers are part of education, jobs, business, e-trading, socializing, gaming and recreation. Moreover after Covid-19, new work from home culture that has popped which has made computer screens an essential part of life. As computers made our lives easy by making technology easily accessible to everyone it came with its own effects on human health. Among computer related problem, computer vision syndrome is most common, others are carpel tunnel syndrome, eye strain, strain injury. etc. Although computer vision syndromes are becoming a major public health concern, less emphasis is given to them, particularly in developing countries. Hence, this article aims to focus and explore the computer vision syndrome and its homoeopathic management.

Keywords - Computer vision syndrome , Homoeopathy , eye discomfort

INTRODUCTION

Computer vision syndrome (CVS) is defined as “a complex of eye and vision problems related to near work experienced during computer use. Visual fatigue (VF) and digital eye strain (DES) terms are also used for CVS, reflecting the different digital devices related to potential health problems. Symptoms related to CVS can be classified as visual, ocular, and extra ocular symptoms. Visual symptoms include blurred vision, visual fatigue or discomfort, and diplopia . Ocular symptoms include dry eye disease, redness, eye strain, and irritation. Extraocular symptoms include headache and shoulder, neck, and back pain

Individuals spend more time on electronic devices such as computers, laptops, smartphones, tablets, and e-readers, which contribute to CVS. Children are also affected in CVS, as they spend many hours using electronic devices for schoolwork, playing video games.

With boom in digital technology and almost everything going paperless, it has increased the use of screens in all age groups. The less usage of protective equipment, long working hours with less breaks from screen has increased chances of CVS. CVS is a major public health problem leading to occupational hazard.

Factors associated with CVS can be classified as personal factors, which include poor sitting position, inappropriate eye-to-screen distance, insufficient working procedures, improper viewing angle and distances, age, medical diseases, and long duration of computer usage. The environment and computer factors such as improper workstations, poor lighting, contrast, and resolution rooms, slow refresh rate, glare of the display, excessive screen brightness, and imbalance of light between the computer screen and surrounding working room. Modern digital technology markedly influences the daily activities and lifestyles of people. CVS has an effect on reduced productivity and visual and musculoskeletal impairment and a negative impact on cardiac rhythms and sleep patterns.

How common is computer vision syndrome?

Computer vision syndrome is very common. Researchers estimate it affects 60 million people around the world. Before the onset of the COVID-19 pandemic, computer vision syndrome affected at least 50% of adults. During the pandemic, more people relied on digital devices for work and socializing. As a result, the number of adults with computer vision syndrome jumped to 78%. The pandemic also caused more children to experience computer vision syndrome. About 50% to 60% of children dealt with this condition during the pandemic, according to some research.

Symptoms of CVS

Computer vision syndrome symptoms include:

- Eye discomfort (most common). This can feel like dryness, watering, itching, burning or the sensation of something in your eye.
- Blurred vision that comes and goes. May notice it when refocusing eyes from near to distance or distance to near.

- Double vision, presbyopia, myopia and slowness of accommodation or change of focus.
- Sensitivity to bright lights.
- Trouble keeping eyes open.
- Headache behind eyes.
- Many people with computer vision syndrome also develop aches and pains elsewhere in their bodies. This can happen when your posture isn't ideal or you stretch and strain your neck to see your screen. Symptoms can include pain in Neck, Shoulders & Back.

Causes of computer vision syndrome

Extensive use of digital devices causes computer vision syndrome. Some research shows that continuous screen use for at least two hours can be enough to trigger symptoms. The longer you spend staring at screens, the more likely you are to develop symptoms. The screens themselves aren't fully to blame. Spending a long time focusing on close-up objects can strain your eyes, whether you're looking at a screen or a printed page. But the screens add another layer of strain to your eyes. Here's why:

- Constant refocusing. When you use screens, you have to constantly focus and refocus to see the print (which is made of pixels, or tiny dots). Constantly moving your eyes in this way can strain them.
- Screen contrast levels. Often, there's a low contrast level between the letters you read on a screen and their background. This can make your eyes work harder.
- Inadequate blinking. Normally, you naturally blink about 18 to 22 times per minute. You need to blink enough to keep your eyes lubricated. But when using a computer, most people only blink three to seven times per minute. Screen use may also cause incomplete blinking. This means you only partly close your eye when you blink. Not blinking fully or often enough can cause the surface of your eyes to dry out.
- Have dry eye disease.
- Have uncorrected or under-corrected refractive errors, like nearsightedness.
- Medical diseases – Systemic diseases and medications – Dry eye is associated with some systemic diseases.eg: Sjogren syndrome, rheumatoid arthritis, and several autoimmune diseases.

Diagnosis and Tests

Eye care specialists diagnose computer vision syndrome by giving you a thorough eye exam and asking you to fill 17 Item CVS assessment scale which includes questions like types of symptoms you have, how often you have them. How severe they are etc. and based on score diagnosis is done. Usually a score of 6 or more is considered as CVS.

Schirmer's test procedure:

Management of Computer Vision Syndrome

- **Blue cut lenses/Blue blocking lenses** - These lenses block the short-wavelength visible light (blue light). Blue blocking lenses may lower the reduction and may reduce eye fatigue.
- **Screen Placement** - 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
- **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.
- **Seating position.** Chairs should be comfortably padded and conform to the body. Chair height should be adjusted so the feet rest flat on the floor. Arms should be adjusted to provide support while typing and wrists shouldn't rest on the keyboard when typing.
- **Lighting.** Position the computer screen to avoid glare, particularly from overhead lighting or windows. Use blinds or drapes on windows and replace the light bulbs in desk lamps with bulbs of lower wattage.
- **Blinking.** To minimize the chances of developing dry eye when using a computer, try to blink frequently. Blinking keeps the front surface of the eye moist.
- **The 20/20/20 rule** – After working on a computer for 20 minutes, the computer user should gaze into the distance in excess of 20 feet for at least 20 seconds.

HOMOEOPATHIC MANAGEMENT:

Homoeopathy is the holistic system of the medicine. The selection of remedy is based on theory of individualization.

- **Ruta** – Pains in eyes when viewing an object minutely. Aching in eyes. Eyes hot like balls of fire. Feel strained. Burning sensation in eyes when reading by candlelight. Itching in inner canthi and on lower lids, which becomes smarting after rubbing them, whereupon the eye becomes filled with water. Obscuration of sight from reading too much, with clouds, or like a veil before eyes. Bad effects from over-straining eyes, from reading too much, esp. fine work at night.
- **Euphrasia**- Eyes very sensitive to light, and candlelight. Dry pressure in eyes, as if sleepy. Frequent burning biting in eyes, obliging frequent winking. acrid water runs from them. Sensation as if dust or sand were in eyes. Sensation as if a hair hung over eyes and must be wiped away. Pressure in the eye when looking at light. Violent pressure in the left eye, with lachrymation, seems smaller and weaker. Burning in eyes, with lachrymation.
- **Arsenicum album** – Great dryness of the eyelids, chiefly in the edges, and on reading by the light (of a candle). Dryness of eyes from artificial light. Spasmodic closing of the eyelids, sometimes from the effect of light. Aching, burning, and shooting pains in the eyes, < by light, as also by the movement of the eyes, accompanied sometimes with a necessity to lie down, or with anguish which does not permit to rest in bed. Eyes inflamed and red, with redness of the conjunctiva.
- **Picric acid** – Dryness of eyes. Tingling and smarting, < by constant use and by lamplight. Feeling of sand in eyes, smarting pain, acrid tears. On waking and for an hour, feeling of sticks in eyes. Pressure over eyes < from studying and motion, > sitting still. Eye symptoms < from artificial light. Acrid, thick matter in corners in morning. Must bring objects close to eyes to see them. everything

blurred as from looking through fog. Brain fag of literary or businesspeople. slightest excitement or mental exertion, or any overwork, brings on headache.

- **Gelsemium** - Gelsemium is valuable to manage complaints of double vision in computer vision syndrome cases. The double vision is most felt when looking sideways. Dimness of sight attends. Eyes feel sore with aching pains. Redness of the eyes along with watering is also noted with the above symptoms. Smoky appearance before eyes, with pain above them. Dimness of sight and vertigo. Great irritability of the eye, resulting from want of tone or energy of muscular structures. Eyes feel sore in the evening, sensitive to light, with lachrymation. lids feel full and congested
- **Lithium carb-** Great pain in eyes after reading especially in artificial light. Pain as if from sand in eyes decidedly greater in the left eye. Later, stitches in the right eye Great sensitivity to artificial light. Sensation of dryness and pain in eyes after reading Eyes pain as if sore. Eyes sensitive after using them by candlelight. Half vision. invisible right half. Photophobia. Pain over eyes. Dry lids.
- **Pilocarpus microphyllus (jaborandi)-** Eye strain from whatever cause. Irritability of the ciliary muscle. Eyes easily tire from slightest use. Heat and burning in eyes on use. Headache. Smarting and pain in the globe on use. Everything at a distance appears hazy. Vision becomes indistinct every few moments. Retinal images retained long after using eyes. Irritation from electric or other artificial light. Spasm of the accommodation while reading.
- **Physostigma-** photophobia. Contraction of pupils. Twitching of ocular muscles. Dull pain over and between eyes. Eyes feel weak. Dimness of vision. Pain after using eyes, flashes of light, twitching of eyelids and around eyes. myopia. Profuse lachrymation. Spasm of ciliary muscles, with irritability after using eyes. Increasing myopia.

- **Cina-** Pains renewed by looking steadily at an object. Pain in eyes when using them at night by candlelight. Aversion to light. When looking at a thing steadily, reading, he sees it as through a gauze, which is relieved by wiping eyes. Pressure in eyes as if sand had got in, especially when reading. Looks sickly about eyes, with paleness of face. Chronic weakness of sight, with aching in eyes and photophobia.
- **Senega-** Aching over the orbits. eyes tremble and water when he looks at object intently or steadily. Eyes weak and watery when reading. Drawing and pressure in eyeballs, with diminution of visual power. Weakness of sight and flickering before the eyes when reading. Must wipe them often. When walking toward the setting sun, seemed to see another smaller sun beneath the first, assuming a somewhat oval shape on looking down disappearing on bending the head backward and on closing the eyes.
- **Belladonna** - Belladonna is very beneficial to manage dry, red eyes in computer vision syndrome. The eyes are congested and dry. A feeling of sand being present in the eyes is felt. Pressive pain deep in the eyes may be felt that gets worse by movement and by light. Double vision may also be complained of. Heat and burning in the eyes may be felt. Sometimes itching and smarting in the eye is felt. Belladonna also helps to manage headaches in case of computer vision syndrome.
- **Physostigma** - Physostigma works well in cases of computer vision syndrome with blurred vision. Objects in the line of vision seem mixed and double-vision may appear in some cases. Along with this, dull pain over the eyes is felt. The eyes feel weak and a drawing sensation in the eyes may be present. The eyes may also water excessively.
- **Cimicifuga** - Cimicifuga is also indicated for managing neck pain in computer vision syndrome. Neck also feels stiff and contracted along with pain where Cimicifuga is indicated. Pain is excessive that worsens from even moving the hands. The neck also feels sensitive to touch. Neck muscles also feel sore.

- **Euphrasia** – Euphrasia is very useful to manage irritation and burning in the eyes in cases of computer vision syndrome. Irritation and burning are attended with excessive watering from the eyes. Marked biting and smarting sensation are felt in the eyes. Sometimes a grittiness or sensation of sand is experienced in the eyes. Eyes feel dry and very itchy. Vision gets somewhat dim. Pressure and tension appear in the eyes.
- **Natrum Mur** – Natrum Mur is significant medicine for treating headaches in computer vision syndrome. For using Natrum Mur the nature of pain in head varies from case to case. It may be beating and throbbing type. In some cases, it feels like little hammers knocking in the head while in some cases bursting sensation in the head is felt. Dull, heavy pain in the head may be there in a few cases. The forehead mostly feels tensed with the sensation of weight over it. Along with this strain and aching pain is felt in the eyes. Eyes also get red. Vision feels dim, and in some cases, double vision may also be present.
- **Rhus Tox** - Rhus Tox is an excellent medicine for managing neck pain in computer vision syndrome. In cases needing Rhus Tox, the neck feels very painful and stiff. The pain extends to shoulders from the neck. Pain is also felt between shoulder-blades and scapulae. The pain and stiffness get worse at rest while movement of the neck gives relief. Warmth also helps to relieve the pain.

CONCLUSION

As computers will remain a part of our daily life we have to combat Computer vision syndrome with proper identification of the etiological factor with related lifestyle modification and use of potentised homoeopathic medicines act as back bone for the CVS. It requires a multidirectional approach in its treatment. There is better scope of homoeopathic medicines in treatment of computer vision syndrome since the treatment is based on holistic and individualistic approach but to establish their proper effects on system.

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