Computer Vision Syndrome (CVS)

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Computers are now an integral part of our day, both at office and at home. The invention of computer and advancement of information technology has revolutionized and benefited the society, but at the same time has caused symptoms related to its usage, such as eye strain, watering, irritation, redness, dryness, blurred vision and double vision. These clusters of symptoms are known as Computer Vision Syndrome.

Introduction

Human eyes were designed for more of distance work and we sailed through centuries with minimal difficulties as the eyes could adapt to the changes for our near tasks. The transformation from hunting in the open to working on paper has been slow and gradual and did not put much stress on our eyes. But the shift from paper to computer has been so rapid that the eyes have not been able to adapt to the new demands put on it to work at near in a new visual environment and in stressful conditions. One of the by-products is Computer Vision Syndrome.

Symptoms

CVS is characterized by visual symptoms, which result from interaction with a computer display or its environment. When the demand at near work exceeds the normal ability of the eye to perform the job comfortably, one develops discomfort and prolonged exposure to the discomfort leads to a cascade of reactions that can be put together as CVS. Near work here refers to the use of all self-illuminating PCs, mobile phones and latest gadgets that have helped bring the web world and quick computations to our hands.

CVS affects 90% of the people who spend 3 hours or more in a day in front of the computer. These includes all professions that use computers (IT, BPO, Accounting, Banking, Front Office, Students and Children). Symptoms are worsened by poor lighting and air moving across eyes. The symptoms of CVS can be divided in Ocular (those related to the eyes) and Extra Ocular (away from the eyes) symptoms.

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<th>Ocular</th>
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Why working on computers causes stress on our eyes? There is a difference in viewing the display on the computer screen compared to reading a printed text. An image produced on the screen is made up of thousands of tiny spots or pixels. The margin of the image or a letter is not sharp in contrast to a printed letter. As the resolution goes down (or pixels are decreased) the image quality worsen causing more stress to our eyes.

Secondly while working with computers we do not blink as frequently as we normally do. Normally we blink about 16-22 times per minute. The blink rate decreases to as low as 6 to 8 blinks per minute, while we are focusing on the computer screen.

Not using proper corrective glasses for refractive errors (eye sight errors) like myopia, hypermetropia, astigmatism and presbyopia, further contributes to stress on our eyes.

Prevention
Prevention remains the main strategy in managing CVS. Modification in the working environment (Ergonomics), patient education and proper eye care are important strategies in preventing CVS.

Tips to reduce risk of computer eye strain:

A. Computer Ergonomics
   1. Sit with head and neck in line with torso, not bending down or tilted back.
   2. Keep elbows close to the body.
3. Pick chair with lower back support and cushioned seat.
4. Make sure computer monitor is slightly below the eye level.
5. Screen brightness and contrast should be adjusted to provide balance with room lighting.
6. Use of screen filters can reduce glare and reflection from the screen.

B. Taking short breaks, restore and relax the muscles of the eyes and prevent eye strain and fatigue.

C. Dry eye secondary to decreased blink rate can be managed by applying lubricating eye drops or artificial tears. Consciously blink the eyes every now and then.

D. Use of proper corrective glasses for eye sight errors as myopia, hypermetropia, astigmatism and presbyopia is important to prevent further deterioration of the symptoms.

Various catch phrases have been used to spread awareness about giving rest to the eyes while working on computers. One of the catch phrases is 20-20-20 rule. After every 20 minutes look at an object 20 feet away for 20 seconds. These basically give a convenient distance and time frame for a person to follow the advice from eye doctor. Otherwise the patient is advised to close his or her eyes (which has a similar effect) for 20 seconds, at least every half hour.
डेंगू: एक महामारी

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डेंगू वायरस

डेंगू वायरस (DENV) से डेंगू का बुखार होता है। यह एक Single Positive – Stranded वायरस है जो फ्लाविभिडीया (Flavivirus) का है। यह एक जीनोम (Genome) है जो फ्लाविवीराइडेआ (Flaviviridae) परिवार का है। डेंगू वायरस विषाणु द्वारा होता है जिसके चार विभिन्न प्रकार टाइप हैं— 1, 2, 3, 4 (DEN-1, DEN-2, DEN-3, DEN-4) आम भाषा में इस बीमारी को ‘हड़ड़ी तोड़ बुखार’ कहा जाता है जबकि इसके कारण शरीर व जोड़ों में बहुत दर्द होता है।

इसमें जीका और चिकनगुनिया को सह-संक्रमित रोगों के रूप में डेंगू के परीक्षण के साथ अवश्य करना चाहिए।

संक्रमण

मलेशिया की तरह डेंगू बुखार भी मच्छरों के काटने से फैलता है। इन मच्छरों को ‘एडेज मच्छर’ कहते हैं जो काफी ठीक मच्छर है और दिन में भी काटते हैं। भारत में यह रोग बरसात के मौसम में तथा उसके तुरन्त बाद के महीनों अर्थात जुलाई से अक्टूबर में सबसे अधिक होता है।

डेंगू बुखार से पीड़ित रोगी के स्वास्थ्य में डेंगू वायरस काफी मात्रा में होता है। जब कोई एडेज मच्छर डेंगू के किसी