APPLIED ASPECT OF AYURVEDA SIDDHANTA IN UNDERSTANDING OF COMPUTER VISION SYNDROME

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ABSTRACT :

Ayurveda has put forward *Siddhanta* that are eternal and can be applied to understand the new disease in all its aspects, in its diagnosis and treatment. *Trividha hetu* and *Pancha lakshana Siddhanta* are a few among those *Sidddhantas* that are time tested and can be applied to understand any new disease irrespective of time. The Review of Literature consisting of *Trividha hetu*, *Nidana Panchaka*, *Sadhyasadhyata*, *Chikitsa*, *Pathyapathya* of *Agantuja netra roga* and Computer Vision Syndrome. In the present study *Asatmendriyartha samyoga* especially *chakshurendriya Atiyoga* i.e., excessive watching and working with computers for longer duration along with *mithyaahara* and *vihara* were the most common *nidanas* encountered in the manifestation of CVS.

Key words: *trividha hetu, agantuja netra roga,* computer vision syndrome.

INTRODUCTION: With the advent of time inevitable changes in food habits, life styles, occupational challenges and environment has led to the manifestation of new disorders. Computer Vision Syndrome is one among such disorders occurring in computer professionals characterized by complex eye and vision problems related to near work which are experienced during working with computers involving both ocular and non-ocular symptoms. The catastrophic effects of this disorder are low work performance, agony, extreme discomfort that hampers daily routine. Negligence towards it could cost ones career resulting in Physiopsychological upset and severe eye problems.The problem is grave according to American Optometric Association with an incidence in 75% -90% of employees working with Computers and more people are likely to suffer in the future due to rapid growth of jobs in IT sector in India. So it is the need of the hour to find a holistic solution to this problem. In the present context Computer Vision Syndrome is taken to explain it on the basis of Ayurveda Siddhanta i.e.; *trividha hetu* mentioned in *Ayurveda samhitas* to understand *Aganthuja netra roga*.

REVIEWOF LITERATURE

Trividha hetu:1 *Asatmendriyartha samyoga*, *Prajnaparadha* and *Parinama* are the prime cause in the disease origin of *shareerika* and *manasika*. Among the *trividha hetu*, the *asatmendriartha samyoga* is related mainly to *Pancha gnanendriya* based on *hinayoga*, *mithyayoga* and *atiyoga* with their *vishayas*. The literal meaning of *Asatmendriyartha* is a state unfavorable for the *indriya* with their *vishaya*. The word *indriyartha* is applied for *gnanendriya* only which are five in number viz (*Shabda*, Sparshadi,etc.).The *hinayoga*, *atiyoga* and *mithyayoga* of *indriyas* with their respective vishayas create unfavorable situation specifically to *indriyas* and thereby to the

body causing a disease. Among *trividha hetu's* it is the nearest or immediate cause in the disease manifestation. *Parinama* in general means *avastha* or *parivartana* brought by the influence of *kala*. *Acharya charaka* had used the word '*kala*' for *parinama*.Since *ati*, *hina* and *mithya* yoga of *kala* brings *dosha* vitiation in the *shareera* and causes *vyadhi*. In *Ayurveda kala* is also given importance and its explanation is found in many places in classics.The definition of *prajnaparadha* stating as the error of *dhi*, *dhruti*, and *smriti* resulting *ashubhakarma* of *kaya*, *vacha* and *mana* surpasses this limitation of merely intellectual error. The word '*karma*' is used for *prajnaparadha*. The word *karma* has a very wide meaning indicating the *karma* of *kaya*, vacha and *manasa* as well as *purvajanmakrita* and sadyo *janmakrita* too. The word *ashubhakarma* in the definition states that disturbed state of *dhi*, *dhriti*, and *smriti* respectively. The *hina*, *ati* and *mithya yoga* of such *karma* causes *vyadhiutpatti*. Thus *prajnaparadha* occupies an important place in *trividha hetu*.

Netraroga:[2]

- **Hetu** :*Ushna Abhitaptasya Jala Pravesha, Doorekshana, Swapna Viparyaya, Kopa, ShiroAbhighata, Vega vinigraha, Upasarga, Darshana ayoga, Darshana atiyoga etc.*

- **Poorvarupa:**AvilaSamrambha, Ashru, Kandu, Upadeha, Shukapurnabham, Oosha, Toda, Ragayuktam, Sashoolam, vartma-kosheshu Guru.*

- **Roopa:** *Atiruja, Bahupicchila ashru, Upadeha, Toda, Bheda, Daha,Guruta, Kandu,Alparaga.*

- **Samprapti:**The *doshas* are vitiated due to *achakshushya nidana* and enter the *urdhwagata siras,* lodge in the various parts of the eye and manifest as *netrarogas.*

- **Chikitsa:**Pittaabhishyanda,raktaabhishyanda* and *vataabhishyanda* chikitsa is to be followed in *abhighataja netra rogas* with drugs having *drushtiprasaadana* properties, like *Nasya, Aalepa,snigdha dravya* which are *drushti prasaada janana* should be used.

- **Pathya:**Yava, Shastika, Mudga, Triphala, Yashtimadhu, Draksha, Jangalamamsa, Godugdha, Netra aschotana, Padabhyanga, Manasika santulana* etc.

Computer vision syndrome:[3,4]

- **Aetiology:** Unsuitable environment and the improper use of eyeglasses or contact lenses along with that working at a computer is more visually demanding than doing other standard office work such as reading printed documents etc.

- **Clinical features:**Eye Irritation (Dry Eyes, Itchy Eyes, Irritated Eyes),Red Eyes, Blurred Vision (Distance Or Near),Headaches Light Sensitivity, Double Vision, Backache,Neck Ache, Muscle Fatigue, Eye Strain, Difficulty Refocusing the Eyes.

- **Aggravating factors:** Long working hours, Improper lighting conditions (bright overhead lighting or glare) Air moving past the eyes (overhead vents, direct air from a fan), Altered sleeping habits, Refraction errors, Age.

- **Treatment**

- **Medical:** Analgesics, Topical NSAIDs, Topical Steroids, Topical Cycloplegics,
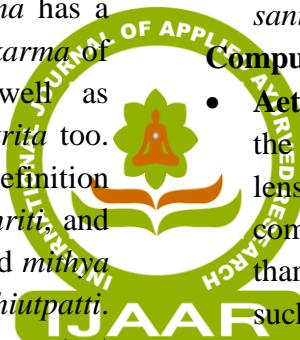
Topical Anaesthetics, Sedatives/ Anxiolytics.

- **Non-Medical:** Looking away from the computer screen and blinking periodically, Use of convergence and divergence exercises Use of bifocals, trifocals or any spectacles for protection of eyes, Viewing angle /Ergonomics **,**Anti-glare screens.

DISCUSSION: The disease CVS is caused due to working or seeing computer screens continuously for longer duration. Here watching computers is the etiological/causative factor for a disease manifestation; it gives rise to the disease and is a *karana* for a *vyadhi*. So in this disease Computer watching is the hetu or *nidana* for manifestation of CVS. *Atidarshana* i.e. ,seeing very bright light or objects for long periods of time. Seeing for a long time those objects which are very near or very far, which are very minute, which are very bright and sparkling is *Mithya yoga*. Because of these reasons the patients may develop eye irritation, dry eye, red eye, vision problem etc. ocular symptoms. *Manasika prajnaparadha* can be seen in the patients of Computer Vision Syndrome as most of them are stressed from the nature of the job especially those working in software companies and call centre. *Vachika prajnaparadha* cannot be found in all the persons except call centers employees whose nature of job is voice based so have to answer and talk continuously while attending the calls. *Kayika prajnaparadha* can be seen in the patients of computer vision syndrome as most of them not taking care in regarding their position or posture during working hours as well as working in

the same posture for hours together. By these causes patients may develop with headache, irritability, neck pain, and muscle fatigue etc. non-ocular symptoms.Exposure to cold in air conditioned atmosphere also aggravates *vatadi dosha* and increases the dryness in eyes as it's not a natural atmosphere. It becomes a factor of *kala mithya yoga* i.e. Different from external natural environment and *atiyoga*i.e.,*sheeta guna atiyoga* causing *dosha prakopa*. The duration of work can also be considered under *kala* i.e., more the duration the patient is exposed to computer work is more prone to develop Computer Vision Syndrome.

CONCLUSIONS:

- Ayurveda Siddhanta holds good to understand any new diseases in all aspects like computer vision syndrome.
- *Asatmendriyartha samyoga* of *chakshurendriya* like watching highly luminous, fast moving flashing colours for a prolonged time etc. have been mentioned in classics and has been validated in understanding the aetiological factors of CVS.
- All aspects of *prajnaparadha* play an important role in exacerbation of the symptoms.
- Duration of computer work as well as the environment of office is directly proportional to the severity of symptoms in CVS.

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