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## Review Article

### AYURVEDIC REVIEW OF COMPUTER VISION SYNDROME

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#### ABSTRACT

Eye sight is the God's greatest gift to mankind, the blessing that allows us to see our surroundings and feel the exquisite beauty of God's creation. According to John Ruskin, an English author, poet and artist, "The greatest thing a human soul ever does in this world is to see something, and tell what it saw in a plain way. To see clearly is poetry, prophecy and religion — all in one."

A high degree of success (Sheedy and Parsons, 1990) has been attained in resolving the symptoms of CVS by applying the following two-pronged approaches:

1. Careful diagnosis and treatment of visual conditions that cause CVS symptoms.
2. In-office diagnosis and management of workstation ergonomic deficiencies.

But no remedial measures for cure of this pathology prevail in the domain of modern pathology. It is out of question to verify the existence of similar syndrome in ancient documents, as the ailment is the consequence of modern invention. But there is room to understand the disease through *Ayurvedic* spectacle and to methodically apply the *Ayurvedic* remedies for the modern ailment.

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#### INTRODUCTION

Computer Vision Syndrome (CVS) has not been mentioned anywhere in *Ayurvedic* texts. CVS emerged in the last two decades of the 20th century certainly needs its footing and understanding on *Ayurvedic* principles /fundamentals before considering its line of treatment.

American Optometric Association (AOA) defines computer vision syndrome as "A complex of eye and vision problems related to near work which are experienced during or related to computer use". The chief source of the problem lies in it being a Repetitive Stress Injury (RSI) to the visual system which means, rectifying the source of stress is overlooked and the negligence could cost one's career and upset the health<sup>1</sup>.

It is estimated that approximately 45 million workers directly use computers by staring into VDT's for hours continuously. A Video Display Terminal (VDT) is commonly known as Computer screen. Most studies indicate that VDT operators report more eye related problems than non VDT workers. A number of investigators (Smith et al 1981; Yamamoto, 1987; Dian et al 1991) have indicated that visual symptoms occur in 75-90% of VDT workers.

CVS according to our present day knowledge seems to be a group of Vata-Pitta dominanting & Kapha depleting ocular as

well systemic disease. Acharya Vagbhatta<sup>2</sup> has indicated cooling and rejuvenating therapies for eyes suffering from light, high voltage electric spark & heat exposure.

A systemic approach with regards to Etiology (Doshas), Site (Dushya/Adhisthan) and Clinical features (Lingam) will lead a physician to the permanent cure of the disease. CVS is a Vata dominating Pittaja ocular as well as a systemic problem and it can be named as "*Sanganaka Atiyogajanya Netra Samlakshana*".

According to *Acharya Charaka* if a physician is unable to name a particular disease, he should not feel ashamed on that account because it is not always possible to name all type of diseases in definite terms. When aggravated, one and the same *doshas* may cause manifold diseases depending upon the various etiological factors and the sites of manifestation.

So a physician should try to comprehend the nature of the disease (dosha), the sites of its manifestation and etiological factors and should then initiate the treatment.

#### Computer Vision Syndrome In Ayurvedic Perspective

The guidelines for identification as well as treatment of the diseases which are not mentioned in the texts has been clearly given in *Charaka Samhita*<sup>3</sup> based on Aptopadesha Pramana.

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**Total 13 tools are mentioned to describe a new disease (Anukta Vyadhi). They are-**

**Evam prakopanam- (Causes)**

Prakopanam implies to hetu. Here in case of CVS Constantly staring at monitor with wide open eyes causes three basic alterations in the eye i.e.

**Widely open eyes** – will evaporates the moisture which is present in the anterior surface.

**Concentrating on the screen without blinking-** will reduce the blinking rate which in turn decreases the tear secretions from lacrimal gland.

**Viewing small fonts for a longer period-** will causes tiredness in the extra ocular muscles.

The earlier mentioned general causative factors are also to be considered as causes of aggravation of Doshas.

**Evam Yonim- (Dosha involved)**

Yoni denotes moolbhoota karana. Yoni of CVS is Vata dominating Pitta. It is a doshabalapravitta vyadhi.

**Evam Utthanam**

Process of understanding the involvement of Doshas in the occurrence of disease is known as utthana. The above described causative factors leads to vitiation of the doshas

The vitiated pitta takes sthanasamshraya at the khiavaigunya of the eye i.e. Pitta predominant area of the eye like vascular parts etc. Vegadharana, Vegodeerana, continuously working with no relaxation of eyes, staring continuously to the screen causes less movement of the eyes.

As a result due to reduced number of blinking rates per minutes the pathology of CVS starts even causes the accommodative insufficiency and convergence insufficiency. Here vata and pitta dosha prakopa starts which causes sthanasamshraya at the khiavaigunya of the eye i.e. Vata predominant areas like Krishna mandala etc.

Thus all the above mentioned processes gradually cause the manifestation of symptoms of 'Computer Vision Syndrome'

**Evam Atmanm-(Cardinal symptom of the disease)**

It is the Pratyatmalinga of the disease. Eye strain can be considered as the cardinal symptom of CVS as it manifests in the early stages of the disease as well as most commonly observed as a presenting symptom and it lasts up to complete remission.

**Evam Adhistanam**

Acharya Charaka, states that when the Malas (vitiating doshas) are lodged in the Indriyas, Upatapa (pathology) is produced, thereby leading to Upaghata (functional impairment) in Chakshurendriya.

The vitiated Vata and Pitta Ddosha will take Sthanasamshraya at Netra Patala (Pratama and Dwitiya), Shweta and Krishana Mandalas, and thus leads to further progression of the symptoms of CVS.

The conjunctiva, cornea, iris, lens and retina will be affected in this disease. Among Dushya Rasa, Rakta, Mamsa & Asthi

Dhatu are involved once the Prakopana of Vata and Pitta Dosha occurs.

**Evam Vedanam**

The word 'Vedanam' denotes knowledge. Here the word can be understood in the sense of, clinical features and various diagnostic tests done in CVS. The diagnostic methods in Ayurveda are by means of Shabda, Sparsha, Roopa. Rasa, Gandha i.e. Prathyaksha Pariksha and Anumana Pariksha.

In CVS diagnostic tools used were Clinical observations. Schirmer-I test and TBUT.

**Evam Samsthanam**

Samsthana refers to the clinical manifestation of the disease. The signs of CVS are Dry eye and Change in colour perception.

**Evam Upadravam- (Complications)**

Upadrava is the disease produced after the formation of main disease and it is dependent on the main disease.

Upadravas of CVS are Timira(Pseudomyopia, Refractive errors, early Presbyopia), Shushkakshipaka(Dry eye) and Avsada(Depression).

**Evam Vriddhi, Sthana, Kshaya**

This implies for the aggravating and relieving factors i.e. the Upshayas and Anupshayas for the disease.

Intermittent rest, good diet, proper posture and proper video display quality is upshaya and prolong sitting in bad posture is Anupshaya in CVS.

**Evam Udarkam- (The Vyadhi Uttarakaleena Avastha)**

After complete treatment, the remaining conditions of the disease which is not relieved by the specific treatment is considered as Udarka either it leads to secondary diseases or complications. Till date except in few references as mentioned earlier because of long standing exposure to the UV- rays and electromagnetic field while working with the computer it will cause damage to the brain tissue, sensitivity towards dust, hormonal imbalance etc. Are all can be considered as the secondary diseases to CVS.

**Evam Naman**

As it is mentioned in the previous pages 'Computer Vision Syndrome' can be considered as Anukta Vyadhi. With this reference we can consider that, with the change of era computers came into human life which is a new Karana, its improper use leads to a new disease condition i.e. CVS.

Acharya Charaka has mentioned that when a disease is caused by wrong-utilization, excessive utilization and inadequate-utilization (non-utilization) of sense faculties, viz visual etc., it is known as 'Aindriyaka'.

Based on this CVS can be named as "Chakshuraendriyaka Roga". Any of the following names can be described to the new ailment i.e. "COMPUTER ATIPRAYOJANITA NETRA ROGA"/ Sanganak Atiprayojanita Netra Roga.

**Evam Yogam-** treatment strategy planed by considering above all points

It includes specific treatment as a part of this process; management of the patients therefore is not merely by drug therapy or surgery, but rather management of whole problems confronted by the patients. Treatment concept of CVS in Ayurvedic aspects can be taken from various references as most of the symptoms of CVS are Vata and Pitta dominant so main line of treatment should be VataPittahara.

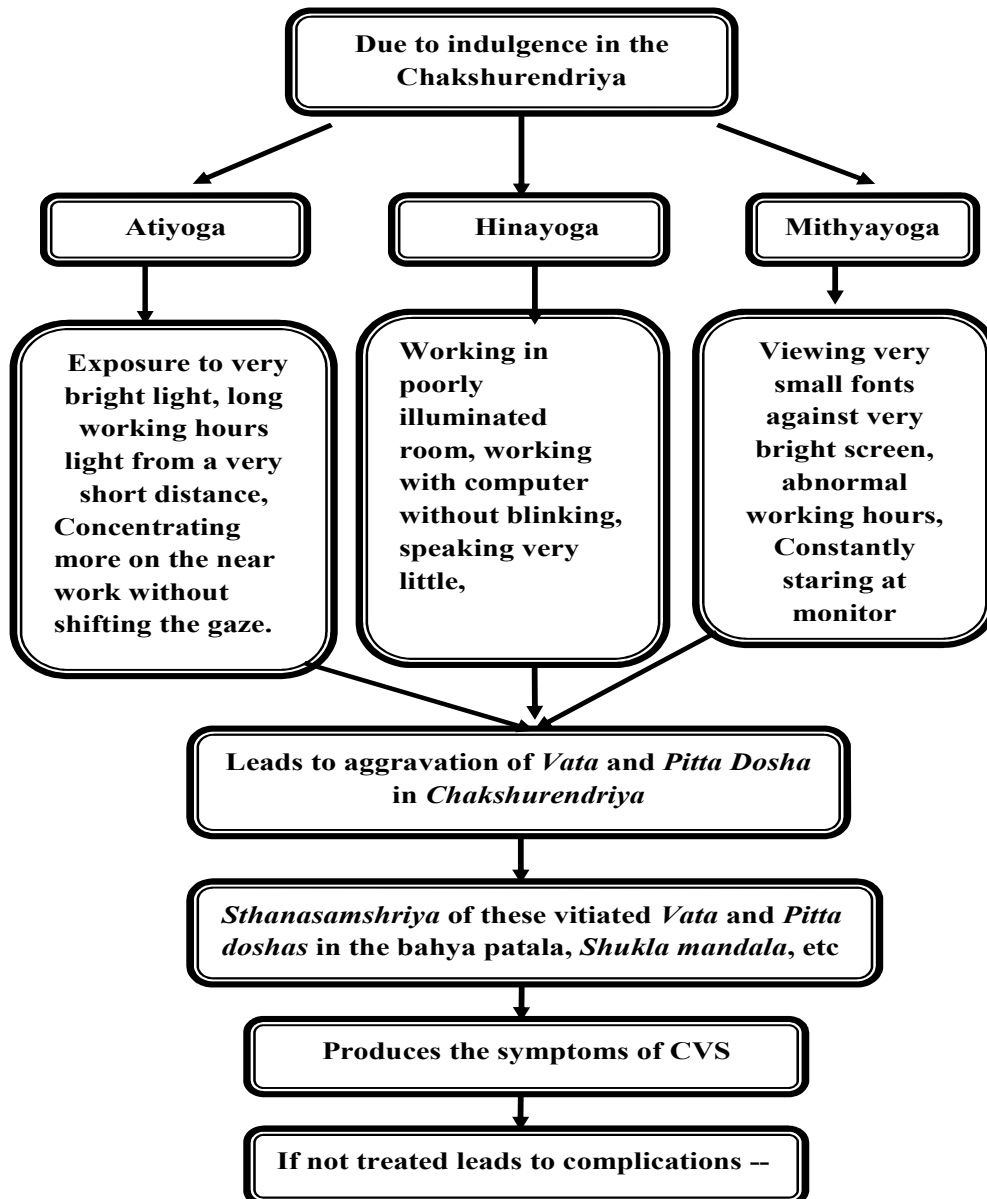
So, by above references we can say that main line of treatment in a patient of CVS should be santarpana, snigdha aushadhi, parisheka, nasya, akshitarpana . In addition, symptomatic treatment should also be done by using yukti (intelligence of physician).<sup>4</sup>

**Pratikaarartha Pravritti & Pratikaarartha Nivrutti** - Pravritti (initiation of action) to revert the pathology & Nivrutti (refrain from taking any action).

stage of the disease when treatment is to be stopped as disease is cured completely or if disease is in incurable stage either the treatment is to be stopped or to be done after explaining the prognosis to the patient. So here the identification of both the conditions becomes necessary in order to continue the treatment. New Pravritti can be continued to revert the pathology and to bring back physiology, and to maintain the residual physiology and control the progressed pathology. Permanent remedy can only be possible by discontinuing his work with VDTs but can avoid the serious damage to the eye by following Ayurvedic treatment/principles.

To summarise the newly emerged disease i.e. Computer Vision Syndrome, is due to persistent use of visual apparatus in a stereo type posture and over indulgence i.e. physical abuse.

**Thus overall Samprapti of CVS can be formulated as shown in the chart:**



Pratikaarartha Pravritti is identifying the stage of the disease when treatment is to be initiated. Pratikaarartha Nivrutti is that

Resultant outcome is aggravation of Vata Pitta Doshas. The aggravated doshas course through the vessels and reaches netra

and produces formidable disease in different parts of the eye. The above factors are conspicuous in Computer Vision Syndrome. By the above factors we can describe the samprapti ghatakas as follows-

**Samprapti Ghataka**

Dosha	-	Vata & Pitta
Dushya	-	Rasa, Rakta, Mamsa, Meda, Asthi
Agni	-	Jatharagni - in general
Srotas	-	Roopavaha and Manovaha
Srotodushti Prakara	-	Vimargagamana and Sanga
Adhishthana	-	Netra(specifically-lids,conjunctiva,cornea&retina)
Vyaktasthana	-	Chakshu
Sadhya	-	Sadhya

**CONCLUSION**

CVS in *ayurvedic* perspective is concluded to be a *Vata Pitta* aggravated and *Kapha* depleted ocular cum systemic problem on the basis of logical application of *Ayurvedic* fundamental and tools suggested by *Acharya Charaka* and can be named as

1. *Parikalak Ativekshanjanya Samlakshanam*
2. *Sanganak Atiprayogajanita Netra Roga*

The available modern treatment only addresses the ocular surface symptoms which may be due to tear film defect owing to exposure to VDT. This concept is incomplete as it has no place for systemic problem.

Changing the lifestyle by preventive measures and counseling is least effective but if advice along with topical and systemic treatment certainly add in study quality, quantity and time.

**References**

1. www.doctorergo.com
2. Astang Hridaya utara 13/37
3. Charak sutra 18/44-47
4. Astang Hridaya uttar 13/37
5. Sushruta utara 1/20

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