



Case Study

MANAGEMENT OF COMPUTER VISION SYNDROME WITH *SAINDHAVA JALA SEKA* AND *TRIPHALA GHRITAPANA* - A CASE STUDY

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ABSTRACT

Computer vision syndrome (CVS) is a symptom complex in which symptoms develop due to long screening time and improper postures while using computers. Ayurveda has mentioned *Shushkakshipaka* under *Sarvagat Netra Roga*. The symptoms of CVS and *Shushkakshipaka* when correlated, it denotes imbalance of *Vata and Pitta Dosha*. These vitiated *Doshas* carried by *Siras* to the eyes. When *Doshas* accumulated in eye the condition develops, called as *Shushkakshipaka*. Over use of Internet, Computers, Electronic devices increasing the risk factors about maintaining the normal vision. For the management of the CVS case, the *Saindhava Jala Seka* and *Abhyantara Triphala Ghritapana* is chosen from *Sushrut Samhita*. *Triphala Ghrita* is beneficial for complete maintenance of physiology of eye. The *Guna Karma* of *Saindhava* and *Triphala Ghrita* are *Vata-Pitta Shamaka* and both having *Chakshushya* properties. The main purpose for this study is to find safe and effective treatment without untoward effect in the management of CVS along with respective ergonomics advice. The required clinical tests done to observe the effectiveness of the combination of local and systemic treatment. The dryness in the eyes and associated symptoms can be resolved with the local treatment like *Seka*. Both the treatment modalities in combination have potential to give local and systemic relief improving the symptoms of CVS.

INTRODUCTION

Computer is said as the need of this 21st century. It's now considered a mandatory thing that, the person in any age group should be able to access the computer to complete his own educational or office work. Through Video Display Terminals (VDT) the essential office work, educational work is done by people from home in this internet era [1]. The Covid pandemic has given a lesson that, the speed of scientific progress & digitalization is not matching the speed of development of senses of human beings. Hence, over use of Internet, Computers, Electronic devices increasing the risk factors about maintaining the normal vision.

The adaptation of human senses with these high illuminating devices is not so fast as compared to development in VDT. The basic development of eyes starts from intra-uterine life. The premature birth is also one of the causes in the structural and functional development of the eyes. After birth, almost from Pre-School age group the over-use of electronic gadgets is now creating the problems like eye fatigue & visual disturbances. Computer vision syndrome is a symptom complex in which symptoms develop due to long screening time and improper postures while using computers. Symptoms comprising CVS are dry and irritated eyes, eye strain / fatigue, blurred vision, red eyes, burning sensation in eyes, excessive tear secretion, double vision, headache, light or glare sensitivity, contact lens discomfort, slowness in changing focus, changes in colour perception, and neck, shoulder and backache[1]. These symptoms of CVS are due to anatomical abnormalities or accommodative disturbances occur in the eyes.

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According to Ayurveda, some of these symptoms can be co-related with condition known as *Shushkakshipaka*. Ayurveda has mentioned *Shushkakshipaka* under *Sarvagat Netra Roga*. The symptoms of CVS and *Shushkakshipaka* when correlated, it denotes imbalance of *Vata and Pitta Dosha*. These vitiated *Doshas* carried by *Siras* to the eyes. When *Doshas* accumulated in eye the condition develops, called as *Shushkakshipaka*. In

Shushkakshipaka, eyes become dry and gritty, eye lids become hard, rough and it becomes difficult to open up the eyes, and vision is blurred. There is pricking type of pain, foreign body sensation in eyes and constriction of eye and liking of cold. These all features indicate the vitiation of mainly *Vata and Pitta Dosha*. Following table [1] shows the co-relation of the symptoms of CVS with the dominance of *Dosha*.

Table 1: Co-relation of the symptoms of CVS with the dominance of *Dosha*

S.No.	Symptoms	Predominated <i>Dosha</i>
1.	Foreign body sensation in eye (Gritty Eyes)	<i>Vata</i>
2.	Eye strain	<i>Vata</i>
3.	Dryness of eyes	<i>Vata</i>
4.	Redness of eyes	<i>Pitta</i>
5.	Burning Sensation of eyes	<i>Pitta</i>
6.	Blurred Vision	<i>Pitta</i>
7.	Excessive Lacrimation	<i>Vata</i>
8.	Headache	<i>Vata</i>
9.	Light or glare sensitivity	<i>Vata, Pitta</i>
10.	Sluggishness in changing eyes focus	<i>Vata</i>
11.	Occasional changes in color perception	<i>Vata Pitta</i>
12.	Excessive fatigue (Neck, Shoulder and Backache)	<i>Vata</i>

The purpose of this case study is to manage the case of CVS with appropriate local and systemic treatment modalities.

Aim: To study the efficacy of *Saindhava Jala Seka* and *Triphala Ghratapana* in the management of CVS w.r.t. *Shushkakshipaka*.

Objectives: To find safe and effective treatment without untoward effect in the management of CVS along with respective ergonomics.

MATERIALS AND METHODS

Study Design: 25-year-old male patient in OPD of *Shalakyatantra*, selected on the basis of symptoms of CVS with prior informed consent.

There was no H/o any major medical/surgical illness/ addiction/ known drug allergies.

The patient is using spectacles regularly since last 4 years for distant vision.

The patient was Myopic with spectacle power SPH -1.50D to both eyes.

The screening time of patient was daily 8 to 9 Hours since past 1 year.

Chief Complaints

Foreign body sensation, dryness, difficulty in focusing, burning sensation in both eyes, eye fatigue since last 1 month.

The classical texts viz., *Charaka Samhita*, *Sushruta Samhita*, *Sharangadhara Samhita* was used to get information about treatment modalities which can be applied in case of CVS w.r.t. *Shushkakshipaka*.

Treatment Planned-*Saindhava Jala Seka*^[2] and *Triphala Ghratapana*^[2] was advised and also required modifications in posture and related ergonomics are advised.

Treatment Protocol

The patient was diagnosed on the basis of symptoms of CVS. The treatment was explained thoroughly and required clinical tests done in OPD with prior written consent for the local procedure.

Table 2: Treatment Schedule

Procedure	Time	Duration
<i>Saindhava Jala Seka</i>	Morning	7 to 10 minutes to each eye for 7 days.
<i>Triphala Ghratapana + Godughdha</i> (10 ml in 200ml of Cow's Milk)	At Night	For 7 days

Administration Details for Seka - Seka was done daily once, during day time only^[3], from the height of 4 Anguli over the closed eyes of patient; which is approximately equal to 4 inches. For Seka, 15gm of Saindhava is dissolved in 240ml of water. The procedure of Seka was done upto 10 minutes to each eye.

Clinical Tests

- Slit-lamp Examination was done.
- Autorefractor Readings (AR) of the patient was noted.
- Schirmer's Test - For the assessment of severity of Dry Eye.
- Intraocular Pressure - For the assessment of Asthenopia Symptoms.
- Tear Film Break-up Time (TFBT) noted.

Table 3: Observation

Clinical Test	Day 1	Day 3	Day 8
Schirmer's Test	6 mm wetting of paper after 5 minutes	6 mm wetting of paper after 5 minutes	5 mm wetting of paper after 5 minutes
Intraocular Pressure (Each Eye)	17.3 mm of Hg	17.3 mm of Hg	14.6 mm of Hg
Tear Film Break-up Time (TFBT)	RE- 15 Sec/ LE-10 Sec	RE- 15 Sec/ LE-15 Sec	RE- 25 Sec/ LE-20 Sec

DISCUSSION

In *Sushruta Samhita*, the *Shushkakshipaka* is mentioned as the *Sarvagata Netraroga*. Its management is mentioned in *Uttartantra Adhyay* 9th. From which the *Saindhava Jala Seka* and *Abhyantara Ghratapana* was chosen for this study^[4]. *Seka* is one of the procedures which come under *Krikyakalpa* mentioned in *Shalakyatantra*. It is also known as *Parisheka*. *Sharangadhara* has given the procedure details as follows- *Seka* should be done on closed eyes. The medicated *Kwath/Sneha* in liquid state should be put over the closed eyelids from distance of 4 Anguli which is approximately equivalent to 4 inches^[3].

Saindhava is mentioned as *Chakshushya*, *Tridoshaghna*, *Madhura* by *Charaka Acharya* ^[4]. *Sushruta Acharya* has given properties of *Saindhava* as *Chakshushya*, *Snigdha*, *Madhura*, *Sheeta*, *Uttama Doshaghna*^[5]. It is given in *Ashtanaga Hridayam* that, Eyes are *Tejomaya* and have risks because of excess *Kapha* ^[6]. On the basis of symptoms CVS is said to be the *Vata-Pittaj Vyadhi*. Considering these aspects in case of CVS the *Vata-Pitta* should be decrease but there should not be excess *Kapha*. *Karma* of

Saindhava is mentioned as *Kaphavilayan* and *Kaphachedana* in *Ashtanga Hridayam*. *Dhanwantari Nighantu* has also mentioned *Saindhava* as *Snigdha*, *Swadu*, *Netrarogaghna*, *Chakshushya*, *Tridoshajit*^[7]. *Bhavaprakash* has also mentioned *Saindhava* having *Netrya* properties^[8].

The time of action for *Seka* is short hence it should be done daily, 10 minutes over each eye for 7 days and can be extended for 15 days. Therefore, on the basis of these properties *Saindhava Jala Seka* is said to be able to maintain balance of *Tridosha* by reducing dryness. *Triphala* is mentioned as *Chakshushya* in *Bhavaprakash*^[9] and *Dhanwantari Nighantu*^[10]. *Aamalaki*, *Haritaki*, *Bibhitaki* in combination acts as *Netrarogahara*. *Haritaki* is mentioned as *Tridoshahara* with *Prabhava*^[11,12]. *Ghrta* is having *Snigdha Guna*, *Vata-Pittashaman* and *Chakshushya* properties^[13,14]. *Godughdha* is also *Vata-Pitta Shamak*^[15], hence it is selected as *Anupana* for *Triphala Ghratapana*. Therefore, daily *Abhyantara Ghratapana* is beneficial to reduce dry eye symptoms and to overcome symptoms of CVS.

Table 4: The Properties of Triphala mentioned in Dhanwantari Nighantu and Bhavaprakash Nighantu are as follows

Classical Text Dravya	Ashtanga Hridayam/Bhavaprakash Nighantu	Dhanwantari Nighantu
<i>Haritaki</i>	<i>Akshirogahara</i> ^[16] , <i>Akshirogashasta</i> ^[12]	<i>Chakshurhita</i> ^[11]
<i>Bibhitaki</i>	<i>Netrahitam</i> ^[17]	---
<i>Aamalaki</i>	<i>Tridoshajit</i> ^[19]	<i>Tridoshajit</i> ^[19]

CONCLUSION

The patient having long screening time for long period develops a symptom complex, which is the basic cause of Computer Vision Syndrome. The dryness in the eyes and associated symptoms can be resolved with the local treatment like *Seka*. *Seka* has to be done on closed eyelids. *Seka* is the procedure which reduces eye strain, it reduces intraocular pressure and helps to maintain normal physiology of the eyeball. The *Abhyantara Triphala Ghratapana* and local *Saindhava Jala Seka*; both in combination will be able to reduce dryness in the eyes and associated symptoms of CVS. These treatment modalities can be applied over large population working with long exposure to computer screens for longer duration and the results can be noted more significantly. Also, the standardization for preparation of *Saindhava Jala* can be studied when this treatment will be applied over large scale.

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