

“Evaluation of efficacy of *Padabhyanga* in computer vision syndrome and its correlation with *Dehprakriti*.”

Mohammed Farhan¹, Preeti Borkar², Bhushan Mhaiskar³, Dnyanesh Joshi⁴,

¹PG Scholar Dept. of Samhita and Siddhant, Mahatma Gandhi Ayurveda College, & Research Center, Salod (H), Datta Meghe Institute of Medical Science, Wardha, (MH). ORCID ID: <https://orcid.org/0000-0001-8240-5068>

²Professor And Head of Department of Samhita and Siddhant, Mahatma Gandhi Ayurveda College, Hospital & Research Center, Salod (H), Datta Meghe Institute of Medical Science, Wardha, (MH). ORCID ID: <https://orcid.org/0000-0001-7862-4401>

³Associate Professor, Dept. of Samhita and Siddhant, Mahatma Gandhi Ayurveda College, Hospital & Research Center, Salod (H), Datta Meghe Institute of Medical Science, Wardha, (MH). ORCID ID: <https://orcid.org/0000-0002-1404-7438>

⁴Associate Professor, Dept. of Samhita and Siddhant, Mahatma Gandhi Ayurveda College, Hospital & Research Center, Salod (H), Datta Meghe Institute of Medical Science, Wardha, (MH). ORCID ID: <https://orcid.org/0000-0002-4314-4640>

ABSTRACT

Background: Computer Vision Syndrome, or CVS, is a health problem caused by excessive use of digital screens. The disorder can occur as a result of prolonged exposure to bright lights, glare, or reflections from screens. It can also be caused by errors in the way digital images are converted to analog form, or by the way screens are used. Symptoms of CVS include headaches, eye pain, oriental Illusions, and fatigue. Treatment focuses on reducing exposure to the factors that cause the disorder, and on the use of appropriate glasses or contact lenses to reduce the effects of glare. **Aim:** Analyze the Association of Deha-Prakriti with Computer Vision Syndrome, and evaluation of the efficacy of *Padabhyanga* in Computer Vision Syndrome. **Objectives:** To study the association between Deha-Prakriti and Computer Vision Syndrome with the Prakriti case Performa. To assest the efficacy of *Padabhyanga* with Tila Taila in the improvement of visual activity in the patient of computer vision syndrome. **Methodology:** In this study, total of 147 patients of computer vision syndrome will be administered abhyanga of 20 ml of Tila Taila for 20 minutes for 28 days. **Conclusion:** This trial may provide evidence of the efficacy of *Padabhyanga* in computer vision syndrome.

Keywords: Computer vision syndrome, *Padabhyanga*, *Tila Taila*, *Prakariti*, *Shushkakshipaka*

Corresponding Authors

Dr Mohammed Farhan, PG Scholar Dept. of Samhita and Siddhant, Mahatma Gandhi Ayurved College, Hospital & Research Centre, Salod (H), Datta Meghe Institute of Medical Science, Wardha (MH).

Introduction: In the twenty-first century the pace of life has quickened and become more competitive. The ongoing evolution of man has produced ground-breaking developments in science and technology. While this has made life for man easier, there are certain drawbacks as well. An entirely new category of eye and vision issues, known as "Computer vision syndrome," has arisen as a

result of this prolonged exposure to visual display terminals. Computer Vision Syndrome (CVS) affects 75-90% of people who spend four hours or more in front of computer per day. ^[1]

It is further implicated as a significant public health issue that merits increasing attention because it has a measurable negative influence on a number of routine and significant everyday tasks. Due to excessive usage of computer games, portable video games, mobile games, and videos, CVS is not just affecting computer professionals; it is also impacting children. Headaches, blurred vision, neck pain, weariness, eye strain, dry eyes, irritated eyes, double vision, vertigo/dizziness, polyopia, and trouble refocusing the eyes are some of the signs and symptoms of CVS. Additionally, some people get a headache, neck pain, and giddiness. Some people also suffer from headache, neck pain & giddiness. Improper lighting could get these symptoms worse. Mechanism of CVS is something thing like carpal tunnel syndrome which occurs by carrying out the same motion again and again. Just like other stress injuries which worsen later on, CVS also get worse the longer you continue the activity. Here the mechanism is overworking or over straining of eye muscle, which is responsible for focusing. The available modern treatment only addresses the symptoms of tear film defect due to computer work which is incomplete. Therefore, only using topical medications is insufficient to treat the disease's underlying causes. We therefore require a treatment that produces better and more desirable results. Local symptoms might result from the underlying causes of a systemic illness, and vice versa.

The CVS is disease of the twenty-first century. Although there are no direct references to this disease in the scriptures of Ayurveda, Acharya Charaka has proposed for using symptom analysis to identify and treat diseases which are not specified in the literature. However, the fundamentals of Ayurveda can be used to understand the disease, and it is expected that following an Ayurvedic regimen will produce effective results.

The Ashtanga Samgraha's 22nd chapter titled Rogabhediyo-Adhyaya, mentions the process of understanding a disease; following this CVS might be identified as "Vata Pitta Doshaja-vyadhi."

CVS can be correlated with Shushkakshipaka mentioned by Acharya Sushruta and Acharya Vagbhata under Sarvagata roga vyadhi.

This constitution is made up of both the "physical body" and the "mental body." The word prakrati is associated to "nature" or natural constitute of people.

Word Prakriti is derived from 'Prakaroti-iti. Prakriti means a relation of special characters due to the predominance of Dosha (Kapha, Pitta and Vata the functional component of the human being),

Concept of Padabhyanga: According to acharya charak Padabhyanga helps in sound sleep, it is pleasant to body, and it is Chakshushya. Abhyanga means the application of Sneha, mainly plain or medicated, according to body constitution, age, season, particular disease and atmosphere. It should be applied in the *Anuloma* direction. ^[2]

Applying Abhyanga to the sole part of foot is called Padabhyanga. It is one of the prophylactic principles mentioned in Ayurveda *dinacharya*. ^[3]

Rationale of the study: - In today's era we are very much dependent on technologies like mobile phone and computers. So problem related to audiovisual organs i.e. eye and ear increases. So for prevention of eye disease like CVS we need to establish that which type of Deha- Prakriti person are prone. It will increase the awareness regarding Computer Vision Syndrome in normal population and it will also establish co-relation between Deha- Prakriti and Computer Vision Syndrome. As there are many works were done on *Deha-Prakriti* and computer vision syndrome individually, but no study data has been found on assessment and relation between Deha-Prakriti with computer vision syndrome and by this study we will see the effect of the intervention which is Padabhyanga with Tila Taila on CVS.

Shushkakshipaka and CVS: Direct reference of Computer Vision Syndrome is not found anywhere in Ayurveda Classics, but *Acharya Charaka* has advocated clear guidelines for identification and treatment for such maladies which are not mentioned in the texts. By analysing the symptoms, it can be correlated with *Shushkakshipaka* which is a *Sarvagata Netra Roga* explained by both *Sushruta* and *Vagbhata*. ^[4]

The major symptom – Dryness of Eye & other symptoms that have been explained in CVS, it seems to be very near to the term *ShushkaakshiPaaka* explained under *SarvagataRoga*. These symptoms can be further aggravated by improper lighting conditions and air moving fast the eyes. Dry eye is a major

symptom that is targeted *Vata* in the therapy of computer vision syndrome. So, these symptoms are related to *PittapradhanaVyadhi* of *ShushkakshiPaaka*. *ShushkakshiPaaka* is one among “*SarvagataNetraRogas*” mentioned by *Sushruta* as well as *Vagbhata* under *SadhyaVyadhis*.^[5]

CVS becomes the disease of 21st centuries; there are no direct references of this disease in Ayurveda text. However, it is possible to understand the disease through the fundamental of Ayurveda and it is expected that effective results may obtain through Ayurveda regimen. The process of understanding a disease has been mentioned in *Ashtanga Samgraha* 22nd chapter named as *Roga-bhediyo-Adhyaya*, and following this, one can nominate CVS as “*Vata Pitta Doshaja-vyadhi*”.^[6]

Concept of Prakriti: This constitution comprises both the “physical body” as well as “mental body” *Prakriti* means “nature” or the natural constitution of the human body. ‘*Pra*’ means the ‘beginning’ or ‘source of origin’ and ‘*kriti*’ means ‘to form’. Put together *Prakriti* means ‘natural form’. *Prakriti* word derived from ‘*Prakaroti-iti*. *Prakriti* means a manifestation of special characteristics due to the predominance of *Doshas* (*Vata*, *Pitta* and *Kapha* the functional component of the body),^[7]

And in these *Prakriti* indicates the predominance of specific *Dosha* in a human being. Other factors also determine the constitution of a body in minor way *Charaka* has mentioned several additional factors which determine the *Prakriti* such as nature of the season, condition inside the uterus, food of mother, during pregnancy, other regimens adopted by mother during pregnancy, *Shukra-Shonita* (sperm-ovum) of father and mother and *MahabhutaVikara*. These factors get afflicted with one or more of the *Doshas* which are dominantly associated with the above-mentioned factors. Therefore, *Prakriti* of some people is dominated by *Vata*, some others by *Pitta*, some others by *Kapha* and some others by the combination of two *Dosha* and in some cases, equilibrium is maintained by *Dosha*. Although all these factors mentioned above play an important role in the determination of *Prakriti*.^[7]

Need of Study:

In today’s era we are very much dependent on technologies like mobile phone and computers. So problem related to audio-visual organs i.e. eye and ear increases. So for prevention of eye disease like CVS we need to establish that which type of Deha-Prakriti person are prone. It will increase the awareness regarding Computer Vision Syndrome in normal population and it will also establish correlation between Deha-Prakriti and Computer Vision Syndrome. As there are many works were done on Deha-Prakriti and computer vision syndrome individually, but no study data has been found on assessment and relation between Deha-Prakriti with computer vision syndrome and from this we will see the effect of the intervention which is *Padabhyanga* with *Tila Taila* on CVS. *Padabhyanga* is mentioned in *Dinacharya Adhyaya* of *Ashtanga Hrudaya* and *Charak Samhita Padabhyanga* with *Tila Taila* can be considered as home remedy which can be easily done in their free time and it will be cost effective too.

Research Question:

1. Whether there is Association of computer vision syndrome with Deha- Prakriti?
2. Whether *Padabhyanga* with *Tila Taila* is efficacious in the management of CVS?

Hypothesis

Alternate Hypothesis: There is significant Association of computer vision syndrome with specific Deha-Prakriti. And there is significant efficacy of Padabhyanga with Tila Taila on computer vision syndrome.

Null Hypothesis: There is no significant association between computer vision syndrome and specific Deha-Prakriti. And there is no significant efficacy of Padabhyanga with Tila Taila on computer vision syndrome.

Aim and Objectives

Aim

Analyze the Association of Deha-Prakriti with Computer Vision Syndrome, and evaluate of the efficacy of Padabhyanga in Computer Vision Syndrome.

Objectives

1. To study the association between Deha-Prakriti and Computer Vision Syndrome with the Prakriti case Performa.
2. To assess the efficacy of Padabhyanga with Tila Taila in the improvement of visual activity in the patient of computer vision syndrome

Research Gap Analysis

Sr. No.	Article	Author	Conclusion By author	Journal and Publication year	Remark By scholar
1	AN AYURVEDIC APPROACH TO COMPUTER VISION SYNDROME (CVS)	R.V. Ramya, Kawthekar Prachi	Newer diseases like C.V.S. can be Understood with help of <i>Ayurveda Siddanthas</i> in <i>Poorvaroop-avastha</i> . CVS major symptom seems to be very near to the term <i>ShushkaakshiPaaka</i> explained under <i>SarvagataRoga</i>	IJAAR APR 2017	A Review study done onCVSAyurvedic Approach
2.	CLINICAL EFFICACY OF PADABHYANG (FOOT MASSAGE) AS CHKSHUHYA (EYE SIGHT PROMOTER) W.S.R TO TIMIRA-REFRACTIVE ERROR (PRATHAM &DWITIYA PATALGATA)	NitinPandey , Nishant jain Pankaj Rajvanshi, Shikha Maurya	<i>Padabhyanga</i> with <i>Tila Taila</i> and non-snehapadarth done, <i>Tila Taila Padabhyanga</i> is more efficacious.	TANG [Humanitas Medicine] Feb 2020	Management by <i>Padabhyanga</i> with <i>TilaTaila</i> but <i>Prakriti</i> assessment not done

3.	Clinical efficacy of Ayurvedic management in computer vision syndrome: A pilot study	KS Dhiman, DK Ahuja, <u>SK</u> Sharma	<i>Shatavaryaadi Churna</i> with <i>Ghrita and Madhu Anupaan</i> , along with <i>Go-Ghrita Tarpana Karma</i> was effective in C.V.S.	PUBM ED 2012	Management of C.V.S. was done but <i>Prakriti</i> assessment not done.
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There are published work are found on association of *Deha-Prakriti* with other diseases. Computer vision syndrome review article and its management with *Ayurveda* medicine has been done earlier, but no study is done on *Padabhyanga* with *Tila Taila* and analysis of association between computer vision syndrome and *Deha-Prakriti*

MATERIAL AND METHODS

Source of Data: Patients will be recruited from the O.P.D. and IPD of the Panchakarma, shalaky tantra and Kayachikitsa of Mahatma Gandhi Ayurveda College, Hospital and Research Centre, Wardha, and from peripheral camps.

Sample size (Including sample size calculation): Total Sample size: 147

Sampling Procedure: randomization computergenerated table.

Study Type

Phase I: Observational Study
Phase II: Interventional Study

Study duration: 2 year

Data Collection tools and process:

Inclusion criteria

1. One who is ready to give written consent as per W.H.O. guidelines.
2. The one who is willing to participate in the study
3. Age : 18 to 45 Years
4. Patients who are exposed to computer screen more than 4 hours
5. Sex : Either gender
6. Patients with signs and symptoms of Computer vision syndrome.

Exclusion criteria

1. Patients who are not ready to give written consent.
2. Age: below 18 and above 45 years
3. Patients suffering from infectious conditions of the eye like conjunctivitis, scleritis, uveitis, Glaucoma etc.
4. Any fundus pathology like Diabetic retinopathy, hypertensive retinopathy, papilledema etc.

Methodology:

Place of Study: This study will be plan in Mahatma Gandhi Ayurveda College, Hospital and Research Centre, Salod (Hirapur), AVBRH Hospital, Sawangi (Meghe), Wardha,

Contents:

Tila Taila

Criteria for discontinuing or modifying allocated interventions: Subject will be pulled back from the investigation if some other malady, highlights of medication affectability or any untoward rate, or issue emerges; free treatment will be offered to the patients till the issues dissolves.

Analysis Plan:

Drug Analysis: oil would be obtained from trustworthy source, identified and authenticated by the Department of Dravyaguna, Mahatma Gandhi Ayurveda College, Hospital & Research Centre, Salod (H), Wardha.

Statistical analysis: Appropriate tests will be applied

Follow Up: 0th day, 14th day and 28th day

Outcome: We will observe the efficacy of Tila oil through Abhyanga on Eye Irritation, Dryness in Eyes, Itchyness in Eyes, Irritation in Eyes, Blurry Vision (Near or Distance), Headaches, Double Vision, Asthenopia, Redness of eyes, Watering of eyes before and after management. It may assume that Tila Taila Abhyanga will be effective in CVS (Computer vision Syndrome).

Discussion: The term "computer vision syndrome" refers to a group of problems with the eyes and vision that are connected to or occur while using a computer. 75–90% of persons who use a computer for four hours or more each day are more experiencing Computer Vision Syndrome (CVS). It is further implicated as a significant public health issue that merits increasing attention since it has a

quantifiable negative influence on a number of routine and significant everyday tasks. Due to excessive usage of computer games, portable video games, mobile games, and movies, CVS is not just hurting computer professionals; it is also impacting children.

Headaches, blurred vision, neck stiffness, lethargy, eye strain, dryness in eyes, eye irritation, double vision, vertigo/dizziness, polyopia, and trouble focussing the eyes are some of the signs and symptoms of CVS. Mechanism of CVS is something thing like carpal tunnel syndrome which occurs by carrying out the same motion again and again. Here the mechanism is overworking or over straining of eye muscle, which is responsible for focusing the only the symptoms of the tear film defect caused by incomplete computer work are treated with Modern treatments. Therefore, addressing the disease's fundamental cause with simply topical medicine is insufficient. Thus, this study will increase the awareness regarding Computer Vision Syndrome in normal population and it will also establish co-relation between Deha-Prakriti and Computer Vision Syndrome. As there are many works were done on Deha-Prakriti and computer vision syndrome individually, but no study data has been found on assessment and relation between Deha-Prakriti with computer vision syndrome and by this study we will see the effect of the intervention which is Padabhyanga with Tila Taila on CVS.

Scope of implications of the proposed study: If Tila Taila Padabhyanga is efficacious in reducing Computer Vision Syndrome symptoms, then the clinical evidence with simple, easy use, safe, with widely efficacious, can be formulated for the management of CVS (Computer Vision Syndrome).

Ethical consideration: Research ethical approval: After critical evaluation and presentation the ethical committee has approve the research topic reference No MGACHRC/IEC/July-2022/564

Consent or assent: The written consent will be taken before starting the study from the patient. During the study the confidentiality of each patient will be properly maintained.

CONCLUSION: Conclusion will be mentioned after the deliberate and analysing data.

Ethical Clearance: Taken from institutional ethics committee.

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AUTHORS

First Author – Mohammed Farhan, PG Scholar Dept. of Samhita and Siddhant, Mahatma Gandhi Ayurveda College, & Research Center, Salod (H), Datta Meghe Institute of Medical Science, Wardha, (MH).

Second Author – Preeti Borkar, Professor And Head of Department of Samhita and Siddhant, Mahatma Gandhi Ayurveda College, Hospital & Research Center, Salod (H), Datta Meghe Institute of Medical Science, Wardha, (MH)

Third Author – Bhushan Mhaikar, Associate Professor, Dept. of Samhita and Siddhant, Mahatma Gandhi Ayurveda College, Hospital & Research Center, Salod (H), Datta Meghe Institute of Medical Science, Wardha,

Fourth Author - Dnyanesh Joshi, Associate Professor, Dept. of Samhita and Siddhant, Mahatma Gandhi Ayurveda College, Hospital & Research Center, Salod (H), Datta Meghe Institute of Medical Science, Wardha, (MH).