



Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/18623

DOI URL: <http://dx.doi.org/10.21474/IJAR01/18623>



RESEARCH ARTICLE

“EFFECT OF YOGIC SHUDDHIKRIYA-TRATAK AND TIL TAIL-NASYA IN THE MANAGEMENT OF COMPUTER VISION SYNDROME (DIGITAL EYE STRAIN) IN WORK PROFESSIONALS”

Dr. Sonal D. Wankhede¹, Dr. Vidya Wasnik² and Dr. Sumeeta S. Jain³

1. MD, PHD Scholar Assistant Professor, Dept. of Swasthavritta and Yoga Govt. Ayurved College (Nagpur).
2. MD, PHD PHD Guide and Associate Professor, Dept. of Swasthavritta and Yoga Govt. Ayurved College (Nagpur).
3. MD (PHD SCH.) Professor AND HOD, Dept. of Swasthavritta and Yoga Govt. Ayurved College (Nagpur).

Manuscript Info

Manuscript History

Received: 28 February 2024

Final Accepted: 31 March 2024

Published: April 2024

Key words:-

CVS (Computer Vision Syndrome),
Yogic Shuddhikriya-Tratak, Til Tail Oil
Nasya

Abstract

Background-Eyes are the most valuable sense organ or Indriya in human body. But, in today's contemporary Era, growing use of computers in home and office brings with in an increase in health risks, especially for eyes. On such eye problem which is currently gaining importance and affecting the performance of people at workplace in computer users is **CVS (Computer Vision Syndrome)** also called as **Digital eye strain**.

Objective: This study is aimed to evaluate the effect of tratoka kriya i.e Constant Gazing and Nasya (nasal installation) of **Til Tail** (sesame oil) in the management of **CVS (Computer Vision Syndrome)**.

Materials and Methods: 20 participants of the age group 18 to 40 years who were working in IT sectors i.e a common job profile having utility of computers, laptops more than 6 hours were recruited in the study. The study design was a pre-post experiment. A convenient sampling technique was used to recruit the participants. The study included participants who use laptops or smartphones for a minimum of 6 hours daily having eye strain, dry eyes, burning sensation in the eyes, headache, and eye fatigue. They were asked to perform tratoka kriya once a day for 5 days a week along with installation of til tail oil nasya in both the nostrils (4 drops in each nostril i.e ½ ml) twice a day for consecutive 60 days i.e 2 months.

Results: Results were evaluated by a computer vision syndrome questionnaire and schimer test to assess the visual fatigue experienced by the study participants and also to find out whether the eye produces enough tears to keep it moist. Statistical Analysis and Results Statistical analysis was done using SPSS version 16.0.

Conclusion: The study concluded that there was a significant improvement seen in the signs and symptoms of the students with Digital Eye Strain improvement in discomfort in the participants with digital eye strain.

Copy Right, IJAR, 2024.. All rights reserved.

Corresponding Author:- Dr. Sonal D. Wankhede

Address:- MD, PHD Scholar Assistant Professor, Dept. of Swasthavritta and Yoga Govt. Ayurved College (Nagpur).

Introduction:-

Eyes are the most valuable sense organ or Indriya in human body. Medical Fraternity has given prime importance to eyes because we can't visualize the beautiful world around us without eyes. But, In this present era, human life has been changed Completely. He has to use his eyes assiduously for studying various objects or close inspection of minute objects and also for carrying out work such as reading, writing, computer work, internet surfing etc. especially young people working hard for their academics and other activities. Adding more to this, in today's contemporary Era, growing use of computers in home and office brings with in an increase in health risks, especially for eyes. On such eye problem which is currently gaining importance and affecting the performance of people at workplace in computer users is **CVS (Computer Vision Syndrome)** also called as **Digital eye strain**.

Computer vision syndrome is the name given to eye problem caused by prolonged (more than 3 hours consecutive) use of computers which includes symptoms such as Itching, Foreign Body Sensation, Burning Sensation, Blurred Vision, Backache, Neck Ache And Muscular Fatigue. Although CVS, has not found to cause any permanent damage to the eyes, but its painful symptoms can affect the performance and work comfort in working professionals as well as students. Hence, it is the need of the hour, to find a suitable authentic treatment module for reducing the prevalence of the disease.

Ayurveda along with Yoga, is a very ancient science which deals with healthy wellbeing of living beings and treats the diseased once. It has a noble aim of healthy body and mind of each individual. At present, if we look at the treatment procedures of CVS according to the modern science, the procedures include Adjustments in eye glasses or contact lens prescription which seems very costly and time consuming. The Complete holistic Science, is a spiritual discipline that has been practised for thousands of years to help people achieve psychological and physiological homeostasis. Six types of cleansing techniques (Shatkriyas) are emphasized in the Yogic texts with their primary mechanism of action which includes Dhauti (internal cleansing), Basti (yogic enema), Neti (nasal cleansing), Trataka (TK) (concentrated gazing), Nauli (abdominal massaging) and Kapalabhati (frontal sinus cleansing).^[4]

TRATAKA is one of the cleansing technique, which is considered to enhance vision and positively influence cognitive processes. It is able to improve blood circulation while also easing the strain that is placed on the eye muscles. Symptoms like eye watering, burning, redness, and eye strain are seem to be improved.

NASYA- In ayurveda, therapies and procedures are suggested to treat the disease as per the Doshas (body humours) involved. In this study, application of Til tail nasya will be administered to visualize the effect of til tail nasya on Computer vision syndrome The drug administered through nose can directly influence the head. The reason for this may be anatomical and physiological structure of the nose and paranasal sinuses. Nose is related to the cranium through its roof i.e. cranial cavity and venous drainage of the nose is directly in the cavernous sinus. Therefore, this study is a cumulative approach in reducing the symptoms of computer vision syndrome in Work professionals through traditional authentic health sciences and to strive for developing a more systematic module for this disease in future.

Aim:

To Evaluate the combined effect of Yogic Shuddhikriya-Tratak (Gazing) and Til Tail-Nasya in the management of Computer vision syndrome in work professionals.

Objectives:-

Primary Objectives

- 1) To study effect of Yogic Shuddhikriya-Tratak and til-tail Nasya on Computer Vision Questionnaire
- 2) To study effect of Yogic Shuddhikriya-Tratak and til-tail Nasya on Schimer's test.

Secondary Objectives:-

- 1) To study in detail the literature about TratakKriya and Nasya Karma Also, to study in detail, literature regarding computer vision syndrome and its co-relation in Ayurveda.

Materials and Methods:-

Twenty participants in the age group of 20-35 years were recruited in the study with the help of a specially designed screening form(enclosed). The study pattern was a pre-post experimental study carried out at the Out Patient Department(OPD) of swasthyarakshan, of our institute.

Sampling method was **convenient sampling** with sample size 30.

To Calculate sample size,

Technique of estimation of single proportion (digital eye strain) is used:

$$n = Z^2 \alpha / p (1 - p) / d^2$$

Where α = confidence level a.

d = precision (15%) b.

p = anticipated digital eye strain (25%)

The calculated sample size is 22, CONSIDERING 10% Dropouts, The study included 20 participants with continuous usage of laptops, mobile phones or any digital monitor for more than 6 hours daily with symptoms having eye strain, dry eyes, mild headache, Backache, Neckache and eye fatigue. Exclusion criteria were the individuals who were suffering from infective conditions of the eye, like conjunctivitis, scleritis, uveitis and any sought of refractive errors.

Intervention(Methodology):-

Participants were assessed at Baseline(Day 0) and at the end of the study i.e after consecutive 60 days. During the intervention, Students were asked to practice tratakriya five times a week under supervision at the **swasthritta and yoga dept, at govt.ayurved college and hospital,**

A)Tratak Kriya

1. For more systematic purpose, three groups of 10 students each were made and asked them to sit at a distance of 2 cm each in circular format centering the candle flame kept in front of them.
2. Before gazing, deep breathing session for 5mins was conducted for a fresh and thoughtless mind.
3. Initial 15 days, Gazing the whole flame without any effort for duration of 30 secs.
4. For next 15 days, Moderate gazing the flame without any effort for duration of 60 secs
5. Intense gazing for next 30 days but the duration was increased from 2 mins(120)secs.
6. Frequency was once a day for five days a week for consecutive 60 days.

A) Nasya [Nasal Nstallation Of Oil(Til Tail)]

1. Students were advised to lie down comfortably relaxed on a table in supine position. Sthanika Snehana (Lalat, Kapoor, Nasa, Manya and KanthPradesha) with lukewarm Til Taila was conducted.
2. Head should neither be excessively flexed or nor extended. Subject is advised to relax with eyes closed. With the help of left hand thumb, raise the tip of the patient's nose and with the right hand lukewarm medicine was instilled into both nostril, with the help of dropper, 4 drops of TilTaila installed in each nostril.
3. At the time of instillation another nostril would be kept close and patient advised for long breathing. The same procedure was repeated in other nostril. After that gentle massage given again on forehead, face and neck.
4. Frequency was Twice a day regularly for consecutive 60 days

Assessment Criteria (Tools)

1.Computer vision syndrome(questionnaire)-It is a tool to assess the visual fatigue. It is a reliable and valid scale which can be used to assess the visual health of the individuals who are suffering from computer vision syndrome.⁶

2.Schimer' 1 test- It is the test for tear quality. It is used to investigate the extent of wetting of a 5×35 mm blotting paper. The normal range of Schirmer's 1 test is from 10 to 25mm. less than 10 mm of wetting after 5 minute is considered as abnormal

Procedure:-

1. For Schirmer's test, the subject was asked to sit comfortably in a dim light room in a chair.
2. It is ensured that no fan was on in the room at the time of carrying out the test.

3. The test was performed by No.41 whatman filter paper strips 5mm wide and 35mm long partially folded 5mm from one end. The folded short end gently inserted at the junction of middle and lateral one-third of lower lid in the lower conjunctival fornix, taking care not to touch the cornea or lashes.
4. Then the subject is asked to keep the eyes gently closed.
5. After 5 minutes the filter paper is removed and amount of wetting from the fold is measured.
6. Less than 10mm of wetting after 5 minutes is considered abnormal.
7. Normal range of wetting is more than 10mm.

Normal - > or 10 mm
 Borderline – 10 to 6 mm
 Deficient - < or 6 mm

Study result was noted based on the following symptoms and tests, calculated in every visit. It was recorded in following format

| Sr.no | Symptoms | Day 0 | Day 30 | Day 45 | Day 60 |
|-------|------------------------|-------|--------|--------|--------|
| 1 | Foreign Body Sensation | | | | |
| 2 | Burning sensation | | | | |
| 3 | Stringy Discharge | | | | |
| 4 | Redness | | | | |

Subjective Assessment

| Sr.No | SYMPTOMS | GRADES |
|-------|---|--|
| 1. | Gharshan(foreign body sensation) | 0-Absence Of Symptom |
| | | 2-Mild, Sometimes Presence Of Foreign Body |
| | | 3- Presence Of Foreign Body During Work |
| | | 4- Frequent Presence Of Foreign Body |
| 2. | Netradaha(burning sensation) | 0-Absence Of Symptom |
| | | 2-Mild Burning Sensation |
| | | 3- Moderate burning sensation during work |
| | | 4- Frequent/always burning sensation |
| 3. | Stringy discharge | 0-Absence Of Symptom |
| | | 2-Mild Discharge in eyes |
| | | 3- Moderate discharge in eyes |
| | | 4- Frequent/always discharge in eyes |
| 4. | Netra Aaraktata(redness of eyes) | 0-Absence of Symptom |
| | | 2-Mild redness in eyes |
| | | 3- Moderate redness of eyes during work |
| | | 4- Frequent/continuous redness of eyes |

Observations and Results:-

Table No. 1:- Mean Score Of Symptoms Of Computer Vision Syndrome Before And After Treatment Values.

| SR NO | Symptoms | Mean | | SD | | Percent Relief | Z Value | P-Value |
|-------|------------------------|------|------|------|------|----------------|---------|------------|
| | | BT | AT | BT | AT | | | |
| 1 | Foreign-body sensation | 1.73 | 0.80 | 0.78 | 0.66 | 54.9% | 4.76 | <0.0001,HS |
| 2 | Burning sensation | 1.56 | 0.46 | 0.67 | 0.62 | 57.5% | 4.79 | <0.0001,HS |
| 3 | Stringy Discharge | 0.86 | 0.66 | 0.68 | 0.48 | 23.2% | 2.44 | =0.0143,S |
| 4 | Redness | 0.93 | 0.56 | 0.74 | 0.62 | 37.78% | 3.31 | =0.0009,HS |

Table No. 2:- Mean score of Schirmer Test Right eye and Left Eye before and after treatment.

| Sr no | Symptoms | Mean | | SD | | Percent Relief | t Value | P-Value |
|-------|-----------|------|------|------|------|----------------|---------|-----------|
| | | BT | AT | BT | AT | | | |
| 1 | Right eye | 6.63 | 7.36 | 1.79 | 2.51 | 11.01% | 3.0631 | 0.0052,HS |
| 2 | Left Eye | 6.96 | 7.53 | 1.92 | 2.40 | 08.19% | 3.0843 | 0.0090,HS |

Table No. 3:- Mean score of Computer Vision Questionnaire (CVS-Q) before and after treatment values.

| Sr no | Cvs-Questionnaire | Mean | SD | t Value | P-Value |
|-------|-------------------|-------|------|---------|------------|
| 1 | Pre-Test | 13.38 | 2.61 | 4.509 | <0.0002,HS |
| 1.92 | Post-Test | 09.45 | 1.98 | | |

Table no. 4:- Overall percentage relief in study patient.

| | % Relief | No.of subjects | Percentages |
|---------------------|----------|----------------|-------------|
| Completely cured | 100 | 0 | 0 |
| Markedly improved | 75-99.99 | 0 | 0 |
| Moderately improved | 50-74.99 | 02 | 6.7 |
| Mild improved | 25-49.99 | 18 | 60 |
| Unchanged | <25 | 10 | 33.33 |
| Total | | | |





Fig 1,2:- Students Performing Tratak Kriya.

Discussion:-

The present study investigated the effectiveness of tratak kriya in computer vision syndrome. It was found that tratak kriya is effective in reducing eye strain in individuals with digital eye strain or computer vision syndrome and it was also shown that a significant improvement was achieved in producing tears which help to keep the eye moisturized. Probably the reason for this could be that during tratak kriya, when the identical object (candle), is continuously being observed, the brain becomes habituated and soon stops recognition of that particular object.

Trataka helps to reduce and cure all eye disorders such as eye fatigue, myopia, and headache. Tratak kriya helps to relax the eyes and the mind, and also improves the vision. There was average improvement in clarity of vision, contrast sensitivity, and fineness of objects. It helps in the vitalization of vision by circulating blood around the areas of the eye. It has also been seen that the use of gazing helps in decreasing mental fatigue and bringing about relaxation.

Probable mode of action of Nasya-

On Cribriform palate of Ethmoid bone, nerve endings are located, on administration of Nasya Dravya, these nerve endings are triggered and a message is sent to the CNS which precedes the normal physiological functions of the body. The drain from the brain and venous circulation of nose drains in the cavernous sinus, Hence it justifies that "Nasa hi shirasodwaram" that it acts on brain through the cavernous sinus.

Nasa is the gateway to Shirah, and the medication ingested through the nose reaches Shringataka, a Siramarma, and enters the Murdha (Brain), through Netra (Eyes), Shrotra (Ears), Kantha (Throat), and expels the morbid Doshas from Urdhwajatra and Uttamanga.[4]

Nasya is a less expensive and less complicated therapy when compared to other Shodhana Karmas. It can function faster and be more effective in Netra. Nasya administration in the early stages of Digital eye Strain can even prevent the eyes from unnecessary complicatory procedures. As a result, it promises a more rapid and successful therapy for the prevention and treatment of Eye Disorders.(4).

Also, Til(Sesame) being lipidsoluble substance diffuse through the plasma membrane of nasal mucosa due to greater affinity of passive absorption and reaches to olfactory receptor cells and finally reaches to Shringatakarma. Sesamumindicum seed oil (tilataila) has high stability due to the presence of high levels of natural antioxidants. Sesame oil has huge therapeutic value externally and internally

Conclusion:-

The study concluded that there was a significant improvement seen in the signs and symptoms of the students with Digital Eye Strain improvement in discomfort in the participants with digital eye strain. The clinical implication of the study is that tra- taka method can be used as an adjunct to pharmacological management.

References:-

1. Seguí Mdel, Cabrero-García J, Crespo A, Verdú J, Ronda E. A reliable and valid questionnaire was developed to measure computer vision syndrome at the workplace. *J Clin Epidemiol* 2015;68(6):662–673
2. Lum F, Feder RS, McLeod SD, Parke DW II. The preferred practice pattern guidelines in ophthalmology. *Ophthalmology* 2016;123(5):928–929
3. <https://www.mountsinai.org/health-library/tests/schirmer-www.mountsinai.org-mount-sinai-newyork>
4. Dr. Pravin Jwanjal PhD Scholar, Dept. of RSBK, IPGT & RA, A til tail review, *wjpmr*, 2018,4(10), 76-78
5. Kaviraj Ambikadutta Shastri, editor. *Ayurveda Tattva Sandipika Hindi commentary of Sushruta Samhita of Maharshi Sushruta - 1st part, Chikitsa Sthana chapter 40*
6. Varanasi: Chaukumba Surbharati Sanstana Reprinted; 2014. p.224.
7. Vaidyadavji Trikamji Acharya, editor. *Ayurveda Dipika Commentary by Chakarapanidatta of Charaka Samhita of Agnivesha, Sutra Sthana chapter 1/85*. Varanasi: Chaukumba Surbharati Sanstana Reprinted; 2017. p.21.
8. Dr. Brahmanand Tripathi Nirmal hindi commentary of *Ashtanga Hridya of Srimadvagbhata, Sutra Sthana Chapter 20 verse 1*. Varanasi: Chaukumba Sanskrit Pratishtan Reprinted; 2015. p.244.
9. Rahul Parihar^{1*}, Suman Dadhich², Therapeutic Uses Of Nasya Karma: Conceptual Critical Review.