ABSTRACT

Digital eye strain (DES) also known as Computer vision syndrome (CVS) has been recognized health problem now-a-days. Across all age groups engagement with digital devices such as Computers Desktop, laptops, Tablets and Smart phones has increased in last decade. Use of social media and multitasking is particularly prominent among younger adults with 87% of individuals aged 20–29 years reporting use of two or more digital devices simultaneously. Symptoms of digital eye strain includes blurred vision at near, blurred distance vision after computer use and difficulty refocusing from one distance to another, irritated/burning eyes, dry eyes, eyestrain, headache, tired eyes, sensitivity to bright lights and eye discomfort. Modern management to treat this condition has limited and temporary effect and also with unwanted effects like drug dependency, drug resistance and gastric irritation etc. In present case study the patient of Digital eye Strain was treated with Tarpan Karma and Shaman chikitsa. We selected the drugs Yashtimadhu siddha ghrita for Tarpan Karma and for shaman chikitsa Laghusootshekhar rasa, Triphala guggulu, and Saptamrut loha were used. Patient has got much relief in symptoms were observed. Follow up of Patient were taken after 3 months and up to follow up there is no any recurrence of symptoms and adverse effects of the therapy.

Keywords: Digital Eye-strain, Tarpan, Shushkakshipaka.

1. INTRODUCTION

Computer has become an integral part among all office equipment. Digital device usage has increased substantially in recent years across all age groups, so that extensive daily use for both social and professional purposes is now normal. Because of the high use of computer there has been a considerable increase in visual problems, leading to the risk of developing Digital eye strain. Digital eye strain (DES), also known as computer vision syndrome, encompasses a range of ocular and visual symptoms, and estimates suggest its prevalence may be 50% or more among computer users. The symptoms of DES are blurred vision at near, blurred distance vision after computer use and difficulty refocusing from one distance to another, irritated eyes, eye strain, blurred vision, red eyes, burning eyes, dry eyes, tired eyes, sensitivity to bright lights and eye discomfort, double vision and headache. Based on the clinical history, reported symptoms, and by ruling out other causes diagnosis of digital eye strain was made. Treatment for digital eye strain in allopathic includes use of lubricating eye drops. Along with these NSAID’s and Omega 3 fatty acid as a supplement are used by many Opticians. These are effective to reduce symptoms such as tiredness, dryness and difficulty focusing during sustained computer use, although complete resolution of symptoms may not occur. Allopathic treatment helps to stop DES symptoms temporarily, many patients has relapse of symptoms after discontinuation of medication.

Ayurveda is ray of hope for these types
of disease. Ayurveda principles and medicines were very useful in these diseases. All symptoms of DES are related to Vata - Pitta pradhana vyadhi of Shushkakshipaka. Shushkakshipaka is one among “Sarvagata Netra Roga”⁴ mentioned by Susruta as well as Vagbhata under Sadhya and Ashastrakrut Vyadhis,⁵ caused by Vata and Pitta Dosha. Aacharya Vagbhat stated symptoms of Shushkakshipaka as Gharshna (foreign body / gritting sensation), Toda (pricking pain), Bheda (pain), Upadaha (coating / loss of clear vision), Krichronmeelan (difficulty in opening and closing of eye lid), Vishushkata (dryness), Shool (Pain) and desire for cold comforts.⁶ Aacharya Susruta mention Rooksha Daruna Vartma (dryness of eyelids), Avila Darshana (Patient cannot see the Objects Clearly), Sudarunam Yat Pratibhodanam (Difficulty in Opening/Closing the Eye) as symptoms of Shushkakshipaka.⁷ These symptoms can be correlated with the symptoms of DES in modern system of medicine.

Treatment of the Shushkakshipaka is described by Aacharya Sushrut and Vagbhat. It can be best treated with Ghritapana, Netra Tarpan, Shiro Virechana, Parisheka, Anjana. Aacharya Susruta also indicated Netra Tarpan, Anjana, Nasya with Jiviniya Ghrit or Anutaila, Parishek with Sainava yukta Sheeta jala helps in Shushkakshipaka Saindhava, devadaru, sunthi, juice of matulunga boiled with ghee and added with breast milk should use as anjana (collyrium). Internally administration of Draksha, Patola, Chandana, Guduchi in the form of kashyam is ideal to cure DES. Aschotana (eye drops) with darvi, manjista kwatha can be administrated.⁸

While describing the Tarpan karma aacharya Sushruta stated that Tarpana is useful in when there is blurring vision, dryness of eyes, falling of eye lashes, deformities of eyes and turbidity in eyes.⁹ Netra Tarpan is a specialized Ayurvedic treatment for eyes, that helps relieve tiredness and improves eyesight. Netra Tarpan acts as both preventive & curative therapy for maintaining normal healthy condition of eyes. Netra Tarpan is a procedure where the lukewarm medicated oil or ghee is made to stay stagnant in the eyes for a speculated time in a specific formed frame.¹⁰ So, Tarpan of medicated ghee of Jeevainya drugs which plays a major role.¹¹

Hence looking into the Ayurvedic treatment modalities, the drug should have Vata- Pittaghna property. In present case study the patient of Shushkakshipaka was treated with Tarpan karma with Yashthinadhu siddha Ghrita¹² and Shama chiktitsa. We selected the drugs Laghusootshekhar Rasa¹³, Triphala Guggulu¹⁴ and Saptamrut Loha¹⁵ for Vata Pitta Shama karma in that patient. Patient got relief in his symptoms.

2. METHODS
2.1. Objectives
♦ To study the literature of Digital eye strain in detail.
♦ To study the literature of Shushkakshipaka in detail.
♦ To observe the effect of ‘Tarpan karma’ in Digital Eye strain.
♦ To establish safe, cost-effective and ideal line of treatment for Digital Eye strain.

2.2. Case History:

A male patient of age 34 years old came to OPD with complaining of dryness of eyes, foreign body Sensation, transient blurring of vision, crustings of eyelids, burning sensation in eyes and Headache for the past 1 month. Nature of symptoms are aggravating day by day. He has history of computer work 8hrs/day and also uses mobile phone. Symptoms were beginning to appear after 1hr of continuous work and then disturbing work throughout the day.

Patient got relief in symptoms up to some extent when takes rest and eye wash but again recurring after computer work or mobile use. There is no any significant past history and Family history. He has taken allopathic treatment but he does not get desirable effect so he came to take Ayurvedic treatment.
2.2.1. Chief Complaints

Netra shushkata (dryness of eyes), Gharshan (foreign body Sensation), Awildarshan (transient blurring of vision), Darun-rukshavartam (crusting of eyelids), Netra daah (burning sensation in eyes) and Shiroshool (Headache) for 1 month.

2.2.2. Past History

No any significant past illness history. Opticool E/D used for 8 -10 days for the same problem but does not got relief.

2.2.3. Family History

No significant Family History.

2.2.4. Hetu:

A. Ahara

Sheeta, Guru, Ruksha and Amla- rasa pradhan ahar. Fast food, cold drinks, bakery products like biscuits and toasts etc.

B. Vihar

Work on Computer 8 hrs /day. Mobile use, Ratrijagarana, Sheeta vata sevana.

2.2.5. Samprapti

Nidana Sevana (Working with computer for longer duration & following other Dosha aggravating factors). Dosha Vruddhi and Dosha Dushti (Nidana Sevana continued further) Dosha-Prakopa with predominance of Vata and Pitta Dosha. Spreading of Dosha in the body through all Sira and Srotas. Then while passing through Urdhwagata Sira, Dosha gets accumulated (Sthanasanshraya) in the parts of the eye like Vartma, Sandhis, Shukla Mandala, Krishna Mandala, Drusti Mandala and manifests the disease Shushkakshipaka (Digital eye strain). 


2.2.6. Diagnosis

Shushkakshipaka (Digital eye strain)

2.2.7. Chikitsa Vivarana

- Firstly, the Shushkakshipaka (Digital eye strain) was treated by Netra Tarpan with Yashtimadhu Ghrit for 8 days.
- Shaman aushadhi includes Laghusootshekhar rasa, Triphala Guggulu and Saptamrut Loha.
- Patient were advised to continue medicaction. Symptoms of the patients were well reduced after 15 days.
- After 30 days all symptoms were relieved.
- During this treatment patients was advised to follow diet including Snigdha, Laghu guna. Also, was advised minimize computer work and other electronic gazette use.

2.2.8. Follow up:

Another follow up was taken after 3 months and during this period patient no recurrence of symptoms were observed.

2.2.9. Drug Review:

Tarpan Karma was done with Yashtimadhu Ghrit. Drugs were administered in order to achieve Vata Pitta Shamana namely Laghusootshekhar, Triphala Guggulu and Saptamrut Loha. The details of ingredients, indications and mechanism of action are illustrated in Table No. 2.

3. RESULTS AND DISCUSSION:

Digital eye syndrome is highly prevalent in young individuals. In Shushkaakshipaka there is Vata Pitta dosha prakopa and Rasa, Rakta, Mansa and Meda were dushyas. Also, Netrendriya is Majja Dhatu predominant organ. So, treatment used should be aimed at removing doshaprakopa from Netrapradesh and giving strength to the eyes.

Ghrita which is Madhura-Sheeta so; it is best for Vata-pitta vitiated diseases. Also, Netrendriya is Majja Dhatu predominant organ and Ghrita nourishes Majja Dhatu, so it is Balya for eye. According to modern pharmacology, various drugs used in the form of eye drops or ointments enters the eyeball by passing through the cornea. This penetration depends
upon the permeability of various layers of cornea. Fat soluble drugs readily penetrate these layers. Tarpan with Ghrita leads to maintain the lipid layer of tear film which reduces the evaporation of aqueous layer of tear film. So, it keeps the tear film in normal state, maintaining nutrition of eyes.

Along with Netra Tarpan, for the Viti-ated Dosha dushyas i.e. Vata and Pitta dosha. Dushya in this disease were Rasa, Rakta, Mansa and Meda Shamana chikitsa were used. For these conditions Tikta, Madhura ras pradhana and balya aushadhi should be used. Laghusootshekhar rasa, act as Pittashamana and Balya. Triphala guggulu used in Shush-kashhipaka acts as a Vatanashak and Vadanahhar. Saptamrut loha is Netraroghar and gives strength to eyes. Patient has got very good relief. Details of follow up and relief in symptoms were given in the Table No.3.

4. CONCLUSION:

- Digital eye strain incidences were increasing day by day as there is increased use of the digital gazetes.
- Symptoms of digital eye strain can be correlated with Shushkaakshipaka of Sarvagata netra vyadhi. Shushkaakshipaka is Pitta Vatatmaka disease of netra.
- Tarpan Chikitsa is very much useful in Netra roga such as Shushkaakshipaka.
- Laghusootshekhar rasa, Triphala Guggulu and Saptamrut loha are useful drugs in Shushkaakshipaka.
- Digital eye strain can be successfully treated with Ayurveda. Recurrence of disease can be avoided or its intensity can be reduced.

5. REFERENCES:

6. TABLES

**Table No. 1. Drug administration**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subject</th>
<th>Ingredients</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Yashtimadhu Ghrit</em></td>
<td>Yashtimadhu, Goghrita.</td>
<td>PittaVatashamak, Tarpan, Balya, Rasayan, Vedanahar, Jantughna, Netrahitakar, Drushtikar etc.</td>
</tr>
<tr>
<td>3</td>
<td><em>Triphala Guggulu</em></td>
<td>Triphala, Guggulu.</td>
<td>Vatanashak, Vedanahhar, Balya, Vranashothahar, Netraroggar etc.</td>
</tr>
<tr>
<td>4</td>
<td><em>Saptamrut Loha</em></td>
<td>Triphala, Loha-bhasma, Yashtimadhu,</td>
<td>Timirnashak, Netrarog, kantharog, Dantrog, Palitya nashak etc.</td>
</tr>
</tbody>
</table>

**Table No. 2. Drug Review – Ingredients and Mechanism of action.**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameter</th>
<th>Follow ups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day 0</td>
<td>Day 8</td>
</tr>
<tr>
<td>1</td>
<td><em>Netra shushkata</em> (dryness of eyes)</td>
<td>+++</td>
</tr>
<tr>
<td>2</td>
<td><em>Gharshan</em> (foreign body Sensation)</td>
<td>+++</td>
</tr>
<tr>
<td>3</td>
<td><em>Awildarshan</em> (transient blurring of vision)</td>
<td>++</td>
</tr>
<tr>
<td>4</td>
<td><em>Darun-ruksha-vartam</em> (crusting of eyelids)</td>
<td>++</td>
</tr>
</tbody>
</table>
Table No. 3. Follow up wise improvement

<table>
<thead>
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<th>Parameter</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Day 0</td>
</tr>
<tr>
<td>5</td>
<td>Netra daah (burning sensation in eyes)</td>
<td>+++</td>
</tr>
<tr>
<td>6</td>
<td>Shiroshool (Headache)</td>
<td>++</td>
</tr>
</tbody>
</table>

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