

SMARTPHONE SYNDROME – AN AYURVEDIC PERSPECTIVE

Virkar Chandana Abhay

Professor, Department of Shalakyatantra, College of Ayurved and Research Center, Nigdi, Pune, Maharashtra, India

ABSTRACT

Today, life without a smartphone is unimaginable. High Energy Visible light i.e. HEV light (blue light) emitted by smart phones can cause more hazardous effects than computer screen. Smart phone syndrome is not only restricted to surface of eyeball but it can lead damage to retina, macula, lens, along with physical and mental disorders. It is our duty to be aware and make conscious effort in preventing and treating this disease especially because it will be affecting mainly children and young generation. As Smart phone syndrome is not restricted to eye surface, only local treatment will not be helpful. Holistic approach will be helpful in management of Smart phone syndrome as there are physical as well as mental symptoms. Treatment modalities under following headings preventive measures, eye exercises, *yogic kriya*, *kriyakalpa*, *panchakarma* and medicinal treatment are suggested.

Smart phone syndrome is going to be a big challenge for us in the next years. *Ayurveda* considers body, mind and sense organs collectively for the treatment of any disease. Therefore, even though this disease belongs to the 21st century, we can tackle it applying principles of *Ayurveda*.

Keywords: smart phone syndrome, *Ayurveda*, eye exercises, *yogik kriya*

INTRODUCTION

Today, life without a smartphone is unimaginable and whether we realise it or not, our obsession with smart phone has become epic one. One in every five people in the world owns a smart phone. The amount of time we spend on staring at screens has increased dramatically in last few years. Average American spends 444 minutes staring at screen everyday (147 minutes on T.V., 103 minutes on computer, 151 minutes on smartphone & 43 minutes on Tablet. Thus maximum time is spent on smartphone.¹

By now, we are familiar with computer vision syndrome. But HEV light (High Energy Visible Light, blue light) emitted by smart phones can cause more hazardous effects than a computer screen.² Smart

phone syndrome is not only restricted to surface of eyeball but it can lead damage to retina, macula, lens along with physical and mental disorders.^{3,4} It will be a big challenge for Ophthalmologists in the next decade to tackle Smart phone syndrome. It is our duty to be aware and make conscious effort in preventing and treating this disease especially because it will be affecting mainly children and young generation.

AIMS AND OBJECTIVES:

- To study Smart phone syndrome.
- To study Smart phone syndrome applying principles of *Ayurveda*.
- To manage Smart phone syndrome according to *hetu*, *dosha*, *dushya* etc.

Study design and Methodology:

Study of Smart phone Syndrome

Causes and Effects of Smart Phones

H.E.V. Light emitted by smart phones²-

High energy visible light (blue/Violet light) is having shortest wavelength which carries the greatest potential to damage living tissues. Animal studies have shown that exposure to high levels of HEV light can damage tissue of Retina, Macula.

Small Screen of smart phones⁵-Small screen potentially could cause greater cumulative HEV light exposure than large screen (computers/Televisions). Moreover small screen increases strain on eyes. Being handy, they are used while travelling. Reading small prints in moving vehicle worsens the situation.

Prolonged Near point activity-Smart phones have to be held very close to eyes. This increases demand for accommodation leading to eye fatigue. Prolonged near work activity has contributed in rising levels of Myopia. In earlier days, development of Myopia used to stop in early 20s. But nowadays it is seen progressing even in 30s & 40s.⁶

Decrease in levels of Melatonin-H.E.V. light from smart phones decreases levels of Melatonin which is essential for sleep regulation.⁷ This results in sleep disturbances, mood variations & anxiety.⁴

Posture changes-Change in posture can cause neck pain and backache. As we look down at our phones, effective weight on our neck increases from 27 lbs to 60 lbs.

Addiction-We have become more and more dependent (or addicted) on smart phones than ever before. This can lead to many physical and psychological symptoms.⁴

Clinical features of smart phone syndrome-^{3, 8, 9}

Related to the eye-

- Headache
- Brow ache

- Eye Strain
- Blurring of vision
- Dry Eye
- Irritation of eyes
- Burning sensation

Physical Symptoms-

- Dizziness
- Neck pain
- Back pain
- Finger cramps
- Tendinitis
- Carpal tunnel elbow(cell phone elbow)-Tingling, numbness in fingers after bending elbow for long time

Psychological Symptoms-

- Nomophobia or fear of being without cell phone
- Phantom pocket vibration syndrome- Experiencing vibrations when phones are not vibrating
- Sleep disturbances
- Mood Variations
- Anxiety

Long term effects¹⁰ -

- Onset of Myopia
- Retinal Degeneration
- Macular Degeneration => Loss of central vision => Blindness
- Cataract formation

Interpretation of Smart phone Syndrome as per Ayurveda-

Hetu¹¹(aetiology)

- *Sookshma nirikshanat* (Watching at minute objects)
- *Klesha*-Strain and stress
- *Abhighat*-Indirect trauma by light.
- *Swapnaviparyat* - Disturbed sleep pattern
- *Atisheeghra yanat* - Working in moving vehicle

Samprapti (pathogenesis)

Causative factors → Vitiation of *vata* & *pitta dosha* → Enters & settles to head and

eye → *Rasa, mansa, majjadhatu & manovaha strotas* vitiation → Symptoms

Presymptoms & symptoms

Due to *vata* vitiation-Headache, *Netrashula, Bhru, manya, prushthashula, Netrashushkata, Toda* (pricking), *Nidra alpata*¹²

Due to *pitta* vitiation – *Bhrama* (dizziness), *daha* (burning), redness¹³

Due to *rasa kshaya - Roukshya* (dryness), *Shrama* (fatigue)¹⁴

Due to *Mansa kshaya - Akshglani, Indriya dourbalya* (fatigue, blurring of vision)¹⁵

Due to *Majja dushti*- Decrease in *Akshi sneha* (dry eye), *Bhrama, Timir darshana* (giddiness, Blurring of vision)¹⁶

Manovaha strotas dushti - Anxiety, sleep disturbances, Mood variations.

Upadrava (complications) - *Patalgata doshdushti*¹⁷ (retinal, macular, lenticular changes)

Management of Smart Phone Syndrome Preventive Measures^{1,10}

- Screen size should be large (minimum 4 inches)
- Increase font size, keep white background with black letters
- Keep screen as far away from your eyes
- Cut down on its usage
- Blink frequently
- Take breaks (20-20-20 rule) Every 20 minutes; stare at something 20 feet away, for at least 20 seconds
- Invest in Eye wears - Glasses restricting HEV light (amber/anti glare glasses)
- Developing smart phone free zones
- Ensure sufficient light while using smart phone i.e. avoid using smart phone in darkness

Eye Exercises¹⁷ -

- Palming - Helps in physical & mental relaxation, reduces eye pain, helps in refreshing eyes
- Directional Eye Exercises (Looking upwards, downwards, laterally, medially, diagonal)
- Drawing imaginary circle shape with eyes
- Drawing imaginary infinity sign with eyes
- Near focusing, Distant focusing - All these exercises strengthen extra ocular muscles
- Massaging - This will help to improve blood circulation around eyes & face. Relieves stress.

Yogik Kriya¹⁸-All *yogik kriyas* help in strengthening of muscles, relaxation of mind and eyes, relieving eye strain and mental stress-

- *Trataka*
- *Bhramari*
- *Bhastrika*
- *Kapalbhati*

Kriyakalpa¹⁹ -

- *Pariseka* - Milk with *saindhava, Erandpatra, kwatha, Yashtimadhu sid-dha, dugdha*
- *Vidalaka - Lodhra, chandan*
- *Ashchotana - Erand tail, Vata-pit-taghna dravya siddha dugdha / kwatha*
- *Netra Tarpana - Goghruata, Triphala, Jeevantyadi, Draksha ghruta*
- *Sneha Anjana*

Panchakarma & allied karma

- *Nasya - Bruhan, shaman*
- *Shirodhara-Takradhara, Dugdhadhara (Jatamansi, sariva, brahmi siddha)*
- *Shiropichu - Jatamansi, brahmi taila*
- *Snehana & swedana-manya, prushtha, hasta*
- *Padabhyanga*²⁰ (foot massage) - Useful for Eye and mind relaxation

Abhantar chikitsa²¹– Internal Herbal medicines: *Vata- pittaghana, chalshushya, Rasayana, acting on manovaha strotas, Amalaki (Emlicaofficinalis), sariva (Hemidesmusindicus), Yashtimadhu (Glycyrrhiza glabra), Triphala, Brahmi (Bacopa monnieri), Shatavari (asparagus racemosa), Draksha (Vitis vinefera), Kakmachi (Solanum nigrum).*

OBSERVATION AND RESULTS:

As Smart phone syndrome is not restricted to eye surface, only local treatment will not be helpful.

Holistic approach will be helpful in management of Smart phone syndrome as there are physical as well as mental symptoms. Combined approach with preventive measures, local treatment like *kriyakalpa, Panchakarma* & allied karma, Eye Exercises, *Yogic* Procedures and internal herbal medicines will be helpful in Smart phone syndrome.

DISCUSSION AND CONCLUSION

Smart phone syndrome is going to be a big challenge for us in the next years. Over use of Smart phone is definitely leading to long term damage to eye as well as physical and mental health. As *Ayurveda* believes in prevention rather than cure, we ought to lay strong emphasis on the preventive measures.

Ayurveda considers body, mind and sense organs collectively for the treatment of any disease. Therefore, even though this disease belongs to the 21st century, we can tackle it applying basic principles of *Ayurveda*.

REFERENCES

1. www.digitaltrends.com
2. www.livescience.com
3. www.visionsource.torrance.com
4. www.gigaom.com

5. www.livescience.com
6. www.timesofindia.indiatimes.com
7. www.businessinsider.com
8. www.goodhousekeeping.com
9. www.netdoctor.co.uk
10. www.gunnars.com
11. Dr. Shri Bhaskar Govind Ghanekar, Sushrutsanhita, uttatantra 1/26,27
12. Dr. Anna Moreshwar Kunte, Ashtang Hrudaya, Vagbhata, Sutrasthana 11/5
13. Dr. Anna Moreshwar Kunte, Ashtang Hrudaya, Vagbhata, Sutrasthana 11/6
14. Dr. Anna Moreshwar Kunte, Ashtang Hrudaya, Vagbhata, Sutrasthana 11/16
15. Dr. Anna Moreshwar Kunte, Ashtang Hrudaya, Vagbhata, Sutrasthana 11/18
16. Dr. Anna Moreshwar Kunte, Ashtang Hrudaya, Vagbhata, Sutrasthana 11/19
17. Dr. Shri Bhaskar Govind Ghanekar, Sushrutsanhita, uttatantra 7/6,7
18. www.eyesightimprovenaturally.com
19. www.wikihow.com
20. Dr. Shri Bhaskar Govind Ghanekar, Sushrutsanhita, uttatantra 9
21. Kaviraj Atridev Gupta / Vd. Yadunandan Upadhyay, Ashtang Hruday Uttatantra 16/66, Chaukhamba Publication
22. Prof. Chunekar k., Bhavprakash Nighantu, Chaukhamba Bharati Academy 2010

CORRESPONDING AUTHOR

Dr. Virkar Chandana Abhay

Professor, Department of Shalakya Tantra, College of Ayurved and Research Center, Nigdi, Pune, Maharashtra, India

Email: virkar.chandana@gmail.com

Source of support: Nil
Conflict of interest: None Declared