WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 6.805
Volume 5, Issue 10, 1084-1088. Case Report ISSN 2277– 7105

AYURVEDIC MANAGEMENT OF COLOUR BLINDNESS: A CASE STUDY

[*1]Dr. Daya Shankar Singh, [2]Dr. Shrawan Kumar Sahu and [3]Dr. Abhishek Bhushan Sharma

[1,2]Assistant Professor, Shalakya Department, Patanjali Ayurveda College, Haridwar.
[3]Assistant Professor, Kaya Chikitsa Department, Patanjali Ayurveda College, Haridwar.

Article Received on
20 Aug. 2016,
Revised on 09 Sept. 2016,
Accepted on 29 Sept. 2016
DOI: 10.20959/wjpr201610-7172

***Corresponding Author'**
Dr. Daya Shankar Singh
Assistant Professor,
Shalakya Department,
Patanjali Ayurveda
College, Haridwar.

ABSTRACT

Human, the supreme creation of Almighty, find themselves unable of enjoying the beauties of this universe because of many predicaments, colorblindness is one of those. It is characterized by the inability to clearly distinguish different colors of the spectrum. It brings about a lot of miseries to the sufferers. Owing to the unavailability of curative treatment they wander here and there in order to get rid of this problem. Having gotten sensitized by the agony of such patients a case study was undertaken to solve this problem by adopting Ayurvdic therapy. This article is about the same which witnessed a splendid result. The treatment was done considering color blindness as an equivalent to Pittaja Timira of Ayurvedic literature.

KEYWORDS: color blindness, Pittaja Timira, Ayurvdic therapy, Alochaka Pitta.

INTRODUCTION

Color blindness is an abnormal condition characterized by the inability to clearly distinguish different colors of the spectrum. The difficulties can range from mild to severe. It is a misleading term because people with color blindness are not blind. Rather, they tend to see colors in a limited range of hues; a rare few may not see colors at all.

The most common cause of color blindness is due to a fault in the development of one or more of the three sets of color sensing cones in the eye. Males are more likely to be color blind than females as the genes responsible for the most common forms of color blindness are on the X chromosome. As females have two X chromosomes, a defect in one is typically

compensated for by the other, while males only have one X chromosome. Color blindness can also result from physical or chemical damage to the eye, optic nerve, or parts of the brain.[1]

Color blindness is sometimes acquired. Chronic illnesses that can lead to color blindness include Alzheimer's disease, diabetes mellitus, glaucoma, leukemia, liver disease, chronic **alcoholism**, macular degeneration, multiple sclerosis, Parkinson's disease, **sickle cell anemia**, and retinitis pigmentosa. Accidents or strokes that damage the retina or affect particular areas of the brain eye can lead to color blindness. Some medications such as **antibiotics**, barbiturates, anti-tuberculosis drugs, high blood pressure medications, and several medications used to treat nervous disorders and psychological problems may cause color blindness. Industrial or environmental chemicals such as carbon monoxide, carbon disulfide, fertilizers, styrene, and some containing lead can cause loss of color vision. Occasionally, changes can occur in the affected person's capacity to see colors after age 60.

In addition to above causes, Red-green color blindness can be caused by ethambutol.[2]

Types of Colour Blindness

Normal color vision requires the use of specialized receptor cells called cones, which are located in the retina of the eye. There are three types of cones, red, blue, and green, which enable people to see a wide spectrum of colors. An abnormality, or deficiency, of any of the types of cones will result in abnormal color vision.

Following are several types of colour blindness.

Trichromacy

Normal colour vision uses all three types of light cones correctly and is known as trichromacy. People with normal colour vision are known as trichromats.

Anomalous Trichromacy

People with 'faulty' trichromatic vision will be colour blind to some extent and are known as anomalous trichromats. In people with this condition all of their three cone types are used to perceive light colours but one type of cone perceives light slightly out of alignment, so that there are three different types of effect produced depending upon which cone type is 'faulty'. The different anomalous conditions are **protanomaly**, which is a reduced sensitivity to red light, **deuteranomaly** which is a reduced sensitivity to green light and is the most common

form of colour blindness and **tritanomaly** which is a reduced sensitivity to blue light and is extremely rare.

The effects of anomalous trichromatic vision can range from almost normal colour perception to almost total absence of perception of the 'faulty' colour.

People with deuteranomaly and protanomaly are collectively known as red-green colour blind and they generally have difficulty distinguishing between reds, greens, browns and oranges. They also commonly confuse different types of blue and purple hues.

People with reduced blue sensitivity have difficulty identifying differences between blue and yellow, violet and red and blue and green. To these people the world appears as generally red, pink, black, white, grey and turquoise.

Epidemiology

Color blindness affects a large number of individuals, with protanopia and deuteranopia being the most common types.[3] In individuals with Northern European ancestry, as many as 8 percent of men and 0.4 percent of women experience congenital color deficiency.[4]

Diagnosis

A number of testing methods like Lantern test, Farnsworth-Munsell 100 Hue Test, are available for the diagnosis of colour blindness, the Ishihara color test, which consists of a series of pictures of colored spots, is the test most often used to diagnose red–green color deficiencies.[5] A figure (usually one or more Arabic digits) is embedded in the picture as a number of spots in a slightly different color, and can be seen with normal color vision, but not with a particular color defect. The full set of tests has a variety of figure/background color combinations, and enable diagnosis of which particular visual defect is present.

MANAGEMENT

There is generally no treatment to cure color deficiencies. "The American Optometric Association reports a contact lens on one eye can increase the ability to differentiate between colors, though nothing can make you truly see the deficient color."[6].These lenses can only be used outdoors under bright lighting conditions. Visual aids have also been developed to help people cope with color blindness. There are iPhone and iPad apps, for example, that help people with color blindness discriminate among colors. Some of these apps allow users to

snap a photo and tap it anywhere on the image to see the color of that area. More sophisticated apps allow users to find out both color and shades of color.

CASE REPORT

A 20 year old boy reported Shalakya OPD of Patanjali Ayurveda Hospital Haridwar in February 2014.He was a diagnosed case of Partial color blindness. According to the patient he had not been selected in Navy owing to this very diasthesis. He consulted many prestigious Allopathic doctors to get rid of his problem, but none of those assured him to solve the same. To combat his severe disappointment, he was admitted in our hospital.

Considering color blindness equivalent to Pittaja Timira, the patient was planned to undergo treatment on the same line (line of Pittaja Timira).The following procedures were adopted:

A. Snehapaana with Patoladi Ghrita (for 5 days) followed by Sarvaanga Vaspasweda for 1 day ,which was followed by Virechana with Trivritta Leha for 1 day.

B. Afterward following procedures were adopted for 7 days

1.Nasya with Patoladi Ghrita

2. Anjana with Chandanadi Anjana

3. Vidalaka

4. Seka (with Mahatriphala Ghrita, Mulethi, Draksha, Lodhra, Triphala Ghrita

5. Ksheer Neti

After undergoing above procedures, the final procedures for 7 days were as follows:

1. Tarpana with Patoladi Ghrita

2. Shirodhara with Ksheerabala Taila

3. Matravasti with Madhuyastyadi Taila.

RESULTS

After the completion of above procedures for 3 weeks, the patient was given Ayurvedic medicines for the pacification of Pitta Dosha mainly for 1 month. Afterwards he was rechecked with Ishihara chart which revealed that he was free from his annoying disorder.

DISCUSSION

Changes (photochemical reactions) that take place in Drishti Patal after the convergence of light rays are due to the action of Alochaka Pitta. The receiving and analysis of images is performed by Pitta in general and Alochak pitta in particular[7]. Two aspects of Alochak Pitta like Chakshu Vaishesika and Budhi Vaishesika carry out this function[8]. Obviously, it is the

vitiation of Alochaka Pitta which is responsible for inability to distinguish different colors leading to color blindness.

As a matter of fact, Snehana is a prerequisite for all the purification procedures.The role of Virechan for kayashodhana and that of Nasya for Shirahshodhan cannot be overemphasized. Rest procedures were capable of Netrashodhana.

All the procedures involved in the present treatment were to counter the vitiation of the Alochaka Pitta by their synergistic action and the results are due to the actions of ingredients of the medicines used for the procedures done.

CONCLUSION

Although the treatment of full-fledged color blindness has not been achieved till now, that of partial color blindness is very much possible by adopting ayurvedic procedures judiciously.i.e the procedures should be designed after careful scrutiny of dosha dushya and condition of patient and disease.

REFERENCES

1. *"Facts About Color Blindness". NEI. February 2015.*
2. *"Myambutol (Ethambutol) Drug Information: Description, User Reviews, Drug Side Effects, Interactions – Prescribing Information at RxList".*
3. *Wong, Bang (2011). "Color blindness". Nature Methods., 8(6): 441.*
4. 4.Chan, Xin; Goh, Shi; Tan, Ngiap (2014). "Subjects with colour vision deficiency in the community: what do primary care physicians need to know?". *Asia Pacific Family Medicine*., 13(1): 10.
5. *Gordon, N (1998). "Colour blindness". Public Health. 112 (2): 81-4.*
6. Color Vision Deficiency. American Optometric Association
7. Sushruta, Sutra Sthan, 21/10., Sushruta Samhita Dalhana Commentary-Nibandhasangraha, Gayadasacharya commentary-Nyayachandrika Panjika on Nidanasthana, Ed. By Vd.Jadavaji Trikamji Acharya& Narayana Ram Acharya, Chaukhamba Surbharti Prakashana, Varanasi, 2008.
8. Bhela, Bhel Samhita 4/4.