

A CASE STUDY OF CENTRAL SEROUS RETINOPATHY WITH AYURVEDIC THERAPIES

Richa Mohan

Assistant Professor, Department of Shalakya Tantra, Sri Dhanwantry Ayurvedic College and Hospital, Sector 46 B, Chandigarh, India

Email: richa.ria2@gmail.com

ABSTRACT

CSR (Central Serous Retinopathy) is defined as spontaneous serous detachment of neurosensory retina in the macular region, with or without retinal pigment epithelium detachment. Presently it is termed as idiopathic central serous retinopathy. Usually it is self-limiting. Complete or partial resolution may occur in patients in 3 to 6 months to one year. *Ayurveda* describes CSR as *vimarga gamana* of *vata dosha*, so the treatment should be *vat shamaka*. In the present case, a 45-year-old male with CR no 19005299 came to *Shalakya* OPD of Sri Dhanwantry Ayurvedic College and Hospital, Chandigarh with the complaint of sudden loss of vision in left eye 5 years back and in right eye 2 months back. He showed marked improvement in both eyes by ayurvedic treatment like *Shirodhara*, *Tarpana* prescribed to him. CSR is a self-limiting retinal condition in which there is seepage of sub retinal fluid in layers of macula. The results are encouraging with the use of ayurvedic therapies.

Keywords: CSR, *Vat Vimarga Gaman*, *Shirodhara*, *Tarpana*

INTRODUCTION

Central serous chorioretinopathy is when fluid builds up under the retina. This causes distorted vision. The fluid leakage comes from a layer of tissue under the retina, called the choroid. There is another layer of cells called the retinal pigment epithelium (RPE). When the RPE doesn't work as it should, fluid builds up under the RPE. As a result, a small detachment forms under the retina, causing vision to become distorted².

Symptoms of central serous chorioretinopathy include:

- distorted, dimmed, or blurred central vision
- a dark area in your central vision

- straight lines may appear bent, crooked or irregular in your affected eye
- objects may appear smaller or further away than they are
- A white object may appear to have a brownish tinge or appear duller in color.

Usually CSR affects male more than female and one eye more than both but both eyes may get affected. Nowadays there are more common cases of CSR, that may be due to increase stress, anxiety, anger in lifestyle and increase use of junk foods, preservatives and canned products and avoidance of natural fruits, vegetables, and environment. In ayurvedic texts the

excess of stress, anger, and other mental ailments result in *vata dushti* mainly *vata prakopa*. Stress is considered one of the main reasons of CSR that can be associated with *vata dushti*. So, the treatment revolves on *vata shaman* along with *kapha shudhi*. Since CSR is a macular disorder i.e. vision is lost from the center, in *ayurveda* we can co relate it with *kaach* where there is loss of vision according to the place of *dosha* involved i.e. if the *doshas* are in center then the patient will not be able to look from centre. The patient will look above but not below, see big objects as covered by cloth, a persons' face devoid of eye ear nose³. *Sushruta* has described *dhoomdarshi* as one of the *drishti gata roga* in which the causative factor is *shoka*, *shiroabhitapa* and *dhooma* in which the patient vision is blurred which looks like CSR as this is caused by stress and the vision is blurred⁴.

Case Report:

A 45-year-old male patient came to *shalakya netra* OPD on with CR no 19005299 at Sri Dhanwantry Ayurvedic College and Hospital with the complaint of sudden loss of vision in left eye for 4-5 years and in rt

eye since last 2 months. He also complained of night blindness, appearance of black lines and streaks in front of right eye and distortion of images .The vision in right eye was 6/24(P) and in left eye was 6/60 with pin hole vision was 6/24(P) R/E and 6/60 L/E. There was no improvement in refraction.

History:

K/c/o asthma for 7 years and taking no medications yet

Family history:

No specific disease history

Personal history:

Bowel: normal

Urine: normal

Sleep: normal

Thirst: normal

General examination:

CVS: Normal

Respiratory: no abnormal sounds

GI system: normal

CNS: well oriented to time,place and person

BP: 120/80 mm Hg

Table 1: EYE EXAMINATION

PART	OD	OS
Lids & Lashes	NAD	NAD
Conjunctiva: Palpebral and bulbar	NAD	NAD
Cornea	NAD	NAD
IOP	14.6 mmHg	15.7mmHg
Fundus Optic Disc OD	NAD	NAD
C:D	NAD	NAD
Media	Normal no haemorrhage, aneurysm or exudates	Normal no haemorrhage, aneurysm or exudates
Macula	Macular oedema+ Demarcated by ring	Macular oedema+
OCT	CSR	CSR
FFA	Smokestack pattern+ Ink blot pattern	Smokestack pattern+ Ink blot pattern

Laboratory investigations:

CBC: Normal

Platelets :0.62

s.uric acid:7.1

TSH: 10.90

HIV/VDRL: Not detected

MRI: Diffuse cerebral atrophy

Treatment planned:

1. *Guduchayadi rasayan vati* 1 bd

2. *Gokshuradi kwath* 40 ml bd

3. *Jeevantiyadi ghrita tarpana*

4. *Shirodhara* with *triphala* and *punarnava kwath*

DISCUSSION

Shirodhara is a planned for 7 days. In relaxation therapy, one of the main treatments which is preferred is *shirodhara*. As described by *Charak*⁵ there are two types of treatment: *antah parimarjan* and *bahiparimarjan*. In *bahiparimarjan*, i.e. in the treatment externally drug is used in any form for the *dosha shanti*. *Shirodhara* works on the principle of law of conservation of energy⁶.

In *shirodhara*, the substance *dhara* when falls above head in the form of kinetic energy collides with head at rest, it generates acceleration and momentum. This momentum may cause change in voltage and stimulate nerve impulse generation and increase nerve impulse conduction. If prolonged pressure is applied to a nerve, the impulse conduction is interrupted, and part of body relaxes. *Shirodhara* relaxes mind by reducing stress.⁷ Moreover acetylcholine (neurotransmitter) which relaxes due to nerve vibration help in reducing blood pressure thereby helping absorbance of serous fluid in eyes too.

Shira is one of the important vital organ (*marma*)⁸. *Shira* is the *adhishtan* of *chakshuinderia*. Aggravated stress disturbs *shira* and thereby *chakshuinderia*. So *shirodhara* helps in reducing harm caused to *chakshuinderia* and reduces the accumulation of serous fluid in neurosensory retina.

Triphala is described as *rasayana* and used for *tridosha shaman*. *Triphala* is one of the potent immunomodulator, helps in free radical scavenging, anti-inflammatory, anti-pyretic and wound healing. *Triphala* help in reducing stress. It is a rich source of vit C and flavonoids. It reduces glutathione levels in eyes. It increases activities of anti oxidant enzymes like superoxide dismutase, catalase, glutathione transferase and glutathione peroxidase⁹. It is a good anti-inflammatory effect as it decreases inflammatory markers. It reduces expression of inflammatory mediators such as IL-17, COX2, RANKL through inhibition of NFκB activation¹⁰.

Punarnava is a great anti oxidant. Rach & coworkers evaluated ethanolic and methanolic extracts of dried root powder for anti oxidant activities in term of ferric reduction and hydrogen peroxide. It is characterized as *rasayana*. In vitro studies, Gache & dhole studied anti oxidant and possible anti-inflammatory potentials by evaluating DP radical scavenging activity, OH radical scavenging activity, vit C content and total polyphenols.¹¹

*Jeeventiyadi ghrita tarpana*¹²:

Contents: *Jeevanti, karkura, yashtimadhu, pushkarmool, munakka, indrajava, kantkari, bala, nilkamala, gokshura, bhumymlaki, pippali, dhanvyas, goghrita, water.*

Ingredients in *jivantiyadi ghrita* are *madhura* and *sheeta*. So, it acts as *VataPitta shamaka*. The drug included in *Jeevenaya mahakashaya*¹³ as explained by *charaka* is *vata pitta shamaka*. In *Tarpana* the tissue contact time is more, so the bio availability of the drug is more. The drugs administered by *tarpana* reaches the target organ i.e. retina in CSR and helps in absorbance of serous fluid.

Guduchayadi rasayan vati: *Guduchi* is a potent immune modulator and anti oxidant thus helps in removing stress and heals CSR. *Tinospora cordifolia* is well known for its immunomodulatory response. Active compounds 11- hydroxymustakone, N-methyl-2-pyrrolidone, N-formylannonain, cordifolioside A, magnoflorine, tinocordiside and syringe has been reported to have potential immunomodulatory and cytotoxic effects¹⁴. Vaibhav Aher et al study confirms the immunomodulatory activity of *Tinospora cordifolia* ethanolic extract (100 mg/Kg/p.o.) stem through altering the concentration of antioxidant enzymes, increasing T and B cells and antibody which play an important role in immunity, enhancing the concentration of melatonin in pineal gland and increasing the level of cytokines like IL-2, IL-10 and TNF-α which plays an important role in immunity.¹⁵ *Tinospora cordifolia* has potential application in food systems as an antioxidant and probably in biological systems as a nutraceutical. Methanolic, ethanolic and water extracts of *Tinospora cordifolia* showed significant antioxidant

potential compared to other solvents and possess metal chelation and reducing power activity.¹⁶

Gokshuradi kwath: It contains a variety of chemical constituents which are medicinally important, such as flavonoids, flavanol glycosides, steroidal saponins, and alkaloids. It has diuretic, aphrodisiac, antiurolithic, immunomodulatory, antidiabetic, absorption enhancing, hypolipidemic, cardiogenic, central nervous system, hepatoprotective, anti-inflammatory, analgesic, antispasmodic, anticancer, antibacterial, anthelmintic, larvicidal, and anticariogenic activities.

Immunomodulatory activity: Saponins isolated from the fruits of TT demonstrated dose-dependent increase in phagocytosis, indicating stimulation of nonspecific immune response. An alcoholic extract of the whole plant of TT exhibited a significant dose-dependent increase in humoral antibody titer and delayed type hypersensitivity response, indicating increased specific immune response.¹⁷

Absorption enhancer: Ethanolic extract of TT enhanced the absorption of metformin hydrochloride, a Biopharmaceutics Classification System (BCS) class III drug, in everted sac technique using goat intestine, due to the presence of saponins in the extract.¹⁸

CONCLUSION

In the present case the patient got relieved in a span of 1 month and the vision was restored to 6/12 in R/E and 6/18 in L/E. The associated symptoms like black streaks were relieved. Thus, the treatment is extremely helpful and motivating. As central serous retinopathy is mainly related due to stress, these drugs helped in alleviating stress and recovery. The patient was satisfied and thus the therapy was effective.

REFERENCES

1. Comprehensive Ophthalmology fourth edition KHURANA A.K Published by New Age international limited Publishers PG 272.
2. American association of ophthalmology Written By: Daniel Porter Reviewed By: Robert H Janigian Jr MD
3. *Susruta Samhita, Uttar tantra* 18/7, Shashtri Ambika Data seventh edition, Chaukhambha Sanskrit Sansthan, Varanasi seventh edition
4. *Susruta Samhita, Uttar tantra* 18/7-Shashtri Ambika Data, seventh edition, Chaukhambha Sanskrit sansthan, Varanasi seventh edition
5. *Charak Samhita Sutrasthan* 11/55 *Caraka Samhita of Agnivesha* revised by Caraka and Drdhabala with introduction by Vaidya Samrata Sri Satya Narayan Sastri Padmabhushan with elaborated vidyotni hindi commentary part 1 by Chaukhambha Bharti Academy Varanasi.
6. Critical analysis of *Shirodhara*.chapara aparna et al IAMJ (April 2017(5)(4)).
7. Review Article www.ijrap.net A CONCEPTUAL STUDY ON *SHIRODHARA* PROCEDURE Nidhi Gupta 1*, Gopesh Mangal 2 .1 PG Scholar, Department of Panchakarma, National Institute of Ayurveda, Jaipur, Rajasthan, India 2 Assistant Professor & Head, Department of Panchakarma, National Institute of Ayurveda, Jaipur, Rajasthan, India
8. *Charak Samhita Siddhi sthan* 9/4 *Caraka Samhita of Agnivesha* revised by Caraka and Drdhabala with introduction by Vaidya Samrata Sri Satya Narayan Sastri Padmabhushan with elaborated vidyotni hindi commentary part 2 by Chaukhambha Bharti Academy Varanasi.)
9. Evaluation of antibacterial potential of anticataract potential of triphala in sentiline induced cataract Gupta SK et al. J Ayurved integrative medicine 2010 1:200-286 crossref, medline google scholar
10. Anti-inflammatory effect of triphala in arthritis induced rats Kalaiselvan S. Rasool MK Pharm Biol 2015,50:51-60 crossref, Medline google scholar
11. Bio Med Research International Phytochemical, Therapeutic, ethanopharmacological overview for traditionally important herb: Boerrhavia Diffusa. Shikha Mishra et al. Volume 2014, article ID 808302
12. Astanga Hridayam Uttara Sthana– with commentary Sarvanga Sundara Vagbhata. 02-03 vol.13 Varanasi: Chaukhamba Subharti prakashan;2002 pp 818-9
13. *Charak Samhita Sutra Sthan* 4 *Caraka Samhita of Agnivesha* revised by Caraka and Drdhabala with introduction by Vaidya Samrata Sri Satya Narayan Sastri Padmabhushan with elaborated vidyotni hindi commentary part 1 by Chaukhambha Bharti Academy Varanasi.
14. Immunomodulatory active compounds from *Tinospora cordifolia* Sharma U, Bala M, Kumar N, Singh B, Munshi RK, Bhalerao S; J Ethnopharmacol, 2012; 141(3):918-26

15. Biotechnological Approach to Evaluate the Immunomodulatory Activity of Ethanolic Extract of *Tinospora cordifolia* Stem (Mango Plant Climber) Vaibhav Ahera and Arun Kumar Wahib; Iranian Journal of Pharmaceutical Research, 2012; 11 (3): 863-872
16. In Vitro Antioxidant Potency of *Tinospora cordifolia* (gulancha) in Sequential Extracts Bhawya D, Anilakumar K R; International Journal of Pharmaceutical & Biological Archives, 2010; 1(5):448-456
17. Effect of five medicinal plants used in Indian system of medicines on immune function in Wistar rats Tilwari A, Shukla NP, Devi U. Afr J Biotechnol. 2011; 10:16637-45
18. Absorption Enhancement Studies of Metformin Hydrochloride by Using *Tribulus terrestris* Plant Extract. Ayyanna C Ayyanna. C, Chandra Mohan Rao G, Sasikala M, Somasekhar P. Int J Pharm Technol. 2012;4:4118-25

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