

**CENTRAL SEROUS RETINOPATHY AND ITS MANAGMENT IN AYURVEDA - A
SPECIAL CASE STUDY**

*Dr. Darshana Dhotre, **Dr. Veena Shekar, ***Dr. Mamatha K V, ****Dr. Sujathamma. K

*2nd year PG Scholar, **Lecturer, ***Reader, ****Professor and HOD,
Dept. of PG studies in Shalakya Tantra, SKAMCH and RC, Vijayanagar, Bangalore.

*Author for Correspondence: Dr. Darshana Dhotre

2nd year PG Scholar, Dept. of PG studies in Shalakya Tantra, SKAMCH and RC, Vijayanagar, Bangalore.

Article Received on 07/04/2016

Article Revised on 26/04/2016

Article Accepted on 16/05/2016

ABSTRACT

Central serous retinopathy (CSR) is characterised by spontaneous serous detachment of neuro sensory retina in the macular region, with or without retinal pigment epithelium detachment. Etiopathogenesis is not known exactly. The condition typically affects males between 20 and 40 years of age^[1]. It is now believed that an increase in choroidal hyper permeability causes a breach in the outer blood retinal barrier. Leakage of fluid across this area results in development of localized serous detachment of neuro sensory retina. The condition is characterized with a sudden onset of painless loss of vision associated with relative positive scotoma, micropsia and metamorphopsia^[2]. Reassurance or Laser photocoagulation are the only treatment indicated in contemporary science but these have their side effects and can even make the patient blind in raised complication. The clinical features of CSR simulates to Dwitiya patalagata & tritiyapatalagata timira to a greater extent due to the occurrence of certain characteristic features and treatment modalities can be adopted based on doshas and patalas involved in pathogenesis. The treatment morals of Ayurveda virtuously lies on the doshic principles, sroto dusti, other samprapti ghatakas and the samprapti involved. If a physician is able to analyse these and plan accordingly with combination of Shodhana, Shamana and kriyakalpas, the arrest of the condition and possible contradiction of the disease can be of great achievement from our science. A special case report of a 41 yrs old male patient with Central serous retinopathy who showed marked improvement with Ayurvedic management is presented in this article. The possible role of Ayurveda in its management and mode of action is also discussed here.

KEYWORDS: *Central serous retinopathy, Timira, Shodana, Virechana, kriyakalpas.*

INTRODUCTION

Central serous retinopathy(CSR),Central serous chorioretinopathy(CSCR), also known as central serous pigment epitheliopathy and central serous retinitis, is a disease that appears to impair choroidal circulation leading to central retinal pigment epithelium (RPE) and serous detachment of the retina. The disease typically presents in isolated unilateral episodes, but is considered a bilateral disease of the choroid.

The incidence of CSR is said to be 10 in 100,000. There does not appear to be any clear predisposing factors that lead to the development of CSR but predominantly affects males ten times more often than females between the ages of twenty and fifty with a mean age of onset at thirty.

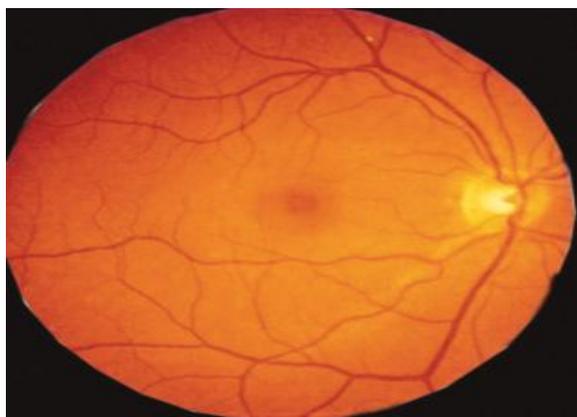
CSR presentation has been associated with competitive or aggressive disposition, or who are under extreme physical or emotional stress, with the use of vasoconstrictive agents such as epinephrine, endogenous

hypercortisolism, and systemic corticosteroids^[3]. Several entities believed to elicit choroidal vascular dysfunction and have been known to produce ocular findings that mirror CSR which include hypertension, pregnancy, dialysis, organ transplantation and systemic lupus erythematosus. An association with migraines has also been documented. The role of genetics is unclear and the vast majority of patients present without a family history of the disease.

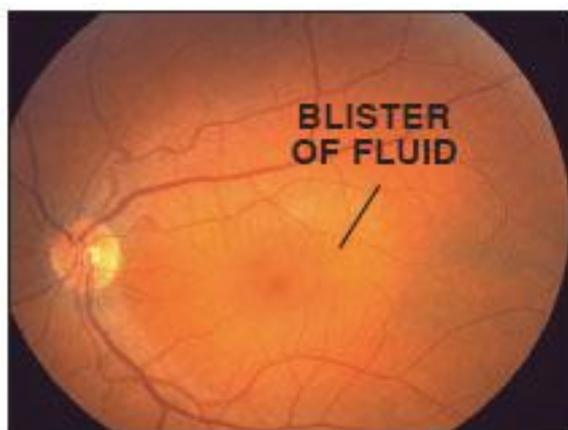
The sudden onset of unilateral metamorphopsia, micropsia, blurred central vision and less frequently abnormal colour vision are symptoms of CSR with extra foveal presentations of CSR discovered during routine Fundus examination. Reassurance is the only treatment given in contemporary science in 80-90% patients, followed by systemic administration of corticosteroids. The condition usually takes a period of 6 months to 1 year to resolve and in the cases which do not resolve and high recurrence rate, Laser photo coagulation is indicated, which has its certain limitations.

According to our ancient seers, among the etiological factors manasika nidanas like klesha, krodha, nidra vega darana are explained as causes of Netra roga^[4], which holds good in CSR and the factors are excessive intake of Masha, Kulatha, Amla rasa and atiyoga of Indriya. From the aharaja nidanas the pitta gets vitiated and the Manasika nidana and atiyoga of Indriya can also lead to vitiation of Pitta and Vata and improper pratyaksa grahanam. Any imbalance in the limbic system due to atiyoga, heena yoga & mithya yoga of Manasika bhavas have an impact on visual pathway & vision.

All the factors in turn leads to Jataragni and dhatwagni mandya followed by Rasa, Rakta, Mamasa & Medhovaha sroto dusti. After dosha dushya sammurchana, the vitiated doshas are carried through roopavahi siras to netra and sthana samsraya of dosha takes place in triteeya patala and further causes srotodusti leading to atipravriti and vimarga gamana. The localised vitiated Pitta with its increased sara guna leads to srotosyanda, and shopa in tritiya patala which can be understood as collection of fluids in between the layers and appearance of elevated macula in fundus examination and oedema in OCT which causes the spontaneous serous detachment of Neuro Sensory Retina in the macular region and giving rise to symptoms like blurriness of vision, Scotoma, micropsia, and metamorphopsia.



NORMAL RETINA



CENTRAL SEROUS RETINOPATHY

A defective vision and blurred vision is implicit as Timira. Though the patala is still an open topic for debate, from the latest textbooks on Netra, Triteeya Patala is considered to be Chorio capillaries and some of the characteristic features of Tritiya patalagata timira simulates with Central serous retinopathy which are karna nasa akshi yuktani viparitani vikshyate (Scotoma), Adha sthite samipastham durastam chouparisthite (unable to make out the distant of the objects), vyavidha darsana (Distortion of letters & objects)^[5].

When the doshas enters Tritiya patala the treatment modalities include Virechana, Basti karma^[6] and Nasya for successful management and the prognosis of the condition is kruchra sadya. The following is a case of diagnosed CSR and successfully managed from Ayurvedic perspective on Timira after assessing clinical features, pathology and prognosis of the disease in detail.

CASE REPORT PRESENTATION

A moderately built male patient aged about 41 years consulted in Shalakyta tantra OPD of SKAMCH&RC with chief complaint of sudden defective vision in right eye from two and half months.

COMPLAINT HISTORY

Two and half months before (from the day of consultation) on a fine morning, when the patient woke up noticed sudden defective vision in right eye & on self assessing by closing one eye he found there was blurred vision in right eye & he could not visualise the central portion of the object he focused on appropriately.

On closing the eyes after exposure to the bright light he could feel a bluish ring with bright background in front of the right eye which becomes darker and fades away after 10- 15 seconds. These changes were observed repeatedly throughout the day. Patient was also stumbling upon problems while driving, as he was not able to judge distance of the object. While reading he could notice distortion of the letters & objects which he focused on were seen smaller than their actual size with diminished colour sensitivity.

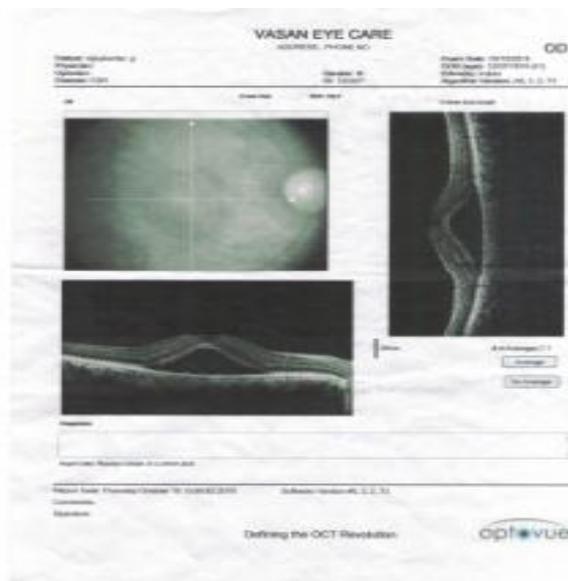
The above mentioned complaints were experienced by the patient when he was in USA for short term on official work. Initially he couldn't fix up with the ophthalmologist and by the time with these complaints as he was able to manage his routine work, he did not consult any ophthalmologist thereafter.

After coming back to his home town, he visited an Eye care hospital for the same persisting complaints which had not aggravated and was diagnosed as Central Serous Retinopathy (CSR). No medication was advised stating it is self resolving over a period of time and in case if aggravates will be administered systemic steroids. Since he didn't availed any treatment, for an alternative he visited our hospital, SKAMCH & RC on 23rd Nov.2015.

TREATMENT HISTORY

For Myopia, 20 years back he has been prescribed by the glasses and there was no change on the lenses since then.

	Spherical	Cylindrical	Axis
RE	-0.25D	-	-
LE	-0.5D	-	-



INVESTIGATION: OCT was advised prior to the treatment.

The impression in the Right eye Showed Central Serous Retinopathy

EXAMINATION**Visual Acuity**

Visual Acuity	BE	OD	OS
Distant Vision	6/6	6/6 Partial, distortion of letters and haziness	6/6
Near vision	N6	N18	N6

Follow-up: After the completion of treatment following parameters were observed to assess the efficacy of treatment.

Parameters	BEFORE TREATMENT	AFTER TREATMENT
Visual Acuity	LE-6/6 RE-6/6P, distortion of letters & objects	BE- 6/6 LE-6/6 RE-6/6P, reduced distortion of letters & objects
Distortion of objects	Present	Absent
After image (Appearance of bluish ring in closed eye)	Present on 10/10 times blinking	Absent
Micropsia	Present	Absent
Appearance of scotoma	Present	Reduced significantly
Foveal reflex on fundus examination	Absent	Present

Examination of Fundus

O/E	RIGHT EYE	LEFT EYE
Media	Clear	Clear
Vessels	Normal	Normal
Macula: Foveal reflex	Mild elevation Absent	Normal Present
Optic disc	Normal	Normal
Cup Disc Ratio	Normal	Normal

TREATMENT COURSE AT THE HOSPITAL

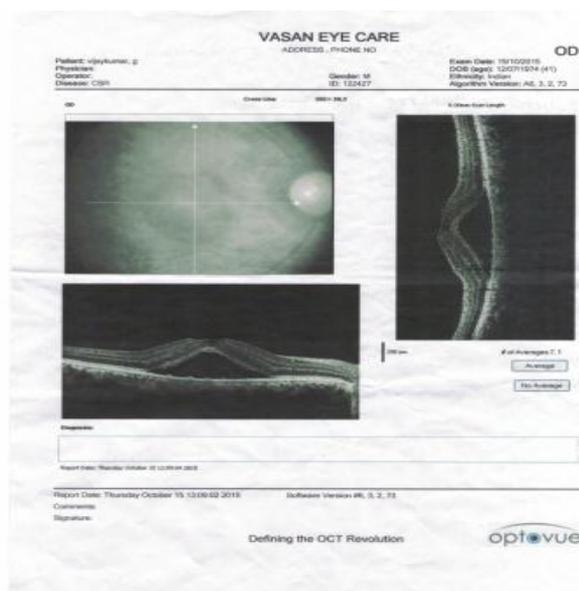
- **Ama pachana** with Tab. Amla parimala BD with warm water for 3 days
- **Snehapana** with Maha triphala ghritha 30ml,70ml,130ml,170ml (4 Consecutive Days)
- **Sarvanga abhyanga** with Ksheera Bala taila followed by **Sarvanga Bashpa Sweda** for 3 days
- **Virechana** with Trivrit leha in dosage 60grams and Ushna jala anupana
- **Samsarjana Krama** for 3 days wherein patient was advised diet accordingly
- **Nasya** with Maha Triphala ghritha 10 drops to each nostril for 5 days

Kriya kalpas advised after Shodhana karma

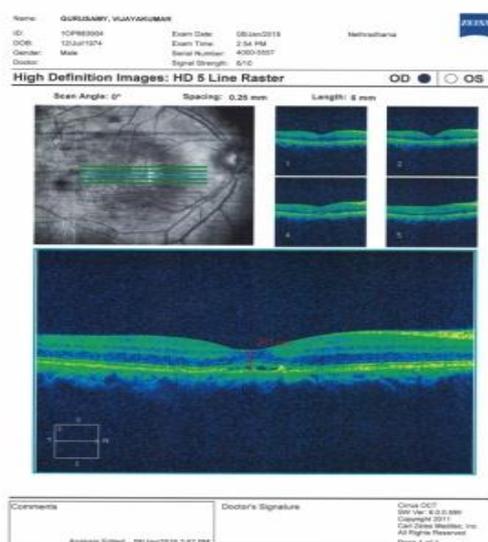
- **Tarpana** with Maha Triphaladi ghritha for 5 days
- **Prasadana Putapaka** was advised for 3 alternative days

Internally following medicines for a period of 7 days was advised:

- Tab. Saptamruta Loha 2 tablets with unequal quantity of Ghee and honey
- Tab. AOIM Z1 tablet at night after food
- Mahatriphaladi ghritha+ Triphala churna +Yastimadhu churna+ Punarnava churna in equal quantity of 5 grams with Honey twice a day after food.
- Eye drops prepared with Drishti prada varti, 2 drops to each eye twice a day.



OCT- BEFORE TREATMENT



AFTER TREATMENT

- Factors reported to induce CSR in this case was atiyoga of netra indriya(which is dosa bala pravrtta nidana), nidra vega dharana(Swabhava bala pravrtta Nidana) and stress(Manasika nidana) excessive intake of Masha(Aharaja nidana) which is having guru and snigdha guna lead.
- All these Nidanans leads to Tridosha Prakopa dominated by rakta and pitta. It is being suggested that an imbalance between the sympathetic parasympathetic drive that maintains auto regulation within the choroidal vasculature may be defective in patient with CSR.
- The planning of treatment was done in the way such that therapies and medicaments had Shotaghna, Srotodustinirharana, Vatanulomana, Pittarechaka, Kaphahara, Chaksuhya & Balya properties.
- Snehapana is a procedure done after deepana & Pachana. In Snehapana, lipids are processed with

medicine which are having the active ingredients that acts on the particular disorder by crossing the cell membrane. By this, the functions of phospholipids will increases the affinity of cellular elements or doshas which are responsible for the formation of diseases and the lipids helps to loosen the pathogens which can be understood as dosha by changing its density..

- Abhyanga or external oleation prior to swedana or sudation therapy helps to drain the impurities towards the gut, as well as in the form of excretion; however this happens with the help of Swedana karma done after Abhyanga.
- Swedana (Herbal steam) increases the body temperature, vasodilatation takes place and as a result of vasodilatation there is increased flow of blood takes places locally, so that the necessary oxygen and nutrition materials are supplied. Also the swedana helps to expel doshas along with the lipids (which is used as medicine) from the cell membrane which are already loosened by snehapana to the gut through circulatory system
- Virechana was the choice of Panchakarma in this patient as it is meant for pitta and kapha doshas, which are the also components in pathogenesis in this condition. When the medicine is administered to the patient orally, after the complete digestion, the action of given medicine starts. The active ingredients of the medicine will stimulate the mucosal membrane and changes the normal permeability of mucosal lining temporarily, due to which the doshas are transferred from cellular level to gut level with the help of Snehana and swedana karma are expelled out through Anal route.
- Nasya is a treatment for all disorders above clavicle as it is the nearest route to reach the targeted tissues. Here, Nasya was done which is a Brimhana Nasya mainly for nourishment of tissues. Nasal cavity is easily accessible and its rich vascular plexus permits direct entry of topically administered drugs straight into blood stream and avoids gastrointestinal as well as hepatic first pass metabolism. The neural connections between the nasal mucosa & brain provide unique pathway for non-invasive delivery of therapeutic agents to the CNS. The high permeability, high vasculature & low enzymatic environment of nasal cavity are well suitable for systemic delivery of drug molecules via nose.
- Lipid soluble drugs pass readily across the whole surface of capillary endothelium. Capillaries having large paracellular spaces do not obstruct absorption of even large lipid soluble molecules or ion. Application of heat & muscular exercise accelerates drug absorption by increasing blood flow. Vascular path transportation is possible through the pooling of nasal venous blood into the facial vein. And it occurs naturally. The facial vein has no valves. It communicates freely with the intracranial

circulation. It communicates through pterygoid plexus with the cavernous venous sinus. Such pooling of blood from nasal veins to venous sinuses of the brain is more likely to occur in head lowering positions. Thus by these process drugs also delivers to ocular structures.^[6]

- Tarpana & Putapaka are the ocular therapeutics which helps in further maintenance of structural & functional integrity and have a more specific action at the targeted organ. They are designed for better intra ocular drug delivery. Delivery to a target organ system, absorption and balanced metabolism are crucial in obtaining the maximum benefit from any formulation and the same is facilitated by Maha triphaladhya ghrita. Since the active ingredients of drugs are mixed with Ghrita and this helps in to cross various barriers in of eye. The Lipophilic action of ghrita facilitates transportation to a target organ and final delivery inside the cell, because cell membrane of the eye especially cornea, as this structure is also lipophilic in nature.
- Moreover, *Ghrita* preparation used in *Tarpana* is in the form of suspension therefore tissue contact time and bio availability is more in *Akshi Tarpana* and hence therapeutic concentration is achieved.
- In Putapaka, extracts are prepared out of plants, animal flesh and mineral by heating their mixture in a closed chamber. Compliance, Disposal and tissue contact time are also same as in Tarpana. As far as the absorption is concerned; drug being a suspension of fat and water soluble contents; should have more absorption than Tarpana.
- Among the different herbs advocated in this patient-Triphala are rich in vitamin C has super oxide dismutase, which helps to prevent the oxidative stress and balance the metabolism and also holds Kapha Pittahara, Chakshushya, Rasayana, Lekhana Properties thereby maintaining the proper movement of vata and removing Sanga. Punarnava has ethanolic acid, it was found to possess restorative activity aganist Stress induced changes in plasma & adrenal cortisol levels (vatahara, shotahara). Yastimadhu is one among the common drugs used in many disorder of the eyes due to its Rejuvenative properties ie., Chaksusya and specific properties beneficial in this case like vrana sotha hara (Anti-inflammatory). Trivrut lehya used in this case is mainly helps in removal of toxins as it possess purgative properties.

CONCLUSION

The modern western life style and excess of stress to balance and grow high cannot take its toll on the body and throws the Doshas out of balance and causes poor health. Based causal factors, the doshas and dhatus gets involved accordingly. If this is well understood and

treated to bring back the balance by proper implication of Shodhana(Detoxification) and Shamana (Palliative) , one can assure promising results, a so far another gift from our ancient science Ayurveda. To further validate and standardise the treatment protocol a pilot study with different combination and a large sample study always holds good.

REFERENCES

1. AK Khurana-Comprehensive Ophthalmology by, 4th edition. New Delhi: New Age Internationa (P) limited, Publishers; reprint 2012, 3rd chapter, pg-605, pp-272
2. AK Khurana-Comprehensive Ophthalmology by, 4th edition. New Delhi: New Age Internationa (P) limited, Publishers; reprint 2012, 3rd chapter, pg-605, pp-272
3. AK Khurana-Comprehensive Ophthalmology by, 4th edition. New Delhi: New Age Internationa (P) limited, Publishers; reprint 2012, 3rd chapter, pg-605, pp-272
4. Sushruta Samhita Uttara tantra, Dalhana tika by Vaidya Yadavji Trikamji acharya, Chowkhamba krishnadas academy Varanasi, edition-2008, 1th chapter, Verse-5-11, pp-824, pg-458.
5. Sushruta Samhita Uttara tantra, Dalhana tika by Vaidya Yadavji Trikamji acharya, Chowkhamba krishnadas academy Varanasi, edition-2008, 7th chapter, Verse-5-11, pp-824, pg-476.
6. IAMJ, ISSN 23205091, Hypothetical evaluation of nasya karma on Central nervous system by Joshi Abhijeet. H.S Prof. & HOD, Tilak Maharashtra vidyapeet. Pune.