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Case Study

EFFECT OF *SADYOVAMANA* IN THE TREATMENT OF CENTRAL SEROUS CHORIORETINOPATHY: A CASE STUDY

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KEYWORDS: CSCR, *Timiraroga, Sadyovamana, Sopha, Apatarpana*.

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ABSTRACT

CSR is a challenging disease to understand and treat, since its pathogenesis remains elusive and multifactorial. CSR is an idiopathic disorder characterised by a localised serous detachment of sensory retina at the macula secondary to leakage from the choriocapillaries through one or more hyperpermeable RPE sites. In Ayurvedic literature, all the conditions which cause impairment of vision are included under *Timiraroga*. The present case CSCR, can be included under *Sannipathikatimira.* The treatment procedure *Vamana* is contraindicated in *Timira* but CSR is a disease in which excessive accumulation of serous fluid. So, it can be considered as *Ekamgajasopha.* The first line of treatment of *Sopha* is *Apatarpana*. *Vamana* is one of the *Apatarpana* procedures. So, *Vamana* can be incorporated in CSR.

Management of CSR usually involves the use of laser photocoagulation, photodynamic therapy with verteporfin and anti VEGF agents in case of choroidal neovascularization related to CSR. As per Ayurvedic classics this condition can be included under *Timiraroga.* This article describes a case report of 47 years old male patient presented with CSR. In present study, *Sadyovamana* is found very effective to improve his visual acuity. OCT studies showed almost total absorption of subretinal fluid after treatment.

INTRODUCTION

Central serous chorioretinopathy (CSCR) is one of the several chorio retinal disorders characterised by idiopathic serous detachment of the neuro sensory and/or RPE at the posterior pole of the fundus with consequent accumulation of fluid.[1] CSR mostly affects healthy males between 25 to 55 years of age. The disorder is most common in males, compared to females with the ratio 3:1 to 6:1 in various studies[2]. Other reported risk factors include hyperopia or emmetropia, stress, Type A personality, hypertension and chronic use of corticosteroid or psychotropic medications, pregnancy and oral contraceptives[1].

The most common presenting symptoms of CSR are decreased and distorted vision. The visual acuity is usually occurred to 6/9 to 6/18. Other symptoms includes metamorphosia, micropsia, altered colour vision and a central dimness in vision that may have a grey or purple cast[1]. Acute classic CSR usually present as a solitary, localised neurosensory detachment at the posterior pole. Serous retinal pigment epithelial detachment seen as smooth, circumscribed, orange coloured elevation with darker rims may be found in association with classic CSR.[1]

Chronic CSCR presents as relatively broad and shallow areas of neuro sensory detachment with thinning or even cystoid changes within the retina. These are often accompanied by RPE alterations including atrophy or loss of pigmentation, focal areas of hyperpigmentation or RPE hyperplasia to the point of formation of bony spicules. In addition, tracks of fluid descending inferiorly up to the equator may also be seen[1]. The diagnosis is performed by dilated fundus exam and image of retina and the choroid with OCT, Fundus

flurescein angiography and Indocyanine Green (ICG) angiography, Fundus auto fluorescence.

Several theories have been proposed to explain the pathogenesis of CSCR. A break in the integrity of RPE causing the subretinal accumulation of fluid is CSCR. Chorodial vascular hyperpermeability, this in turn increases the tissue hydrostatic pressure in the choroid causing PED, disruption of RPE barrier and abnormal egress of fluid under the neuro sensory retina leading to CSCR.

Current treatment modalities for CSCR generally target the RPE, choroid or both. They aim to improve the ability of the RPE to remove the subretinal fluid, to diminish leakage from the choroid vessels, or to decrease fluid flux across the RPE barrier[3]. Management usually involves either waiting for spontaneous resolution, which commonly occurs within 3 months of onset or the use of focal laser photocoagulation, photodynamic therapy with verteporfin and anti-vascular endothelical growth factor (anti-VEGF) agents in cases of choroidal neovascularisation related to CSCR[4]. In Ayurvedic literature, all the conditions which cause impairment of vision are included under *Timiraroga*[5]. The present case CSR, can be included under *Sannipathikatimira*. The treatment procedure *Vamana* is contraindicated in *Timira*[6]. But CSR is a disease in which excess accumulation of serous fluid. So, it can be considered as *Ekamgajasopha*. The first line of treatment of *Sopha* is *Apatarpana*[7]. *Vamana* is one of the *Apatarpana* procedures. So, *Vamana* can be incorporated in CSR.

Aims and objectives

To study the efficacy of *Sadyovamana* in CSCR.

Materials and Methods

A 47 years old male patient of CSR was selected from OPD, Department of Shalakyatantra government Ayurveda College, Thiruvananthapuram.

Case Report

A 47-year-old male patient approached the OPD presented with diminution and blurring of vision associated with central dimness of both eyes especially right eye for two weeks. He is a carpenter he can't equalize the lines drawn on two wood pieces. So he consulted in Government Ayurveda College, Thiruvananthapuram on 16 / 01 /2020 and undergone fundus examination and suspected CSR. So he was referred for OCT and thus confirmed CSR.

Chief complaints and associated symptoms

- Diminution and blurring of vision associated with central dimness of vision in both eyes especially right eye for the last 2 weeks

Personal History

- Bowel - Regular
- Appetite - Moderate
- Micturition - Normal
- Sleep - Good

History of previous illness

History of using spectacles since 3yrs. Patient had a chronic history of using inhalers for dyspnea.

Family history

Nothing relevant

Investigations

Visual Acuity

RE (Unaided)	With Glass	LE (Unaided)	With Glass
CF 3m	6/9p	5/60p	6/36p

OCT - Show serous detachment of neurosensory retina with accumulation of subretinal fluid.

Diagnosis

- CSCR (*Sannipathika Timira*)

Line of Management

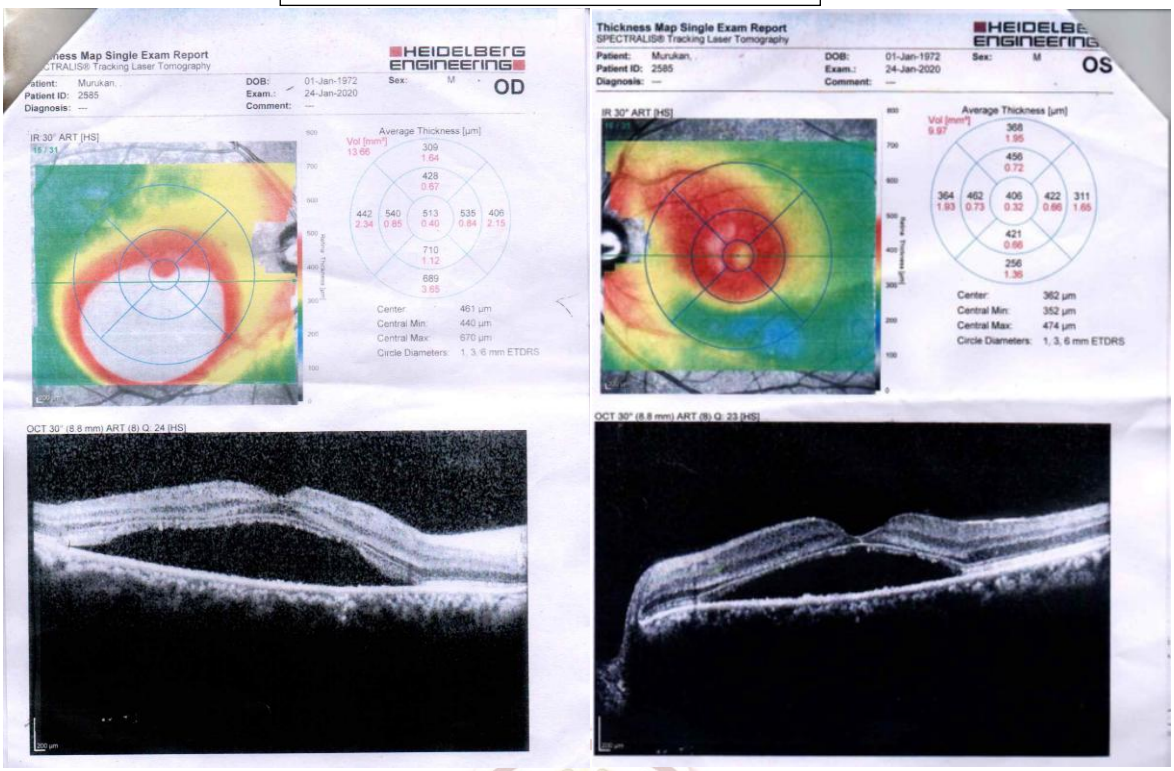
- *Purva karma- Agnideepana*
- *Sadyasneha*- gruel with ghee for 3 days
- 4th day- *Abhyanga* and *Ushnambusnana*, at night *Utklesakara* food with milk and *Uzhunnuvada*
- 5th day- *Virechana* with *Avipattichoorna* 20gm
- 6th day- *Sadyovamana* with *Yashtimadhu kashaya* and saline water.

Observation and Result

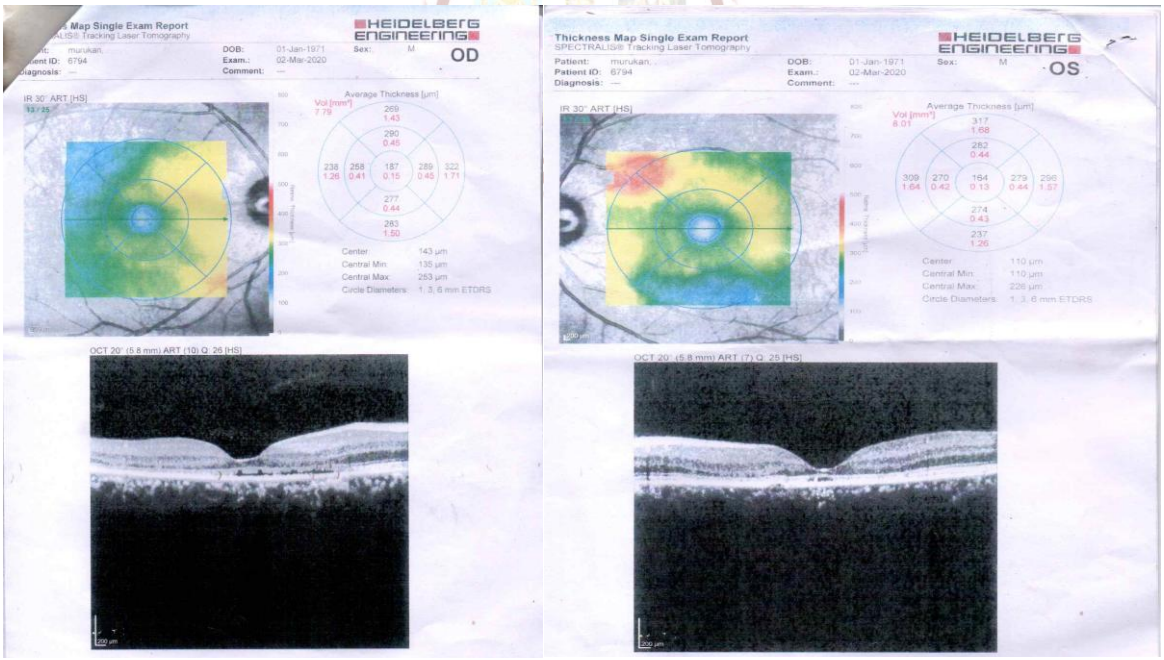
After *Vamana*, the patient got significant improvement in visual acuity. OCT shows almost total absorption of sub retinal fluid. He was advised to take *Dasamula Kashaya* 90ml bd, *Hingutrigunataila* 5ml with *Kashaya* at night.

Visual acuity	UCVA		BCVA	
	RE	LE	RE	LE
BT	CF - 3m	5/60p	6/9P	6/36P
AT	6/18	6/36	6/9P	6/24P
Follow up	6/18	6/24p	6/9P	6/24P

OCT before Treatment



OCT After Treatment



DISCUSSION

In Ayurvedic literature, all the conditions which cause impairment of vision are included under *Timiraroga*. The present case CSR, can be included under *Sannipathikatimira*. During *Vamana*, inspiratory thoracic and abdominal wall muscles contract –raised intra thoracic and intra-abdominal pressure. Increasing intra thoracic pressure against a closed glottis diminishes the venous return to the heart, decreasing stroke volume and subsequently increasing the venous system pressure. As the sudden rise in intra ocular venous pressure occurs, a spontaneous rupture of retinal capillaries ensues. This may be the reason for general contraindication of *Vamana* in *Drishti rogas*. But as per the specific pathophysiology of CSCR concerned, this sudden

change in the venous pressure may enhance the immediate absorption of SRF.

CSR is a disease in which excess accumulation of serous retinal fluid under neurosensory retina. So it can be considered as *Ekangajasopha.* The cardinal feature of *Sopha* is *Utseda*, meaning elevation from normal site, which is the cardinal feature of CSCR as evident from the OCT findings. The first line treatment of *Sopha* is *Apatarpana*[7] and *Vamana* is one of the *Apatarpana* procedures. In *Sopha Samprapti*, *Rasavaha srotodushti* is the key factor causing the localised collection of fluid, here in case of CSCR, in the retina. Treatment of *Rasavaha srotodushti* is also *Vamana*[8]. From these classical references we adopt *Vamana* in the treatment of CSR.

Vamana karma is the specific therapy for *Kaphaja* disorders[6]. *Vamana* drugs possessing the properties like *Ushna, Teekshna, Sukshma, Vyavayi* and *Vikashigunas* reach Hridaya by its own *Veerya*, mobilizing the vitiated *Doshas* in the *Sakha* and bring them back to *Koshta*[9]. *Hrideya* may be heart or brain because both are able to carry *Dravya* all over the body in a short duration by using their circulatory or nervous system respectively. When *Vamaka dravyas* reaches the stomach they stimulate gastric mucosa, stimulated vagus and sympathetic nerve that carry signals to the vomiting centre and induces emesis.

Current treatment modalities for CSCR generally target the RPE, choroid or both. They aim to improve the ability of the RPE to remove the subretinal fluid, to diminish leakage from the choroid vessels, or to decrease fluid flux across the RPE barrier. According to various Ayurvedic classics, the ultimate results of *Vamana* coincide with the current treatment modalities in the modern science. According to *Astangahridaya*, *Samyakshodhana* results in to strength of *Indriyas* (sense organs), stability of *Dhatus* (body tissue), improvement of *Agni.*[10]

Susruta samhita, mentioned that the person undergoing *Vamana* never develop *Malavriddhi* in *Srotasas* (accumulation of waste in body channels i.e., excessive fluid accumulation), *Kaphasrava* (excessive fluid secretion), *Grahani* (Mal absorption)[11]. By *Vamana,* the vitiated and aggressive *Kaphadosha* is expelled out of the body, leading to cure of disease. i.e., in CSR excessive accumulation of fluid is ultimately expelled out. This will certainly improve the functions of RPE and normal health of RPE and choroid is restored.

CONCLUSION

Management of CSR with *Sadyovamana* has a significant role in improving visual acuity and absorption of the accumulated serous fluid.

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