

## Case Report

## Ayurvedic management of recurrent unilateral central serous retinopathy with neurosensory detachment: A case report

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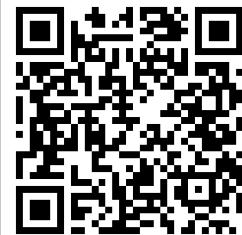
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### Abstract

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Central Serous Retinopathy (CSR) is a retinal disorder caused by subretinal fluid accumulation leading to serous detachment of the neurosensory retina, often involving the macular region. It usually presents with sudden, painless visual impairment, image distortion, and central scotoma. Major predisposing factors include psychological stress, hypertension, prolonged corticosteroid use, and a type A personality. Conventional therapy such as anti-VEGF injections, laser photocoagulation, or observation primarily offers symptomatic relief but does not prevent recurrence and may risk retinal damage. In Ayurvedic context, CSR resembles Sannipatika Timir described under Drishtipatalagata Rogas, caused by vitiation of Tridosha affecting the inner ocular layers. A 43-year-old male presented with blurred and double vision, central dark spot, insomnia, constipation, and stress for 25 days and was diagnosed with CSR in the left eye. He underwent Panchakarma therapy including Netra Basti and Shirodhara, along with internal medicines—Punarnavadi Kashaya, Gandharvahasthadi Kashaya, and Chandraprabha Vati for 20 days. Following treatment, vision improved from 6/12 to 6/6 with complete resolution of macular edema confirmed on optical coherence tomography. One-year follow-up showed no recurrence. The case highlights the potential of Ayurvedic management in promoting retinal recovery and preventing CSR relapse naturally.

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### Introduction

Central Serous Retinopathy (CSR), also referred to as Central Serous Chorioretinopathy (CSCR), is increasingly recognized as part of the Pachychoroid spectrum of disorders (1). CSCR predominantly affects healthy males between the ages of 25 and 55 years, with a male (10/100,000) to female (1.7/100,000) with ratio ranging from 3:1 to 6:1 (2). Other identified risk factors include hypermetropia, stress, Hypertension, long-term use of corticosteroids or psychotropic medications. The most common presenting symptoms of CSCR include reduced and distorted vision, with visual acuity typically ranging from 6/9 to 6/18 (3).

Additional symptoms may include metamorphopsia, micropsia, altered colour vision, and a central scotoma with a gray or purple hue (4,5).

It is characterized by a thickened and congested choroid, with dilated blood vessels, particularly in the deep choroid. This choroidal congestion exerts pressure on the superficial choroid, which is in close proximity to the retina (1). As a consequence, the capillaries supplying the Retinal Pigment Epithelium (RPE) and retina become damaged, resulting in fluid leakage (6). Subretinal fluid accumulation results in a detachment of the neurosensory retina from the underlying retinal pigment epithelium (RPE) (7). In more advanced stages, choroidal neovascularization may develop (8). Diagnosis is typically established through a dilated fundus examination, retinal imaging, and optical coherence tomography (OCT). Additional imaging modalities, such as fundus fluorescein angiography (FFA), indocyanine green (ICG) angiography, and fundus autofluorescence, provide further diagnostic insights. Management generally begins with observation, as CSR often resolves spontaneously within three months. For persistent or recurrent cases, treatment options

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include focal laser photocoagulation, photodynamic therapy with verteporfin, and intravitreal anti-vascular endothelial growth factor (anti-VEGF) injections, especially when choroidal neovascularization is present (9).

In Ayurvedic literature, all conditions leading to impaired vision are classified under *Timir Rogas*. From an Ayurvedic perspective, clinical manifestations of CSR are understood as a disorder arising from the vitiation of *Kapha* and *Pitta Doshas*, which disrupts the integrity of the *Prathama* and *Dwitiya Patalas* (the first and second ocular layers) (2). This *doshic* imbalance is further aggravated by the pathological involvement (*Dushti*) of *Rasa* and *Rakta Dhatus* (bodily fluids and blood tissue), ultimately resulting in fluid leakage across the blood-retinal barrier and accumulation of serous fluid between the retinal layers, manifesting as visual disturbances. The vitiation of *Rasa* and *Rakta Dhatus* is often caused by *Vata Dosha*, indicating the involvement of all three *Doshas* (*Tridosha*) in the pathogenesis of CSR. Based on the dominant *Doshas* and clinical presentation, CSR can be correlated with *Sannipatata Timira Roga* (10). The primary symptom observed is *Aavila Darshana* (blurred vision), *Vakramrjvavapi manyate* (metamorphopsia) while modern diagnostic tools such as fundus imaging and optical coherence tomography (OCT) help to identify the *Samprapti* (pathological process), often revealing macular region swelling.

In Ayurveda, such swelling is considered a manifestation of *Shopha*. Here, *Vata Dosha* transports the imbalanced *Tridoshas* through the body's channels, where they become lodged in specific tissues (*Dhatus*), leading to the development of *Shopha*. Therefore, *Shopahara Chikitsa* (treatment to reduce swelling) and *sannipatika timira har chikitsa* is indicated.

The treatment protocol includes *Bahirparimarjana Chikitsa* (external therapies) such as *Netra Basti* and *Shirodhara* for 20 days, along with *Antahparimarjana Chikitsa* (internal medications) to support systemic healing (11).

## Case report

A 43-year-old male pharmacist (OPD No. 18408), non-diabetic and non-hypertensive, presented with complaints of double vision, distorted vision, insomnia, increased stress, constipation, and a central dark spot in both eyes for the past 25 days. He had a history of similar CSR episodes in February 2022 and October 2022. The patient reported difficulty in reading and driving due to distorted vision.

He consulted an ophthalmologist, who advised optical coherence tomography (OCT) and diagnosed him with central serous retinopathy (CSR) in the left eye on 06/02/2023. The prescribed treatment included Hylumax eye drops (four times daily), diuretics, and focal laser therapy. However, the patient did not experience significant relief from the previous treatments and declined laser therapy. Consequently, he sought Ayurvedic treatment at Jiva Ayurveda, Sector 14, Gurgaon, on 03/03/2023.

At the time of examination, the patient's visual acuity in the left eye was noted to have declined to 6/12. A dilated fundus examination revealed distorted foveal contour in the left eye. Ayurvedic treatment began on 04/03/2023. Within the first week, he reported symptomatic relief. After 16 days of OPD-based treatment, OCT findings showed a marked reduction in CSR, and visual acuity in the left eye was fully restored.

## Past history:

- k/c/o Hypothyroidism: 1 year (on medication- thyronorm 50 microgram (pharmacy)
- H/o Using Glasses 7 to 8 years

## Clinical findings

### (a) General physical examination

Weight- 72 kg  
Height- 5'8  
BP- 120/70mm hg  
Pulse rate – 70bpm  
Temperature- Afebrile  
Respiratory rate- 18/min  
Appetite – reduced  
Bowel – constipated  
Sleep – highly disturbed (due to stress)

### (b) Systemic examinations

All recorded vital parameters were found to be within the normal physiological range.

## Ten-fold Examination

Table 1: Ten-fold Examination

Prakriti- Vataj	Saara- Madhyama
Vikriti- Vata kaphaja	Satmya- Heen
Samhana- Madhyama	Ahara shakti: Abhyavarana- Avara
Vyayamashakti- Madhyama	Jarana shakti- Avara
Vaya- Madhyama	Pramana - Madhyama

## Eight-fold Examination

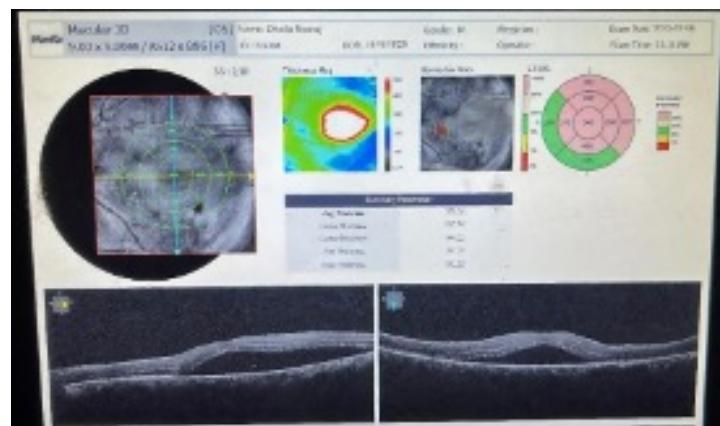
Table 2: Eight-fold Examination

Nadi – vata kaphaja	Shabdhya- clear
Mala – malavastambh	Sparsha – ruksha
Mutra- samayak	Drik – avila darshan
Jivha- Alpa upalipta jihwa	Akirti – madhyam

## Clinical findings

OCT Findings- Optical coherence tomography (OCT) revealed separation of the Retinal Pigment Epithelium (RPE) from the Neurosensory Retina (NSR), accompanied by subretinal fluid accumulation and macular edema.

Figure 1: Showing separation of RPE from NSL



**Table 3: Ophthalmic Assessment Table (12)**

Ophthalmic parameter	Right eye	Left eye
Visual acuity	6/6	6/12
Near vision aided	N6	N12
Tonometry (I.O.P)	11 mm/hg	11 mm/hg
Fundoscopy	Normal	Macular swelling, sub retinal fluid,
Ocular motility	Full	Full
Colour vision aided	Normal	Normal
Pupil reaction	Reactive	Reactive
Anterior segment	Within normal limit	Within normal limit

## Diagnosis

Based on the presenting symptoms and clinical evaluation, a diagnosis of central serous retinopathy was made, which is clinically correlated with *Sannipatika Timira* as described in Ayurvedic literature.

## Treatment Plan

### Panchakarma Intervention

**Table 4: External Treatment**

Medicine	Dose	Time of	Duration
<i>Netra Basti</i>	As required	Morning	20 days
<i>Shirodhara</i>	As required	Morning	20 days

\**Tripala Ghrita* – Jiva Ayurveda Pharmacy, *Brahmi Tailam* – Nagarjuna Pharmacy

Triphala Ghrita Ingredients	
Ingredients	Latin names
Amalaki (13)	<i>Emblica officinalis</i>
Haritaki (13)	<i>Terminalia chebula</i>
Vibhitaki (13)	<i>Terminalia bellirica</i>

## Standard Operative Procedure (14)

### *Netra Basti* (*Netra* –eye, *Basti*- compartment which holds)

**Figure 2: Netra Basti**

This procedure falls under *Netra Kriyakalpa* (therapeutic measures for eye disorders) in Ayurveda. It should be performed during *Sādhāraṇa Kāla* (preferably in the morning or evening) in a *Nivāta Sthāna* (draft-free environment), after complete digestion of the previous meal. Prior to the procedure, the patient should undergo *Sthānika Snehana* (local oil massage) and *Swedana* (fomentation or steam therapy). The patient is subsequently positioned in a comfortable supine position. A dough dam (*Māṣa Pali*) is prepared using a paste of *Yava* (barley) or *Māṣa* (black gram) and applied around the eyes to a height of approximately 2 *Āngula* (around 3.6 cm), ensuring it is firm enough to prevent leakage of the medicated ghee.

The patient is instructed to close their eyes, and *Tripalā Ghrita*—previously melted using a hot water bath—is poured into the cavity until it reaches the level of the eyelashes. The patient is advised to open and close the eyelids frequently to allow the *Ghrita* to penetrate the deeper layers of the eye. For disorders related to *Drṣṭigata Rogā* (retinal or vision-related conditions), the *Ghrita* should be retained for approximately 1000 *Mātra Kāla*, which is roughly 25 minutes. After the retention period, the *Ghrita* is removed by creating a small opening in the dough dam at the outer canthus of the eye. Following this, *Vairechanika Dhooma* (medicated smoke inhalation) is administered to complete the procedure.

## *Shirodhara* (15)

*Shirodhara* is a therapeutic procedure involving the continuous pouring of medicated liquid in a systematic manner onto the forehead or scalp using a *Dhara Yantra*. The patient should be positioned in the supine decubitus on the therapy table (*Droni*), with a small pillow placed under the cervical region. The *Shirodhara* apparatus should be positioned near the patient's head, with the height adjusted so that the liquid falls from approximately 4–5 inches in a continuous stream, with the thickness of a little finger.

The oil should be gently heated to just above body temperature (38–40°C) and poured into the *Dhara Patra* (vessel). A steady stream of oil should flow onto the forehead, with the *Dhara Patra* oscillated slowly and uniformly to ensure even coverage across the entire forehead and scalp. The oscillation should be neither too fast nor too slow to maintain consistency. Simultaneous gentle massage with the therapist's other hand may be performed to enhance the therapeutic effect.

The oil that collects in the *Droni* should be carefully recollected, reheated, and reused during the procedure. After completion, gauze and earplugs should be removed. The head should be wiped with a clean towel, and a head bath with lukewarm water should be taken after 45 minutes. Finally, *Rasnadi Churna* should be administered to the vertex of the scalp after the bath to prevent kapha accumulation and protect against cold-related ailments by retaining warmth and dryness. It also restores dosha balance and prevents sinusitis, headache, and heaviness in the head region. (16).

## *Shamana Chikitsa* (internal medication)

**Table 5: Internal Medicines**

Medicine	Dose	Time of administration	Duration
<i>Punarnavadi kashayam</i>	20ml with 40ml of warm water	BD (before food)	30 days
<i>Gandharvahastadi kashayam</i>	25ml with 50ml of warm water	Bed time (after food)	30 days
<i>Chandraprabha vati</i>	2 (500mg each) tablets with <i>Kashayam</i>	Bd (before food)	30 days

\**Punarnavadi Kashayam*, *Gandharvahastadi Kashyam* – AVP (Arya Vaidya Sala Kottakkal), *Chandraprabhavati* - Baidynath

## Observations and Results

After 20 days of treatment, the patient demonstrated significant improvement in both distant and near visual acuity. An OCT scan performed on 06/02/2023 revealed central serous retinopathy (CSR) with neurosensory detachment (NSD) and a central retinal

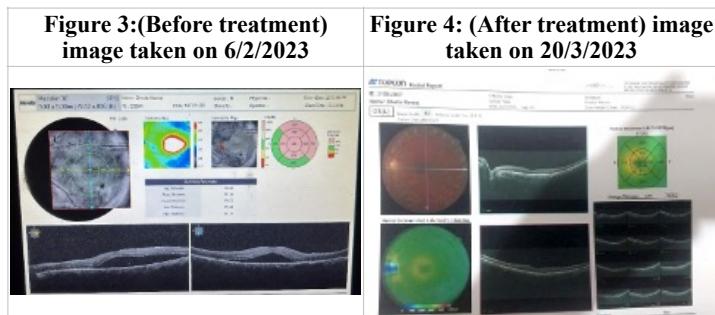
thickness (CRT) of 548  $\mu\text{m}$  (Figure 1). Following 20 days of continued management, a repeat OCT scan showed a marked reduction in CSR with the presence of pigment epithelial detachment (PED) and a decreased CRT of 276  $\mu\text{m}$  (Figure 2). Fundus analysis of the left eye revealed normal findings. By this time, the patient's visual acuity had fully recovered and remained stable throughout the follow-up period. To prevent recurrence, the prescribed medication was continued for an additional month.

A follow-up OCT scan of both eyes on 20/03/2023 demonstrated a reduction in macular edema, complete absorption of subretinal fluid, and resolution of the NSD.

**Table 6: Visual acuity table**

Date	Right Eye		Left Eye	
	Distant vision	Near vision	Distant vision	Near vision
6/2/23 CSR diagnosed	6/6	N6	6/12	N12
3/3/23 First day of OPD	6/6	N6	6/12	N12
9/3/23 7 <sup>th</sup> Day of treatment	6/6	N6	6/9	N10
20/3/23 17 <sup>th</sup> day of treatment.	6/6	N6	6/6	N6

## OCT Findings-



## Discussion

Panchakarma is planned after assessing the vitiated doshas. Vitiated Vata causes *vimarggaman*; vitiated Pitta (due to its *drav guna*) causes extravasation of vessels in *Rasa Vaha* and *Rakta Vaha Strotas*. Vitiated Kapha causes fluid accumulation.

**Netra Basti or Akshi Tarpan** provides nourishment to the eyes and helps cure eye diseases caused by vitiated Vata and Pitta doshas (17). According to the Acharyas, *Netra Basti* is indicated in Vata-dushti ophthalmic conditions, mainly in *Dristigata Patal Rogas*, macular degeneration, and blurry vision (10). Here, *Triphala Ghrita*, which is used for *Netra Basti*, is infused with a decoction of *Triphala* and thus contains both lipid- and water-soluble components. Due to its lipophilic nature, *Ghrita* enhances drug absorption to its target organ and allows it to reach the cellular level (2). This property is particularly beneficial for entry through the cornea, as the epithelium and endothelium of the cornea are permeable to lipid-soluble substances, making *Ghrita* capable of penetrating the cornea efficiently, regardless of molecular size (18).

**Triphala Ghrita**, in terms of its *Rasa*, *Guna*, *Veerya*, and *Vipaka*, primarily acts as a *Vata-Pitta* balancing agent, followed by its

action on *Kapha*. Thus, its overall effect is to balance all three doshas, with a focus on *Vata*. *Triphala Ghrita* contains *Triphala*, which has been documented to exhibit immunomodulatory, antimicrobial, and anti-inflammatory properties. (19,20) *Triphala Ghrita* has *Lekhana* properties, which help in removing excess fluid from the retinal layers and work on macular swelling because of its *Sopha Hara* nature (21). *Triphala* is regarded as the most effective *Chakshushya Rasayana*, or rejuvenating remedy for the eyes (1).

According to Ayurvedic texts, *Shirodhara* is particularly beneficial for balancing *Vata* and *Pitta* doshas. The therapeutic properties of the liquid used in *Shirodhara* counter the effects of imbalanced doshas by soothing, nourishing, and pacifying them through its application to the forehead, scalp, and nervous system (22). *Shirodhara* is a therapeutic procedure in Ayurveda known to exert neurophysiological, immunomodulatory, and psychotropic effects on the human body. (23)

During the procedure, controlled pressure and gentle vibrations are generated on the forehead, which are amplified by the frontal sinus cavities (24). These mechanical stimuli are believed to be transmitted via the cerebrospinal fluid (CSF), potentially influencing the thalamus and basal forebrain. This neurophysiological activation may contribute to the regulation of serotonin and catecholamine levels, thereby promoting sleep induction (24,25).

*Shirodhara* is classically indicated in the management of insomnia, stress, anxiety disorders, and various ocular conditions (*Netra Rogas*) (16,26). In this case, elevated stress is identified as a significant contributing risk factor for Central Serous Retinopathy (CSR), leading to increased intraocular pressure (IOP) and sleep disturbances. To address these issues, *Shirodhara* using *Brahmi* oil is considered an effective therapeutic approach. *Shirodhara* works on the principle of "law of energy conservation", wherein the continuous flow of medicated oil (*Taila Dhara*), due to its high density and prolonged contact duration, facilitates optimal transdermal absorption and therapeutic efficacy. It exhibits *Vata*-pacifying and calming properties that support the optimal functioning of *Tarpaka Kapha*, thereby restoring the coordination between the sensory organs and their respective stimuli—particularly in cases where this connection has been disrupted due to aggravated *Vata dosha* (26).

**Brahmi**, classified as a *Medhya* (nootropic) herb, possesses rejuvenating, anti-inflammatory, anxiolytic, sleep-inducing (*Nidrajanana*), *Anuloma* (redirects downward flow of *vata*), cardiotonic, and antihypertensive properties (27). It also helps balance *Vata* and *Kapha doshas*, thereby enhancing the therapeutic efficacy of *Shirodhara*. Additionally, by promoting improved circulation to the hypothalamus, *Brahmi* supports the regulation of the autonomic nervous system, which is often disrupted by stress (28,29).

**For Shamana Chikitsa** in this case, *Purnanavadi Kashyam* is one of the best medicines tailored for suffering from swelling. Its primary mechanism involves promoting diuresis, thereby facilitating the elimination of excess fluid from the body and reducing swelling (30).

*Gandharvahasthadi Kashayam* enhances digestive fire (*Agni Deepana*) and promotes *Amapachana* (metabolism of toxins). It relieves accumulated waste (*Mala Sanchaya*), and helps balance *Apana Vata* disorders. (31)

*Chandraprabha Vati* acts as a *Rasayana* (rejuvenative) and *Balya* (strength-promoting) formulation. It is classically indicated in

conditions such as *Mandagni* (impaired digestion), *Netra Rogas* (ophthalmic disorders), and diseases involving imbalances of *Vata*, *Pitta*, and particularly *Kapha* due to its *Kapha-Hara* properties (32).

After 20 days of Ayurvedic intervention including *Netra Basti*, *Shirodhara*, and *Shamana Chikitsa*, the patient exhibited marked clinical improvement with complete resolution of macular edema on OCT. Visual acuity improved from 6/12 to 6/6, with normalization of retinal structure. The combined Panchakarma and internal therapy protocol effectively balanced Tridoshas, reduced ocular stress, and restored retinal health, with no recurrence observed during one-year follow-up. (33)

### Strengths and Limitations

The patient presented with acute-onset central serous retinopathy (CSR) and opted for Ayurvedic treatment as the primary therapeutic approach within the first month of diagnosis, foregoing conventional management. The early presentation and preference for Ayurvedic intervention were key factors influencing the clinical course.

### Scope for Further Study

Ayurvedic treatments effectively managed Central Serous Retinopathy (CSR), leading to a reversal of its pathology and significant improvement in visual outcomes. Additionally, these treatments helped prevent the recurrence of CSR. The potential of Ayurveda in managing CSR warrants further investigation through clinical trials with larger sample sizes.

### Conclusion

Ayurvedic management with Panchakarma therapies and internal medicines led to rapid visual recovery, resolution of macular edema, and prevented recurrence in Central Serous Retinopathy—showing that timely integrative Ayurveda offers effective, noninvasive treatment for CSR.

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