

An Ayurvedic Approach in the Management of Central Serous Retinopathy: A Case Report

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ABSTRACT

Background: Central Serous Retinopathy (CSR) is an ocular pathology characterized by the accumulation of subretinal fluid at the macula, causing central visual impairment. While contemporary medicine often relies on observation or laser interventions, Ayurveda offers a holistic, non-invasive approach to resolving macular edema.

Case Presentation: A clinical record details a two-week history of defective vision in the left eye of a 43-year-old male police officer with a Type A personality, diagnosed as acute CSR. Initial Optical Coherence Tomography (OCT) revealed a severely elevated Central Macular Thickness (CMT) of 870 µm with significant subretinal fluid and functional vision limited to 6/12 with correction.

Intervention and Outcome: Following Ayurvedic treatment involving systemic medications and localized procedures (*Sekam, Jaloukavacharana, Talapotchil, Takradhara*), the patient experienced a dramatic structural and functional recovery. Follow-up OCT demonstrated a rapid reduction in CMT to a near-normal 322 µm, clear resolution of edema, and complete restoration of the foveal contour. Consequently, the left eye's visual acuity improved to a fully restored 6/6. **Conclusion:** Ayurvedic therapeutic principles targeting *Shotha* (edema) and *Kleda* (fluid accumulation) demonstrate profound efficacy in the rapid resolution of acute Central Serous Retinopathy, offering a viable alternative to conventional invasive therapies.

Keywords: Central Serous Retinopathy, Macular Edema, Optical Coherence Tomography, *Timira, Drishtigata Roga*.

Introduction

Central Serous Retinopathy (CSR), or Central Serous Chorioretinopathy (CSCR), is an ocular condition characterized by the accumulation of transparent subretinal fluid at the macula, leading to a localized detachment of the neurosensory retina. From an allopathic perspective, the exact pathogenesis involves hyperpermeability of the choriocapillaris and dysfunction of the Retinal Pigment Epithelium (RPE), which fails to pump fluid out of the subretinal space. It is commonly associated with psychological stress, endogenous or exogenous corticosteroids, and "Type A" personalities. The primary symptom is a sudden onset of blurred or dim vision, often accompanied by micropsia, metamorphopsia, and a hypermetropic shift. Standard allopathic management typically involves observation (as many cases resolve

spontaneously over months), discontinuation of corticosteroids, or interventions like Focal Laser Photocoagulation and Photodynamic Therapy (PDT) for chronic or recurrent cases.

In Ayurveda, retinopathies and macular disorders fall under the broad spectrum of Drishtigata Rogas (diseases of the vision), frequently correlated with Timira depending on the affected Patala (layer of the eye). The accumulation of subretinal fluid can be understood as a localized Shotha (edema) resulting from the vitiation of Pitta and Kapha doshas. Pitta governs vascular integrity and inflammation (Rakta and Pitta relationship), while Kapha imbalance leads to fluid stasis (Kleda accumulation). The Ayurvedic management of such conditions typically focuses on Shothahara (anti-inflammatory and anti-edematous), Srotoshodhaka (channel-clearing), and Chakshushya (vision-enhancing) therapies, utilizing systemic Shamana (pacification) drugs and specific Kriya Kalpas (localized ocular therapeutics) to restore structural integrity and visual function.

REVIEW OF LITERATURE

Contemporary (Allopathic) Perspective on CSR

Central Serous Chorioretinopathy (CSCR or CSR) is a chorioretinal disease characterized by an idiopathic serous detachment of the neurosensory retina at the macula.

- **Pathophysiology:** The exact pathogenesis remains partially understood but is primarily attributed to hyperpermeability of the choriocapillaris. This choroidal congestion leads to increased hydrostatic pressure, overwhelming the barrier function of the Retinal Pigment Epithelium (RPE). The compromised RPE allows fluid to leak into the subretinal space, causing macular elevation.
- **Risk Factors:** CSR most commonly affects young to middle-aged males (typically 20–50 years). It is strongly associated with exogenous or endogenous corticosteroid exposure, psychological stress, pregnancy, and "Type A" personality traits. Sympathomimetic agents and elevated cortisol levels are known triggers.
- **Clinical Presentation:** Patients typically present with a sudden onset of blurred or dim central vision. Associated symptoms include metamorphopsia (distortion of lines), micropsia (objects appearing smaller), dyschromatopsia (altered color vision), a central relative scotoma, and a temporary hypermetropic shift due to the anterior displacement of the macula by the underlying fluid.
- **Standard Management:** As acute CSR often resolves spontaneously within 3 to 4 months, conventional management primarily involves observation and the immediate discontinuation of any corticosteroid therapy. In chronic or recurrent cases, or when rapid visual recovery is required, interventions such as Focal Laser Photocoagulation (for extrafoveal leaks), Half-Dose Photodynamic Therapy (PDT), or oral mineralocorticoid receptor antagonists (e.g., eplerenone) are utilized.

Ayurvedic Perspective on Macular Edema and CSR

In Ayurvedic ophthalmology (Shalakya Tantra), structural and functional diseases of the posterior segment of the eye are classified under Drishtigata Rogas. While there is no direct, single-word equivalent for CSR, the condition can be understood through its clinical presentation and pathogenic mechanisms.

- **Disease Correlation:** The blurring of vision and distortion align with the progressive visual deterioration described in Timira (blurring of vision/refractive errors). When the morbid Doshas localize in the first and second Patalas (layers) of the eye, patients report seeing distorted, dim, or altered images, correlating with the metamorphopsia and micropsia seen in CSR.

- **Pathogenesis (*Samprapti*):** The accumulation of subretinal fluid is pathologically viewed as a localized Shotha (edema). It involves the vitiation of Tridosha, with a predominance of Pitta and Kapha.
- **Pitta & Rakta:** Pitta is responsible for visual acuity (*Alochaka Pitta*) and vascular integrity. Vitiation of Pitta and Rakta (blood) correlates with the inflammatory choroidal hyperpermeability and RPE breakdown.
- **Kapha & Kleda:** The leakage and accumulation of serous fluid (subretinal fluid) are manifestations of aggravated Kapha dosha and excessive Kleda (moisture/fluid). Stagnation of this fluid in the Drishti Mandala obscures vision.
- **Ayurvedic Management Principles:** The therapeutic approach for CSR in Ayurveda focuses on counteracting the fluid accumulation and strengthening the retinal tissue.
 - **Shothahara Therapy:** Administration of systemic anti-inflammatory and anti-edematous drugs to facilitate the reabsorption of the subretinal fluid (reducing Kleda).
 - **Srotoshodhana:** Clearing the microchannels to improve choroidal circulation and restore the physiological drainage pump function of the RPE.
 - **Procedural Interventions (*Kriya Kalpas & Panchakarma*):** Localized ocular therapies such as *Sekam* (pouring of medicinal liquids) and *Anjanam* (collyrium) are utilized to deliver phytoconstituents directly to the ocular tissues, while procedures like *Jaloukavacharana* (leech therapy), *Takradhara*, and *Talapotchil* are employed to relieve localized stress, reduce inflammation, and draw out excess Pitta and Kapha.
 - **Chakshushya Dravyas:** Post-resolution, vision-promoting herbs (such as Triphala, Punarnava, and Shatavari) are used to rejuvenate the photoreceptors and prevent recurrence.

Case Presentation

A clinical record from the Out Patient Department of Govt. Ayurveda Medical College Hospital, Thiruvananthapuram, details the presentation of a 43-year-old male patient, occupationally serving as a police officer with a Type A personality. He presented with complaints of defective central vision in the left eye lasting for two weeks, alongside a concurrent complaint of hearing difficulty in the right ear. The patient was formally diagnosed with acute Central Serous Retinopathy (CSR) in the left eye.

The initial allopathic consultation advised against the use of steroids. The prescribed conventional medications included Nepafenac eye drops, Dorzox eye drops, Tablet U-Geritol (100 mg), and Tablet Alpros (0.25 mg). The patient's baseline clinical and optical coherence tomography (OCT) findings prior to targeted Ayurvedic intervention were recorded as follows:

Initial Assessment (July 22–23, 2025)

- **Visual Acuity:** The right eye (RE) presented at 6/18, improving to 6/6 with a pinhole. The affected left eye (LE) presented at 6/24, improving to 6/18 with a pinhole.
- **Refraction:** The right eye required -1.25 cyl at 100° to achieve 6/6 vision. The left eye required +1.00 cyl at 170° yielding 6/12, with no further visual improvement possible at that time.
- **Near Vision:** An addition of +1.25 yielded N6 in the right eye and N12 in the left eye.
- **Initial OCT Findings:** The scan revealed significant macular edema accompanied by subretinal fluid and an elevated foveal contour. The Central Macular Thickness (CMT) was extremely high at 870 µm, with CMM values of 795 µm / 948 µm.

Following this diagnosis, the patient underwent a comprehensive Ayurvedic treatment regimen involving both systemic medications and specialized local procedures, leading to drastic structural and functional improvements.

Therapeutic Intervention (Ayurvedic Treatment Regimen) The patient was prescribed the following structured treatment protocol encompassing *Shamana* (pacification), *Shodhana* (purification), and *Kriya Kalpas* (localized procedures):

Procedural Modalities & Local Applications:

1. **Sekam:** Utilizing *Yashti Darvi Kashaya* for a duration of 14 days.
2. **Jaloukavacharana (Leech Therapy):** Applied on the bilateral forehead and temple alternatively for 5 days to reduce localized inflammatory stasis.
3. **Virechana (Therapeutic Purgation):** Administered with *Avipathi Churna* (20 gm) with hot water to facilitate systemic Pitta elimination.
4. **Talapotichil:** Performed with *Vara* and *Darvi Churna* applied over the vertex.
5. **Anjanam:** Application of *Pasupathanjana* for 7 days.
6. **Takradhara:** Administered for 7 days to mitigate stress, a key trigger for CSR in Type A personalities.

Internal Medications (Shamana Aushadhi):

1. **Pathakshadhetradi Kashayam:** 90 ml twice a day (BD), before food (B/F).
2. **Kaisoraguggulu:** 1 tablet twice a day (1-0-1), after food (A/F).
3. **Brihatyadi Kashayam:** For internal administration (Panam).
4. **Saptamrutaloham Tablet:** 2 tablets twice a day (2-0-2), after food (A/F).

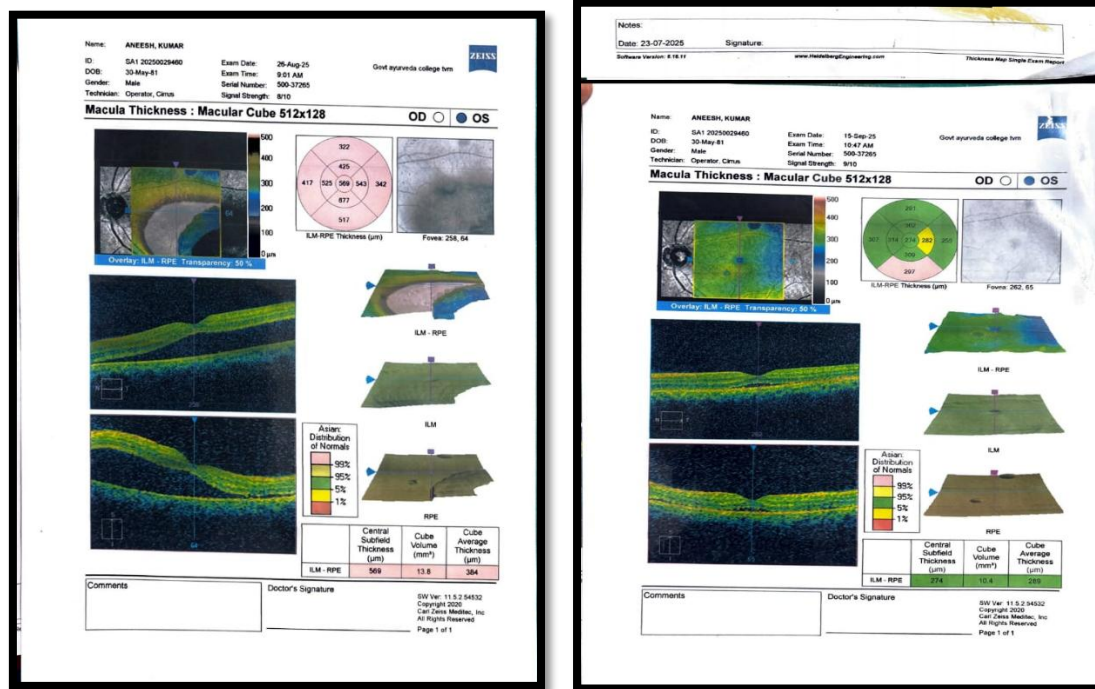
Post-Treatment Outcomes (August – November 2025)

A follow-up OCT scan on August 26, 2025, and a vision assessment on November 14, 2025, confirmed the resolution of the pathology.

TABLE NO. 1 PRE TREATMENT AND POST TREATMENT FINDINGS

Parameter	Pre-Treatment Findings (July 2025)	Post-Treatment Findings (Aug/Nov 2025)	Clinical Improvement
Central Thickness	870 µm	322 µm	Swelling reduced to near normal
Macular Subfields	700–900+ µm	320–420 µm	Values successfully normalized
Macular Morphology	Large swelling, subretinal fluid	Reduced fluid	Clear resolution of edema and fluid
Volume Map	16.36 mm ³	Visually lower	Macular volume significantly reduced
Color Map	Red/Orange (indicating thickness)	Green/Yellow (healthy tissue)	Overall thickness improved
Foveal Contour	Elevated	Restored	Better structural contour achieved
Left Eye Best Vision	6/12 (with +1.00 cyl)	6/6 (with -1.00 cyl at 80°)	Final vision fully improved to 6/6

RESULTS : PRE AND POST TREATMENT



Discussion and Clinical Integration

The integration of Ayurvedic principles in this case demonstrates a rapid and highly effective resolution of acute macular pathology. The patient's baseline OCT parameters indicated a severe form of CSR, evidenced by an exceptionally high central macular thickness of 870 µm and macroscopic morphological distortion (blurred retinal layers and elevated foveal contour). The initial hypermetropic refractive error in the left eye (+1.00 cyl) was highly characteristic of neurosensory elevation pushing the macula forward. Following the Ayurvedic intervention involving specialized procedures like *Jaloukavacharana* and *Takradhara*, alongside systemic *Virechana* and targeted *Sekam*, the resolution of the subretinal fluid directly catalyzed functional recovery. The clearance of fluid allowed the central thickness to drop drastically from 870 µm to 322 µm in roughly one month. Consequently, the color maps transitioned from pathological red/orange indicators to healthy green/yellow, and the previously blurred retinal layers became clearly delineated. Structurally, the complete restoration of the foveal contour signifies that the choriocapillaris leakage was halted and the RPE pump function was restored.

Functionally, the structural normalization resulted in the patient's visual acuity improving from a restricted 6/12 to a fully restored 6/6. Notably, the refractive requirement in the left eye shifted to -1.00 cyl, suggesting that as the macular elevation resolved, the eye returned to its natural refractive state. This case highlights the profound clinical potential of holistic Ayurvedic management in acute retinal edemas, presenting it as a viable, effective therapeutic modality for clearing subretinal fluid, restoring macular anatomy, and fully recovering visual acuity without the need for invasive laser procedures.

SUMMARY

The 43-year-old male patient initially presented in July 2025 with defective vision persisting for two weeks. Baseline diagnostics revealed significant visual impairment, with the left eye achieving only 6/12 vision with correction. Initial Optical Coherence Tomography (OCT) on July 23, 2025, confirmed severe

macular pathology, demonstrating extensive subretinal fluid, large swelling, an elevated foveal contour, and an extremely high Central Macular Thickness (CMT) of 870 μm . Initial allopathic management involved topical drops and systemic medications, with an explicit advisory against steroid use.

The patient subsequently underwent targeted Ayurvedic treatment featuring *Sekam*, *Takradhara*, *Talapotchil*, *Jaloukavacharana*, and systemic internal medications. A follow-up OCT on August 26, 2025, revealed a drastic structural improvement: the macular subfields normalized, the edema and fluid clearly resolved, and the CMT reduced to a near-normal 322 μm . The structural restoration of the foveal contour directly translated into functional visual recovery, with the final visual assessment on November 14, 2025, recording a fully restored visual acuity of 6/6 in the affected left eye.

CONCLUSION

This case report highlights the profound clinical efficacy of Ayurvedic treatment modalities in the management of acute Central Serous Retinopathy. The intervention led to a rapid and complete resolution of subretinal fluid, successfully reducing severe macular edema from 870 μm to 322 μm . Furthermore, it facilitated the complete restoration of the foveal contour and structural integrity of the retinal layers. Consequently, the patient experienced a full functional recovery, with visual acuity improving from a restricted 6/12 to a normal 6/6. The drastic structural and functional improvements observed in this case demonstrate that Ayurvedic management serves as a highly effective, non-invasive therapeutic modality for resolving macular edema and restoring vision in patients suffering from acute CSR.

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