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Case Study

CENTRAL SEROUS CHORIORETINOPATHY IN PREGNANCY: AN AYURVEDIC APPROACH

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ABSTRACT

Central Serous Chorioretinopathy (CSCR) is a disorder within the pachychoroid spectrum, characterised by the buildup of subretinal fluid (SRF) and detachment of the neurosensory retina, resulting in metamorphopsia and central scotoma. Known risk factors include stress, exposure to corticosteroids, hormonal changes, and pregnancy. This case report describes a 29-year-old woman who noticed a sudden dark spot in the central visual field of her right eye at 20 weeks' gestation. Right eye visual acuity decreased to 6/18, and optical coherence tomography (OCT) revealed neurosensory macular detachment. The clinical symptoms resembled those described as *Prathama* and *Dviteeya Patala Gata Drishti Roga* in Ayurveda. The pathogenesis involves *Tridoṣa* with *Sopha samprapti*. Prognostically, this condition is classified as *Sadya*, aligning with *Sannipatika timira*. Considering her pregnancy, appropriate Ayurvedic treatments were administered, including *Mrdu virecana, Sekam* with *Vara kashaya, thalam* with *Rasnadi curna* and *Anutaila, Pratimarsha nasya*, and *Pranayama*. The patient achieved complete resolution of the subretinal fluid (SRF), and visual acuity in her right eye improved to 6/9 Postpartum *Rasayana* therapy helped to maintain disease stability, with no recurrence observed over a year, and her vision was 6/6. This case highlights the potential supportive role of Ayurvedic management in CSCR during pregnancy.

INTRODUCTION

Central serous chorioretinopathy (CSCR) is a maculopathy characterised by the serous detachment of the neurosensory retina, primarily affecting younger individuals. Common symptoms include metamorphopsia, reduced visual acuity, central scotoma. It is often associated with psychological stress, elevated levels of endogenous corticosteroids, hormonal fluctuations during pregnancy, sleep disturbances, and characteristics of a Type A personality. Occasionally, it may present as completely asymptomatic and can resolve spontaneously. The latest research reveals a significant loss of photoreceptors in patients with central serous chorioretinopathy (CSCR), even when their visual acuity appears unaffected following remission or treatment. These findings suggest that patients with CSCR should receive treatment to prevent considerable cone loss at the macula. [2,3]

While CSCR primarily affects men, it can also occur in women, with pregnancy being identified as a risk factor. According to research, the annual incidence of central serous chorioretinopathy (CSCR) in pregnancy is approximately 0.008%.[1] Although the specific origin is unknown, high cortisol levels are suggested to be a possible factor. *Vata dosha* becomes imbalanced, and disrupts *Pitta* and *Kapha dosha.* Consequently, the integrity of the retinal layers is compromised, leading to fluid accumulation between the RPE and the Neurosensory retina. Thus, the pathogenesis of the disease can be categorized as *Vata pradhana sannipatika timira drishtigataroga* [6]. In the context of pregnancy, management focuses on safe, noninvasive *Sannipatikatimira chikitsa*. This case underscores the potential of Ayurvedic treatment in managing CSCR during pregnancy.

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Case History

A 29-year-old woman in her second trimester of pregnancy noticed a sudden appearance of a central black spot in the visual field of her right eye, associated with micropsia, metamorphopsia, and blurred vision over the past three days. She reported impaired central vision, which made it difficult to perform basic tasks such as typing on a computer. After consulting an allopathic ophthalmologist, she was diagnosed with central serous chorioretinopathy (CSCR) in her right eye and was prescribed Nepafenac eye drops (one drop, three times daily in the right eye) and Refresh Tears eye drops (one drop, three times daily in both eyes). However, concerned about medication use during pregnancy, she opted not to follow the allopathic treatment plan and instead sought Ayurvedic care.

Diagnostic Assessment

Pt evaluation at the time of OPD visit			
The patient was a second gravida with one prior abortion and no previous deliveries. The patient had a history of oral contraceptive pill use and PCOD treatment under gynecologist guidance prior to her second pregnancy, following a previous abortion. Bowel habits and appetite were normal. Sleep was disturbed due to nocturnal urinary urgency. The patient had a history of work-related stress and daily exposure to air conditioning and hot environments. She had no known comorbidities such as hypertension, diabetes mellitus, or dyslipidemia. Family history -Nil			
Visual Acuity Assessment			
UCVA	6/18(OD)	6/9(OS)	13.07.2023
BCVA	6/18	6/6	
Anterior Segment Examination	WNL-BE		
Posterior Segment (Dilated Fundus Examination)	OD Fundal glow Media Optic disc Cup-Disc Ratio Macula Foveal reflex Vessels General background	OD Present Clear Round ≈0.3 Odema Absent WNL WNL	OS Present Clear Round ≈0.3 Healthy Foveal reflex present WNL WNL
Diagnosis	**CSCR(OD)**		

Therapeutic Intervention

External therapy	**Medicine**	**Dose & Duration**	**Date & Days**
Sekam (pouring medicated decoction over the eyes)	*Vara Kashayam*	Twice daily in morning and evening	13/07/2023 to 02/08/2023 (21 days)
Thalam (Application of medicine over vertex)	*Anutailam* with *Rasnadi choornam*	Thrice daily in morning, noon evening	13/07/2023 to 02/08/2023 (21 days)
Pratimarsa Nasyam (Instilling medicine in nostrils)	*Anutailam*	(2 *Bindu* in each nostrils) once daily in evening	13/07/2023 to 02/08/2023 (21 days)
Internally			
Mridu virechanam	*Mridweeka swarasam* 25ml (soaking black resins in water overnight, followed by straining to collect the juice)	Once daily (morning before food)	13/07/2023 to 19/07/2023 (7 days)

Result

After three weeks of outpatient treatment, the patient's distant vision improved. Previously diagnosed with pregnancy-induced CSCR, the initial OCT showed significant subretinal fluid accumulation (Fig.1). After 21 days of outpatient care, the OCT revealed a substantial reduction in subretinal fluid and a decrease in central retinal thickness (Fig.2). Although visual acuity was fully restored, a mild form of metamorphopsia persisted in her right eye. To address this, she continued with *Pratimarsha nasyam, Sekam,* and *Pranayama* (breathing exercises) for one month.

Assessment of objective parameters

	Before treatment (13/07/2023) (At the time of first Visit)	**After treatment (03/08/2023) (After 21 days of treatment)**	**Follow-up (after1year) (05/08/2024)**
Visual Acuity	BCVA-Right -6/18, Left-6/6	BCVA-Right-6/9, Left-6/6	BCVA-Right-6/6, Left- 6/6
Dilated Fundus Examination	Right-macular odema Foveal reflex absent Left-WNL	Right-Odema subsided Distorted foveal reflex Left-WNL	Right-No odema Foveal reflex -present Left-WNL
OCT-Macula (OD)	Fig. (1)	Fig (2)	Fig (3)

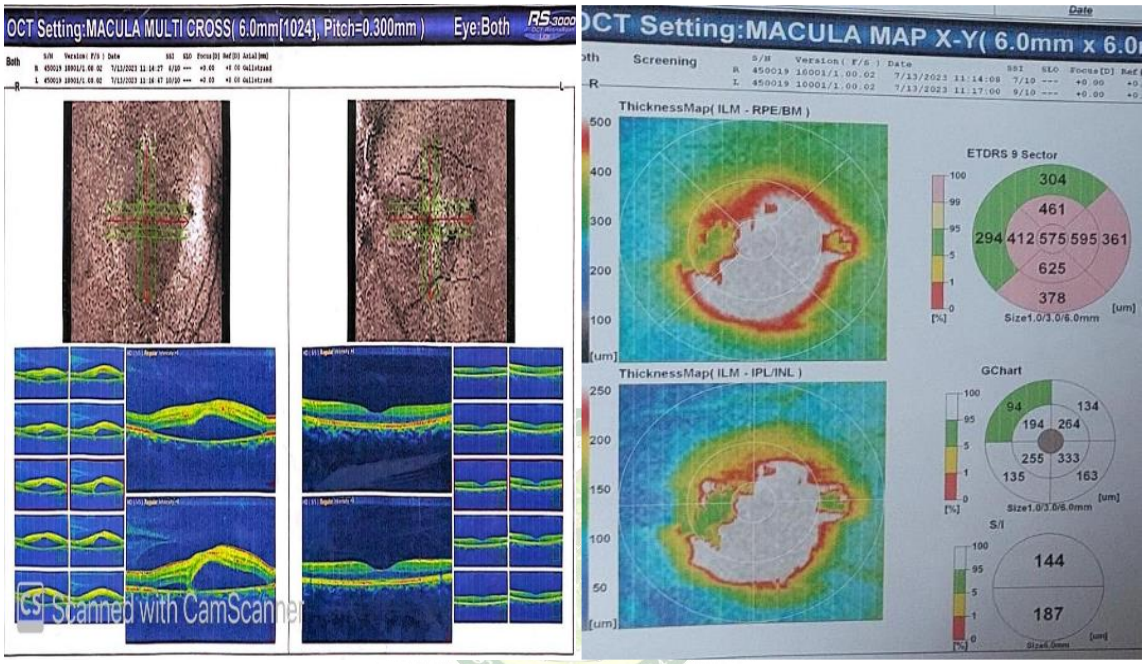

Fig. (1)

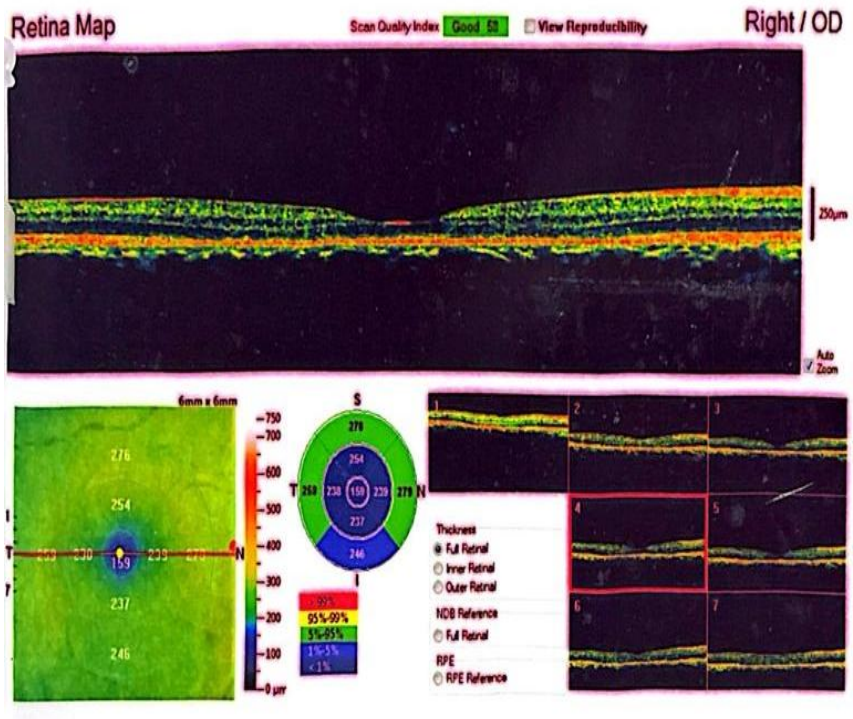

Fig.(2)

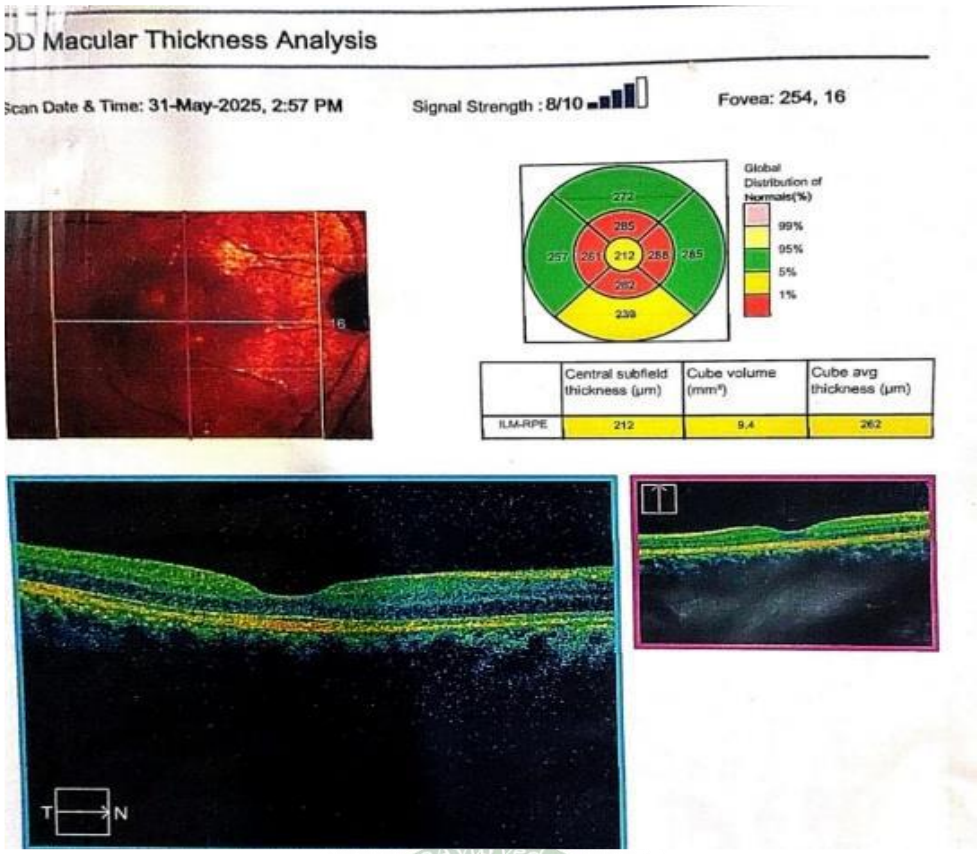

Fig.(3)

DISCUSSION

Central Serous Chorioretinopathy (CSCR) predominantly affects males but may also present in females under specific conditions, including pregnancy, although pregnancy itself has not been conclusively established as a risk factor. Psychological stress and elevated endogenous cortisol levels are the primary triggers. The pathogenesis involves dysfunction of the retinal pigment epithelium (RPE) and choroidal circulatory alterations, resulting in subretinal fluid accumulation due to disrupted fluid transport and venous dilation mediated by the mineralocorticoid receptor pathways. The reported case concerns a pregnant woman in her second trimester without hypertension or diabetes mellitus.

From an Ayurvedic perspective, the eye *(Chakshu),* identified as a *Pitta sthana*, and normal functioning of *Pitta* is *Darsanam* (Vision)[9], and *Vata dosha* possesses the property of *Sthula anu srotasam bhetta* (it pervades all the body channels, both gross and subtle).[10] During her pregnancy, the patient experienced work-related stress, disturbed sleep, and environmental fluctuations, which disrupted the normal functioning of *Vata, Pitta* and *Kapha dosha*, leading to increased cortisol levels. while aggravated *Vata* with its *Chalaguna* causes disruption of outer blood retinal barrier facilitating fluid accumulation within the retinal layers and leading to neurosensory detachment. So, the Clinical manifestations, such as metamorphopsia, micropsia, and central scotoma reflect *Doshic* imbalance, analogous to *Vata* predominant *Sannipatika timira* disease*.* This condition is further characterized by *Srotavaigunya*, involving obstruction of the *Rasavaha* and *Raktavaha srotas*, weakening the structural integrity and precipitating acute retinal manifestations.

Therapeutic management avoided aggressive detoxification contraindicated in pregnancy, employing gentle Ayurvedic interventions such as *Mṛdu virecana* with *Mrdweeka svarasa* to restore *Vata- Pitta* balance and *Vata anulomana.* External therapies targeted the relief of *Srotorodha* and mitigation of *Kapha* stagnation to enhance retinal stability. *Vara Sekam* was utilized for its anti-inflammatory and antioxidant properties to alleviate *Srotorodha* (Improved microcirculation around the eye supported fluid clearance from the retina, reducing edema and stabilizing retinal function). while *Thalam* combined with *Anutaila* and *Rasnadi Churna* contributed to inflammation reduction and subretinal fluid management. *Pratimarsha Nasya* (nasal route of drug administration) with *Anutaila* was safely administered to clear vitiated *Kapha* without compromising channel integrity. Stress modulation was supported through *Nadishodhana Pranayama* (Breathing exercises).

During the course of treatment, objective parameters including visual acuity and optical coherence tomography (OCT) were routinely assessed. Both parameters demonstrated gradual and consistent improvement over time. In parallel, the patient's

subjective symptoms, such as central scotoma, micropsia, and blurred vision, were carefully monitored and documented at each follow-up visit. The cumulative findings indicate that the Ayurvedic therapeutic interventions contributed to the resolution of subretinal fluid, improvement in retinal morphology, and stabilization of visual function. These observations suggest that such interventions may be effective in the management of pregnancy-induced central serous chorioretinopathy (CSCR) while remaining safe for maternal and fetal health.

Postpartum, *Cyavana Prasha*, rich in antioxidants, was prescribed as a *Rasayana* to promote detoxification, neutralize free radicals, and prevent disease recurrence. This comprehensive, pregnancy-safe regimen effectively addresses inflammation oxidative stress, and *Doshic* imbalances, thereby supporting retinal stability and facilitating *Samprapti- vighatana* in CSCR management.

CONCLUSION

This case illustrates that carefully selected Ayurvedic interventions can offer safe and effective supportive management for CSCR during pregnancy, a period in which conventional treatment options are limited. By addressing key pathogenic factors- such as stress-induced *Dosha* imbalance, *Srotorodha*, inflammation, and oxidative stress- the individualized regimen facilitated restoration of retinal function and complete resolution of subretinal fluid, with no recurrence during one year of follow-up. The successful outcome highlights the potential role of pregnancy-appropriate Ayurvedic therapies, combined with modern diagnostic monitoring, in promoting retinal stability and preventing long-term complications. Further clinical studies are warranted to explore the broader applicability of such integrative approaches in CSCR management.

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