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CASE REPORT

AYURVEDIC MANAGEMENT OF RECURRENT CENTRAL SEROUS RETINOPATHY WITH PIGMENT EPITHELIAL DETACHMENT- A CASE REPORT

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Abstract

Central Serous Retinopathy (CSR) is an idiopathic disorder characterized by spontaneous serous detachment of the neurosensory retina in the macular region, with or without retinal pigment epithelium detachment (PED). Symptoms of CSR include unilateral blurring of vision, metamorphopsia and micropsia. Management of CSR includes conservative measures, laser treatment and anti-VEGF injection, but recurrence is also seen in up to 50% of cases. According to Ayurveda, the signs and symptoms of CSR can be considered under the dosha vitiation in Pradhama and Dvideeya patala, mainly because of the imbalance of kapha pitha dosha and Rasa and raktha dhathus. Rasa and raktha dhathu vitiation is caused by the Vata dosha. This implies the involvement of tridosha in the manifestation of CSR. So we can correlate the CSR with PED to the Sannipathika timira lakshana. The pathogenesis of this disease can be considered under the sopha samprapthi; thus, kapha pitha samana, sophahara chikitsa and sannipathika timira chikitsa were adopted for the management of this disease. Here we illustrated the case of a male patient with 38 year old had gradual blurring of vision in the right eye for one month diagnosed with CSR with PED. It is effectively managed with internal medications and procedures like takradhara, avagundanam, rooksha vasthi etc. After the treatment, his right eye vision improved from 6/18 to 6/6b. Optical Coherence Tomography (OCT) also presented with a marked reduction in macular oedema. Six-month follow-up was done with Chakshushya and Rasayana drugs like Sapthamrithaloha tablet, Aswagandhaghana vati etc. There is no recurrence of the symptoms during this period. Thus, this case proves that Ayurvedic management is effective in managing and preventing the recurrence of CSR

Introduction

Central Serous Chorioretinopathy (CSR) is an idiopathic disease that mainly affects a middle-aged person, usually in the unilateral eye. The annual incidence of CSR is 9.9 per 100,000 men and 1.7 per 10,000 women in a population[1.] Central serous chorioretinopathy (CSR) is manifested as spontaneous serous detachment of the neurosensory retina in the macular

region, with or without retinal pigment epithelium detachment (PED). Even though pathogenesis is not known precisely, the widely accepted theory is the hyperpermeability of choroidal vasculature.

Symptoms of CSR include blurring of vision usually occurs unilaterally, metamorphopsia, micropsia, scotoma and mild dyschromatopsia. Important risk factors of CSR include steroid use, pregnancy, Cushing's syndrome, psychological stress and sleep disorders. Normally spontaneous resolution occurs within 3-6 months with almost normal vision. Recurrence is seen in up to 50%, but when this detachment lasts for a prolonged time, then it will cause gradual degeneration of RPE and photoreceptors, finally resulting in a permanent reduction in vision.

In Ayurveda, the signs and symptoms of this can be considered under the dosha vitiation in Pradhama and Dvideeya patala affecting blurring of vision along with metamorphopsia and micropsia[4]. Pathogenesis points to the Pitta and Kapha dosha involvement in this disease mainly because kapha dosha is responsible for the sthairyatha of the blood-retinal barrier (BRB), and pitha dosha maintains the regulations of metabolites between BRB. So, any derangement of the kapha and pitha dosha leads to fluid leakage across the BRB, causing excess accumulation of serous fluid between the retinal layers. The normalcy of Pitha and Kapha dosha is maintained by Vatha dosha. The etiological factors like Ratrijagarana, Soka and Krodha lead to the vitiation of Vatha dosha thereby causing an imbalance of Pitha and Kapha dosha. This pathology can be considered under the *Ekangaja sopha* along with Sannipathika timira thus, sannipathika timira chikitsa and sophahara chikitsa were adopted for the management of this disease.

Case Report

38-year-old male patient, network engineer by profession non-diabetic was normal before 1 ½ months. Gradually he was experiencing blurring of vision and seeing straight objects as curved by his right eye from the first week of September 2022 onwards (He had a similar attack of CSR in July 2021 and February 2022). He noticed this change by closing his left eye and trying to read or do work on his laptop with his right eye; then, he failed to do that because of blurred vision and central scotoma. Therefore, he consulted an ophthalmologist for these complaints, who advised to take OCT and diagnosed as CSR-RE on 05/09/22. The doctor gave nepafenac e/d –bd –RE and advised him to do an angiogram before planning an intra-vitreal injection. He refused to do the same due to poor economic circumstances. Then he consulted in shalakyatantra OPD of Government Ayurveda College and did an investigation, his visual acuity was reduced to 6/18 for the right eye, and the left was 6/6. Near vision without spectacles was N18 in the right eye and N6 in the left eye. On dilated fundus examination of the right eye revealed a dull foveal reflex and ring reflex in the macular area, which are suggestive of CSR-RE. His treatment was started on 06.10.2022 after obtaining consent. After three weeks of OPD treatment, he got symptomatic relief, and his vision improved from 6/18 in RE on 06/10/22 to 6/6p RE on 01/11/22. But blurring of vision, metamorphopsia, and central scotoma was persisted, so he admitted on 01.11.2022 for further management.

Relevant Past History with Intervention

He had a history of HTN -3 years back and took one month of medication, stopped after proper consultation with the doctor. He was also affected by COVID-19 two times, the first attack in June 2021 and the second in January 2022. Both times he had severe breathing problems and took Seroflo 250mg inhaler combination of salmeterol and Fluticasone propionate for six months at the time of the first attack. The second time he took the Deriphyllin tablet for one month. After these COVID attacks, he was affected by recurrent CSR (July 2021 and February 2022). Now it is his third episode of CSR.

Personal History

Appetite – reduced

Bowel – constipated

Sleep – disturbed

Mental status- Due to his wife and children's ailments and work stress, he was mentally worried at that time.

Food habits- More prone to spicy, Non veg food items

Treatment and Observations

Table 1: Internal Medicines: During IP Treatment, Except the Day of Virechana

SL NO	Medicines	Anupana	Dose	Days
1	Punarnavadi kashayam		90 ml -6 am and 6 pm -before food	20 days
2	Chandraprabha gulika	Luke warm water	1-0-1 after food	20 days
3	Dasamoola harithaki +avipathi choornam		5 gm lehya +5 gm churnam each at bedtime - 9 pm – after food	20 days

Table 2: Procedures

SL NO	Procedure	Medicines	Dose	Time and Duration	Date	Days
1	Sekam	Triphala Kwatham		8 am and 3 pm	01/11/2022 - 20/11/2022	21 days
2	Takradhara	Dhatri Siddha Takram		10 am for 45 minutes	03/11/2022- 09/11/2022	7 days
3	Sirolepam	Triphala+Yashti Choornam in Triphala Kwatha		11.30 am for 45 minutes	04/11/2022- 10/11/2022	7 days
4	Talam	Rasnadi Choornam +Jambeera Swararam		3 pm for 20 minutes	04/11/2022- 20/11/2022	17 days
5	Vicharana Snehapanam	Guggulu thikthaka gritham	20gm -30 gm at 9 am and 8.30 pm, respectively		10/11/2022- 12/11/2022	3 days
6	Virechana	Avipathi Choornam with Draksha Hima Kashayam	25g	6 am	13/11/2022	1 day
7	Nasyam	Surasa Swarasam+Honey+Saidhavam	10 drops -first 2 days after that, 20 drops in each nostril	8 am	14/11/2022 20/11/2022	7 days
8	Avagundanam	Triphala choornam +dhanyamlam		10 am and 3 pm	14/11/2022 20/11/2022	7 days
9	Rooksha Vasthi	Amrithotharam Kashayam-480ml Vaiswanara Choornam-20g Triphala Choornam-10g		2 pm after the food	15/11/2022 19/11/2022	5 days

Result

There was an improvement in the distant and near vision after three weeks of OPD treatment. The patient was admitted, and OCT was taken at the time of admission, which showed CSR with PED and central retinal thickness was 251µm (Figure 1). After 21 days of IP management OCT scan was repeated for the right eye only (on 24/11/22 due to the unavailability of a technician at the time of discharge); it showed a marked reduction in CSR with PED and central retinal thickness was 239 µm (figure 2). Fundus examination shows normal findings in the right eye. By that time, visual acuity was restored completely and maintained during the follow-up period. Even though his visual acuity improved markedly mild form of clarity problem persisted in his right eye. For this, he continued medications for one more month.

Table 4: Visual acuity

DATE	OD		OS	
	Distant vision	Near vision	Distant vision	Near vision
06/10/22 – First day of OPD	6/18	N_{18}	6/6	N_6
01/11/22- At the time of admission	6/6p	N_8	6/6	N_6
20/11/22- At the time of discharge	6/6p	N_8	6/6	N_6
22/12/22- Review after discharge	6/6b	N_6	6/6	N_6

Table 3: follow up medications

SL NO	Medicines	Anupana	Dose	Days
1	Punarnavadi kashayam		90 ml bd , 6 AM and 6 PM	1 month
2	Gokshura Guggulu	Luke warm water	1-0-1 after food	1 month
3	Sekam with Triphala + Yashti Kashyam			1 month
4	Dasamoola harithaki		1 teaspoon at bed time	1 month
5	Sapthamritha loham	Luke warm water	1-0-1 after food	6 month
6	Aswagandha Ghana vati	Luke warm water	1-0-1 after food	6 month

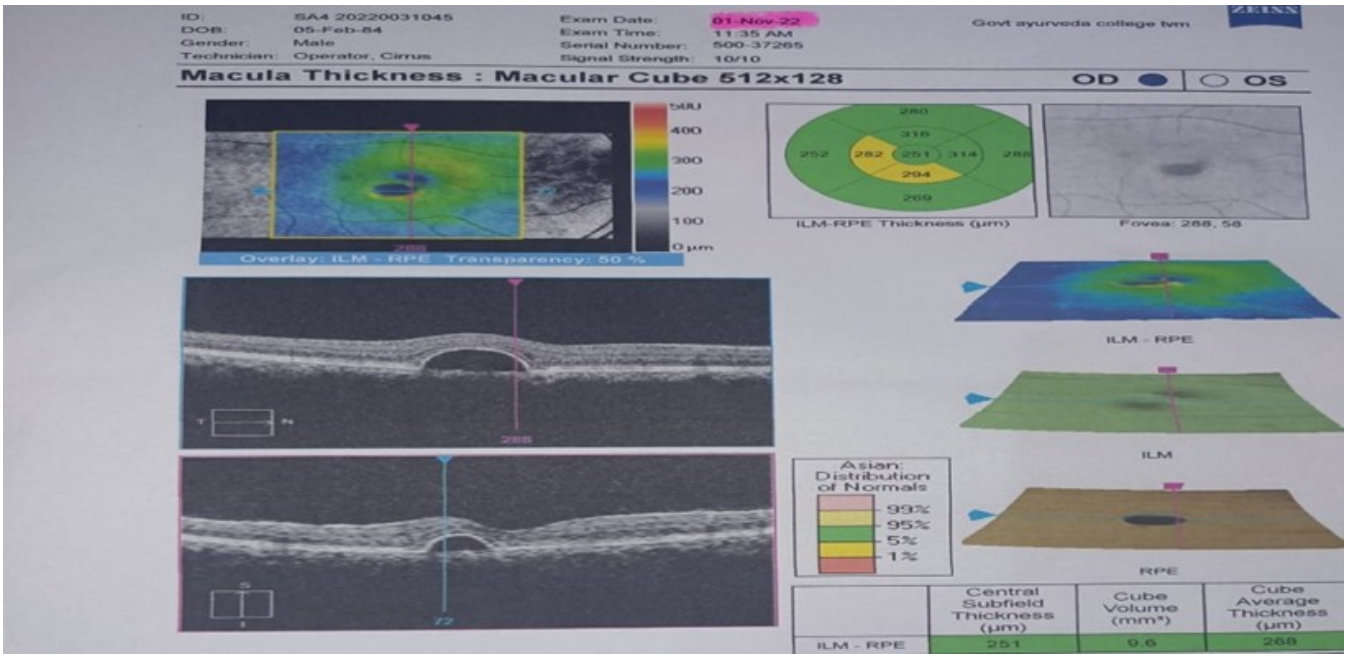

Figure 1: OCT Report at the Time of Admission

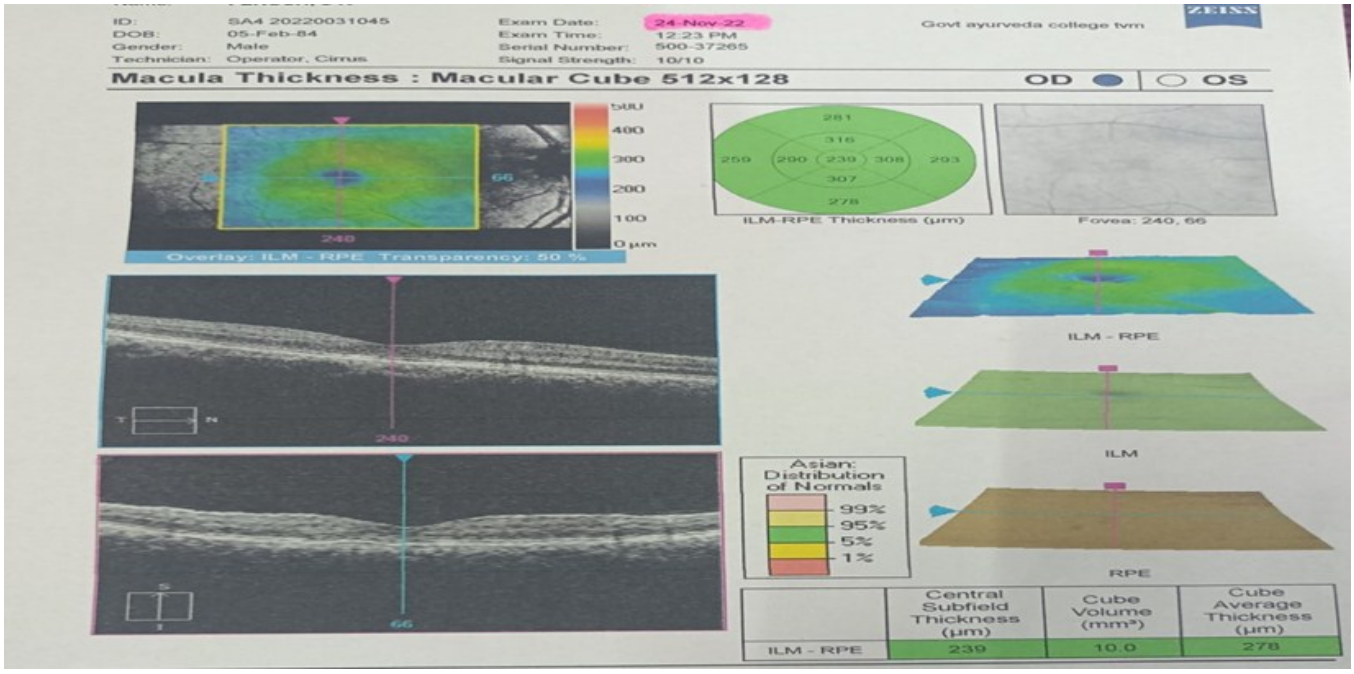

Figure 2: OCT Report After Treatment

Discussion

The retina is the outermost layer of the eyeball and is the body's highly developed tissue. It is arranged in two distinct functional components, the pigment epithelium and neurosensory retina. The pigment epithelium provides metabolic support to the neurosensory retina and later helps in visual perception[5]. From an Ayurvedic perspective, vatha and pitha dosha play a significant role with the support of rasa and raktha dhathu. Kapha dosha is the crucial factor that maintains the rasa- raktha dhathu in the equilibrium state, so any vitiation in kapha dosha or rasa dhathu is responsible for the initiation of retinal pathology[6]. Considering the above fact, kapha dosha is the main factor to be kept in a normal stage to maintain retinal health, which is clinically significant in managing CSR and diabetic retinopathy.

Rasa dhathu is considered a vital element for maintaining life. It is derived from the food's essence and has the function of preenana (nourishment) of other dathus[7]. Intake of cold, heavy, excess fatty food items, increased worries, and mental stress lead to the morbidities of Rasa dhatu[8]. Raktha dhathu is derived from rasa dhathu due to dhathu parinama and has the property of jeevana[6] and those who have sudha raktha in their body, the Indriyas are more powerful, and they perform their function effortlessly. But some dietary factors and regimens cause alternations in the normalcy of raktha dhathu. It includes teeksha (strong), amla (sour), kadu rasa (pungent taste), madya (alcohol), dadhi (curd), kshara ahara (alkali), overexposure to sunlight and wind, excessive intake of food, control the natural urges like chardhi, avoidance of raktha mokshana (bloodletting) in proper

time. Along with this, some mental factors also cause raktha dushti, including krodha (anger), bhaya (fear) and srama (mental tension)[9]. An interrelation exists between rasa,raktha dhathu and kapha, pitha dosha simultaneously, which can be substantiated by Asrayaasrayee bhava (reciprocal relation) and upadathu. So when there is a vitiation of kapha and pitha dosha it ultimately results in retinal diseases like CSR.

Intake of ushna, theekshna kadu ahara, krodha (anger), bhaya (fear) and srama (mental tension), chinda (increased thoughts) are present in this patient which act as a causative factor for the rasa raktha dushti and leads to imbalance of kapha and pitha dosha which cause srotho rodha and vimargagamana finally results in leakage of fluid across the BRB causing excess accumulation of serous fluid between the retinal layers.

The pathogenesis of CSR with PED can come under the samprapthi of Ekanga sopha in which rasa and raktha dhathu dushti are involved. The etiological factors of Sopha includes theeksha (strong), amla (sour), dadhi (curd), kshara (alkali), guru (heavy), kadu rasa (pungent) ahara intake and improper food habits, control of natural urges like chardhi,mootra and purisha etc[10]. In the present case, the kapha pitha dushti with rasa raktha dhathu vitiation occurs in Siras and Netra. In siras it is considered as Siro syandana and in Netra it is pradhama and dwitheeya padala dushti. So, the local treatment in netra, along with siras is incorporated in the management of the present case. The medicines having deepana, pachana and sophahara properties were given internally and local rookshana procedures mainly sirolepam, takradhara talam and teekshna nasyam with kapha pitha samana drugs were given externally to reduce srothorodham and syandana of siras. Local treatment of Netra includes seka, a potent form of Netra kriyakalpa and mainly indicated in acute conditions of eye diseases and Avagundanam. Along with this, to prevent recurrence Rooksha vasthi was done at the final stage of the treatment which is highly beneficial to prevent the prathiloma gathi of dosha from koshta to netra by its vathanulomana,kleda soshaka properties.

Conclusion

The clinical features of CSR show similarities with Sannipathika Timira, especially kapha and pitha dosha vitiation. So, the treatment adopted here was kapha pitha samana chikitsa along with sannipatha timara and sophahara chikitsa. Oral intake of drugs having kapha pitha samana along with deepana, and pachana sophahara properties have been given along with takradhara, sirolepam, seka which have shown significant results in relieving this condition. The patient got complete relief of signs and symptoms and no recurrence was found during the follow-up period.

Conflict of Interest

Nil

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