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EFFECT OF SELECTED AYURVEDA TREATMENT PROTOCOL IN THE MANAGEMENT OF CENTRAL SEROUS CHORIORETINOPATHY

Ayurveda

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ABSTRACT

Central serous chorioretinopathy (CSCR) is characterized by spontaneous serous detachment of neurosensory retina in the macular region, with or without retinal pigment epithelium detachment. The condition typically affects young and middle-aged (25 – 55 years) males more than females, with an incidence of 10 in 100,000. Risk factors include Type- A personality, emotional stress, steroid intake, systemic lupus erythematosus (SLE), pregnancy and Cushing disease. The disease manifests as sudden painless onset of defective vision associated with relative scotoma, micropsia and metamorphopsia. Though it is self- limiting, recurrence and severity may cause permanent vision loss and treatment options such as photodynamic therapy (PDT), intravitreal injections are not much promising and expensive. CSCR can be correlated with Dhoomadarshi / Dhoomara on the basis of etiological considerations whereas the clinical presentation resembles 1st and 2nd Patalagata Timira. Pathogenesis of CSCR suggests involvement of mainly Kapha – Pitta Dosha associated with Vata Vaigunya. Thus, the basic treatment strategy adopted should be Vatanulomana and Kapha-Pitta Samana. 15 patients within the age group of 25-55 years diagnosed with CSCR selected on the basis of inclusion criteria, attending OPD and IPD of Shalakyatantra, Govt. Ayurveda College, Thiruvananthapuram will be subjected to Sekam with Yashti Darvi Kashayam and Jalukavacharanam for 7 consecutive days, followed by Takradhara (Sirodhara) for the next 7 consecutive days. Clinical evaluation and investigations will be done prior to the commencement of intervention, 8th day and 15th day. Results will be statistically analyzed after the study by paired t test.

KEYWORDS

CSCR, Jalukavacharanam, Seka, Takradhara

INTRODUCTION

Central serous chorioretinopathy (CSCR) also known as central serous choroidopathy (CSC) or central serous retinopathy (CSR) is characterised by spontaneous serous detachment of neurosensory retina in the macular region, with or without retinal pigment epithelium detachment.

CSR mostly affects males between 25 to 55 years of age[1]. Psychiatric disturbances, Type A personality, emotional stress and depression, pregnancy, hypertension, smoking, steroid medications, antihistamines and alcohol consumption have been proposed as risk factors in the pathogenesis of CSCR.The etiology of CSC is mostly attributed to hyper permeability of choroid leading to subsequent leakage of plasma into the retina. The most common presenting symptoms of CSCR are decreased vision, metamorphopsia and micropsia. The diagnosis is done by dilated fundus exam and imaging of retina and the choroid with OCT, Fundus Fluorescein Angiography, Indocyanine Green (ICG) angiography and Fundus Auto Fluorescence.

CSCR is the 4th common vision threatening disease of retina. There are limitations in current treatment modalities which includes observation, laser treatment, photodynamic therapy (PDT), and intra-vitreal anti-VEGF agents[2]. Observation take 3-6 months and rest other methods are expensive and may cause complications necessitating search for alternative effective therapies. CSCR can be correlated with *Dhoomadarshi / Dhoomara* on the basis of etiological considerations whereas the clinical presentation resembles 1st and 2nd *Patalagata Timira*. The first and second *Patalagata Timira lakshanas* like *Avyaktha rupadarsana, Hraswa Vridha Viparyaya* simulates the symptoms of CSCR like blurring of vision, micropsia and metamorphopsia[3]. Pathogenesis of CSCR suggests involvement of mainly *Kapha – Pitta Dosha* associated with *Vata Vaigunya* in its early stage along with *Rasavaha* and *Rakthavaha Srotodusti.* As it becomes chronic, the degenerative changes in the retinal pigment epithelium and photoreceptor cells will be more dominant resulting in permanent visual disturbances.

Considering all these factors, this study is being undertaken as an effort to find an effective Ayurvedic treatment protocol for the management of CSCR. The selected treatment protocol includes *Sekam* with *Yashti Darvi Kashayam* and *Jalukavacharanam* on forehead for 7 consecutive days followed by *Takradhara (Sirodhara)* for the next 7 consecutive days. Seka is the foremost treatment which is very effective in early stage of eye diseases[4]*Sekam* with *Yashti Dravi Kashayam* is effective in treating CSCR due to its *Kapha-Pitta* pacifying properties. *Jalookavacharana* helps by balancing *Pitta* and *Rakta*, improving microvascular circulation, and reducing localized swelling.[4] *Takradhara,* with its *Rooksha* and *Seetha* properties, aids in reducing excess moisture and pacifying *Pitta*. Adding *Dasamoola churnam, Musta,* and *Amalaki churnam* to *Takradhara* enhances its anti-inflammatory properties, making the treatment protocol effective in managing CSCR by targeting the underlying *doshic* imbalances.[6]

METHODOLOGY

Study Design

Interventional study (open clinical trial without a control group)

Study Setting

OPD and IPD of Shalakyatantra, Govt. Ayurveda College Hospital, Thiruvananthapuram.

Study Population

15 diagnosed cases of CSCR within the age group 25-55 years selected as per inclusion criteria from the OP and IP of Department of Shalakyatantra, Govt. Ayurveda College, Thiruvananthapuram.

In the Clinical study,15 patients diagnosed with CSCR from the IPD and OPD of Shalakya Tantra, Government Ayurveda College Hospital, Thiruvananthapuram, were selected based on inclusion and exclusion criteria. The data collection was done using a case proforma, clinical examinations, and relevant investigations. Treatment was provided for 14 consecutive days and assessed Visual status using the LogMAR chart and central subfield thickness and macular cube volume in OCT on 0th,8th, and 15th day of treatment. Later results were compiled, analysed, and statistically documented. The data were analysed with a paired t-test.

INCLUSION CRITERIA

a) Diagnosed cases of CSCR with symptoms like blurring of vision, distorted vision, scotoma, micropsia and metamorphopsia.
b) Patient between age group of 25-55 years irrespective of gender, religion and socioeconomic status
c) Patients with visual acuity of 6/9 to 6/60 (Log MAR 0.2 to 1.00)
d) Patients with increased central subfield thickness and macular volume in OCT.

e) Patients with well controlled blood sugar level with HbA1C less than 7.
f) Patients with well controlled blood pressure and serum cholesterol level.
g) Patient with written informed consent.

Table No 1: Intervention Of The Study

Sl. No	Intervention	Drug	Duration	Mode of administration	Time of administration	Dose
1	Sekam	Yashti Darvi Kashayam	1-7 days	Externally	8 am and 4 pm	
2	Jalukavacharanam		1-7 days	Externally on forehead	10 am	
3	Takra dhara (sirodhara)	Musta,Amalaki,Dasamoola churna sidha takram	8-14 days	Externally	10 am	
4		Punarnavadi kashayam	1-14 days	Internally	6 am & 6 pm Before food	48 ml morning & evening Before food
5		Chandraprabha gulika	1-14 days	Internally	6 am & 6 pm	1-0-1, before food,along with kashayam

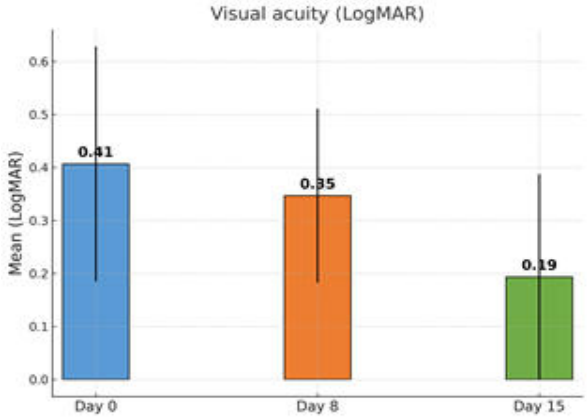
Exclusion Criteria
a) Those who have systemic disorders like renal and cardiac diseases
b) Those who have malignancy, TB, anaemia and bleeding disorders, pregnancy and lactation
c) History of Laser/PDT treatment for CSCR within 3 months of enrolment
d) Use of corticosteroids in all forms within 3 months of enrolment
e) History of glaucoma in either eye
f) Presence of sub-retinal fluid (SRF) or intra-retinal fluid (IRF) secondary to causes other than CSCR
g) Patients under steroid medications
h) Those who have sinusitis and pyrexia

AIM & OBJECTIVE
1) To assess the effect of selected Ayurveda treatment protocol for a period of 14 days in improving visual acuity and reducing central subfield thickness and macular volume in patients of age group of 25-55 years, irrespective of sex, diagnosed with CSCR.
2) To critically analyse CSCR in an Ayurvedic perspective.

INTERVENTION
Treatment protocol includes Sekam with Yashti Darvi Kashayam 200ml for each eye for 1 minute morning and evening and Jalukavacharanam on forehead, both for first 7 consecutive days followed by Takradhara (Sirodhara)using Dasamoola Churnam along with Musta and Amalaka Churnam for the next 7 consecutive days along with internal medications administered from the first day itself.

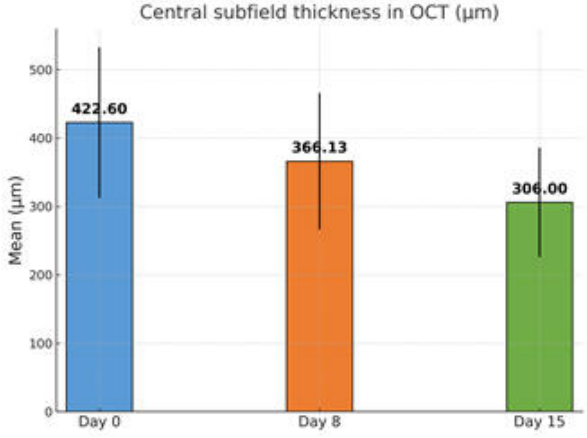
Internal Medications
1. Punarnavadi Kashayam – 48 ml morning and evening, before food at 6 am & 6 pm (1-14 days)
2. Chandraprabha gulika – 1-0-1 with Kashayam,before food(1-14 days)

RESULT
Effectiveness In Visual Acuity
Analysis of LogMAR visual acuity revealed a gradual and consistent improvement over the treatment period. By Day 8, 33.33% (n = 5) of patients showed improvement from baseline, while 66.67% (n = 10) maintained their initial visual acuity without deterioration. By Day 15, all patients (n = 15) demonstrated improvement compared to baseline values, with no cases of unchanged or worsened vision. This uniform recovery pattern indicates a favourable treatment response, likely reflecting resolution of subretinal fluid and restoration of macular function in CSCR.



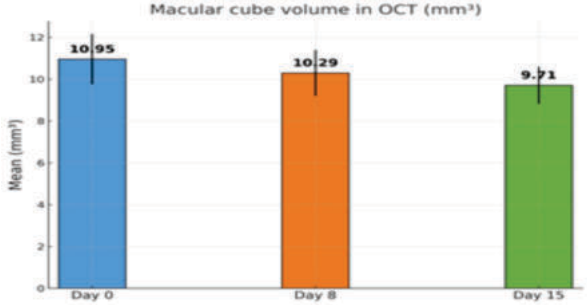
Graph No: 1 Comparison Of Visual Acuity LogMAR Score With Respect To Baseline (Day 0)

Effectiveness In Central Sub Field Thickness
Central subfield thickness showed uniform reduction in all patients by Day 8, with further reduction observed by Day 15. At Day 8, all patients (n=15) demonstrated decreased thickness compared to baseline, and this trend persisted at Day 15, indicating a consistent anatomical improvement. The reduction in subfield thickness correlates with the resolution of subretinal fluid, supporting the observed improvements in visual acuity.



Graph No : 2 Comparison Of Central Subfield Thickness In OCT With Respect To Baseline (Day 0)

Effectiveness In Macular Cube Volume
There was a 6.02% reduction in macular cube volume from day 0 to day 8, and from day 8 to day 15, there was an additional 5.63% reduction. Overall, from day 0 to day 15, the macular cube volume decreased by 11.32%. All patients showed improvement in macular cube volume over the 15 days, with an average reduction of approximately 11.1 %. There was a consistent and progressive reduction in macular cube volume from baseline (0th day) through the 8th day and 15th day of treatment. Statistical analysis showed that these reductions at each time point were highly significant.



Graph No : 3 Comparison Of Macular Cube Volume In OCT With Respect To Baseline (Day 0)

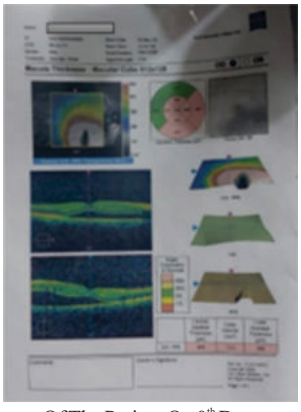


Figure 1: OCT Image Of The Patient On 0th Day

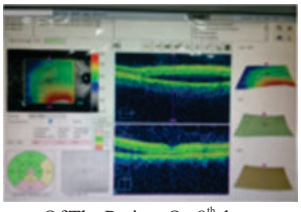


Figure 2: OCT Image Of The Patient On 8th day

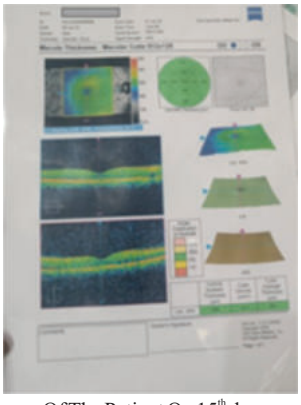


Figure 3: OCT Image Of The Patient On 15th day

DISCUSSION

The effect of treatment was assessed based on improvement in visual acuity in the LogMAR chart and a decrease in central subfield thickness and macular cube volume in OCT.

By statistical analysis, it is found that *Yashti Darvi Netra Seka* and *Jalukavacharanam* on the forehead, both for the first 7 consecutive days, followed by *Takradhara (Sirodhara*)using *Dasamoola Churnam* along with *Musta* and *Amalaka Churnam* for the next 7 consecutive days, along with *Punarnavadi Kashayam* and *Chandraprabha Gulika* as internal medications administered from the first day itself, is effective in improving vision (Log MAR visual acuity testing) and reducing macular oedema (central subfield thickness and macular volume in OCT). The combination of *Yashti* and *Darvi* in *Sekam* might aim to reduce inflammation and fluid leakage in the retina, promote retinal health and function, and support the healing process in CSR by its nature of *kapha pitta samanatwam. Jalaookavcharana* exhibits anti-inflammatory effects, improves microvascular blood supply, and provides effects similar to those of anti-VEGF and steroid therapy without their side effects. It could be done for local anti-inflammatory action, *pitta-rakta sodhana,shothaghna,* and *shamana* properties that reduce macular oedema. *Musta* is having *Laghu* and *Ruksha guna.* It has the property to absorb all water content and also anti-inflammatory and antioxidant properties. *Amalaki* also has anti-inflammatory and antioxidant properties and helps to reduce oedema. Takradhara have anti-stress property relieves stress, being one of the major risk factors in CSR. *Punarnava,* along with other herbs that have a diuretic effect, anti-inflammatory properties, and give protection against oxidative stress, helps in the balancing of *kapha–pitta* dosha, which are often imbalanced in CSCR. *Chandraprabha Gulika* also balances *tridosha* and enhances urine output, thereby facilitating the removal of excess interstitial fluid and reducing macular oedema.

CONCLUSION

In this research work, the effect of selected Ayurveda treatment protocol in the management of central serous chorioretinopathy was studied. The intervention was statistically significant in improving vision (Log MAR visual acuity testing) and reducing macular oedema (central subfield thickness and macular volume in OCT) among patients diagnosed with CSCR. CSCR is more prevalent among middle-aged adult males, with a peak incidence in the fourth and fifth decades of life. The incidence of the disease is higher among the middle socioeconomic class.

CSCR is more common among people doing jobs associated with high levels of psychological stress, irregular working hours, and sustained visual demand. Exogenous corticosteroid exposure is a well-documented risk factor for CSCR. Person with a habits of taking a bath immediately after physical exertion or exposure to sunlight, sleeping fewer than 5 hours per night, experiencing a stressful or depressed situation, consuming carbonated drinks, pickle or vinegar, not taking their meals at regular times, suppressing natural urges (such as urination, defecation, or hunger), having hard stools and experiencing acid belching or heartburn were found to be more prone to the disease.
The majority of the patients presented with blurring of vision and metamorphopsia. None of the cases worsened during the study. No adverse effects of the therapy were observed during the treatment period. Satisfactory results were obtained in the improvement of vision and reduction in macular volume.

LIMITATIONS

- Sample size was not adequate to draw a precise conclusion.
- Follow-up period was not considered.
- The study was conducted in a particular geographic area only.
- Advanced investigative procedures were not adopted in the present study.
- The duration of study was limited.

SUGGESTIONS

To substantiate the overall effect and mode of action of the treatment, further studies are required with the following modifications.

- The study needs to be conducted in a larger sample.
- Long-duration studies are to be conducted with follow-up periods to assess the persistent effect.

Source Of Support

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REFERENCES

1. Khurana AK. *Comprehensive ophthalmology*. 9th ed. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2023.
2. Karunakaran S, Jayalakshmi S. Effect of Sadyovamana in the treatment of central serous chorioretinopathy: a case study. *AYUSHDHARA*. 2020 Jun 15;7:2681–2684.
3. Srikantamurthy KR. *Susruta Samhita*. Varanasi: Chaukhambha Orientalia; Uttara Sthana. p. 32.
4. Srikantamurthy KR. *Ashtanga Hridaya*. Varanasi: Chaukhambha Orientalia; Uttara Sthana. p. 111.
5. Vaidyan KV, Pillai SG. *Sahasrayogam*. 33rd ed. Alappuzha: Vidyarambham Publishers; 2015. p. 475
6. Ministry of Health and Family Welfare, Government of India. The Ayurveda Pharmacopoeia of India. Part 1, Vol. 1. 1st ed. New Delhi: Ministry of Health and Family Welfare; 2001.