

Case Report

Ayurvedic Management of Branch Retinal Vein Occlusion after Dexamethasone Implant: A Case Report with BCVA and OCT Follow-up

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ABSTRACT:

Background: Branch retinal vein occlusion (BRVO) is a vision threatening retinal-vascular disease. *Ayurveda* correlates BRVO with *Trutiya patalagata Timira*, a disease manifested by the vitiated *Tridosha* with *Rakta* (blood) entering the *Trutiya Patala* causing *Sanga* (obstruction), *Vimargagamana* (deranged movement) of *Rakta*, which results in distortion and sudden diminution of vision. **Case Presentation:** A 41 year old hypertensive male patient presented with sudden painless diminution of distant vision and metamorphopsia in the right eye (RE) and initially managed with dexamethasone intravitreal implant. Best Corrected Visual Acuity (BCVA) was LogMAR 0.301 in RE, LogMAR 0 in LE. His fundus photo showed hard exudates, multiple dot and blot hemorrhages and macular edema, whereas Optical Coherence Tomography (OCT) Central Macular Thickness (CMT) 624 μm and Total Volume (TV) 11.60 mm^3 confirm the cystoid macular edema (CME) and BRVO. **Intervention:** From March to December 2025, the patient attended three outpatient visits, including the initial consultation and two follow-ups, and completed one 14-day inpatient treatment. He received *Shodhana* (purification), *Raktaprasadana* (refines *Rakta Dhathu*), *Bruhmana* (nourishment) medications and treatments both internally and externally, along with *Kriyakalpa* (ocular therapeutic procedures). **Outcome:** Post-treatment evaluation revealed symptomatic and functional improvement in BCVA LogMAR 0.301 $\rightarrow$ LogMAR 0, symptoms like distortion, diminution in vision and CME with CMT 624 μm $\rightarrow$ 156 μm . **Conclusion:** This case report documents the clinical and OCT based improvement observed during *Ayurvedic* management of CME secondary to chronic BRVO previously treated with dexamethasone implant. Due to single-case design, prior dexamethasone implant, and natural fluctuations, direct causality cannot be confirmed.

KEYWORDS: Case Report, Cystoid Macular Edema, Retinal Vein Occlusion, *Trutiya Patalagata Timira*

RECEIVED ON:
11-09-2026

REVISED ON:
26-09-2026; 13-10-2026

ACCEPTED ON:
18-10-2026

Access This Article Online:

Quick Response Code:



Website Link:

<https://jahm.co.in>

DOI Link:

<https://doi.org/10.70066/jahm.v14i9.3051>

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CITE THIS ARTICLE AS

Sreekanth N Parameswaran,
Narayanan Nelliakkattu,
Sreekala Nelliakattu N P, Amala
Varghese, Sumesh Soman,
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Ayurvedic Management of
Branch Retinal Vein Occlusion
after Dexamethasone Implant:
A Case Report with BCVA and
OCT Follow-up. Journal of
Ayurveda and Holistic Medicine
(JAHM) 2026; 14(9):150-159.



1. INTRODUCTION

Branch Retinal Vein Occlusion (BRVO) is the second most common cause of retinal vascular vision loss after diabetic retinopathy. Obstruction of a branch retinal vein causes hemorrhage, macular edema and sudden painless visual impairment in the affected eye. Risk factors for BRVO include hypertension, diabetes, dyslipidemia, obesity, smoking, inflammatory diseases, ocular hypertension and older age. [1] Approximately 4 in 1,000 are affected by BRVO, with a 15-year cumulative incidence of 1.8%. [2], [3]. In *Ayurveda*, BRVO may be correlated with *Trutiya Patalagata Timira* (Morbidity Code: HG-2.1), described by *Susruta*, involving vitiated *Tridoshas* and *Rakta* leading to obstruction, inflammation and bleeding. [4]

The uniqueness of this case reports is *Ayurvedic* management of cystoid macular edema (CME) secondary to chronic BRVO in a patient previously treated with a dexamethasone intravitreal implant with serial Best Corrected Visual Acuity (BCVA) and Optical Coherence Tomography (OCT) findings documented changes during treatment and follow-up. Management included *Shodhana* (purification), *Raktaprasadana* (refinement of *Rakta Dhathu*) and *Bruhmana Chikitsa* (nourishing therapy), with assessment of visual acuity, hemorrhage, macular edema and hard exudates. Reduced fluid accumulation was observed; effects on retinal blood flow and prevention of retinal thinning or atrophy could not be established.

2. CASE

In September 2024, a 41-year-old patient noticed distortion and diminution of vision in his right eye (RE). An ophthalmologist elsewhere diagnosed macular edema secondary to BRVO. He received a dexamethasone intravitreal implant (Ozurdex) in October 2024. Pre- and post-implant visual acuity, OCT/CMT and fundus data were unavailable; therefore, the anatomical and functional response could not be assessed. He reported slight improvement in visual clarity, but blurring and distortion persisted. Three months later, vision deteriorated again, and bevacizumab (Avastin) injection was advised. He

declined the injection and pursued Ayurvedic treatment from March 2025. At the initial consultation, distortion, blurring and diminution of vision persisted in his RE.

Clinical Assessments: The patient was a moderately built software engineer with a sedentary lifestyle. His height was 177 cm, weight 70 kg and BMI 22.34 kg/m². Temperature was 97.4°F and blood pressure 130/80 mmHg. He had hypertension for three years, managed with cilnidipine 10 mg and telmisartan 40 mg (Cilaheart-T), one tablet daily. Assessment for additional vascular risks showed normal CBC, hematocrit and lipid profile. Creatinine was 0.99 mg/dl, uric acid 10.03 mg/dl and HbA1c 5.3%. Further evaluation or management details for the elevated uric acid were unavailable. He reported no smoking, alcohol use or relevant family history of vascular or systemic disease.

Ocular examination: The eyelids, sclera and cornea were normal. Pupils in both eyes (BE) reacted to light, with no relative afferent pupillary defect (RAPD). Visual acuity was assessed monocularly at 6 m using a Snellen chart, with BCVA recorded after subjective refraction. Uncorrected DVA was LogMAR 0.477 in RE and 0 in LE; BCVA was LogMAR 0.301 and 0, respectively. Pinhole showed no further improvement in BE. Intraocular pressure was 15 mmHg bilaterally. RE fundus photography showed inferotemporal dot and blot hemorrhages, hard exudates and macular edema. OCT revealed intraretinal cysts, subretinal fluid, ellipsoid zone disruption and disorganization of retinal inner layers. CMT was 624 µm and total volume (TV) 11.60 mm³, supporting CME secondary to chronic BRVO.

Ayurvedic examination revealed *Vata-Pitta Prakruti* (constitution), *Pitta-Kapha Vikruti* (imbalance), *Avara Satwa* (low mental strength), *Madhyama Ahara Shakti* (moderate digestive capacity), *Madhyama Vyayama Shakti* (moderate exercise capacity) and *Mridu Koshta* (soft bowels). *Ashta-Sthana Pariksha* showed *Sthira Nadi* (regular pulse), *Visada Mootra* (clear urine), *Ushna Sparsha* (warm touch), *Sthira Shabda* (regular voice), *Aliptha Jihwa* (clear tongue), and normal *Mala* (excreta) and *Akruti* (appearance). Distortion (*Vihvala Darshana*), blurring (*Mahantyapicha Rupani*

Chhaditaniva Vasasa) and diminution of vision were correlated with the *Lakshana* (symptoms) of *Trutiya Patalagata Timira* described by *Acharya Susruta*.

Timeline: The progression of patient symptoms, patient visits, clinical measures, medications are included in [Table 1](#)

Diagnostic assessment: Considering the clinical symptoms along with the investigative findings, the differential

Table 1: Patient symptoms, visits, clinical measure and medications.

Dates	Events
September 2024	Diminution in distant vision, distortion in RE.
September 2024	Diagnosed with macular edema with BRVO.
1 st October 2024	Dexamethasone implant done, visual clarity improved.
25 th January 2025	Distortion, blurring and diminution of vision increased; an intravitreal injection was advised
23-03-2025 (Initial OP)	Distortion, blurring and diminution of vision in RE at initial consultation and started <i>Ayurvedic</i> treatments. DVA-LogMAR 0.477, BCVA LogMAR 0.301, CMT- 624 µm, TV-11.60 mm ³ .
19-07-2025 (IP)	Inpatient treatment for 14 days. Distortion, blurring of vision and diminution of vision in RE. DVA-LogMAR 0.301, BCVA LogMAR 0.176
18-10-2025 (1 st follow-up OP Visit)	Distortion resolved. Visual clarity improved in RE. DVA-LogMAR 0.176, BCVA LogMAR 0
13-12-2025 (2 nd follow-up, OP Visit)	Improved diminution in vision, no distortion. DVA-LogMAR 0.176, BCVA LogMAR 0, CMT-156 µm, TV-7.11 mm ³ .

Table 2: Differential Diagnosis with its exclusion criteria.

Differential Diagnosis	Exclusion criteria
Diabetic Retinopathy	Not a known case of diabetes mellitus. HbA1C normal. Absence of bilateral involvement of dot and blot hemorrhages, microaneurysms or neovascularization.
Hypertensive Retinopathy	Though hypertensive, Absence of bilateral presentation and presence of a single inferotemporal quadrant occlusion event
Central Retinal Vein Occlusion	Absence of venous tortuosity and disc edema. Absence of hemorrhages in four quadrants. Here, the inferotemporal branch is affected with no disc edema.
Hemi Retinal Vein Occlusion	Absence of hemorrhages in a full hemisphere. Whereas, here a single branch is affected

Diagnostic challenges: The hemorrhages along with exudates may occur in various retinal disorders made the uncertainty in diagnosis. In this case the retinal hemorrhages were present in the territory of inferotemporal branch retinal vein which supports the BRVO. Cystoid space in the OCT macula with increased CMT further supports the diagnosis as CME secondary to BRVO. **Prognosis:** A better prognosis could be expected in this patient due to good control over systemic hypertension

diagnosis was made. The presence of hemorrhages from a single branch, hard exudates and presence of macular edema supports the diagnosis of the BRVO with CME. Whereas [Table 2](#) shows the differential diagnosis and exclusion reasons.

along with the involvement of bleeding in inferior part of macula. Continued follow-up is essential to assess the secondary conditions neovascularization etc. **Treatment Plan and Rationale:** Patient received no further conventional ophthalmic treatment after dexamethasone implant. *Ayurvedic* management considered his *Agni* (digestive and metabolic capacity), *Rogibala* (patient strength) and *Rogabala* (disease severity). In BRVO, involvement of *Rakta-Pitta* along with *Kapha* and *Vata* lead

to *Siragrandhi* (venous occlusion), which led to *Sanga* (obstruction) and *Vimargagamana* (improper flow) of *Rakta*. Internal and external treatments aimed at *Srotho-Shodhana* (channel cleansing), *Raktaprasadana*, *Shothahara* (reducing inflammation) and *Bruhmana* (nourishment). Procedures included *Kayashodhana* (bodily purification), *Nasya* (nasal instillation), *Aschyotana* (eye

drops), *Vidalaka* (medicated paste over closed eyelids) and *Tarpana* (retention of medicated ghee). Internal medications and external therapies are detailed in [Tables 3](#) and [4](#). *Pathya AharaVihara* advice included leafy vegetables, lukewarm drinking water, sunglasses, and avoidance of prolonged screen-time and bright-light exposure.

Table 3: Internal medication, medicine dosage, company, batch and duration

Date(OP/IP)	Medicines	Dosage	Duration	Company	Batch
(OP)	<i>Amrithothara Kashaya</i>	15 ml with 45 ml lukewarm water twice a day	4 months	Sreedhareeyam	AMZS-5
23/03/2025	<i>Triphala Guggulu</i>	2 tablets with lukewarm water twice a day	4 months	Sreedhareeyam	TGZS-4
(IP)	<i>Varanadi Kashaya</i>	15 ml with 45 ml lukewarm water twice a day	12 days	Sreedhareeyam	freshly prepared
19/07/2025-	<i>Triphala Guggulu</i>	2 tablets with lukewarm water twice a day	12 days	Sreedhareeyam	TGZS-4
01/08/2025	<i>Kasyapa Ghrita</i>	1 tsp ghee is to be taken at night	12 days	Sreedhareeyam	GHPZS-5
	<i>Kayashodhana</i> with <i>Avipathy Choorna</i>	10 gms mixed with ½ glass of luke warm water before bed (4 vegas)	1 day	Sreedhareeyam	CHAVZS-3
(First	<i>Varanadi Kashaya</i>	15 ml with 45 ml lukewarm water twice a day	2 months	Sreedhareeyam	VKZS-4
Follow-Up)	<i>Triphala Guggulu</i>	2 tablets with lukewarm water twice a day	2 months	Sreedhareeyam	TGZS-4
18/10/2025					

Table 4: External treatment, medication, Procedure medicine dosage, company, batch and duration

Date(OP/IP)	Treatment	Duration	Medication	Company	Batch	Procedure and Dosage
(OP)	<i>Aschyotana</i>	4	<i>Netranjanam</i>	Sreedhareeyam	NEZS-	2 drops of medicine is to be instilled in the inner
23/03/2025		months	drops		3	canthus of RE, twice a day
(IP)	<i>Aschyotana</i>	5 days	<i>Netranjanam</i>	Sreedhareeyam	NEZS-	2 drops of medicine is to be instilled in the inner
19/07/2025 -			drops		3	canthus of RE, twice a day
01/08/2025	<i>Vidalaka</i>	5 days	<i>Mukkadi Gulika</i>	Sreedhareeyam	MIZS-	6 tablets made paste and applied over closed Right
					6	eyelid avoiding the lashes twice a day
	<i>Nasya</i>	5 days	<i>Ksheerabala</i>	Sreedhareeyam	KBZS-8	6 drops instilled in both nostrils early morning
			<i>Thaila</i>			
	<i>Tarpana</i>	5 days	<i>Triphala Ghrita</i>	Sreedhareeyam	TMZS-	Divided dose 40 ml of medicine poured over a
					3	frame of black gram over RE once daily
(First Follow-Up)	<i>Aschyotana</i>	2	<i>Netranjanam</i>	Sreedhareeyam	NEZS-	2 drops of medicine is to be instilled in the inner
18/10/2025		months	drops		3	canthus of RE, twice a day

3. FOLLOW-UP AND OUTCOME:

The patient remained cooperative and adherent during nine months of *Ayurvedic* management, comprising one inpatient admission and three outpatient visits, including two follow-ups. No conventional ophthalmic treatment was

received during this period. BCVA improved from LogMAR 0.301→0, while CMT decreased from 624 µm→156 µm and TV from 11.60 mm³ → 7.11 mm³. He reported reduced distortion and improved visual clarity. Follow-up OCT showed minimal foveal ellipsoid zone attenuation; sclerotic

vessels were noted on fundus examination. Visit-wise outcomes are presented in [Table 5](#), and imaging changes in [Figures 1 and 2](#). RE Amsler grid testing was performed at 30 cm with the LE covered, maintaining central fixation while assessing line distortion and square uniformity. Changes are shown in [Figure 3](#).

Adherence: Adherence assessed through daily assessment during stay. Patient was educated on medications at the time of discharge, and reported strict adherence and prompt follow-up in two months.

Table 5: Outcome table

Dates	DVA	BCVA	CMT	TV	Metamorphopsia	Fundus findings
23/03/2025	LogMAR 0.477	LogMAR 0.301	624 µm	11.60 mm ³	Present	Hard exudates, multiple dot and blot hemorrhages, macular edema.
19/07/2025	LogMAR 0.301	LogMAR 0.176	-	-	Present	Dot and blot hemorrhages resolved. Hard exudates, macular edema partially resolved.
18/10/2025	LogMAR 0.176	LogMAR 0	-	-	Resolved	Macular edema, hard exudates resolved.
13/12/2025	LogMAR 0.176	LogMAR 0	156 µm	7.11 mm ³	Resolved	Sclerotic vessels noted.

Tolerance: Patient was stable on day of *Kayashodhana*, cooperative, and tolerated procedures like *Nasya* and *Tarpana* etc., and assessed by monitoring during the treatments

Adverse events: During inpatient treatments, adverse effects like epiphora and ophthalmalgia etc. were monitored. At the time of discharge the patient was educated about reporting and consulting sudden diminution vision, itching, or ocular pain. No such events were reported.

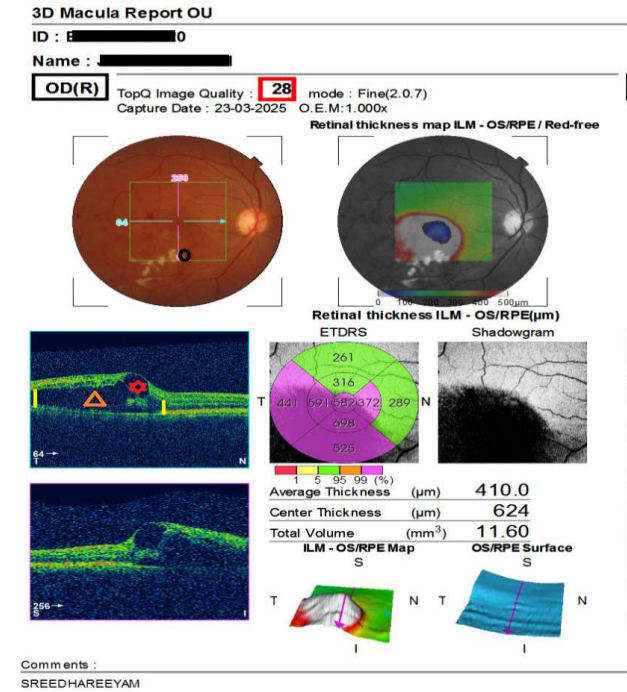


Figure 1: Baseline right-eye imaging (23 March 2025): (A) fundus photograph showing inferotemporal hemorrhages and hard exudates; (B) OCT showing intraretinal cysts (■), subretinal fluid (●), disturbances in ellipsoid zone (—), (○) hard exudates and CMT 624 µm.

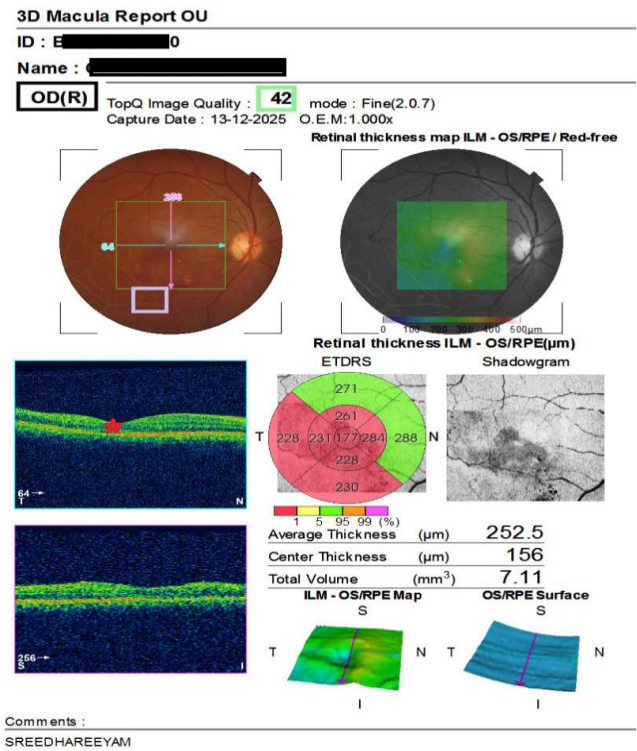


Figure 2: OCT RE with (■) minimal attenuation in foveal ellipsoid zone, (■) sclerotic vessel and CMT 156 µm (13th December 2025).

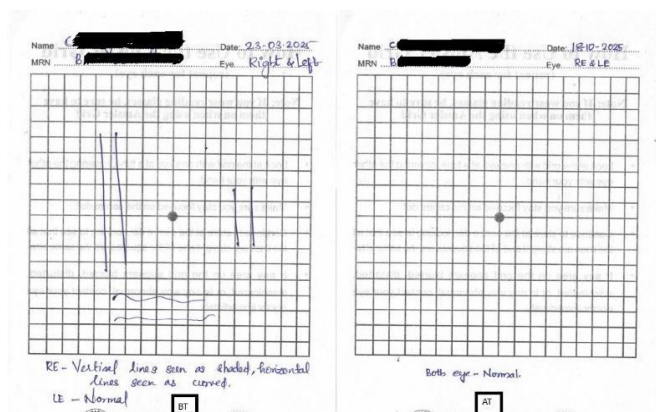


Figure 3: Comparison of Amsler grid report taken on 23rd March and 18th October 2025.

4. DISCUSSION

BRVO is a retinal vascular condition in which severe ischemia leads to increased production of VEGF factors and cause macular edema and retinal hemorrhages. Intravitreal Anti-VEGF injection or intravitreal corticosteroid implants are the line of treatment in conventional medicine.

Patient received dexamethasone implant before *Ayurvedic* management. Though considerable time elapsed, only mild response was reported. Prior dexamethasone implant remains a potential confounding factor. Pre- and post-

implant BCVA/OCT are unavailable, limiting direct causal relationship to *Ayurvedic* treatments. Natural resolution timeline of macular edema in BRVO (21 months), spontaneous fluctuations, systemic hypertension control, and natural regression of BRVO along with the *Ayurvedic* interventions might have contributed to improvement. Previous dexamethasone exposure, natural regression, prevent causal attribution. Reduced OCT-measured thickness does not establish restoration of normal retinal architecture. Missing intermediate OCT measurements prevent attribution of anatomical changes to individual treatment stages.

Published *Ayurvedic* BRVO case reports [5], [6], [7], [8], [9] describe different disease durations, ophthalmic treatments, baseline severity, intervention combinations, and follow-up periods. These case reports illustrate clinical improvements in visual acuity, resolution of CMT, CME, and hemorrhages during *Ayurvedic* treatments and highlights potential therapeutic association. Comparison of previously published BRVO cases with current case is given in (Table 6).

Table 6: Comparison of previously published cases reports in terms of age, prior treatment, severity, CMT, intervention, follow-up and outcomes.

Cases	Age	Duration	Prior treatment	CMT	Intervention	Follow-up/outcomes.
Present case	41 years	8 months	dexamethasone intravitreal implant	624 μ m $\rightarrow$ 156 μ m	<i>Shodhana, Raktaprasadana Bruhmana</i>	BCVA LogMAR 0.301 $\rightarrow$ LogMAR 0/9 months
Karthika Rajagopal & Athira Mohan [5]	38 years	3 weeks	nil	360 μ m $\rightarrow$ 273 μ m	<i>Pitta Kaphahara Chikitsa</i>	DVA 6/6 in LE/3 months
Amrut Salunke et al. [6]	57 years	3 months	nil	-	<i>Snehapana, Virechana</i>	Dot & blot haemorrhages absorbed/8 days
Bhuriya & Sukesan [7]	42 years	2 weeks	nil	864 μ m $\rightarrow$ 248 μ m	<i>KaphaVata Shamaka, Shothagna, Rakthahara,</i>	BCVA CF 1 m $\rightarrow$ 6/24/5 months
Kale et al. [8]	64 years	1 year	2 intravitreal injection	502 μ m $\rightarrow$ 254 μ m	<i>Rakta-Shodana, Vata-Pitta Shamana, Rasayana, Kriyakalpa</i>	DVA CF 1.5 m $\rightarrow$ 6/24/10 days
Jayan et al. [9]	36 years	2 months	Anti-VEGF	482 μ m $\rightarrow$ 248 μ m	<i>Srotho-rodha, Shophahara, Bruhmana, Rasayana</i>	BCVA 6/9 $\rightarrow$ 6/6/5 months

Susruta Uttaratantra, 7th chapter describes *Trutiya Patalagata Timira*, which may be compared with BRVO with CME. Patient showed *Lakshanas* of distortion, blurring of vision and diminution of vision.

Amruthothara Kashaya selected for its *Deepana* (digestion and metabolism enhancement), *Amapachana* (enhanced digestion), *Srotho-Shodhana*, *Shophahara* and *Raktaprasadaka* properties. [10], [11] *Triphala guggulu* with its *Tikta* (bitter) *Kashaya Rasa* (astringent in taste), *Laghu Rooksha Guna* (light and dry in quality) suggest anti-inflammatory, antioxidant, and immunomodulatory

activities. [12], [13] Various studies on *Varanadi Kashaya* suggest that it possesses anti-inflammatory and antioxidant activities. [14], [15], [16] *Snehapana* (internal oleation) with *Kasyapa Ghrita*, an *Ayurvedic* proprietary medicine ([Table 7](#)), may be helpful in *Srotho-Shodhana*, *Vatanulomana* (regularizing movement of *Vata*), *Raktaprasadana*, and intended to act as *Chakshushya* (good for the eyes). Considering the *Satwa*, *Sadhyovirechana* (rapid purgation) with *Avipathy Choorna* given as *Kayashodhana* and considered to act as a carminative, and may help to alleviate deranged *Pitta*. [17]

Table 7: *Kasyapa Ghrita* (Each 50g is prepared out of)

Sanskrit Name	Botanical/English Name	Parts Used	Quantity
<i>Vasa</i>	<i>Adhatoda vasica</i> Nees.	Leaf	5.00 g
<i>Bringaraja</i>	<i>Eclipta alba</i> (L.) Hassk.	Leaf	5.00 g
<i>Amalaki</i>	<i>Emblia officinalis</i> Gaertn.	Fruit rind	1.67 g
<i>Vibhitaki</i>	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Fruit rind	1.67 g
<i>Haritaki</i>	<i>Terminalia chebula</i> Retz.	Fruit rind	1.67 g
<i>Pippali</i>	<i>Piper longum</i> L.	Fruit	0.13 g
<i>Draksha</i>	<i>Vitis vinifera</i> L.	Fruit	0.13 g
<i>Swetha agaru</i>	<i>Dysoxylum malabaricum</i> Bedd. ex Hiern	Hard wood	0.13 g
<i>Saindhava</i>	Rock salt	Mineral	0.13 g
<i>Bala</i>	<i>Sida cordifolia</i> L.	Root	0.13 g
<i>Bakuchi</i>	<i>Psoralea corylifolia</i> L.	Seed	0.13 g
<i>Kshirakakoli</i>	<i>Lilium polyphyllum</i> D.Don	Bulb	0.13 g
<i>Meda</i>	<i>Polygonatum cirrhifolium</i> (Wall). Royle	Root	0.13 g
<i>Maricha</i>	<i>Piper nigrum</i> L.	Fruit	0.13 g
<i>Sunti</i>	<i>Zingiber officinale</i> Roscoe.	Rhizome	0.13 g
<i>Ikshu</i>	<i>Saccharum officinarum</i> L.	Root	0.13 g
<i>Punarnava</i>	<i>Boerhavia diffusa</i> L.	Root	0.13 g
<i>Daruharidra</i>	<i>Berberis aristata</i> DC.	Stem	0.13 g
<i>Yashtimadhu</i>	<i>Glycyrrhiza glabra</i> L.	Stem	0.13 g
<i>Sita</i>	Sugar	-	0.13 g
<i>Go dugdha</i>	Cow's milk	-	10.00 ml
<i>Go Ghrita</i>	Cow's ghee	-	10.00 g
<i>Nalikeraksheera</i>	<i>Cocos nucifera</i> L.	Seed kernel	10.00 ml

External therapies like, *Aschyotana* with *Netranjanam* proprietary Drops ([Table 8](#)). *Sookshmaguna* (deep penetrating quality) and channel-cleansing quality of *Saindhava lavana* may have contributed. Its catalytic action

enhances the *Raktastambhana* property of Alum and may potentially act as *Shophahara*. [18] *Vidalaka* with *Mukkadi Gulika*, with its *Pittahara* (normalize *Pitta*) and *Raktastambhana* properties, may be helpful in *Shopha* and

Srava (discharge). [19], [20] One study reported that efficacy was higher when *Nasya* was performed before *Tarpana*. [21] *Ksheerabala Taila* was administered for its *VataPittahara*, *Balya*, *Bruhmana*, and *Rasayana* properties. [22], [23] When active inflammation reduced and *Raktasthambhana* was attained, *Tarpna* with *Triphala Ghrita* started. *Triphala Ghrita*, characterized by *Chakshushya* and immunomodulatory activities, serves as *Drushtiprasadana* (ocular rejuvenation). [24], [25] Mode of action of the treatments are given in [Diagram 1](#).

Table 8: Netranjanam (Each 10 ml is prepared out of)

Sanskrit Name	Botanical/English Name	Part Used	Quantity
<i>Satapatri jala</i>	<i>Rosa x damascena</i> Herrm.	Rose water	10.00 ml
<i>Phitkhari</i>	Potash alum	Mineral	1.36%
<i>Saindhava lavana</i>	Rock salt	Mineral	0.44%

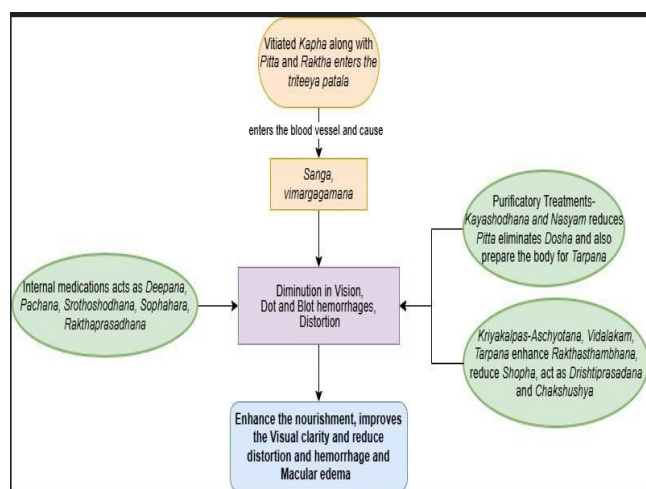


Diagram 1: Proposed mechanism of action of Ayurvedic management in chronic BRVO

Limitation: The major limitation is the absence of Fluorescein Angiography, resulting in an inability to assess the venous filling and vascular perfusion status. Unclassified ischemic status causes difficulty in monitoring neovascularization. Long-term monitoring is essential to watch for neovascularization. Due to financial constraints, OCT scan were not obtained between treatments, which restricted from determining exact morphological resolution. The dual-route administration of internal and external

treatments obscured the assessment of contribution of individual treatments/medications or its combined effect. The previous dexamethasone intravitreal implant can be considered as a confounding factor, [26] the considerable time elapsed. Absence of pre- and post-implant (BCVA/OCT) reports restrict its credits of contribution and clinical improvements observed during *Ayurvedic* treatments. The natural course of BRVO with macular edema is subject to random variations influenced by dexamethasone implant, systemic hypertension control, and natural regression to mean of BRVO that restrict the definitive causality. The single-case design and absence of a control group further limit causal interpretation.

5. CONCLUSION:

This case documents the clinical and OCT-based improvement observed during *Ayurvedic* management in an eight-month history of chronic BRVO with CME patient who received dexamethasone intravitreal implant previously. He underwent *Ayurvedic* therapies for nine months (one inpatient admission and three OP visits, including two follow-ups). *Shodhana*, *Raktaprasadana* and *Bruhmana* line of management with *Kriyakalpa* were provided. He noticed improvement in clarity of vision and distortion during the period. The course of treatment was uneventful with no reported adverse effects. Nevertheless, causality cannot be substantiated because of the single-case design, previous dexamethasone implant, absence of pre- and post-implant objective measurements, and natural regression of chronic BRVO associated with CME.

Key findings: A specific gain in BCVA LogMAR 0.301→LogMAR 0, reduced CME with CMT 624 μm →156 μm and TV 11.60 mm^3 →7.11 mm^3 during *Ayurvedic* treatments.

Incidental findings: Throughout the treatment patient observed strong appetite and body lightness.

Key message: A chronic BRVO patient with previous dexamethasone implant observed clinical improvement in BCVA and OCT during and post-*Ayurvedic* interventions. OCT showed changes in macular edema, hard exudates, and

hemorrhages. As objective improvement was documented during the *Ayurvedic* treatment, large-scale controlled clinical evaluations and studies are required to assess the safety and efficacy.

Abbreviations:

BRVO- Branch Retinal Vein occlusion

RE- Right Eye; LE- Left Eye; BE- Both Eye

DVA- Uncorrected Distant Visual Acuity; BCVA- Best Corrected Visual Acuity

OCT- Optical Coherence Tomography; CMT- Central Macular Thickness

TV- Total Volume; CME- Cystoid Macular Edema

RAPD- Relative Afferent Pupillary Defect

Declaration of Patient Consent – The authors confirm that they have acquired a patient consent form, in which the patient or caregiver has granted permission for the publication of the case, including accompanying images and other clinical details, in the journal. The patient or caregiver acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

Patient's Perspective

I was in great trouble and stress due to my sudden diminution in vision. I immediately reached out for medical help and taken implant in my eye. But, found no change in the vision. After starting your treatment, I noticed gradual but steady changes in my vision distortion, blurring and I noticed clarity in my vision by last month. Thank you to my doctors and staff for taking care of my vision.

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Acknowledgements – We authors are thankful to the esteemed Sreedhareeyam Ayurvedic Eye Hospital and Research Centre, for allowing us to write a case report. And we extend our sincere thanks to the patient for providing consent to publish this case.

Data Availability Statement: The data supporting the findings of this report are available from the corresponding author upon reasonable request, subject to patient confidentiality and applicable ethical requirements.

Ethical Statement: Written informed consent was obtained from the patient for publication of the clinical information and accompanying images. The requirement for Institutional Ethics Committee approval was waived in accordance with the applicable institutional policy.

Declaration of Generative AI: The authors declare this manuscript was written without the use of generative artificial intelligence tools. All the content, including text generation, data analysis and references was developed and reviewed by the author without assistance from AI technologies.

Conflict of Interest – The authors declare no conflicts of interest.

Source of Support – The authors declare no source of support.

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