



# “Ayurvedic Management of Branch Retinal Vein Occlusion - A Case Study”

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## Abstract

Branch Retinal Vein Occlusion (BRVO) is a significant retinal vascular disorder, often secondary to systemic conditions like hypertension and arteriosclerosis, leading to painless visual impairment. In Ayurveda BRVO can be correlated, based on signs and symptoms, with Sannipathika Timira. An 84year old patient presented with sudden, painless diminution of vision. Dilated fundus examination and Optical Coherence Tomography (OCT) confirmed BRVO with significant macular edema. An Ayurvedic protocol was implemented including internal medication and Kriyakalpas like Sekam, Aschotanam and Bidalakam for a period of 12weeks. Objective improvements were noted in visual acuity, from 2/60 to 6/24 and a significant reduction in central macular thickness on OCT. Subjectively the patient reported enhanced clarity in vision. This case highlights that tailored Ayurvedic management can be a safe and effective alternative or supportive therapy for BRVO, even in geriatric patients where conventional repeat injections may pose challenges.

**Keywords:** BRVO, Sannipthika Thimira, Macular edema, Kriyakalpa

## INTRODUCTION

Branch retinal vein occlusion (BRVO) is a condition where arteriole sclerotic thickening of a branch retinal arteriole is associated with compression of a venule at an arteriovenous crossing point, exacerbated by sharing an adventitial sheath. This leads to secondary changes that include endothelial cell loss, turbulent flow and thrombus formation. Once venous occlusion has occurred, elevation of venous and capillary pressure with stagnation of blood flow ensues, resulting in retinal hypoxia, which in turn results in damage to the capillary endothelial cells, extravasation of blood constituents and liberation of mediators such as Vascular Endothelial Growth Factor (VEGF). The incidence of BRVO is most common in supero-temporal quadrant (58.1-66%), followed by the inferotemporal quadrant (29%) and least common in nasal quadrants (12.9%). Age (older than 65) and hypertension are the two important risk factors for BRVO. The prevalence of BRVO continues to increase with advancing age, reaching an estimate of 2.64% in

individuals aged 80–89 years. Laser was considered as the standard treatment for macular oedema secondary to BRVO, but nowadays Intra vitreal anti VEGF agents have been widely adopted for the same. These conventional therapies may require frequent administration, posing logistical and physical burdens for elderly patients.

As the symptoms can be correlated with the Thimira mentioned in Drishti-gatha Roga of Ayurveda classics like Ashtanga Hridaya and Susruta Samhitha, Thimira Chikitsa based on the predominant Dosha proves to be effective in the management of BRVO. Considering the pathology and symptoms, here in case of BRVO the obstruction to the vein (Sanga) is caused by Vata, haemorrhage is caused by Pitta and Rakta and Oedema is caused by Kapha. All the Doshas are involved and hence can be correlated with Sannipataja Timira. Considering the Saama-Niraama condition of eye, internal medicines along with Mridu Virechanam, Kriyakalpas like Sekam, Aschotanam, Bidalakam etc were done in this case.

### Case Presentation:

An 84-yr old lean built male patient presented with sudden central field defect and blurring of vision in right eye noticed since 3 months. He has consulted elsewhere and was diagnosed with right eye BRVO. There he was advised to take multiple intra-vitreous Anti VEGF injections in the same eye. As the patient prefers Ayurvedic treatment, he consulted in the OPD. Patient was a known case of Bronchial Asthma and an unnoticed hypertension.

On the first day of examination:

Visual Acuity	Right eye	Left eye
UCVA	2/60	6/9 (P)
BCVA	2/60	6/9
Near Vision	< N36	N8
With glass	No improvement	DV-6/9, NV- N6

Anterior segment examination:

Examination of	Right eye	Left eye
Conjunctiva- Congestion	Absent	Absent
Cornea	Clear	Clear
Anterior chamber depth	Grade 3	Grade 3
Iris		
• Colour and Pattern	Normal	Normal
• Neovascularisation	Absent	Absent
Lens	PCIOL	IMSC
Pupillary reaction	Sluggish	Regular
IOP (NCT)	29	22

Dilated fundus examination:

Fundus findings	Right eye	Left eye
Media	Clear	Clear
Foveal Reflex	Absent	Present
General background	Superficial, dot and blot haemorrhages over infero temporal region	Normal
Vessels	Dilated and tortuous	Normal
CDR	0.3	0.3
Macular oedema	Present	Absent

An optical Coherence tomography revealed profuse cystoid macular oedema in Right eye with central macular thickness of 528 um and increased thickness in nasal and inferior quadrant of macula (613 and 584 respectively).

**Treatments given:** On the first day of consultation patient thoroughly examined and diagnosed as BRVO (Sannipathika Timira). He was advised with following medication for a period of 4 weeks and asked to follow-up in the OPD.

- Laksha Kashayam- 90ml in morning- empty stomach
- Punarnavadi Kashayam- 90ml evening - before food
- Gokshura Choornam- 5gm twice daily with hot water
- Chandraprabha Vati 1Tab twice daily after food
- Avipathi Choornam 5gm night - after food
- Sekam with Vara Choornam on both eyes
- Bidalakam with Mukkadi Choornam mixed with milk

On 1<sup>st</sup> Follow-up (After 1month of medication), patient had improvement in vision. His visual acuity was improved to 4/60 in right eye and 6/9 in left eye. Near vision was improved to N36 in right eye and N8 in left eye. IOP was 23 in right eye and 21 in left eye. He was advised to continue the following medications for a period of 4 weeks and ask to report to OPD for follow-up.

- Manjishtadi+ Patoladi Kashayam- 90ml morning and evening
- Gokshura Choornam- 5gm twice daily with hot water
- Chandraprabha Vati 1Tab twice daily after food
- Avipathi Choornam 5gm night - after food
- Sekam with Vara Choornam on both eyes
- Sigr Punarnava Arkam 1drop in both eyes thrice daily

On 2<sup>nd</sup> follow-up there was a marked improvement in visual acuity in right eye. Undilated fundus examination showed minimal dot and blot haemorrhages. The distant vision was improved to 6/36 (P) with improvement in pinhole to 6/9 (P). Near vision was N36 in right eye and IOP was 22 and 20 in right and left eye respectively. Patient was advised to continue with the following medicines;

- Gokshura Choornam- 5gm twice daily with hot water
- Avipathi Choornam 5gm night time after food
- Sekam with Vara Choornam on both eyes
- Sigr Punarnava Arkam 1drop in both eyes thrice daily

Optical Coherence tomography was repeated in right eye after 3 months of medication. Central macular thickness was reduced to 273µm with peripheral nasal and inferior quadrant thickness 335 and 353 µm respectively, showing a minimum cystoids macular oedema. Uncorrected visual acuity was improved to 6/24 in right eye with a mild improvement in pinhole to 6/18.

## DISCUSSION

Internal medicines along with the external therapies helped to reduce the oedema and bleeding in the macular area which resulted in improvement of vision. Laksharasa is Rakta Stambhaka (haemostatic) and Vranaropaka (healing) in nature. It is primarily used to address the active retinal haemorrhages and vascular damage associated with the condition. Punarnavadi Kashaya is Sophanshana and most of the drugs in Patoladi and Manjishtadi Kashaya are having Katu, Tiktarasa, balances Pitta, Raktha and Vata. Mukkadi Purampada is useful in acute inflammatory signs of eyes like swelling, redness and pain and works on vitiated Pitta and Rakta. Action of Gokshura is primarily centered on its Mutrala (diuretic) and Shothahara (anti-inflammatory) properties, which directly address the core complications of BRVO, macular edema and venous congestion. Chandraprabha Gulika is Mutrala and Shothahara, which helps to reduce the macular edema associated with venous obstruction. By facilitating the drainage of excess fluid from the body, it indirectly helps in reducing central macular thickness. Rakta Prasadana action of

Chandraprabha helps in clearing obstructions (Sanga) in the Raktavaha Srotas. Avipathi Choorna is Mridu Virechaka and is a best Pitta Shamaka also. Vara Choorna has got Lekhana and Kledahara properties, by which when used as Sekam, helps to drain excess fluid from the ocular tissues.

## CONCLUSION

This case demonstrates the potential role of Ayurvedic management in Branch Retinal Vein Occlusion (BRVO), correlated with Sannipātaja Timira. The integrative use of internal medications and external therapies resulted in reduction of retinal edema and haemorrhage, with corresponding improvement in visual acuity. The therapeutic approach targeted Dosha imbalance, particularly involving Pitta and Rakta, and contributed to clinical recovery. These findings suggest that Ayurveda may serve as a complementary modality in retinal vascular disorders; however, controlled clinical trials are required to validate efficacy and generalizability.

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