



# Ayurvedic Management Of Madhumehajanya Timira (Long Standing Proliferative Diabetic Retinopathy): A Case Report

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## ABSTRACT

**Background:** Proliferative diabetic retinopathy (PDR) is an advanced microvascular complication of diabetes mellitus and a major cause of visual impairment. In Ayurveda, long-standing diabetic retinal pathology can be correlated with *Madhumehajanya Timira*, resulting from chronic *Prameha* associated with *Agnimandya*, *Ama* and *Rakta-Meda Dushti* affecting the *Drishti Mandala*. Conventional management primarily aims at preventing further progression, highlighting the need for supportive and holistic therapeutic approaches. **Aim:** To assess the role of Ayurveda in managing *Madhumehajanya Timira* corresponding to long-standing proliferative diabetic retinopathy. **Materials and Methods:** A 58 year old patient diagnosed with long-standing proliferative diabetic retinopathy was treated using a comprehensive Ayurvedic regimen. Internal medications included *Chitrakadi Vati*, *Nishamalaki Choorna*, *Brihat Vasakadi Kashaya* and *Triphala Choorna* combined with *Shuddha Shilajatu*. External therapies (*Kriyakalpa*) such as *Nasya* with *Anu Taila*, *Thalam* with *Amalaki kalka sadita Dadhi*, *Bidalaka* using *Mukkadi Choorna*, *Durva Swarasa* and *Vata Shringa*, along with *Takradhara* were administered. Clinical assessment was based on subjective visual symptoms and fundoscopic and OCT findings. **Results:** The patient showed improvement in visual comfort with stabilization of vision and no further progression of neovascular changes during the treatment period. Systemic well-being and better glycemic stability were also observed. **Conclusion:** Ayurvedic management may help in stabilizing disease progression and improving ocular comfort in *Madhumehajanya Timira* corresponding to long-standing proliferative diabetic retinopathy. An integrative approach addressing systemic metabolic derangements along with ocular pathology can be beneficial as supportive care. Further studies are required to validate these observations.

**KEYWORDS:** *Madhumehajanya timira*, Proliferative Diabetic Retinopathy, *Bidalaka*, *Thalam*, *Takradhara*.

## INTRODUCTION

Diabetic retinopathy (DR) is a progressive microvascular complication of diabetes mellitus and remains a major cause of vision loss among working-age adults worldwide. Proliferative diabetic retinopathy (PDR) is the most advanced stage of DR, characterized by widespread retinal ischemia and pathological neovascularization, leading to vitreous hemorrhage and tractional retinal detachment<sup>1</sup>. Chronic hyperglycemia induces biochemical and structural changes in retinal capillaries, including basement membrane thickening, pericyte loss, and capillary non-perfusion<sup>2</sup>. These changes stimulate the release of angiogenic factors, particularly vascular endothelial growth factor (VEGF), resulting in abnormal new vessel formation<sup>3</sup>. Although laser photocoagulation, intravitreal anti-VEGF agents, and vitreoretinal surgery are effective in controlling disease progression, these modalities primarily address local ocular manifestations and do not correct the underlying systemic metabolic imbalance<sup>4</sup>.

In Ayurveda, diabetic retinopathy can be interpreted as a complication of *Madhumeha*, a chronic metabolic disorder arising from *Agnimandya* and *Santarpana*. The ocular manifestations of PDR show close resemblance to *Madhumehajanya Timira* described in classical texts<sup>5</sup>. Prolonged *Madhumeha* leads to vitiation of *Kapha* and *Pitta* doshas along with *Rakta Duṣti*, resulting in *Srotorodha* and *Dhatukshaya* of *Netra Dhatus*. Progressive diminution of vision reflects chronic involvement of *Rasavaha* and *Raktavaha Srotas*, ultimately affecting visual function<sup>6</sup>. Ayurvedic management emphasizes systemic correction through *Nidana Parivarjana*, *Agni Deepana*, *Rakta Prasadana* and *Chakshushya Rasayana*, aiming at prevention of complications and preservation of vision in a holistic manner<sup>7</sup>.

## CASE REPORT

This is a case report of 58-year-old male patient presented to the Outpatient Department of Shalakya Tantra, Government Ayurveda Medical College and Hospital, Bengaluru.

### Presenting complaints

Patient complains of gradual painless blurring of vision for distant and near objects associated with floaters in the both eyes since five years.

### History of Present Illness

A 58 year old male patient known case of type 2 Diabetes mellitus since 12 years, gradually he developed diminution of vision in both eyes since 5 years, consulted ophthalmologists and was diagnosed with proliferative diabetic retinopathy (PDR) in Right eye and PDR with Diabetic macular edema (DME) with Vitreous haemorrhage in left eye. He took 1 sitting of intravitreal injection of Ranibizumab under Topical anaesthesia in his left eye and underwent two courses of Laser therapy (PRP) but got no relief. The visual disturbance was progressive over the past one year. There was associated flashes, floaters, diplopia, or headache. He was advised surgery, but he refused. He came to our hospital to seek ayurvedic treatment.

### Past Medical History

The patient is a known case of Type 2 Diabetes Mellitus for 12 years and has been under regular oral medication.

### Past Ocular History

There was no history of ocular trauma or allergic eye disease. He took 1 sitting of intravitreal injection of Ranibizumab under Topical anaesthesia in his left eye and underwent two courses of Laser therapy (PRP) in left eye.

### Family History

Family history was non-contributory, and all family members were reported to be healthy.

## Systemic Examination

All the systemic examinations were within normal limits.

### Personal history

Appetite	Reduced
Bowel	Constipated
Micturition	5-6 times /day, 1-2 times/night
Sleep	Disturbed
Addictions	No

### Vitals

BP	130/90 mm Hg
RR	18 times/min
Temperature	98.6° F
Pulse rate	72 bpm

### Ashtastaana Pareeksha

<i>Nadi</i>	<i>kaphapittaja</i>	<i>Shabda</i>	<i>Prakrita</i>
<i>Mala</i>	<i>Vikruta (Vibandha)</i>	<i>Sparsha</i>	<i>Prakrita</i>
<i>Mutra</i>	<i>5-6 times/day, 1-2 times/night</i>	<i>Drik</i>	<i>Vikruta</i>
<i>Jihwa</i>	<i>ishat liptata</i>	<i>Akruti</i>	<i>Madyama</i>

### Clinical findings

Table showing visual acuity

Visual Acuity	Unaided Distant vision (Snellen Chart)			Unaided Near vision (Jaeger Chart)			Pinhole Distant vision (Snellen Chart)		
	OD	OS	OU	OD	OS	OU	OD	OS	OU
Before treatment	5/60	CF@5m	5/60	N24	<N36	N24 <sup>p</sup>	6/60	NI	6/60

Note - OD – *Oculus Dexter* (Right eye), OS – *Oculus Sinister* (Left eye), OU – *Oculus Uterque* (Both eyes), CF@5m - counting fingers at 5meter distance, NI – No improvement.

Table showing Findings of Slit lamp Examination

	Right eye	Left eye
Eyebrows	Normal in position	Normal in position
Eyelashes	Normal, no misalignment	Normal, no misalignment
Eyelids	Normal	Normal
Conjunctiva	Normal	Normal
Sclera	Normal, no degenerative changes	Normal, no degenerative changes
Cornea	Normal, no pannus	Normal, no pannus
Iris	Normal pattern, no NVI	Normal pattern, no NVI
Anterior chamber	Quiet and Normal depth	Quiet and Normal depth
Pupil	3mm RRR	3mm RRR, (slight sluggish reaction to light)
Lens	SIMC Changes	SIMC Changes
IOP	18 mm Hg	12 mm Hg

## TREATMENT PLAN

### Table showing Treatment plan

Days	Name of the medicine	Dose	Time	Anupana	Duration
1 <sup>st</sup> -7 <sup>th</sup> day	Tab <i>chitrakadi vati</i>	1-1-1	Before food	Warm water	7 days
8 <sup>th</sup> – 14 <sup>th</sup> day	<i>Nasyakarma</i> with <i>Anutaila</i>	8 drops-8 drops to each nostril	Morning (in empty stomach)	-	7 days
15 <sup>th</sup> – 21 <sup>st</sup> day	<i>Bidalaka</i> using <i>Mukkadi Choorna</i> , <i>Durva Swarasa</i> and <i>Vata Shringa Swarasa</i>	q.s.	Morning	-	7 days
8 <sup>th</sup> – 37 <sup>th</sup> day	<i>Nishamalaki choorna</i>	3gm-0-3gm	Before food	Warm water	30 days
8 <sup>th</sup> – 37 <sup>th</sup> day	<i>Brihat vasakadi Kashaya</i>	15ml -0- 15ml	After food	With 30 ml of Warm water	30 days
38 <sup>th</sup> – 44 <sup>th</sup> day	<i>Takradhara</i>	q.s.	Morning	-	7 days
45 <sup>th</sup> - 51 <sup>st</sup> day	<i>Shiro Thalam</i> with <i>Amalaki</i> and <i>Dadhi</i>	q.s.	Morning	-	7 days
				<b>TOTAL</b> -	<b>51 days</b>

### FOLLOW-UP MEDICINE

52 <sup>nd</sup> – 81 <sup>st</sup> day	<i>Triphala Choorna</i> (100 gms) with <i>Shuddha Shilajatu</i> (10 gms)	0-0-1tsp	After food	Ghee	30 days
52 <sup>nd</sup> – 66 <sup>th</sup> day	Tab <i>Punarnava mandoora</i>	1-1-1	After food	Water	15 days
67 <sup>th</sup> –81 <sup>st</sup> day	Tab <i>Saptamrita loha</i>	0-0-2	After food	½ tsp ghee	15 days
				<b>Total</b>	<b>30 days</b>

### OBSERVATION AND RESULTS

Over the 81-day treatment period, the patient experienced subjective improvement in visual clarity and a significant reduction in associated symptoms such as floaters and headache. While OCT imaging\* did not reveal substantial anatomical changes, the improvement in functional symptoms and patient satisfaction suggests a positive therapeutic response to the Ayurvedic treatment.

**\*Note:** OCT Reports of left eye before and after treatment are attached at the end of the article.

### Table showing Visual Acuity before and after treatment

VISUAL ACUITY	Without spectacles (Day 0 -before treatment)			Without spectacles (Day 82 – after treatment)		
	OD	OS	OU	OD	OS	OU
Distant vision (Snellen chart)	5/60	CF@5 m	5/60	6/36	1/60	6/36
Near vision (Jaeger chart)	N24	<N36	N24 <sup>p</sup>	N18 <sup>p</sup>	N36 <sup>p</sup>	N18 <sup>p</sup>

Laboratory Investigations	Before treatment	After treatment
FBS	186 mg/dL	118 mg/dL
PPBS	265 mg/dL	162 mg/dL
HbA1c	9.1 %	7.2 %

### Fundus findings before and after treatment

Fundus parameter	Before Treatment	After 81 Days of Treatment
Media Clarity	Hazy view due to vitreous haemorrhage	Improved clarity with partial resolution of vitreous haemorrhage
Optic Disc	Hazy disc margins; neovascularization at disc noted	Disc margins better defined; no progression of neovascularization
Neovascularization	Active neovascular fronds present (post-PRP)	Stable neovascularization; no new vessels
Macula	Edematous with absent foveal reflex	Reduced edema with partial restoration of foveal reflex
Retinal Haemorrhages	Dot-blot haemorrhages present	Reduced haemorrhages; no fresh bleeding
Retinal Vessels	Dilated and tortuous	Mild improvement in vessel caliber
PRP Laser Scars	Multiple laser scars in mid-peripheral retina	Laser scars stable and well defined
Overall Impression	Active post-PRP PDR with DME and vitreous hemorrhage	Stabilized PDR with reduced DME and improved fundus visibility

Fundus evaluation showed stabilization of proliferative diabetic retinopathy with partial resolution of vitreous haemorrhage and reduction in macular edema following 81 days of Ayurvedic treatment.

## DISCUSSION

Proliferative diabetic retinopathy (PDR) represents an advanced stage of diabetic retinal disease characterized by chronic hyperglycemia-induced microangiopathy, retinal ischemia, neovascularization and recurrent inflammation. From an Ayurvedic perspective, such a long-standing condition can be understood as *madhumeha-janya Drishti Roga* involving *Agnimandya*, *Ama* accumulation, *Rakta-Meda Dushti* and vitiation of *Vata* and *Pitta* in the *Netra*. The present therapeutic approach was designed to address both the systemic metabolic derangement and the local ocular pathology.

*Chitrakadi Vati* was administered to correct impaired *Agni* and facilitate *Amapachana*, which is essential in chronic *Prameha* conditions. By improving digestion and metabolism, it helps in reducing the pathological substrate responsible for *Srotorodha* and ensures better bioavailability of subsequent medications. This step is crucial in old cases of PDR where long-standing metabolic imbalance perpetuates disease progression.

*Nishamalaki Choorna* played a significant role in regulating glycemic status and reducing oxidative stress. The synergistic action of *Haridra* and *Amalaki* contributes to *Raktashodhana* and *Rasayana* effects, which are particularly beneficial in preventing further microvascular damage in the retina. Its *Chakshushya* property supports retinal nourishment and functional stability.

*Brihat Vasakadi Kashaya* was selected for its *Pitta-Kapha Shamana* and *Shothahara* properties. In PDR, chronic retinal inflammation and vascular congestion are common pathological features. This formulation helps in reducing inflammatory changes and supports healthier retinal circulation, thereby aiding in stabilization of neovascular activity.

The combination of *Triphala Choorna* with *Shuddha Shilajatu* served as a potent *Rasayana* therapy. *Triphala* is well known for its ocular rejuvenative effect, while *Shilajatu* acts as a *Yogavahi*, enhancing tissue penetration and strengthening microvascular integrity. This combination supports retinal metabolism, delays degenerative changes, and may help in preventing recurrent hemorrhagic episodes seen in advanced retinopathy.

*Punarnava Mandoora* may have contributed to disease stabilization in proliferative diabetic retinopathy by improving *Raktaprasadana* and correcting microcirculatory impairment commonly seen in long-standing diabetes. Its *Shothahara* and *Rasayana* properties can help reduce retinal edema and support vascular integrity, thereby complementing the overall therapeutic response.

*Saptamrita Loha* plays a supportive role in proliferative diabetic retinopathy through its *Chakshushya* and *Rasayana* actions, promoting nourishment of retinal tissues and improving visual function. By enhancing *Rakta Dhatus* quality and reducing oxidative stress, it may help in stabilizing microvascular changes associated with long-standing diabetes.

*Kriyakalpa* therapies were incorporated to address local ocular and neurological components of the disease. *Nasya* with *Anu Taila* facilitated *Dosha Shodhana* of the *Urdhva Jatrugata Srotas*, improving ocular nourishment and neural regulation. *Thalam* with *Amalaki* and *Dadhi* helped in pacifying aggravated *Pitta* and reducing ocular strain and burning sensations commonly reported in chronic retinal disorders.

*Bidalaka* using *Mukkadi Choorna*, *Durva Swarasa* and *Vata Shringa* provided local anti-inflammatory, *stambana* and *Raktaprasadana* effects. This external application helped in alleviating periocular congestion and supported microcirculatory improvement around the eye.

*Stambana karma* may help in arresting haemorrhage. *Takradhara* was employed to achieve systemic *Vata-Pitta Shamana* and mental relaxation, which indirectly influences retinal circulation and disease chronicity by reducing stress-induced metabolic fluctuations.

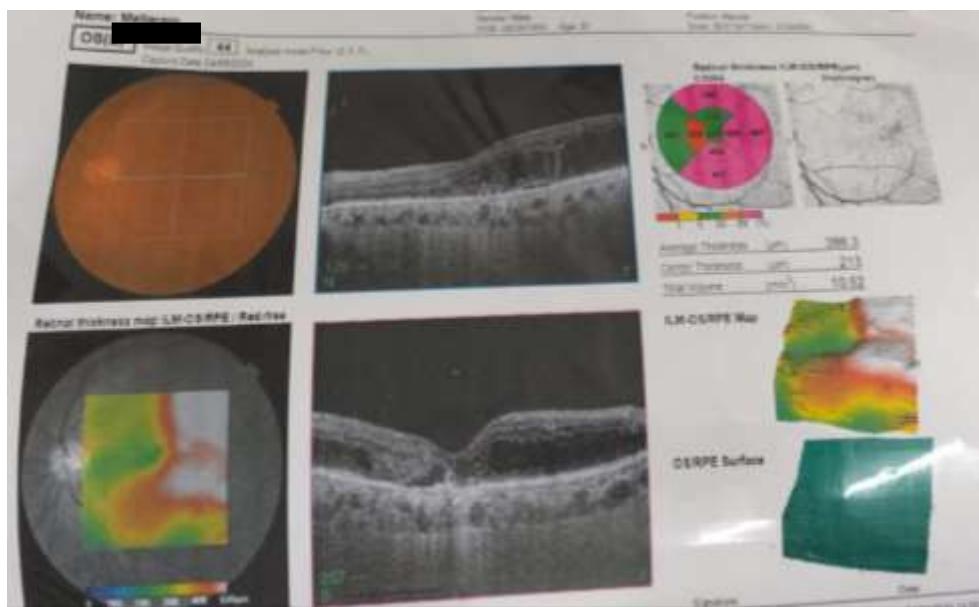
Overall, the integrated treatment approach addressed the multifactorial pathogenesis of long-standing proliferative diabetic retinopathy by correcting systemic metabolic imbalance, reducing inflammation, improving microcirculation and providing ocular rejuvenation. Such a holistic regimen may help in disease stabilization and improving quality of vision, especially in chronic cases where conventional management options are limited to preventing further progression rather than functional restoration.

## CONCLUSION

This case highlights the potential role of Ayurvedic interventions in the supportive management of *Madhumehajanya Timira* corresponding to long-standing proliferative diabetic retinopathy. The combination of *Deepana-Pachana*, *Pramehaghna*, *Rasayana*, and *Chakshushya* therapies, along with targeted *Kriyakalpa* procedures, contributed to stabilization of retinal changes and improvement in subjective visual comfort. By addressing both systemic metabolic imbalance and local ocular pathology, the treatment approach aligned with the Ayurvedic understanding of *Prameha* progression into ocular tissues. Although the outcomes suggest that Ayurvedic management may help in arresting further deterioration and enhancing the patient's overall functional status, conclusions cannot be generalized from a single case. Well-designed clinical studies with larger sample sizes and longer follow-up are needed to establish efficacy, safety, and mechanisms of action.

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**OCT of left eye before treatment****OCT of left eye After treatment**