

CASE STUDY

Management of Diabetic Retinopathy through Ayurveda - A Case Report

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ABSTRACT

Diabetes mellitus is one of the most frequently occurring metabolic disorders impairing healthy life. It is associated with secondary complications like diabetic retinopathy, which damages the retina and leads to vision loss. Diabetic patients often suffer from retinal capillary aneurysms, haemorrhages, and oedema, which lead to non-proliferative and proliferative diabetic retinopathy. Ayurveda is found to have a vivid clinical description of *prameha/ madhumeha*, a condition mimicking diabetes. *Prameha* is one among the *astaroga* in Charaka Samhita. Diabetic retinopathy can be compared to *madhumehajanya/Sannipataja timira*. All the *tridosha*, along with *raktadosha* and *saptadhatu*, as well as the four internal *dristi patalas*, are affected in different stages of *madhumehajanya/Sannipataja timira*. *Avarana*, *dhatukshaya*, and *agnimandya*, related to *ama* formation, play a key role in the development of *madhumehajanya/Sannipataja timira* due to prolonged and uncontrolled hyperglycemia.

This is a case report of 64-year old male patient who presented to Shalakya OPD with complaints of reduced vision in the left eye for since 2 months. He also felt flickering of letters and flashes of light while reading with his left eye. He was unable to read letters even while wearing glasses. He noticed tiny dark spots while perceiving through his left eye. He was managed conservatively with Ayurveda treatments. *Shiroabhyanga* applied over the head makes the healing fast and effective. *Takradhara*, one among the *murdhni taila*, provides a much larger skin contact time with controlled release of drugs. *Takradharadravya*, by its procedural effect – *pitha vatahara* and medicinal effect – *kapha vatahara*, helps to relieve this *margavarodha*. The case report showed the combined effect of local and systemic medication. Visual acuity and OCT angiography of the patient were checked to assess the improvement.

Key Words *Diabetic mellitus, diabetic retinopathy, Takra dhara, Sannipathaja Timira*

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INTRODUCTION

Diabetic retinopathy is a vision-threatening retinal change seen in patients with Diabetes mellitus. It can range in severity from mild,

moderate, or severe non-proliferative diabetic retinopathy to proliferative diabetic retinopathy. Diabetic retinopathy is the leading cause of impaired vision among the working-age adult population in developed countries¹. The incidence

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of diabetic retinopathy varies by geographical area and type of diabetic mellitus, due to differences related to regional prevalence, life expectancy of different populations, as well as social and economic factors². Retinal imaging has been a key tool in the diagnosis, evaluation, management and documentation of diabetic retinopathy for many decades. In this article, we review the applications of ayurvedic treatment in the management of Diabetic retinopathy and look forward to future advances that are likely to be of high impact in the coming years.

CASE REPORT

A 64 year old male patient from Palakkad visited the OPD of Ahalia Ayurveda Medical College and Hospital on 14th September 2022. He presented with complaints of reduced vision in the left eye for 2 months. He is a known case of DM, HTN, since 10 years. He also felt flickering of letters and flashes of light while reading with his left eye. He was unable to read letters even while wearing glasses and he observed tiny dark spots while perceiving through his left eye. He wanted to try ayurvedic medications and thus visited our hospital.

CLINICAL FINDINGS

Head posture: Was kept in a straight, erect position without any tilt.

Facial symmetry: Both eyebrows were at the same level. The deviation of the angle of the mouth was normal.

Ocular posture: visual axes of the two eyes were parallel to each other in primary position and were maintained in all positions of gaze.

Visual Acuity Before Treatment:

Distant Vision

Without PG	BE- 6/18	RE- 6/18	LE- 6/36
With PG	BE- 6/6	RE- 6/6	LE- 6/36

Near Vision

Without PG	BE – N18	RE – N18	LE – N24
With PG	BE – N6	RE – N6	LE – N18

OCT (Left Eye)

Non-proliferative diabetic retinopathic changes

Macular edema present, Retinal detachment present, Microaneurysms present, Multiple dot-blot haemorrhages in superotemporal and inferonasal quadrant present.

OCT (Right Eye)

Normal

THERAPEUTIC INTERVENTION

The patient underwent both internal and external treatments as an outpatient from 14th September 2022. He was administered oral medicines such as *Manjishtadi Kashaya*, *Punarnavadi Kashaya*, *Thriphala guggulu* tablet, and *Aswagandha choorna* from 17/06/2022. (**Table 1**). External therapies administered were *Shiro abhyangam*, *Takra dhara*, *Netra sekam* and *Nasyam*. (**Table 2**).

Table 1 Oral medicines

Medicine	Dosage	Time	Duration
Manjishtadi Kashaya	7.5 ml	6 am and 6 pm	17/06/22 to 24/09/22
Punarnavadi kashaya	7.5 ml	6 am and 6 pm	17/06/22 to 24/09/22
Thriphala guggulu tablet	1 tablet	Twice a day, before food	17/06/22 to 24/09/22

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Aswagandha choorna	1 teaspoon	Night after food with hot water	17/06/22 to 24/09/22
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BEFORE	Without PG	BE- 6/18	RE- 6/18	LE- 6/36
	With PG	BE- 6/6	RE- 6/6	LE- 6/36
AFTER	Without PG	BE- 6/18	RE- 6/18	LE- 6/36
	With PG	BE- 6/6	RE- 6/6	LE- 6/24P

Table 2 External therapies

Treatment	Medicine	Duration
Shiro abhyangam	Asanavilwadi tailam	14/09/22 to 24/09/22
Takra dhara	Takram + mustha + Kashaya with (lodhra,punarnava, yashtimadhu,triphalala)	14/09/22 to 24/09/22
Netra sekam	Triphala + punarnava + Manjishtadi Kashaya+ Gomutra	14/09/22 to 24/09/22
Nasyam	Anutailam	14/09/22 to 24/09/22

RESULTS

- After treatment, vision in left eye improved from 6/36 to 6/24P (Table 3).
- Photopsia and floaters in left eye was diminished.
- After treatment, OCT reports showed remarkable changes like Central subfield thickness was 186µm before treatment, and it reduced to 156 µm. (OCT - Before treatment - fig 1, OCT - After treatment- fig 2)

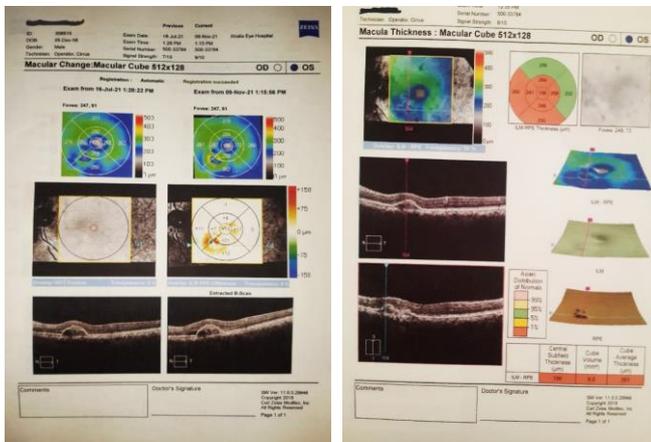


Figure 1 OCT - Before treatment **Figure 2** OCT – After treatment

Table 3 After treatment

DISCUSSION

Diabetic retinopathy refers to microangiopathy affecting retinal pre-capillary arterioles, capillaries, and venules³. It ranges from non-proliferative diabetic retinopathy to advanced diabetic eye disease. Among patients aged 25-74 years, diabetic retinopathy is a leading cause of vision loss worldwide. Main risk factors include duration of diabetes, poor metabolic control, pregnancy, hypertension, nephropathy, obesity, hyper lipidaemia and anaemia⁴. In Ayurveda, it can be correlated to *Sannipatha timira/ madhumeha janya timira*. Here, the pathology involves *sroto abhishyanda* and *raktavaha sroto dushti*. *Prameha* brings out changes (microangiopathy) in the *drishti patalam*, which greatly affects vision.

In this case study, the patient complained of seeing flashes of light, dark spots, and flickering of letters while reading with the left eye. He is unable to read letters even while wearing spectacles. The objective of this case study was to restore structural and functional integrity in *Drishti Patala* affected by *madhumeha*.

Treatment involves correcting and preventing etiopathological mechanisms. The first and foremost care should be given to maintaining blood sugar levels within the normal range. Treatment protocol includes management of

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urdhwaga rakta pitha, avarana, dhatu kshaya,
and *agni mandya*.

The patient was given *Manjishtadi kashaya*, *Punarnavadi kashaya*, *Triphala guggulu* tablet, and *Aswagandha churna* as internal medications. *Manjishtadi kashaya* is indicated in vata and raktha vitiation (alleviate vata and raktha)⁵. *Punarnavadi kashaya* is indicated in *shopha* (oedema).⁶ *Triphala guggulu* has *tridosha shamana* and *shophahara* (alleviate oedema) properties⁷. *Aswagandha churna* is vata kapha hara (alleviates vata and kapha), *shophahara*, and has *rasayana* properties⁸.

External therapies administered were *Shiro abhyangam*, *Takra dhara*, *Netra sekam* and *Nasyam*. *Shiro abhyanga* was done with *Asanavilwadi tailam*. *Asanavilwadi tailam* is indicated in *kapha anubandha netraroga*⁹. *Takradhara*, by its *kapha vata hara* and *laghu* (lightness) properties, helps to alleviate *srotho abhishyanda*¹⁰. *Netra Sekam* done with *triphala*, *punarnava*, *manjishtadi kashaya* along with *gomutra* which have *tridosha shamana* and *shophahara* properties. *Nasyam* was done with *Anutailam*. *Anutaila* is indicated in all *shiroroga* and it has *tridosha shamana* property¹¹.

After the treatment, vision improved. Flickering of letters and flashes of light diminished. Tiny dark spots during vision are gone. New OCT reports show marked changes. Central subfield thickness was 186µm before treatment, and it reduced to 156 µm after treatment.

CONCLUSION

Diabetic retinopathy refers to microangiopathy affecting retinal pre-capillary arterioles, capillaries, and venules. In Ayurveda, it can be correlated to *sannipatha timira/madhumeha janya timira*. By administering local and systemic medications having properties *tridosha shamana*, *shophahara*, and *rasayana*, symptoms got reduced, and OCT reports showed marked changes.

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