



Case Study

ROLE OF VASAKADI KWATH IN DIABETIC RETINAL HEMORRHAGES—A CASE STUDY

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ABSTRACT

Introduction: Diabetes mellitus is becoming a global epidemic and is now one of the top causes of vision loss globally. Diabetes increases the risk of a range of eye diseases, but the main cause of blindness associated with diabetes is diabetic retinopathy (DR). DR damages blood vessels inside the retina at the back of the eye. It commonly affects both eyes and can lead to vision loss if it is not treated. The treatment of modern system of medicine, focal laser therapy, anti-vascular growth factor drugs. These treatment modalities have side effects, so in such disorders. Ayurveda is very effective in such complicated disorders.

Methods and materials: 55yrs old diabetic patient since 10 yrs complaining of blurred vision attending *shalakya* OPD of NIA, was chosen having signs of retinal hemorrhages. Regular weekly visit was done for 1 month in hospital.

Result: *Vasakadi kwath* seems to have role in controlling hemorrhages found in diabetic retinopathy. Visual acuity improved from 6/60 to 6/24 in right eye and from 6/12 to 6/9 in left eye in 1 month.

Discussion: The drugs selected here should be *vata* pacifying, as well as *pitta shamaka* with *rakta prasadka* properties that help in healing and reducing the symptoms that are caused especially due to ocular hemorrhages.

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INTRODUCTION

As eyes are the gateways of external world, visual defects tantamount to the obliteration of the world. The diseases of eye are classified vividly in *Susruta Samhita* among which as per pathological site one group of eye disease known as *Dristigata roga*, (diseases of visual impairment). Among these diseases, *Timira* involving *patala* (layers of retina) is considered to be the most important and serious as far as its prognosis and treatment is considered. If it is not treated in time it leads to total blindness, *Timira* simulates to refractive error, presbyopia, cataract, vitreous pathology and disease of retina.

Prevalence--An estimated five million individuals worldwide suffer from this disease today, accounting for 4.8% of blindness worldwide¹. According to the World Health Organization, diabetes is the leading cause of new cases of blindness among adults aged 20-74 years. More than 170 million people worldwide currently have diabetes, and this number is projected to skyrocket to 366 million by 2030. Approximately half of these cases are likely to develop DR. Rates of both diabetes and DR are expected increase significantly in developing countries due to a lack of access to health care.² In 2014, there were approximately 422 million people (8.5% of the world's adult population) living with diabetes; compared to 108 million in 1980 (2016 WHO

Global Report on Diabetes)³. It commonly affects both eyes and can lead to vision loss if it is not treated. The treatment of modern system of medicine, focal laser therapy, anti-vascular growth factor drugs. These treatment modalities have side effects, so in such disorders. Ayurveda is very effective in such complicated disorders. As such this disease is not mentioned directly in our texts so we can take it as a type of *raktapitta doshaja timira*.

Timira is a disease which is included under *dristigata roga*⁴- disorders of vision and visual apparatus. *Timira* is *vata pradhan tridoshaja vyadhi* which gradually progress to involve the *Patalas* thereby deteriorating the vision. *Dristipatalagata roga* is mainly attributed to *Sira srotas abhisyandam* and *raktavaha sroto dusti* due to a variety of *Achakshyushya ahara* and *vihara*. *Nidana* of endogenic eye diseases are mainly *Achakshyushya* factors which vitiates *pitta*. The vitiating *pitta* in turn vitiates the *pitta vaha srothas*. Due to interconnection of *pitta* and *rakta*, *raktavaha srotas* is also vitiating. As the *nidana* factors are *Achakshyushya*, the vitiating *pitta* and *rakta* have an affinity towards penetrating the eyes. Hence the vitiating *dosha* turn towards the eyes through *Jatroordhwa* *siras* and *srotas* and finally gets confined to the eyes. In this context there is a stage when the *Sirasrothas* are deeply involved which is known as *Sira abhisyanda* in which the *Asrya sthana* is *Srotas*, affected *dhatu* is *Rakta* and vitiating *dosa* is *Pitta*.

Case report

MATERIAL AND METHODS

Place of study- National institute of Ayurveda, Jaipur (Rajasthan), 302002

Presentation -55yrs old female patient of type 1 diabetic since 10 yrs complaining of gradual diminution of vision attending *shalakya* OPD of NIA, was chosen having signs of retinal hemorrhages.

History of Present Illness- According to patient he was asymptomatic since 6 months gradually she found diminution of vision. She was already taking ayurvedic prescriptions for diabetes from NIA, so she was referred to our opd for her ocular complaints.

Personal History **Table no .1**

Name: xyz	Bala: avara	Prakriti: Pitta Vata
Age:55years	Sleep: adequate	BP:130/80 mmHg
Sex: female	Addiction: None	Weight: 64kg
Marital status: married	Bowel habit: regular	Height: 158cm
Occupation: housewife	Appetite: good	

Ashtavidha Pariksha **Table no.2**

Nadi (pulse): 80/min	Shabda (speech): Clear
<i>Mala</i> (stool): normal regular	<i>Sparsha</i> (touch):Normal
<i>Mutra</i> (urine): Norml	<i>Druka</i> (eyes):Normal
<i>Jivha</i> (tongue) : normal	<i>Akruti</i> (built): Madhyam

Regular visit was done for 1 month at 15 days interval in hospital. The patient's past medical history was significant only for T2DM. She did not have hypertension. Her T2DM was moderately controlled with allopathic and ayurvedic medicines. She did not have glaucoma and had no history of undergoing eye surgery or any treatment for diabetic retinopathy (DR).

Treatment plan- Patient was treated on OPD basis. Selected Ayurvedic Drugs: *Vasakadi kwath* was selected as oral drug.

Table no. 3 Dose, Route, Kala (drug administration time) of drugs used in the management

Name Of Medicine	Dose	Route	Kala
<i>Vasakadi kwath</i>	30 ml	Oral	Morning and evening

Duration: 1 month
 Follow up - will be done once in 15 days for 1 month.
 Criteria for selection of medicines: *vasakadi kwath* was selected on the basis of their properties useful in pacifying vitiated *dosha* in diabetic retinopathy and ability to relieve signs and symptoms.

Ingredients of trial drug -*Vasa Nimba, Patola, Triphala, Musta.*

Preparation of *kwath*-- Each content were taken in equal quantity in *yavakuta* form. Patient was advised to prepare fresh *kwath* as per classics both time.

Counseling- As patient was also psychologically upset hence proper counseling of patient was done. She was made aware about the disease and the associated fact that Diabetic patient are more prone for ocular complaints. Patient was made aware regarding her condition and her health.

Follow up 1st- After first follow up patient had mild relief in signs and symptoms.

Duration- This treatment was carried out for 1 month.

Follow up -After 15 days. Signs and symptoms of the patient were assessed during each follow up and results were drawn after last follow up.

Local Examination-- visual acuity was 6/60 in the right eye and 6/12 in the left eye with normal intraocular pressures at first visit Near vision before correction was N36 and after using glass N6. He was using glasses only for near vision. Slit lamp examination of the anterior segment was normal in both eyes, and dilated fundus exam was significant for mild non-proliferative DR in both eyes.(microaneurysms, hard exudates, few signs of dot and blot hemorrhages in retina specially in the perimacular area are found), rest findings are within normal limits. Presbyopic glasses were advised by the optometrist.

Assessment criteria

Subjective parameter-criteria based on symptomatology of *Timira*.

vihval drishti-Blurred vision not corrected by spectacles.

Objective parameter

- visual acuity
- Fundus examination by direct ophthalmoscope
- Investigation- blood sugar (fasting .pp), blood pressure.

Treatment

There are currently no eye-specific treatment options for early stage DR. The patient was referred back to her endocrinologist for diabetes management and told to return for proper follow up meanwhile oral medication of *vasakadi kwath* was indicated for resolution of hemorrhages found in non proliferative type of diabetic retinopathy along with for improvement of vision too.

Investigations	Before treatment	After treatment
Vision acuity	RE 6/60 LE 6/12	RE 6/24 LE 6/9
Blood pressure	140/80mmhg	130/80mmhg
Fasting blood sugar	96mg/dl	85mg/dl
Blood sugar (pp)	122mg/dl	120mg/dl

Follow up----On her one-month return visit to the hospital, the patient was found to have RE 6/24 vision AND LE 6/9 but still had evidence of mild non-proliferative DR in her eyes.

DISCUSSION

Basis of drug selection- The drugs selected here for *Timira* should be *vata* pacifying as well as *pitta shamaka* with *rakta prasadka* properties which will help in healing and reducing the symptoms that are caused especially due to ocular hemorrhages. As in the textual reference of *vasakadi kwath* it is indicated that it is useful in hemorrhage, *kapha dosha shamak* and *chakshusya* properties.

The contents of the trial drug are altogether *shita virya, tikta kashyaya rasa, shonitha shapana*, thus indicating their appropriate role in *Timira* as well as retinal hemorrhages.

Drug name	Latin name	Rasa	Guna	Virya	Vipaka	Karma	Ref.as Chakshyushya ^{5,6}
Patola	Trichosanthes dioica	Tikta	Laghu Ruksha	Ushna	Katu	Raktasodhak, Sothahara Tridosha samak	Su.U.17/51
Nimba	Azadirachta indica	Tikta, Kashaya	Laghu	Sita	Katu	Pittasamak Madhumehanasak Chakshyushya Sothahara	Sa.S.3.13/29,35 Bngsen netraroga 117
Bibhitak	Terminalia belerica	Kashaya	Ruksya Laghu	Ushna	Madhura	Raktasthambhak Chakshyushya	Su.U.12/31 Raj.Ma.3.15 A.H.U.13/46
Musta	Cyperus rotundus	Katu, tikta, Kashaya	Laghu Ruksha	Sita	Katu	Kapha pitta samak Raktaprasadan	Ga.Ni.3.3/200 Ga.Ni.3.3/299,302
Haritaki	Terminalia Chebula	Pancharasa Lavan barjit	Laghu Ruksha	Ushna	Madhura	Tridoshasamak	Su.U.17/49
Amalaki	Embelica Officinalis	Pancharasa Lavan rahita	Laghu Ruksha Sita	Sita	Madhura	Tridoshahara Pittasamak Rasayana Sonitasthapan Kaphapitta	Raj.ma.3/10 Ch.Chi.26/260 Su.U.12/49 Ba.Se.Netra-34
Vasa	Adhatoda vasica	Tikta Kashaya	Laghu Ruksha	Sita	Katu	Samak Raktasthambh	CH.SU27,su-su-6

- *Triphala*⁷ to possess free radical scavenging, antioxidant, antiinflammatory, antipyretic, analgesic, antibacterial, antimutagenic, wound healing, anticariogenic, antistress, adaptogenic, hypoglycaemic, anticancer, chemoprotective, radioprotective and chemopreventive effects.
- *C. rotundus* are reported to possess antiinflammatory, antipyretic, antibacterial and antidiarrhoeal properties, while antiinflammatory and antibacterial activities⁸.

CONCLUSION

*Vasakadi kwath*⁹ seems to have role in improving visual acuity found in diabetic retinopathy. Visual acuity improved from RE 6/60 to 6/24 LE 6/12 to 6/9 in 1 month along with subjective relief. But still no significant changes observed in the fundus pathology like haemorrhages, (dot and blot), hard exudates, and microaneurysms in both eyes.

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