



AYURVEDIC STRATEGIES FOR EFFECTIVE MANAGEMENT OF PRIMARY OPEN - ANGLE GLAUCOMA – A CASE STUDY

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ABSTRACT

Primary open-angle glaucoma (POAG) is a significant cause of irreversible vision loss, necessitating early detection and management. This article presents a case study of a 55-year-old Male patient with POAG. Initially asymptomatic, he visited OPD of Shalakya Tantra at GAMC Bengaluru with complaints of gradually diminishing vision in both eyes over the past few years. On Examination, his intraocular pressure (IOP) measured elevated at 26 mmHg in both eyes. Further examination revealed cup-to-disc ratio asymmetry and characteristic visual field defects consistent with glaucomatous damage. The patient was diagnosed with POAG and initiated with Ayurvedic Treatment such as Deepana Pachana, Classical Virechana, Jaloukavacharana and Internal medications. Regular follow-ups were scheduled to monitor disease progression. There was improvement in visual acuity in both eyes along with significant reduction of intra-ocular pressure. Visual field analysis showed improvement in retinal sensitivity. Thus it can be concluded that Ayurvedic approach is helpful in giving a complimentary treatment protocol for primary open angle glaucoma.

INTRODUCTION

Primary open-angle glaucoma (POAG) is a chronic and progressive optic neuropathy characterized by insidious onset and gradual visual field loss, often leading to irreversible blindness if left untreated.^[1] Despite its prevalence and significant impact on global public health, the exact etiology and pathogenesis of POAG remain incompletely understood in modern medicine. In recent years, there has been growing interest in exploring traditional medical systems such as Ayurveda, which offer unique perspectives on the underlying mechanisms and management of various diseases, including ocular disorders. Glaucoma is also a major public health problem about the eye which is silent killer of vision and came upto total blindness that entails substantial societal, educational, personal and economic impact. The mechanism of glaucoma differs according to the clinical types, the main cause of raised intraocular pressure are either excessive secretion by ciliary process or obstruction in the drainage of aqueous humour at chamber angle.^[2] In the open angle glaucoma the excretion of aqueous humour from chamber angle to the exterior is reduced due to thickening of connective tissue causing blockage in the trabecular meshwork as well as sclerosis of outlet channels. The sclerosis extends to the capillaries of the optic nerve also there by causing optic atrophy and also the pressure necrosis of retina. In the

modern science treatment options of glaucoma include local pilocarpine 0.5% to 4% eyedrop, timolol malate, hyperosmotic agent, trabeculectomy. Hence to provide efficient and better treatment options available through ayurveda this study has been taken up.

CASE HISTORY

A 57 years old Male patient presented to our shalakya opd at GAMC Bengaluru with complaints of gradually diminishing vision in both eyes over the past few years. He reported experiencing occasional episodes of blurry vision, particularly in low light conditions, along with mild discomfort and a sensation of pressure around his eyes. He also mentioned that his symptoms had gradually worsened despite using over-the-counter eye drops for dryness.

Medical History

He had a history of hypertension since 15 years which was well-controlled with medication.

He had no significant past ocular history, including trauma, surgeries, or family history of glaucoma. His general health was otherwise stable, with no history of chronic systemic illnesses or allergies.

Family History

There was no any significant history.

Personal History

There was no any significant history

Ocular Examination**VISUAL ACUITY**

	RIGHT	LEFT
DVA	6/24	6/12
NVA	N10	N8
PH	6/12	6/9

Colour Vision Test:

Normal Reading.

Amsler Grid:

Normal Reading in both eyes in all quadrants

FUNDUS EXAMINATION

	OD	OS
Fundal glow	Dull	Dull
Media	Clear	Clear
Vessels	Normal AV ratio 2:3	Normal AV ratio 2:3
Cup disc ratio	Cup disc 0.5	Cup disc 0.7

TREATMENT PLAN

SI No	Medication	Duration	Dose
1	Deepana pachana with Chitrakadi Vati	5 days	2 tablets BD After food
2	Snehapana with Patoladi Ghrita	For 5 days	1 st day – 30ml 2 nd day – 65ml 3 rd day – 110ml 4 th day -160 ml 5 th day – 220ml
3	Virechana with Trivrit Lehya	In the morning at 8;30am	100gms
4	Samsarjana krama	5 days	
5	Nasya with Anu taila	For 7 days	8 bindu in each nostrils
6	Jaloukavacharana	1 sitting	
7	Shadanga Guggulu Kwata Pana ^[3]	For 15 days	15ml Bd
8	Saptamruta Loha	For 15 days	2 BD after Food, morning and Night

RESULTS AFTER TREATMENT**Subjective Parameter**

Improvement in blurriness of vision

Improvement in dark adaptation

Improvement of peripheral vision loss

Objective Parameter

Visual acuity : Improvement in visual acuity is given below.

VISUAL ACUITY

	RIGHT	LEFT
DVA	6/12	6/9
NVA	N8	N8
PH	6/9	6/9

Macula	FR+	FR+

Diagnostic Assessment

Laboratory investigation and other hematological findings before treatment revealed were within normal limit.

IOP measurement was done with Scheziot tonometry was little increased level.

Visual acuity for near /distance vision done using

Snellens distant vision chart and Jaegers near vision chart.

Detailed assessment of Ant chamber of eye was done with slit lamp biomicroscopy with ant. Chamber angle depth.

Fundus examination : which confirmed the diagnosis of advanced POAG in both eyes, showed an acquired optic nerve pit in both eyes with cup disk ratio asymmetry was 0.5 and 0.7 in right and left eye respectively.

Visual field analysis : Showed Nasal Para central scotoma in both eyes

Fundus Examination findings - no progression of cupping.

Intraocular pressure: Reduced and maintained during follow up period also.

Visual field perimetry test, showed mild improvement in retinal sensitivity with no further progression of defects.

RESULT

There was improvement in Visual acuity and IOP in both eyes. Fundus examinations findings were unchanged with no progression of cupping, Visual field analysis showed mild improvement in retinal sensitivity with no further progression of defects V/A and IOP maintained

during follow-up period also.

DISCUSSION

Chronic glaucoma gradually reduces the peripheral vision, but by time person notice it, permanent damage may already have occurred. If the IOP remains too high, the damage can progress until significant loss of peripheral vision develops, and the person will only able to see objects that are straight ahead. Left untreated, it can lead to blindness. Majority of the risk factors and pathological mechanisms involved in pathogenesis glaucoma indicate the role Vata dysfunction which regulates the activities of other two Dosha viz. Pitta and Kapha.^[4] In the later stage of glaucoma all three Doshas then abnormal while Vata continue to play a predominant role. Agnimandya, Malasandya, Margavarodha, Pranavahaand Rasavaha Srotodustiand Vyadhikshamatva^[5] also seem to play a significant role in glaucomatous damage.^[6] These aspects should be kept in mind while selecting therapeutic intervention. Deepana, Pachana, Sadyovirechana was done to relieve Agnimandya both at Kshata (gastro intestinal) and Dhatu level and to bring Vata Doshanulomana, having Samagni is the base for being healthy and to have proper metabolism and absorption of the drug and action of the other procedures in managing POAG are as follows.

CONCLUSION

Thus, it can be concluded that Ayurvedic approaches are helpful in managing degenerative disease like primary open angle glaucoma. This study also emphasizes that Ayurveda can play a significant role in the integrated management of this condition, considering such beneficial activities of Ayurveda approaches, there is a need to undertake collaborate researches to generate evidence at large scale.

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