

## PRECISE INFORMATION ON PRIMARY OPEN ANGLE GLAUCOMA

## PARTHA HARADHAN CHOWDHURY<sup>1</sup>

# BRINDA HAREN SHAH<sup>2</sup> NRIPESH TIWARI<sup>3</sup>

<sup>1</sup>M.OPTOM, ASSOCIATE PROFESSOR, PRINCIPAL

Department of Optometry, Shree Satchandi Jankalyan Samiti Netra

Prasikshan Sansthan Pauri, Affiliated to Uttarakhand State Medical

Faculty, Dehradun, India

<sup>2</sup>M.OPTOM, Practitioner, Ahmedabad, Gujarat, India

<sup>3</sup>D.Optom, Chief Optometrist, District Hospital Pauri, Government of Uttarakhand

## **CORRESPONDING AUTHOR:**

PARTHA HARADHAN CHOWDHURY, M.OPTOM, ASSOCIATE
PROFESSOR, PRINCIPAL, Department of Optometry, Shree Satchandi
Jankalyan Samiti Netra Prasikshan Sansthan Pauri, Affiliated to Uttarakhand
State Medical Faculty, Dehradun India

## **ABSTRACT:**

This paper describes about Primary Open Angle Glaucoma, its Clinical Features and its Treatment.

## INTRODUCTION:

Before describing about the Primary Open Angle Glaucoma, it is to be remembered that, the Preliminary Clinical Feature of the Glaucoma is Optic Disc and Optic Cup Ratio changes. After that, IOP spikes.



The meaning of the Optic Disc and Optic Cup is permanent Optic Nerve Head damage. It means permanently Optic disc and Optic cup border sharpness is changed and color is deteriorated also. In case of Primary Open Angle Glaucoma, the angle remains same but IOP spike is due to accentuate of the scleral spur and Trabecular Meshwork.

#### **CLINCAL FEATURES:**

♣ Visual Acuity is deteriorated and it is permanent

It occurs because in case of Primary Open Angle Glaucoma, Optic Disc and Optic cup ratio is damaged which may lead to damage of Optic Nerve Head.

♣ IOP spike

In case of Primary Open Angle Glaucoma, angle is open but Intra ocular Pressure is spike. It mainly occurs due to attenuation of Trabecular Meshwork and Scleral Spur

- Colour Haloes are present due to Corneal Edema
- ♣ Mild eye ache and Headache
- Difficulty in near work
- ♣ Frequent change of presbyopic glasses

In case of Primary Open Angle Glaucoma, patient will suffer problems during near work due to disturbances in ciliary muscle

Optic disc Cupping

In case of Primary Open Angle Glaucoma, it occurs when Intra Ocular Pressure spikes leads to pulling to Lamina Cribrosa which will create pressure on Optic disc and it creates Optic disc Cupping (The meaning of the cupping is Optic Nerve Head permanent damage).

Before diagnosis of the Primary Open Angle Glaucoma, Provocative Test should be done. The meaning of the Provocative test is to enhance the Intra Ocular Pressure. If difference is greater than 8 mm of Hg compared to previous measurement, then it is considered as Primary Open Angle Glaucoma.



#### **PROVOCATIVE TEST:**

The meaning of the Provocative Test is "This test can induce Intra Ocular Pressure and if its value is greater than 8 mm of Hg compared to previous test IOP value, then it is considered as Primary Angle Closure Glaucoma."

Mainly Primary Angle Closure Glaucoma is diagnosed by the Gonioscopy because here angle must be shallow

## I. DARK ROOM TEST:

Here, patient is asked to stay in dark room upto1 hour. Here Intra Ocular Pressure may spike due to Pupil Dilatation.

## II. PRONE TEST:

Patient is asked to stay in prone position upto1 hour and Intra Ocular Pressure should be measured.

## III. DARK ROOM PRONE TEST:

Here, patient is asked to stay in Dark room in prone position for 1 hour and Intra Ocular Pressure should be measured.

## TREATMENT:

Modes of Treatment are:

- Medical
- **Laser**
- Surgical
- Combination

#### POINTS TO REMEMBER:

- ♣ For Heart patient "Betaxolol eye drops is considered.
- ♣ Mainly consider Latanoprost eye drops \* 3-4 times a day.

## IN CASE OF SURGERY,

Goniotomy



- Goniopuncture
- Trabeculotomy
- ♣ Trabeculotomy + Trabeculectomy

## A. GONIOTOMY

During Goniotomy, an arcuate lesion is being created between Schwalbe's line and Iris. The meaning of the Arcuate lesion is "Half Moon."



## **B. GONIOPUNCTURE**

The meaning of the puncture is "WHOLE". Here, puncture is created between Trabecular Meshwork and Conjunctival space.

## C. TRABECULOTOMY

Here, fine metal probe is passing through the Schlemn's canal into the Anterior Chamber. Thus, Schlemn's canal will be opened.

## D. TRABECULOTOMY + TRABECULECTOMY

Trabeculectomy procedure is followed with Trabecular Meshwork is excised (cut) totally.

#### **REFERENCES:**

1. Brad Bowling (2016) Kanski's Clinical Ophthalmology E-Book: A Systematic Approach. 8th (Edn.).





- 2. Sihota, Radhika Tandon (2018) Parson's Diseases of the Eye. 22nd (End.).
- 3. Samar K Basak (2009) Clinical Ophthalmology.
- 4. Robert L. Stamper et al., (2009) Becker-Shaffer's Diagnosis and Therapy of the Glaucomas