

Glaucoma Patient Management for the Team

Dr. April Jasper

Glaucoma is known as the silent thief of sight. It is the number one cause of irreversible blindness in the world. It affects approximately 70 million people worldwide. It is a chronic, progressive disease described as an optic neuropathy characterized by optic disc or retinal nerve fiber structural abnormalities and corresponding visual field defects. Approximately 50% of POAG remains undiagnosed and untreated. In this course we will discuss the impact of glaucoma in our patient population and steps we can take to be certain we never fail to diagnose and initiate treatment in our patients. We will review best practices in starting the first drop, adding the second and third drops and when and how to refer. We will review patient education options and the importance of and role of technology in the diagnosis, treatment and management of glaucoma. At the conclusion of this course we will leave the optometric team with a better understanding of how to seamlessly incorporate glaucoma screening, diagnosis and care into our practice for the best outcomes for our patients.

Objectives:

- 1.** In this course we will discuss the impact of glaucoma in our patient population and steps we can take to be certain we never fail to diagnose and initiate treatment in our patients.
- 2.** We will review best practices in screening, diagnosis, classification, treatment (from starting the first drop, adding the second and third drops) continuation of care and when and how to refer.
- 3.** We will review patient education importance and options
- 4.** We will discuss the importance of and role of technology in the management of our patients as well as the role the team plays in the process
- 5.** At the conclusion of this course we will leave the optometric team with a better understanding of how to seamlessly incorporate glaucoma screening, diagnosis and care into our practice for the best outcomes for our patients.

Outline

- a) Glaucoma is known as the silent thief of sight. It is the number one cause of irreversible blindness in the world. It affects approximately 70 million people worldwide. It is a chronic, progressive disease described as an optic neuropathy characterized by optic disc or retinal nerve fiber structural abnormalities and corresponding visual field defects.
- b) Approximately 50% of POAG remains undiagnosed and untreated.
- c) Up to 50% of POAG patients have unmedicated IOPs below 21 mmHg.² Sommer A, Tielsch JM, Katz J, et al. Relationship between intraocular pressure and primary open angle glaucoma among white and black Americans. The Baltimore Eye Survey. Arch Ophthalmol. 1991;109(8):1090-1095.
- d) Why not treat glaucoma? What Lawsuits are most common in Glaucoma?
 - a. Failure to Detect (determine risk)
 - b. Failure to Diagnose
 - c. Failure to Warn of seriousness of disease
 - d. Failure to Determine Progression and change treatment or refer
 - e. Failures in Surgery
- e) What do we do?
 - a. Simplify the process
 - b. Create a consistent protocol for screening, diagnosis, treatment, continuation of care
 - c. Utilize technology
 - d. Train the team
 - e. Create patient tools/handouts/apps to improve outcomes
- f) Screening
 - a. What tests?
 - b. When to perform screening
 - c. How to set up a protocol and what technology may be needed
 - i. OCT
 - ii. Camera
 - iii. Visual Field
 - iv. ORA
 - d. History: what questions need to be asked of each patient
 - e. Who on the team is involved and what is their role?
 - f. Which patients are screened?
 - g. Who reviews the tests and when?
 - h. Billing tips for screening
 - i. Next Steps
- g) Diagnosis

- a. Prevalence in your practice
- b. Risk Factors
 - i. Age
 - ii. Race
 - iii. Refractive Error
 - iv. Family History
 - v. IOP
 - vi. Migraines
 - vii. Antihypertensive Medications
 - viii. Sleep Apnea
- c. Diagnostic Technology needed and watch outs/best practices with each
 - i. OCT
 - ii. Camera
 - iii. FDT
 - iv. ORA
- d. Patient communication tools for at risk patients, diagnosed patients as well as their families/support group
 - i. Websites
 - ii. Handouts
- e. Protocol for next visit if glaucoma suspect
- f. Protocol for next visit if diagnosed
- h) Examination
 - a. Who does what tests in your office?
 - b. Questions to ask?
 - i. *Have you or anyone in your family ever been diagnosed with glaucoma, been told they were a glaucoma suspect, use drops in their eyes or had eye surgery?"*
 - ii. What color top drops do they use?
 - c. When does each test need to be done?
 - i. Before seeing doctor
 - ii. After seeing doctor
 - iii. Same day
 - iv. Next week
 - v. How often should they be done
 - d. How to determine when to start treatment
 - i. Risk Calculator
 - 1. 20% risk means 20 out of 100 patients with similar findings in previous clinical trials converted to GL in the next 5 years
 - 2. Risk doubles every 5 years

3. Consensus is developing that a 15-20% risk is enough to consider treatment
4. Remember to use an average of 3 IOP measurements and an average of 2 VF's

ii. Studies

i) Classification

- a. Suspect
- b. Definite diagnosis

j) Treatment

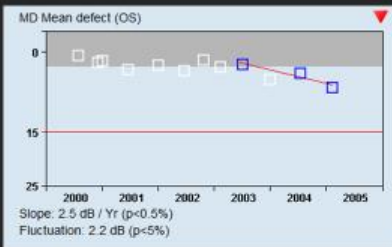
- a. Threshold to treat calculator <http://oil.wilmer.jhu.edu/threshold>
 - i. Provides an estimate of the IOP that would result in a particular level of risk for developing glaucoma
- b. Drops vs surgery
- c. What drops?
- d. When to use a second, third drop?
- e. How to educate patient on drops importance, usage and refills

Target IOP (Range is Best)

- Age (risk of blindness over lifetime)
- Worst starting IOP range
- Risk factors for progression such as cup size, thinner cornea, race, visual field and disc heme

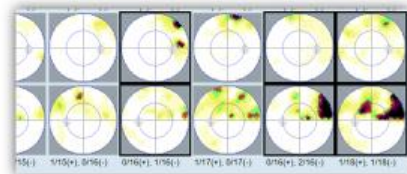
- OHTS - 20% IOP reduction + progression
- EMGT - 25% IOP reduction + progression
- CNTGS - 30% IOP reduction + progression
- CIGTS - 35-48% reduction no progression
- AGIS <18 at all visits no progression
- Formula method using MD on VF says the worse the field the lower the target IOP

Progression Analysis



Some rules about judging progression

- Disease progression rates can always change because of new treatment, surgery
- If a field is unreliable, it should not be included in progression analysis
- → **Select the visual fields of interest**
- **IGS recommends judging progression of MD not VFI**



k) Continuation of care/special testing

a. Which are needed

i. Visual field

1. Progression analysis
2. Which one
3. How often

ii. OCT

iii. Photos

iv. Gonioscopy

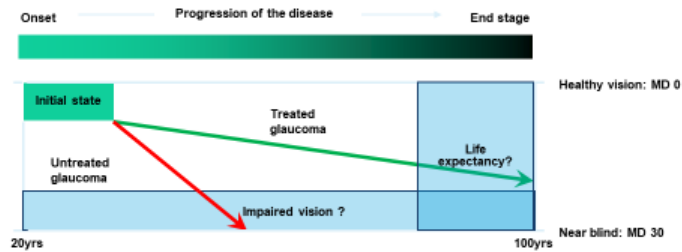
v. ORA

vi. Questionnaires

Looking at Change Over Time is Critical



- Disease progression is slow, VF changes are small, VF analysis is subjective!!!
- There is always fluctuation



HAAG-STREIB
DIAGNOSTICS

b. How to educate patients regarding results

l) Glaucoma Case Report

- a. History
- b. Screening
- c. Examination
- d. Diagnosis
- e. Classification
- f. Education
- g. Treatment
- h. Continuation of Care