

Assessment and Management of Patients with Eye Disorders

Glaucoma

Assistant lecturers

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glaucoma

Glaucoma is a group of ocular conditions characterized **by elevated IOP**.

The increased IOP damages the optic nerve and nerve fiber layer.

The normal IOP is between **10 and 21 mmHg**.

The optic nerve damage is related to the **IOP** caused by congestion of aqueous humor in the eye.

Is the 2nd leading cause of blindness in adult in the US.

Glaucoma is more prevalent in people older than 40 years.

There is no cure for glaucoma, but the disease can be controlled

RISK Factors of Glaucoma

- African American race
- Cardiovascular disease
- Diabetes
- Family history
- Older age
- Previous eye trauma
- Thin cornea
- Prolonged use of topical or systemic corticosteroids
- Migraine syndromes
- Nearsightedness (myopia)

Pathophysiology

There are 2 theories regarding how increase IOP damage the optic nerve in glaucoma.

The direct **mechanical theory** suggested :

High IOP **damages the retinal layer as it passes through the optic nerve head.**

The indirect ischemic theory suggested that high **IOP compresses the microcirculation in the optic nerve head, resulting in cell injury and death.**

Classification of Glaucoma

There are several types of glaucoma:

1- wide-angle glaucoma

2- narrow-angle glaucoma

3- congenital glaucoma

4- glaucoma associated with other conditions, such as developmental anomalies or corticosteroid use.

The two common clinical forms of glaucoma in adults are **wide- and narrow angle glaucoma,**

Clinical Manifestations

“Silent thief of sight”

Most pts. Are unaware that they have the disease until they have experienced **visual changes** and **vision loss**.

Blurred vision or “**halos**” around lights, **difficulty focusing** , **loss of peripheral vision**, **aching** or **discomfort around the eye** and **headache**.

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Assessment and Diagnostic Methods

1. **Ocular and medical history** (to investigate predisposing factors)
2. **Tonometry** (measures IOP),
3. **Ophthalmoscopy** (to inspect the optic nerve),
4. **Gonioscopy** (to examine the filtration angle of the anterior chamber)
5. **Perimetry** (visual fields assessment).

Medical Management

The aim of all glaucoma treatment to:

- ❖ **Is prevention of optic nerve damage.**
- ❖ Pharmacological therapy (**miotics**) (medications that cause pupillary constriction), .
- ❖ laser trabeculoplasty)(Laser procedures)
- ❖ surgery or a combination of these approaches

- **Surgical Management**
 - Laser trabeculoplasty or iridotomy indicated when IOP is inadequately controlled by medications.
 - Filtering procedures
 - Drainage implant or shunt surgery.
 - Trabectome surgery

Nursing Management

- Create a teaching plan regarding the nature of the disease and the importance of strict adherence to the medication regimen to help ensure compliance.
- Review the patient's medication program, particularly the interactions of glaucoma-control medications with other medications.
- Explain effects of glaucoma-control medications on vision (eg, miotics and sympathomimetics result in altered focus

- Refer patient to services that assist in performing activities of daily living, if needed.
- Refer patients with impaired mobility for low vision and rehabilitation services.
- Provide reassurance and emotional support.
- Integrate patient's family into the plan of care, encourage family members to undergo examinations at least once every 2 years to detect glaucoma early.

THANK YOU