

*–OUTCOMES AFTER SURGICAL
DRIANAGE OF CHOROIDAL
EFFUSION FELLOWING GLAUCOMA
SURGERY.*

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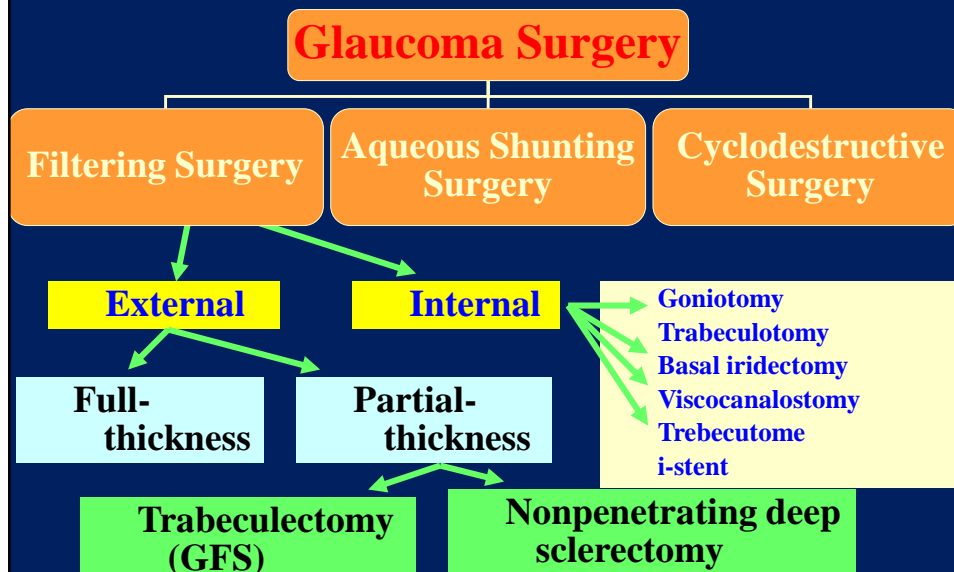
GLAUCOMA CONSULTANT



Glaucoma

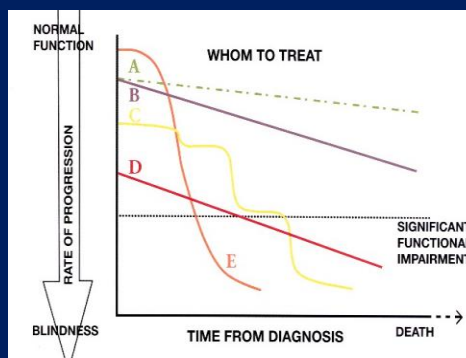
- Group of diseases that have in common a characteristic optic neuropathy associated with visual field loss for which **elevated IOP** is the primary risk factor.

Types of Glaucoma Surgery



The decision to perform glaucoma surgery is based on:

- Amount of loss in the nerve and field (Stage of glaucoma)
- **Rate of progression**
- Patient's own sense of visual function
- Magnitude & duration of pressure elevation
- **General health and life expectancy of the patient**
- **The condition of the contralateral eye**

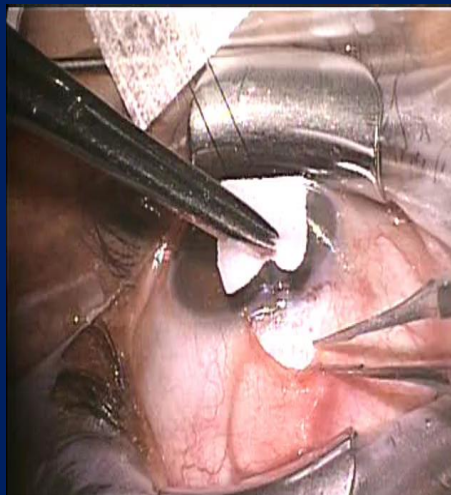


European Glaucoma Society Guidelines, 2004

Trabeculectomy

- **Starts before the end of the surgical procedure**

- Formation of AC
- Adjustment of filtration
- Watertight closure of conjunctival flap
- Pupillary dilation ?
- Subconj . Antibiotic ?



Postoperative Course

The main objectives:

- **Minimize postoperative inflammation**
- **Avoid postoperative hypotony or hypertension**
- **Enhance bleb formation**
- **Avoid late bleb infection**
- **Early detection and management of postoperative complications**

Early Postoperative Course

- Antibiotic drops (1 wk)
 - Steroid drops (tapered over 6 wks)
 - Cycloplegic drops
 - Limit activity if IOP <6mmHg
 - Patient seen in 1st & 2nd postop days and 1st week
- **YOU MUST CHECK**
 - **The Bleb: extent, elevation, LEAK**
 - **Anterior Chamber: depth & contents**
 - **Cornea, epith. Edema**
 - **IOP**
 - **Retinal periphery: choroidal effusion**
 - **Macula & Disc: edema**

Postoperative Complications of Trabeculectomy

Early Postoperative Complications

1. Shallow Anterior Chamber
2. Hyphema
3. Wipe-out phenomenon
4. Corneal Decompensation
5. Hypotony Maculopathy
6. Early Blockage of Sclerostomy
7. Complications related to use of antimetabolites

Late Postoperative Complications

1. Filtration Failure (nonfunctioning blebs)
2. Late Bleb Leak
3. Excessively Large Bleb
4. Blebitis/Endophthalmitis
5. Chronic Hypotony
6. Cataract Formation/Progression
7. Progressive Glaucomatous Damage

Shallow Anterior Chamber

With Low Postoperative IOP

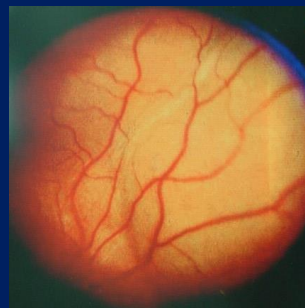
1. **Conjunctival leak**
2. **Choroidal Effusion**
3. **Cyclodialysis Cleft**
4. **Excessive Filtration**
5. **Ciliary hyposecretion**

With High Postoperative IOP

1. **Pupillary Block**
2. **Aqueous Misdirection (Malignant glaucoma)**
3. **Delayed suprachoroidal Hemorrhage**

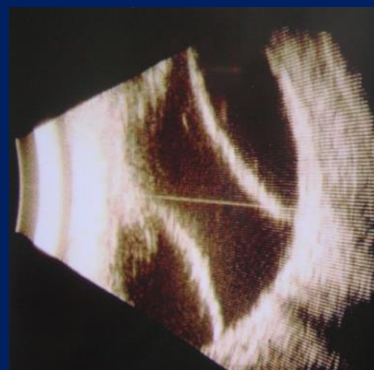
Choroidal effusion

is an abnormal accumulation of fluid In the suprachoroidal space ,is a common complication of glaucoma surgery ,laser suture lysis and may arise from other intraocular surgery and a number of conditions including inflammatroy and infectious disease , trauma , neoplasm , drug reaction and venous congestion.



Choroidal Effusion

- **hypotony** is the main cause of fluid accumulation in the suprachoroidal space with shallow AC
- May be annular, quadrant, or large kissing detachment
- Choroidal effusion further exacerbates hypotony by reducing aqueous humor production and possibly by increasing uveoscleral outflow.



Clinical features

- Small, peripheral effusions may asymptomatic
- Large may cause refractive changes due to anterior displacement of the lens – iris diaphragm with significant reduction in V/A

DIAGNOSIS:

- Clinically
- B-scan U/S:
to differentiate choroidal effusions
From retinal detachments.



Risk factors

– Any condition causing low IOP as overfiltration, bleb leaks

– **LI** increase the risk of subclinical effusion.

Medications :as

– Antimetabolites and aqueous suppressants.

– Sulfa- derivatives as topiramate leads to choroidal effusion with secondary angle Closure glaucoma in which the LI is not effective .

Tetracycline, diuretics .

Nanophthalmos ,Sturge-Weber syndrome

{**AC maintanier**}

Treatment

– **Observation** , most effusions resolve spontaneously

– **Medications:**

– Topical or oral steroids

– In overfiltration , steroids are discontinued to promote bleb scarring

– Cycloplegics to deepen the A/C by rotating the CB posteriorly.

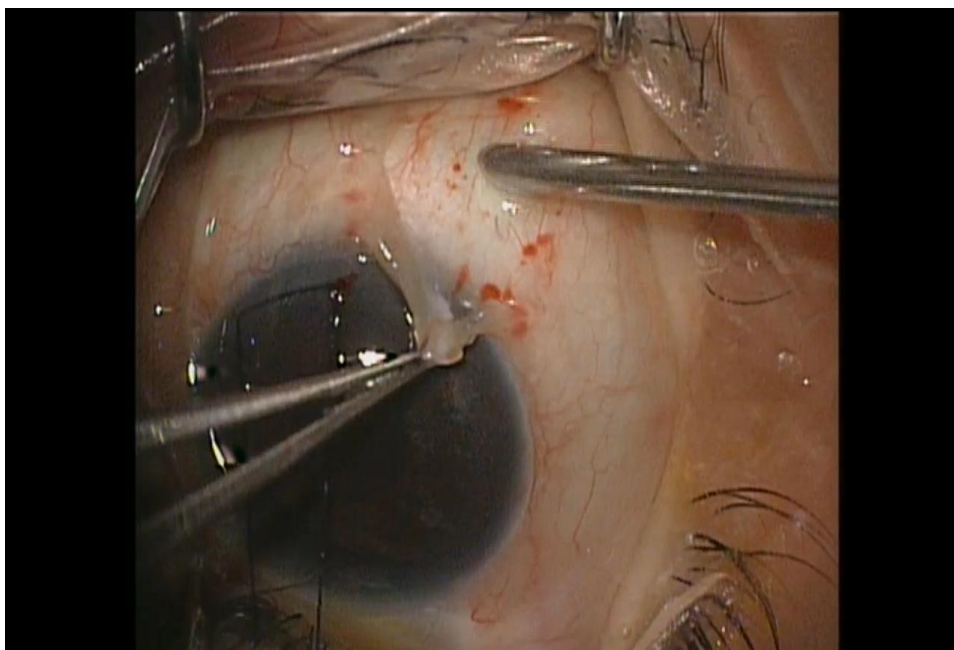
– Large bandage CL

– Injection of high density visco elastics.

– Compression sutures.

Indications of surgical drainage

- **Kissing choroidals**
- **Long lasting effusions**
- **Decrease vision**
- **A failing bleb**
- **Extremely shallow AC in eyes with chronic angle closure glaucoma**
- **Suspected suprachoroidal hge**



Drainage of suprachoroidal hemorrhage

- Severe, uncontrollable pain
- Retinal detachment
- Prolonged retinal apposition
- Retinal adherence to anterior segment structures
- Drainage is delayed until clot liquefies guided by U/S

WuDunn and colleagues reported retrospective study of 63 surgical drainage following glaucoma surgery .

high success rate was reported with significant improvement in V/A and hypotony.

Conclusion

- Choroidal effusions may result from various etiologies but are most commonly encountered after glaucoma surgery especially in the setting of hypotony , inflammation.
- Meticulous surgical steps and preventive measures may help to reduce the risk of choroidal effusions.
- Most effusions resolve spontaneously , surgical drainage may necessary in some cases to restore normal anatomy and visual funcion.

