Malignant Glaucoma following Cataract surgery

HANY ELIBIARY

Patient Criteria:

- 64 years old lady ,dark skin, medically free.
- C/O : defective vision Rt eye, recurrent headache.
- BCVA : Rt 0.3 (+1.50 sph/+0.75 cyl)
  Lt 0.8 (+ 3.0 sph/+1.00 cyl)
- IOP : 18 mmHg appl ou.
- Bilateral cataract : Rt N+++, Lt N+
  Average AC depth
- Normal posterior segment.
- Uneventful Rt. phacoemulsification & in the bag IOL *(+ 24.5 D)*

Postoperative:

- **Day 1**: Eye quiet , UCVA 0.9, refraction *+0.25 sph/-0.75 cyl*.
  (satisfied patient)
- **Day 3**: Phone call : far objects blurred but now can *read well*
  advised to come *ASAP*.
- **Day 4**: Headache , vomiting , severe visual deterioration .
- Advised to take 2 tablets of cidamex & *come immediately* to hospital.

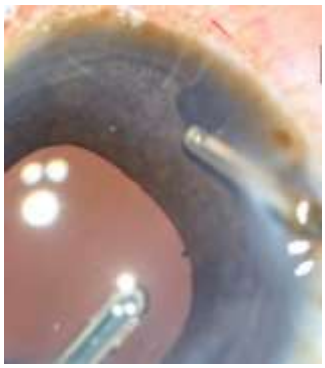
On Examination:

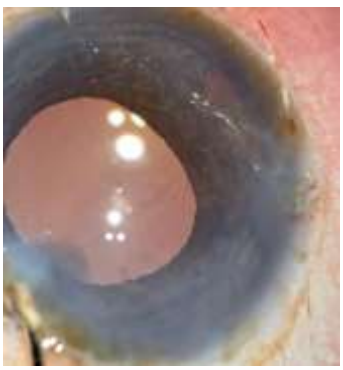
- Angry eye
- CF < 2 m
- IOP **52 mmHg**
- AC : almost *"lost even centrally"*
- Marked corneal edema
- Normal post. Segment ?

Malignant Glaucoma:
(Aqueous misdirection)

- **Admission, IV mannitol, aqueous suppressants.**
- **CYCLOPLEGICS : ATROPINE**
- **Trial for YAG iridotomy … failed**

Back to OR: "*IZH*"

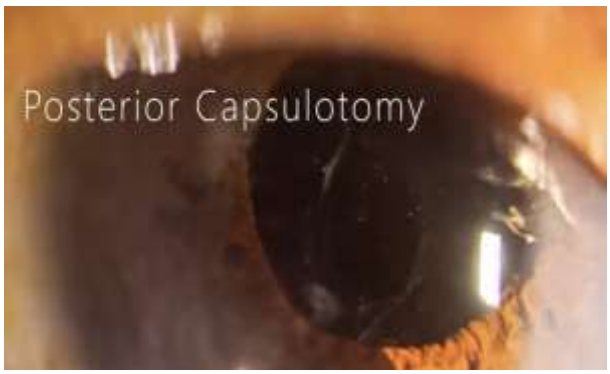


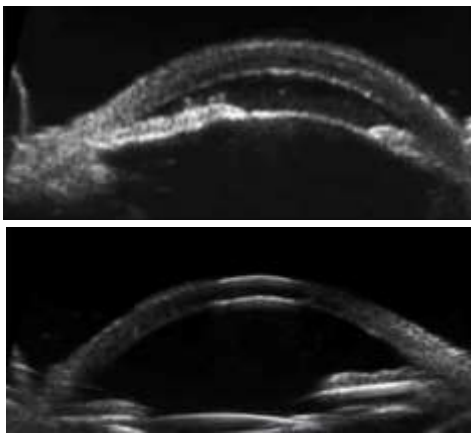


Postoperative :

- Steroids, ***atropine***.
- Recurrent pain, headache & vomiting.
- **IOP 48**, flat AC, corneal edema, **patent PI**.
- **Mannitol**, Aqueous suppressants, atropine.
- Try ***YAG posterior capsultomy*** & disruption of ***anterior hyaloid face*** …. Otherwise PPV.

YAG Laser:





High IOP+ Shallow AC :

- **Aqueous Misdirection**

  "Malignant Glaucoma"

- **Pupillary block**
- **Suprachoroidal hemorrhage**

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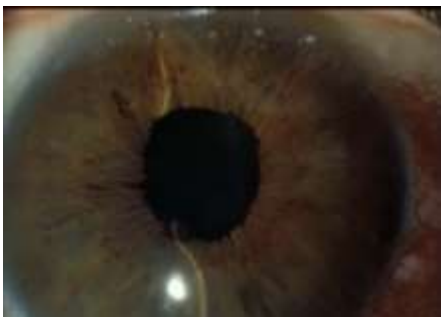

High IOP+ Shallow AC :

- **Aqueous Misdirection**

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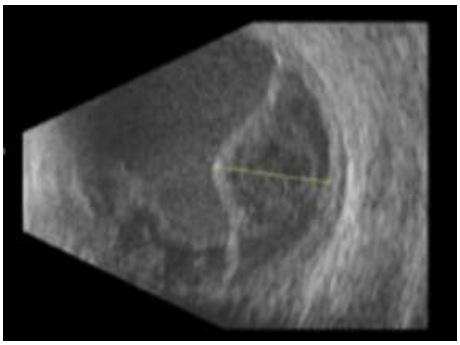
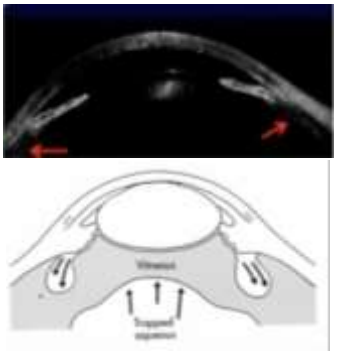
- **Pupillary block**
- **Suprachoroidal hemorrhage**

  "Pain"



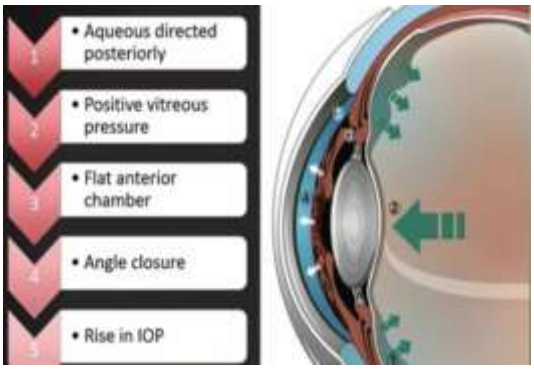
Malignant Glaucoma:

- ***Aqueous misdirection***, ciliary block , etc..
- Rare 1-4% , any interference : SST, cataract s, PI, argon laser , bleb needling, miotics, spontaneous !!!
- ***Narrow angles***
- Anterior rotation of ciliary processes, ciliolenticular block.
- ??? Lax zonules, choroidal expansion, impermeable ant. Hyaloid.



Malignant Glaucoma:

- Net result: pressure building posteriorly within the vitreous cavity pushing everything anteriorly.
- The *Lens (or posterior capsule)- Zonule – altered ciliary processes* & *compacted anterior hyaloid* form a ***Barrier*** separating the two compartments from each other & interfering with forward flow of aqueous.
- Treatment should aim at *breaking this barrier* to allow forward movement of aqueous.



Malignant Glaucoma:

- Although IOP is typically *very high* , it may present with *normal or low* IOP.
- Intensive & prolonged **cycloplegia (atropine)** + aqueous suppressants are the mainstay of medical ttt.
- *Miotic* use should be *avoided* by all means.
- In our experience , *almost all cases required interference* , prompt surgery is advised if the response to medical ttt is delayed.
- Simple lens extraction *&/or* core vitrectomy are ***not usually sufficient*** to solve the problem.
- Barrier should be broken *(Unicameral eye)*

Irido-zonulo-hyaloidectomy *(IZH)* :

- To insure a ***durable pathway*** connecting the 2 compartments we need to break condensed anterior hyaloid , create a sufficient PI & create a hole through the zonule just behind the iridotomy ***"IZH"***
- ***Anterior , Pars plana or combined.***
- **Lens** ,if present, usually removed.
- In **pseudophakic eyes** : try YAG

High risk & Fellow eyes:

- Detailed ***informed Consent*** .
- Stop any ***miotics***.
- Prophylactic ***PI*** in narrow angles.
- Avoid intraoperative or postoperative ***miotics***.
- Avoid intraoperative ***AC shallowing***.
- Prolonged ***cycloplegia*** with any interference.
- Some consider prophylactic vitrectomy or even ***IZH*** if surgery is needed in fellow eyes.


Thank You
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Hany Elibiary