



Uveitic cataract and glaucoma

Things to consider

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Uveitic Glaucoma

- The term **Uveitic** glaucoma is a progressive loss of retinal ganglion cells (RGC) with corresponding visual field loss (functional damage) that results in a characteristic “cupped” appearance (structural damage) in the optic nerve head associated with **uveitis**.

Hypertensive uveitis

- Definition: is an elevated intraocular pressure (IOP) that is associated with uveitis with NO STRUTCUARAL OR FUNCTIONAL DAMAGE OF THE OPTIC NERVE.
- Prolonged rise of IOP can lead to glaucoma.

PREVALENCE

- Estimated prevalence of Uveitic glaucoma is 10-20% of patients Heiligenhaus A 2009, and may reach 46% in chronic uveitis.
- Among the paediatric population, the prevalence of glaucoma among all uveitic patients was 19% Rothova A 2003.
- Glaucoma is more common in Vogt–Koyanagi–Harada syndrome (50% compared with 33% in JIA) Dhibi HA 2009

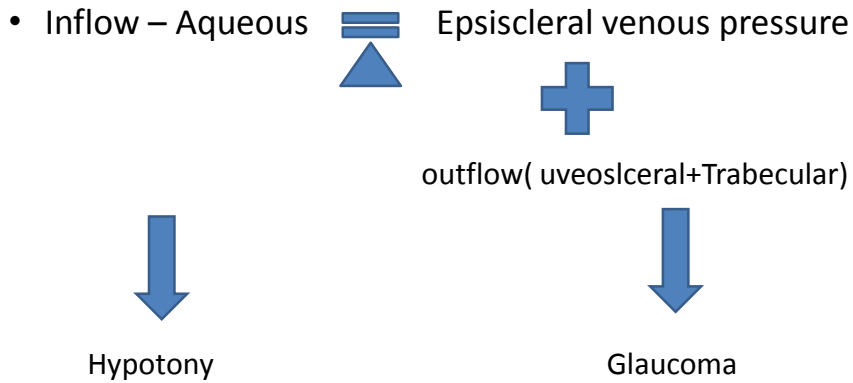
- Cataracts are one of the most common complications in patients with chronic uveitis. Its incidence varies from 57% in pars plants to 78% in Fuchs heterochromic iridocyclitis.
- Glaucoma was ranked as the third most common complication in uveitis after cystoid macula edema (CME) and cataract. Forrester JV 2004

Goldmann's Equation

$$F = (P_i + P_e) \times C + U$$

- F= Aqueous Flow
- P_i = Intraocular pressure
- P_e = Episcleral Venous pressure
- C= outflow facility
- U= uveoscleral outflow

Aqueous Dynamics in Uveitis



Uveitis Status

- 1-Acute inflammation.
- 2-previous mild to moderate uveitis(less than 5 attacks)
- 3- previous severe multiple uveitis(more than 5 attacks)

Aqueous dynamics in uveitis

- Acute uveitis may have low aqueous production but obstructed trabecular and enhanced uveoscleral outflow
- Prostaglandins likely to be ineffective in **active** uveitis
- Low aqueous production may be common in those with severe uveitis ?(Ahmed valve first choice)
- Moderate uveitis do not have reduction in aqueous (Traby).

Preparing the eye with uveitis

- Better to operate on a quiet eye for few months with iop within reasonable range
- The general consensus suggests that for the majority of cases of uveitis, at least three months of absolute inflammatory control is required

Preparing the eye

- Oral steroids 40 for 3 days before and after then taper down
- Already on Topical steroids

Combined or sequential

- Sequential is better
- Usually difficult cataract needs hooks , stain,.
- Fuchs uveitis??

Which one to do first

- Challenge of inflammation
- The steroids response
- Challenge of the IOP spike

Post op

- Spike of IOP, steroids response, Intracameral steroids (IBI-10090 DEXAMETHASONE DRUG 342, 517 ug
- CMO -NSAID drops, IV steroids, IV anti VEGF
- Need further operation

What kind of glaucoma operation

- Role for MIGS ?? hypertensive uveitis , steroid induced
- TRABY
- TUBE
- Cyclophotocoagulation??

Surgical

- Uveitic eye has a sick ciliary body and the natural progression of the eye pressure would be towards hypotony, because the ciliary body would not produce aqueous.
- Be careful in trying to reach very low target pressure in cases of very advanced glaucoma.

Drainage implant

- The surgical procedure of choice is a glaucoma drainage implant .
- Studies have shown that all 3 common types of valves (Ahmed, Baerveldt, and Molteno) are effective in lowering intraocular pressure and reducing the number of glaucoma medications.
- Express shunt !! may work in very sick eyes.

Precautions for tube surgery in uveitis

- Ligation of tube, delayed opening of the tube, smaller plate tube.
- NO MMC, which uveitis?
- VKH/ JIA –Ahmed valve

Surgical

- NPS is a safe and effective procedure to lower IOP in uveitic glaucoma. However, as with other glaucoma procedures, a significant proportion of patients will require another IOP-lowering procedure in the long-term.

Mercica 2017.

- Refractory juvenile uveitic glaucoma was managed successfully by glaucoma drainage device implantation.. Freedman 2013

Trabeculectomy

- Trabeculectomy with antiproliferative agent can be used in uncontrolled IOP cases.*(less in Fuch's)*
Moorfields 2nd Uveitic Glaucoma Surgery Study Lim IOVS 2004
- Trabeculectomy can fail postoperatively secondary to ongoing inflammation/ Cataract/ conj inflammation.
- Pre-op/Pot-op meds
- Precautions (Thickish flap, extra scleral flap suturing, late removal of sutures).

Pupillary block

- In secondary angle-closure glaucoma due to pupillary block(iris bombe,occlusio/ seclusio), surgical iridectomy with posterior synechiolysis and membranectomy is usually the treatment of choice.



Thank you

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