

Background

Paediatric Glaucoma (PG) caused by raised intraocular pressure (IOP) can cause irreversible blindness. Techniques which help to decrease the fluid production in the eye or increase the exit of fluid from the eye have proved to be successful treatment options. Mainstay of treatment is often surgery although pharmacologic management can also be used. Traditional surgical techniques such as trabeculectomy or goniotomy are often successful for the majority.



Despite these techniques, refractory cases remain. How we tackle these difficult cases is yet to be explored thoroughly. Interventions such as glaucoma drainage devices have been introduced but review of the long term success of these are limited.

Aim

Explore current treatments for refractory PG and consider the success of these through conducting a literature review.

Methods

A comprehensive literature review through online journals and databases
46 reviews were identified
32 were deemed to have relevant content.
Key terms included refractory glaucoma and implantable devices

Results

Traditional surgical techniques such as goniotomy first reported by Barkan¹ have a success rate of 70-90% after one year. Success of lowered IOP varies based on age and category of glaucoma (primary congenital glaucoma vs secondary to cataract removal). Trabeculectomy has similar success rates². Long term success has also been reviewed with 2/3 of children requiring only one surgery³.

Refractory cases can be amenable to implantable drainage devices (GIP) when traditional surgical options fail. One such device named 'Ahmeds valve' has proved to be 90% successful in lowering IOP in children at the first year⁴. Aphakic eyes respond better to this treatment and success after 5 year follow up is 70%.

Discussion

- Implantable devices are an appropriate management option for refractory cases as they have a good short term success.
- Tube related complications can occur and further research is required to improve post procedural complications.
- More studies looking at long term follow up are needed to compare success rates after a 10 year period.

References

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