

Transscleral Diode Cyclophotocoagulation to Tackle Refractory Cases of Pediatric Glaucoma



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Glaucoma in infants with early onset developmental glaucoma (EODG) can respond well to surgeries specifically tailored for their management like trabeculotomy and goniotomy

However, other instances of infantile glaucoma like Recurrent EODG, aphakic/pseudophakic glaucoma, advanced anterior segment dysgenesis pose a great challenge to most glaucoma surgical techniques



This study was carried out to evaluate the effect of trans-scleral diode cyclophotocoagulation on refractory cases of pediatric glaucoma

Patients

- 46 eyes of 41 children with refractory glaucoma were included in the study: recurrent early onset developmental glaucoma (EODG) after 2 or more surgeries (23 eyes), Aphakic/pseudophakic glaucoma (16 eyes), advanced anterior segment dysgenesis (7eyes). Transscleral

Technique

- Trans-scleral
- 25-35 shots/session
- 360 degrees evading horizontal line
- Power 1000-2500, Duration 1500-2000



Postoperative Management

- Keep anti-glaucoma meds 1-7 days depending on IOP level
- Watchful antinflammatory topical steroid-antibiotic
- Evaluation 2 days, 1 week, 3 months, 1year post-op

Outcome Parameters

- IOP level
- Subjective evaluation of visual performance (*parent comments on child activities pre- and postoperatively, visual acuity testing when applicable*)
- *Signs of ocular inflammation*

Results

- IOP was lowered below 20 mm Hg with no medications in 38 eyes (83%), the remaining eyes needed 1-2 medications to keep IOP at that level.
- Marked hypotony was observed in 24 eyes(52%) within 3 days postoperatively, with IOP building up afterwards to its plateau of below 20 within 6 weeks.
- Various degrees of transient extra/intraocular inflammation were observed in almost all eyes starting the second postoperative day, and disappeared 1-6 weeks postoperatively

Visual performance

- Significant temporary reduction of visual performance as commented by parents was observed in 14 eyes (30%)
- Noticeable visual improvement was commented by parents in 8 eyes (17%)
- Stable vision in rest of eyes (52%)
- No permanent loss of functioning vision was observed in all eyes

Conclusion

Trans-scleral diode cyclophotocoagulation can be a viable option in managing refractory cases of pediatric glaucoma.