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Cyclodialysis revival of an abandoned technique in glaucoma surgery

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Purpose: This pilot study evaluated the short-term efficacy and safety of Cyclodialysis operation in cases of advanced and uncontrolled Glaucoma.

Methods: Patients with advanced Glaucoma and uncontrolled Intra Ocular Pressure (IOP) despite maximally tolerable antiglaucoma medications were selected to undergo cyclodialysis. Through fornix based conjunctival incision, Episcleral vessels were cauterized for Hemostasis. Cyclodialysis was done through 2 mm radial scleral incision, 3-4 mm from the limbus to expose the outer surface of the ciliary body (CB). A 27, 25-gauge canula, spatula or trabeculotome was passed between CB and the sclera into the anterior chamber, then rotated to complete separation between the Sclera & CB on both sides. Follow-up examinations took place until 6 months postoperatively.

Results: Thirty-five eyes of 31 patients were included. Mean age was 47.17 ±17.99 years. Open-angle Glaucoma was the most common diagnosis 18 eyes (51.43%), 14 of them (40%) were Primary open-angle Glaucoma and 4 (11.4%) were Pseudoexfoliation Glaucoma. Best Corrected Distant Visual Acuity (BCDVA) at baseline ranged between 0.7 and 1.6 log MAR. Mean untreated IOP before surgery was 47.1±9.5 mm Hg. This was reduced significantly to 16.4 ±8 mm Hg (mean reduction 30.7 mmHg:65.2% reduction, $P < 0.0001$) at 6 months. The mean number of antiglaucoma drops decreased significantly from 3.6 ±0.8 drops before surgery to 0.52 ±1.12 at 6 months of follow-up ($P < 0.0001$). Visually significant hyphema on the 1st postoperative day was encountered in 16 eyes (45.7%). We noted non-significant reduction of mean BCDVA from 1.14 ±0.28 to 1.24 ± 0.22 log MAR ($P = 0.1198$). Cyclodialysis failed to control IOP in 3 of 5 eyes with Neovascular Glaucoma (60%) at 6 months due to continuous proliferation in these eyes.

Conclusions: Cyclodialysis is an efficient glaucoma surgery that achieves significant reduction of IOP and the number of antiglaucoma drops. Further studies are needed to assess the success of this technique in different types of glaucoma.

Biography

Khaled G Abu Eleinen is a renowned Ophthalmology Professor. Khaled G Abu Eleinen is working in Department of Ophthalmology, Faculty of Medicine, Cairo University, Egypt and Department of Ophthalmology, Fayoum Eye Hospital, Fayoum, Egypt. He has published many articles in reputed journals.