



Glaucoma drainage device surgery outcomes for pediatric uveitic glaucoma

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Purpose: To evaluate outcomes of glaucoma drainage devices implantation in children with glaucoma secondary to uveitis.

Methods: This is a retrospective case series of children with uveitic glaucoma who underwent glaucoma drainage device implantation to control intraocular pressure. Surgery was performed by 3 surgeons in a tertiary referral center between 1999 and 2013. Success was defined as an IOP of less than or equal to 21 mmHg with or without additional topical treatment. Further IOP-lowering surgery (additional tube, cyclodiode laser), elevated IOP greater than 21 mmHg or loss of light perception acuity was classified as failure. Snellen acuity was converted to LogMAR for statistical analysis.

Results: Surgery was performed in 53 eyes of 41 patients with uveitic glaucoma (underlying diagnosis: idiopathic uveitis n=13, juvenile idiopathic arthritis n=27 and other n=1). Mean age at the time of surgery was 10+/- 2.7 years (range 5-17) with a mean follow-up of 86.5 months +/-55.5, (range 3-193). The type of drainage implant used was: 33 (63.5%) SP Molteno, 13 (25%) Baerveldt 250, 4 (7.7%) Baerveldt 350, 2 (3.8%) Ahmed valves. At final follow up 47 eyes (88.7%) were classified as successes. Further surgery, not indicative of tube failure, included 8 lens extractions, 10 revisions for hypotony, 1 tube exploration, 3 revisions for exposure and 5 bleb needlings. Failed tubes required second tube surgery (n=6). Mean survival = 157.4 months, see Kaplan-Meier figure. There was no significant difference in visual acuity between initial and final examination (0.34 +/- 0.41 vs 0.47 +/- 0.72, p= 0.44). IOP was reduced from 31.9 +/-7.4 to 15.2 +/-4.7 mmHg (p<0.0001) as well as number of glaucoma medications 3.6 +/-0.9 vs 1.2 +/-1.4, (p<0.0001).

Conclusions: Refractory pediatric uveitic glaucoma can be managed successfully by glaucoma drainage device implantation. Further interventions are common but visual function is maintained for most patients.

Layman Abstract (optional): Provide a 50-200 word description of your work that non-scientists can understand. Describe the big picture and the implications of your findings, not the study itself and the associated details.:

