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Ahmed vs Baerveldt Glaucoma Drainage Device in Uveitic Glaucoma

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SI/CTR Abstract

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Ahmed vs Baerveldt Glaucoma Drainage Device in Uveitic Glaucoma

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Introduction: Uveitis is an inflammatory eye disorder which may elevate intraocular pressure (IOP), causing sight-threatening glaucoma. Treatment of refractory uveitic glaucoma involves implantation of a glaucoma drainage device (GDD). Uveitic glaucoma has been a minority diagnosis in prior studies comparing the valved Ahmed GDD and non-valved Baerveldt GDD. Here we compare the safety and efficacy of the Ahmed and Baerveldt GDD in uveitic glaucoma.

Methods: This retrospective comparative study was conducted on patients with uveitic glaucoma (≥ 14 years old) who underwent Ahmed or Baerveldt GDD implantation between 2006–2018 with a minimum follow-up of 3 months. Success was defined as IOP of 6-21 mmHg with (complete success) or without (qualified success) medications, with at least light perception vision and no further glaucoma surgery. Pearson Chi-

squared test, independent t test, and Kaplan-Meier survival model were utilized for statistical analysis.

Results: 137 eyes of 122 patients (67 Ahmed and 70 Baerveldt) were included.

Baseline characteristics were comparable in both groups. The Baerveldt group experienced greater IOP reduction (60.3% vs. 44.5%), higher complete success rate (28.6% vs. 10.4%), higher complication rate (44.3% vs. 20.9%), and higher hypotony rate (10% vs. 0%) than the Ahmed group (all p values <0.05).

Discussion: Our results are in line with pooled analysis of previous GDD comparison studies on various types of glaucoma. For patients with uveitic glaucoma, the Baerveldt implant provided a significantly higher success rate and greater IOP reduction with fewer medications, but was associated with a higher complication rate, compared to the Ahmed implant.