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Treatment outcomes in the Ahmed Baerveldt Comparison Study after 1 year of follow-up.

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Abstract

PURPOSE: To determine the relative efficacy and complications of the Ahmed glaucoma valve (AGV) model FP7 (New World Medical, Ranchos Cucamonga, CA) and the Baerveldt glaucoma implant (BGI) model 101-350 (Abbott Medical Optics, Abbott Park, IL) in refractory glaucoma.

DESIGN: Multicenter, randomized, controlled clinical trial.

PARTICIPANTS: Two hundred seventy-six patients, including 143 in the AGV group and 133 in the BGI group.

METHODS: Patients 18 to 85 years of age with refractory glaucoma having intraocular pressure (IOP) of 18 mmHg or more in whom an aqueous shunt was planned were randomized to undergo implantation of either an AGV or a BGI.

MAIN OUTCOME MEASURES: The primary outcome was failure, defined as IOP >21 mmHg or not reduced by 20% from baseline, IOP ≤5 mmHg, reoperation for glaucoma or removal of implant, or loss of light perception vision. Secondary outcomes included mean IOP, visual acuity, use of supplemental medical therapy, and complications.

RESULTS: Preoperative IOP (mean±standard deviation [SD]) was 31.2±11.2 mmHg in the AGV group and 31.8±12.5 mmHg in the BGI group (P = 0.71). At 1 year, mean±SD IOP was 15.4±5.5 mmHg in the AGV group and 13.2±6.8 mmHg in the BGI group (P = 0.007). The mean±SD number of glaucoma medications was 1.8±1.3 in the AGV group and 1.5±1.4 in the BGI group (P = 0.071). The cumulative probability of failure was 16.4% (standard error [SE], 3.1%) in the AGV group and 14.0% (SE, 3.1%) in the BGI group at 1 year (P = 0.52). More patients experienced early postoperative complications in the BGI group (n = 77; 58%) compared with the AGV group (n = 61; 43%; P = 0.016). Serious postoperative complications associated with reoperation, vision loss of ≥2 Snellen lines, or both occurred in 29 patients (20%) in the AGV group and in 45 patients (34%) in the BGI group (P = 0.014).

CONCLUSIONS: Although the average IOP after 1 year was slightly higher in patients who received an AGV, there were fewer early and serious postoperative complications associated with the use of the AGV than the BGI.

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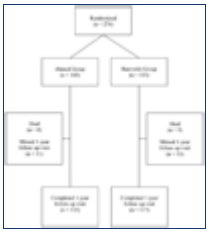
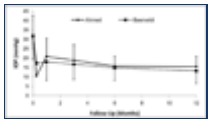
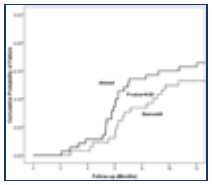


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