

# Ahmed vs. Baerveldt Comparison (ABC) - 2015



## Objective

To compare the 5-year outcomes of Ahmed FP7 Glaucoma Valve and the Baerveldt 101-350 Glaucoma Implant for treatment of refractory glaucoma.

## Methods

**Design:** Double-blinded RCT

**Sample Size:** 276 (174 finished 5-year follow up)

**Treatment Groups:**

- 143 patients to Ahmed
- 133 patients to Baerveldt

**Outcome Measures:**

- Intraocular pressure, number of glaucoma medications
- Failure within 5-years: IOP >21 mmHg or <20% reduction below baseline, reoperation, loss of light perception

## Results

**Point 1:** Both groups provided similar rates of surgical success at 5 years; however, Baerveldt had lower rate of glaucoma reoperation

- Cumulative probability of failure during 5-year follow-up was 44.7% in the Ahmed group vs. 39.4% in the Baerveldt group ( $P = 0.65$ )
- Cumulative proportion of patients undergoing reoperation for glaucoma was 20.8% in the Ahmed group compared to only 8.6% in the Baerveldt group ( $P = 0.010$ )
- The Baerveldt group generally had lower numbers of residual glaucoma medications, but this difference was not statistically significant at 5 years

**Point 2:** Baerveldt produced a greater IOP reduction than Ahmed at 5-year follow-up, but with some potential for increased risk

- The Ahmed group had significantly lower IOP at POD1 and POW1, but then the Baerveldt group had lower IOP measurements afterwards
- IOP at 5 years was  $14.7 \pm 4.4$  mmHg in the Ahmed group vs.  $12.7 \pm 4.5$  mmHg in the Baerveldt group ( $P = 0.015$ )
- The rates of hypotony (13%) and loss of light perception (26%) were greater in the Baerveldt group compared to Ahmed (2% and 12%, respectively)

**TLDR: The Baerveldt group was more effective in providing long-term IOP control than the Ahmed; however, both implants provided similar surgical success at 5-year follow-up.**