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### **Comparison of safety and efficacy between trabeculectomy with mitomycin-C and Ahmed glaucoma implant in uveitic glaucoma**

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**Purpose:** To compare the safety and efficacy of trabeculectomy with mitomycin-C (TRAB) and Ahmed Glaucoma Implant (AGI) in the treatment of uveitic glaucoma.

**Methods:** A retrospective chart review of 74 eyes of 58 consecutive patients who underwent TRAB or AGI implantation with a minimum follow-up period of 6 months was performed. The primary outcome measures were IOP, complication rate and surgical success. Surgical success was defined as IOP reduction of at least 20% from baseline and final IOP >5mmHg and < 22 mmHg. Eyes requiring additional glaucoma surgery, implant removal or who lost light perception were also considered surgical failures.

**Results:** There were 41 and 33 eyes in the TRAB and AGI groups, respectively. Baseline IOP was significantly higher in the AGI group ( $35.8 \pm 8.7$  mmHg vs.  $31.3 \pm 8.8$  mmHg,  $p=0.03$ ). In addition, a greater proportion of patients in the AGI group had undergone previous glaucoma surgery (30.3% vs. 2.4%,  $p=0.002$ ). Other baseline characteristics were similar in the two groups. A significant reduction in IOP from baseline was achieved in both groups (TRAB - 55.2% and -61.0%, both  $p<0.00005$ ). The mean IOP was significantly lower on the AGI group at the first postoperative day ( $7.9 \pm 3.3$  mmHg vs  $15.5 \pm 13.1$  mmHg,  $p=0.002$ ). The IOP in the TRAB group was lower at all other follow-up time points, but these differences were not statistically significant. The required number of postoperative glaucoma medications was similar in the two groups ( $p=0.2$ ). The rate of surgical success according to our defined criteria was higher in the AGI group at 6 month (93.5% vs 73.2%,  $p=0.03$ ) and 18 month (100.0% vs 70.6%,  $p=0.009$ ) follow-up time points. Ocular hypotony (IOP  $\leq 5$  mmHg) was observed more frequently in the TRAB group, but the difference was not statistically significant. The rate of complications and the change in visual acuity did not differ between the two groups ( $p>0.4$  and  $p=1.0$ , respectively).

**Conclusion:** Both TRAB and AGI are safe and effective in the treatment of uveitic glaucoma. The higher success rate following AGI may result from the more common occurrence of ocular hypotony following TRAB in patients with uveitis.

