Systematized stenting of baerveldt shunts: techniques to reduce early post-operative hypotony
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Purpose: To investigate the effect of the systematized use of intraluminal stents in Baerveldt shunts (BS) on early postoperative IOP control and complication rates.

Methods: One hundred and twenty eyes with medically uncontrolled glaucoma were prospectively recruited to undergo BS implantation at Jules-Gonin Eye Hospital, Switzerland. Baerveldt shunts were stented (full-length) using a Supramid® 3.0 suture, intraoperatively. A minority of shunts (37%) was ligated and laser suture lysis performed postoperatively. Stent removals (partial/complete) were carried out according to a predetermined protocol. Surgery was considered a success when IOP was ≤ 21 mmHg and a minimum of 20% reduction from baseline was achieved with/without glaucoma medication (GMs). Hypotony related complications included shallow AC, choroidal detachment and hypotonous maculopathy.

Results: Mean age was 61.8 years (± 21.5). Mean follow-up was 17.1 (± 7.9) months. Mean preoperative IOP was 26.9 mmHg; mean IOP on the last visit 13.2 mmHg (p<0.001). At year one, the success rate was 87%. In 90% of eyes, IOP was ≤ 18 mmHg at last visit. Mean number of preoperatively GMs was 3.1; postoperatively 1.4 (p < 0.001). Stent removals were performed in 87% of eyes (24% partial; 61% complete). Complications were minor and infrequent (16%) and only 7% was hypotony related.

Conclusion: Systematized use of intraluminal stents with Baerveldt aqueous shunts resulted in gradual and controlled IOP lowering with minimal hypotony-related complications. This may have important implications on clinical practice, given the rising rates of aqueous shunt implantation.