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Comparison between silicone Ahmed glaucoma valve with and without intravitreal triamcinolone acetonide injection in neovascular glaucoma

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PURPOSE: The purpose of the study was compare implantation of silicone Ahmed glaucoma valve vs. implantation of silicone Ahmed glaucoma valve combined with intravitreal triamcinolone acetonide injection in neovascular glaucoma (NVG) treatment. METHODS: 49 patients with NVG, uncontrolled intraocular pressure, maximum tolerated therapy, and a visual acuity of better than light perception were divided in 2 groups by randomization table. Exclusion criteria included previous glaucoma drainage device implantation or a cyclodestructive procedure. The first group, with 28 patients, was submitted to silicone Ahmed glaucoma valve implantation. In the second group, with 21 patients, an intravitreal injection of triamcinolone was performed immediately after the glaucoma valve surgery. RESULTS: The mean patient age was 57 years old in group 1 and 63 years old in group 2. 43% of patients were women in group 1 while 20% were women in group 2. Systemic Hypertension was present in 82% of patient in group 1 and 81% in group 2. Diabetes Mellitus was present in 71% of patient in group 1 and 44% in group 2. Table 1 shows the mean intra-ocular pressure values before and after surgery in both groups and the mean number of glaucoma medications:

Group 1	pre	1d	7d	1 m	2 m	3 m	4 m	5 m	6 m
Mean IOP	42.7	13.6	10.3	19.7	18.3	18.3	17.0	15.3	13.5
± SD	±13.1	±14.0	±6.7	±10.2	±7.0	±11.6	±9.7	±3.5	±3.3
N med	2.3	0	0.1	0.2	0.5	0.7	1.1	0.9	1.0
Group 2									
Mean IOP	42.1	11.1	9.1	11.6	16.7	17.1	14.5	13.0	16.4
± SD	±9.8	±12.9	±6.1	±6.3	±6.8	±8.3	±4.7	±3.9	±6.1
N med	2.7	0	0.2	0.3	0.4	0.8	0.6	0.8	0.5
n	48	49	46	44	37	28	32	26	23

IOP=intra ocular pressure; SD=standard deviation; n = number of patients; N med= mean number of medication; Group 1 = Ahmed Valve; Group 2 = Ahmed Valve + intra-vitreous triamcinolone acetonide **CONCLUSIONS:** These preliminary data show good IOP reduction in both groups during the first 6 months. Follow up and statistical analysis will show long term results and possible differences between groups.