Purpose: To evaluate the clinical outcomes of the STARflo Glaucoma Implant in patients with open angle glaucoma.

Method: The authors describe 6 cases of patients who underwent STARflo implantation and were followed for a minimum of 12 months. All the patients had open angle glaucoma with, for some cases, history of multiple intraocular surgeries. They were presented with preoperative intraocular pressures (IOP) between 26-50 mmHg, under double or triple IOP lowering medication. In all cases the implant was placed with its head into the anterior chamber and major part of its body into the suprachoroidal space. No MMC or 5-FU were used during surgery. The following parameters were evaluated preoperatively, at day 1, week 1, months 1, 3, 6 and 12: IOP, IOP-lowering medication, operative and post-operative complications and adverse events. IOP reduction over 30% and < 21 mmHg was considered as relative or absolute success depending on whether this was achieved with or without use of medical IOP-lowering treatment.

Results: At 12 months, there was a reduction in IOP greater than 30% with IOP < 21 mmHg for all 6 patients (baseline IOP: 38 ± 9 mmHg, 12 month IOP: 12 ± 4 mmHg, mean IOP reduction: 67%). Absolute success was achieved for 1 patient. The other 5 patients were under single or double IOP lowering medication at 12 months. In all cases, the number of IOP lowering medications was significantly lower at 12 months than at baseline. There were no complications during the surgical procedure. Post-operative complications and adverse events included 2 cases of small peripheral choroidal detachment which spontaneously resolved after less than 4 weeks, 1 case of synchexia with no impact on vision and 1 case of macular edema.

Conclusions: The STARflo Glaucoma Implant seems effective in reducing IOP significantly in patients with open angle glaucoma. Device implantation is technically feasible and has few postoperative complications or adverse events.