

Goniowash: a new surgical approach combined with cataract surgery to lower intraocular pressure in pseudoexfoliation syndrome

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Abstract

Purpose: Pseudoexfoliation syndrome (PEX) is a common finding in elderly patients and is related to intra-ocular pressure (IOP) elevation. Goniowash is a new surgical technique, developed in our clinic to clear PEX material from the iridocorneal angle, specially the trabecular meshwork, aiming to lower IOP postoperatively. We assessed the long-term efficiency of this method on IOP and best corrected visual acuity (BCVA) after cataract surgery in patients with PEX.

Materials and Methods: Retrospective study comprised 190 eyes of 122 patients with PEX (mean age, 73.8 ±7.7), who underwent routine cataract surgery combined with Goniowash. BCVA, IOP and medication status were recorded for all patients during 5 years of follow-up.

Results: Mean BCVA increased from 0.60 to 0.95 ($p < 0.001$) one year after surgery. This effect was remained stable throughout the follow-up period ($p < 0.001$). Mean IOP decreased from 26.40 mmHg

preoperatively to 15.92 mmHg postoperatively at one year ($p<0.001$), 16.11 ($p<0.001$) at 3 years and 16.82 ($p<0.001$) at 5 years. Mean number of ocular hypotensive medications pre and postoperatively decreased from 1.50 to 0.37 ($p<0.001$) (75% reduction). No unexpected and unacceptable complications related to the surgical procedure were reported for any of the patients.

Conclusions: Goniowash combined with cataract surgery provides stable and long-lasting improvement in BCVA and decrease in IOP. The described surgical approach also resulted in a considerable decrease in the need for hypotensive medications. In conclusion, Goniowash combined with a standard cataract surgery, is a safe procedure for long term beneficial outcome and should be considered for patients with pseudoexfoliation syndrome.