

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

V.T. Tran<sup>1</sup>, MD ; K. Mansouri<sup>2</sup>, MD, MPH ; A. Mermoud<sup>1,2</sup>, MD

<sup>1</sup> Center for Ophthalmic Specialised Care (COS), Clinic Montchoisi, Lausanne Switzerland

<sup>2</sup> Glaucoma Research Center, Clinic Montchoisi, Lausanne Switzerland

## Corresponding Author:

Van Tao TRAN, MD

Centre for Ophthalmic Specialized Care (COS),

Ave Beaumont 9, 1012 Lausanne, Switzerland

e-mail: trantao@citycable.ch

Telephone: +41 21 329 15 15

Fax: +41 21 329 15 16

## 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.