



UPMC LIFE CHANGING MEDICINE

Trabectome-Mediated Ab Interno Trabeculectomy in Highly Complex Glaucomas

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Ralitsa T. Loewen,¹ Evan Lagouros,² Nils A. Loewen²

1. Dept of Surgery 2. Dept of Ophthalmology, University of Pittsburgh School of Medicine

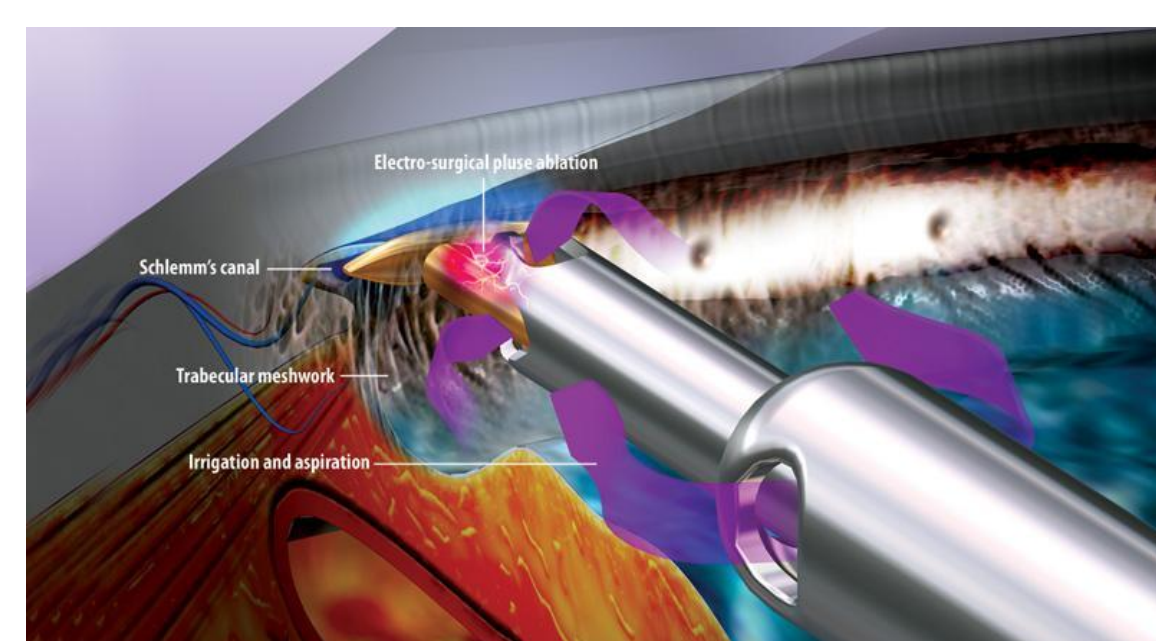
Purpose

To describe outcomes of trabectome-mediated ab interno trabeculectomy in highly complex mixed mechanism glaucomas in which minimally invasive glaucoma surgery has traditionally been seen as ineffective or contraindicated.

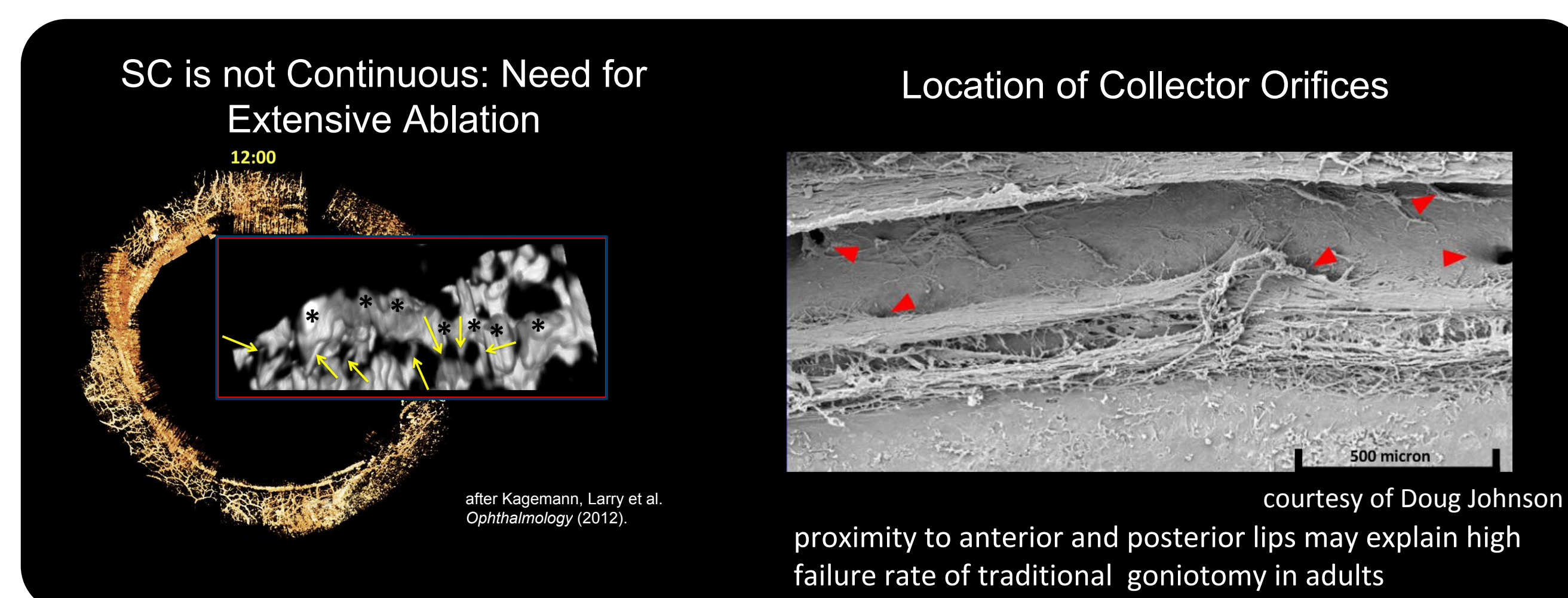
Patients and Methods

Surgical case series describing patients with advanced forms of traumatic glaucoma (TR), neovascular glaucoma (NV), encircling buckle for retinal detachment (RD), chronic angle closure and uveitic glaucoma, some of which had failed conventional glaucoma procedures, who were treated with trabectome-mediated ab interno trabeculectomy and had 1 year of follow up. Cases were selected from trabectome surgeries performed since July 2012 when UPMC, historically a tertiary referral center for complex glaucomas, established a focus on minimally invasive glaucoma surgeries, including trabectome ab interno trabeculectomy. Outcome measures were intraocular pressure (IOP), number of topical and systemic glaucoma medications (meds) and occurrence of vision threatening complications or vision loss.

Key Steps of Surgical Technique

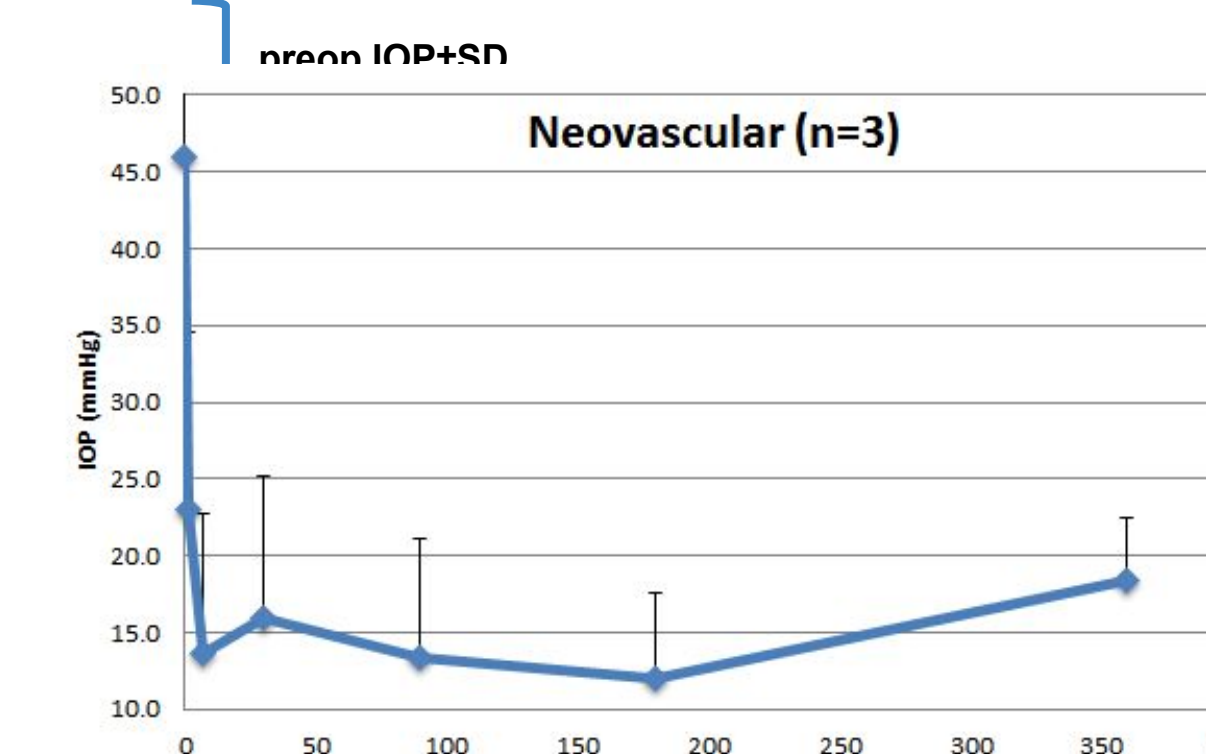
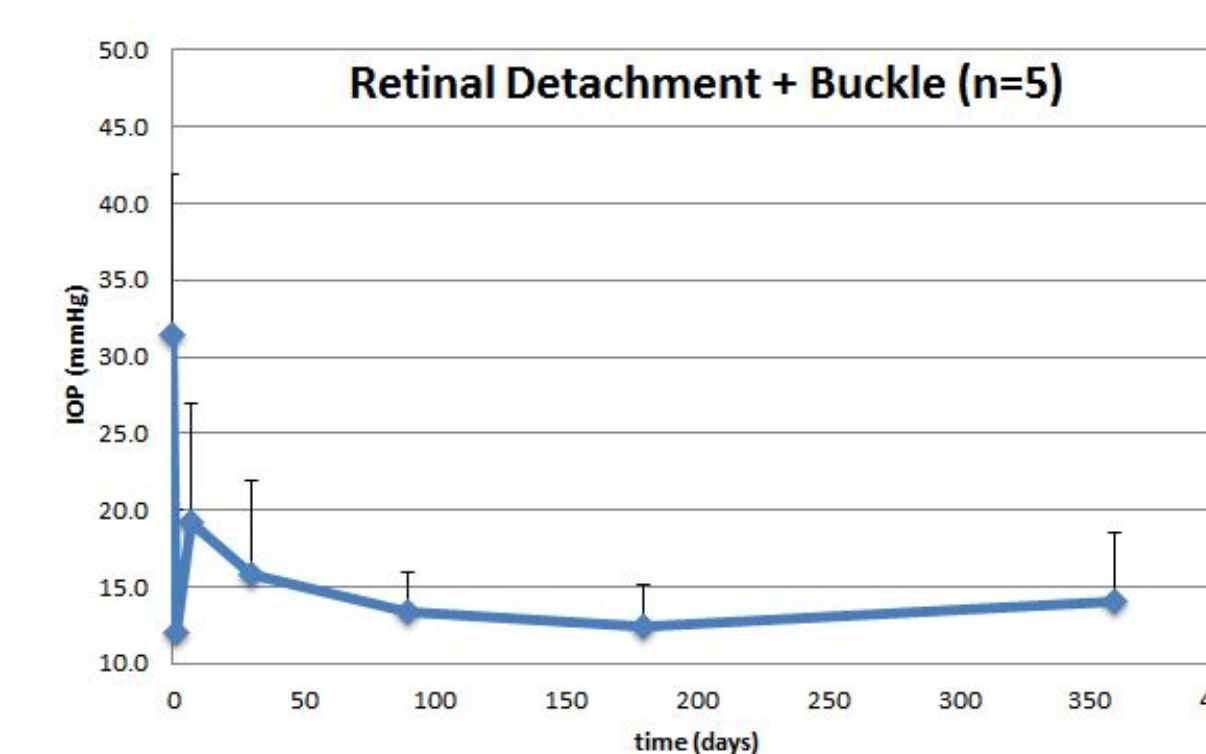
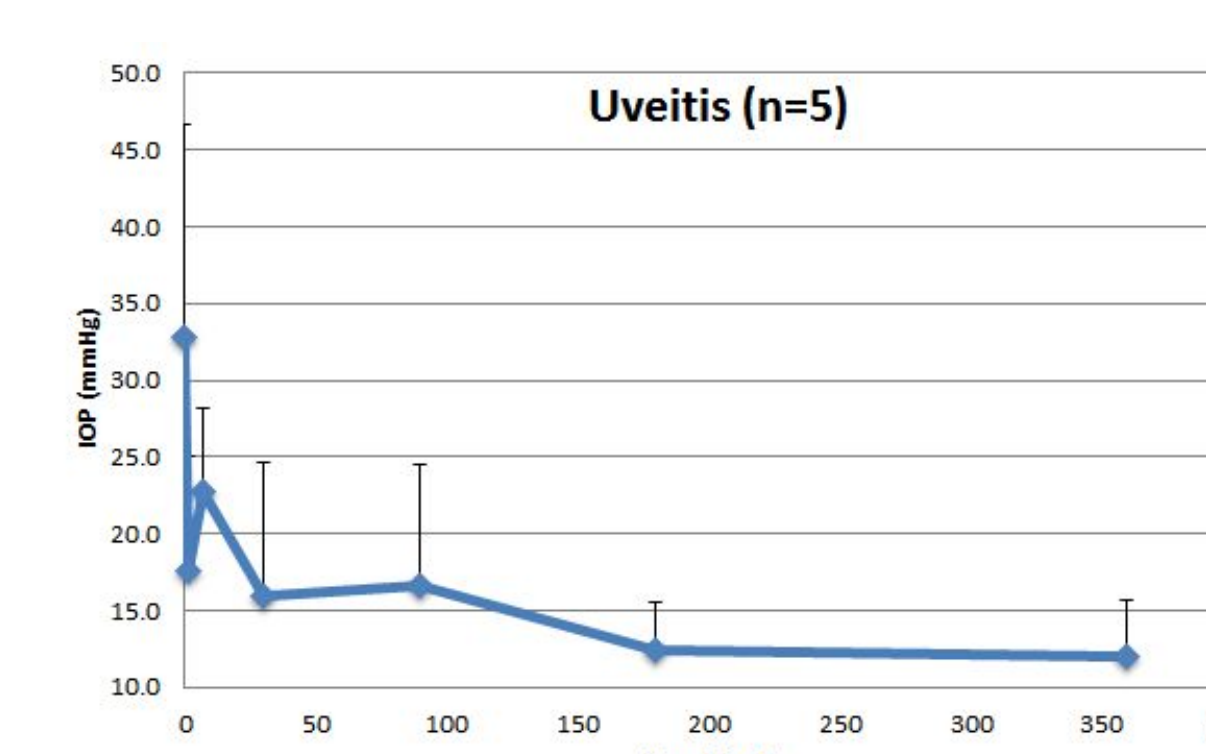
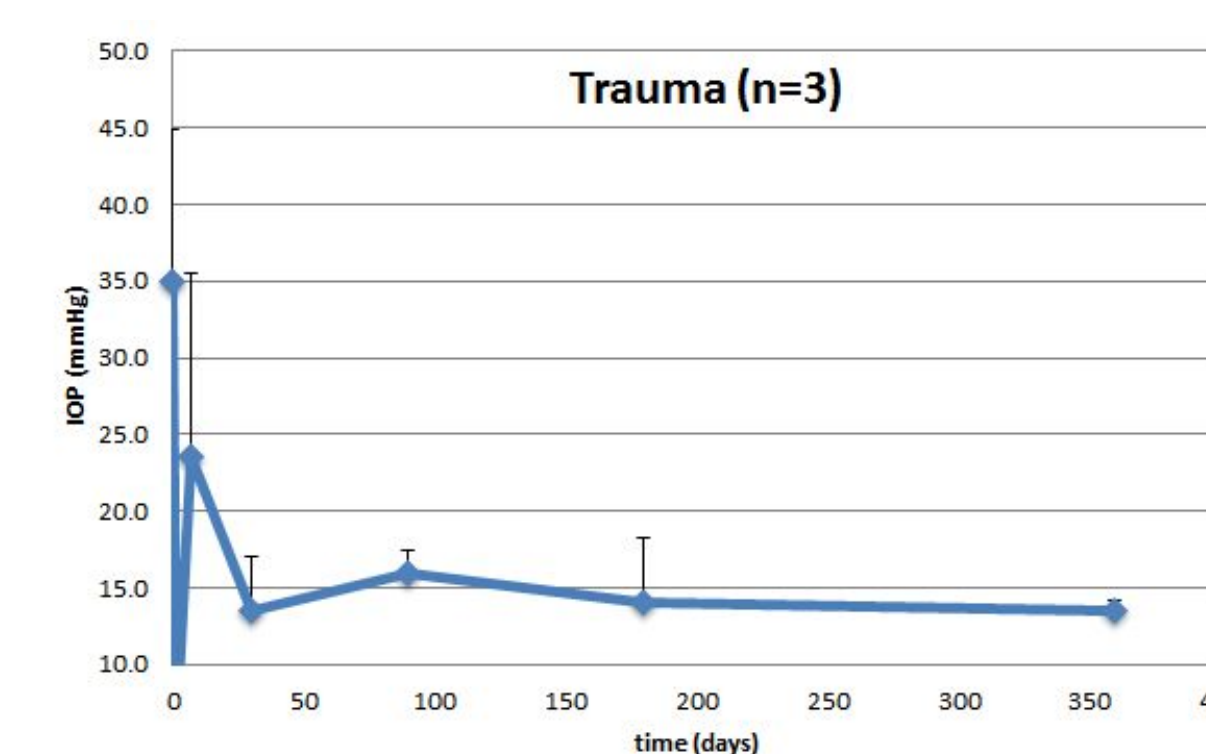
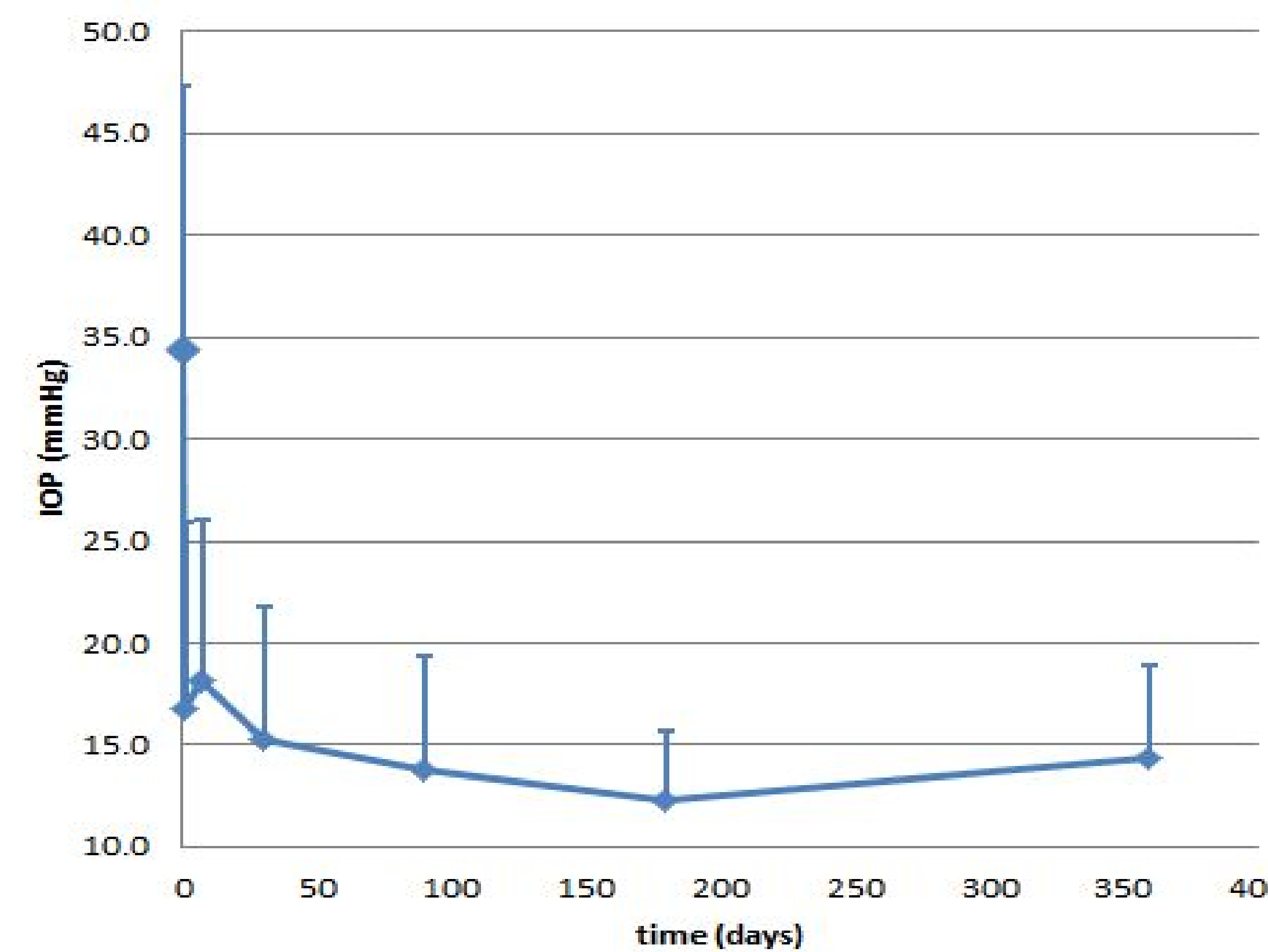
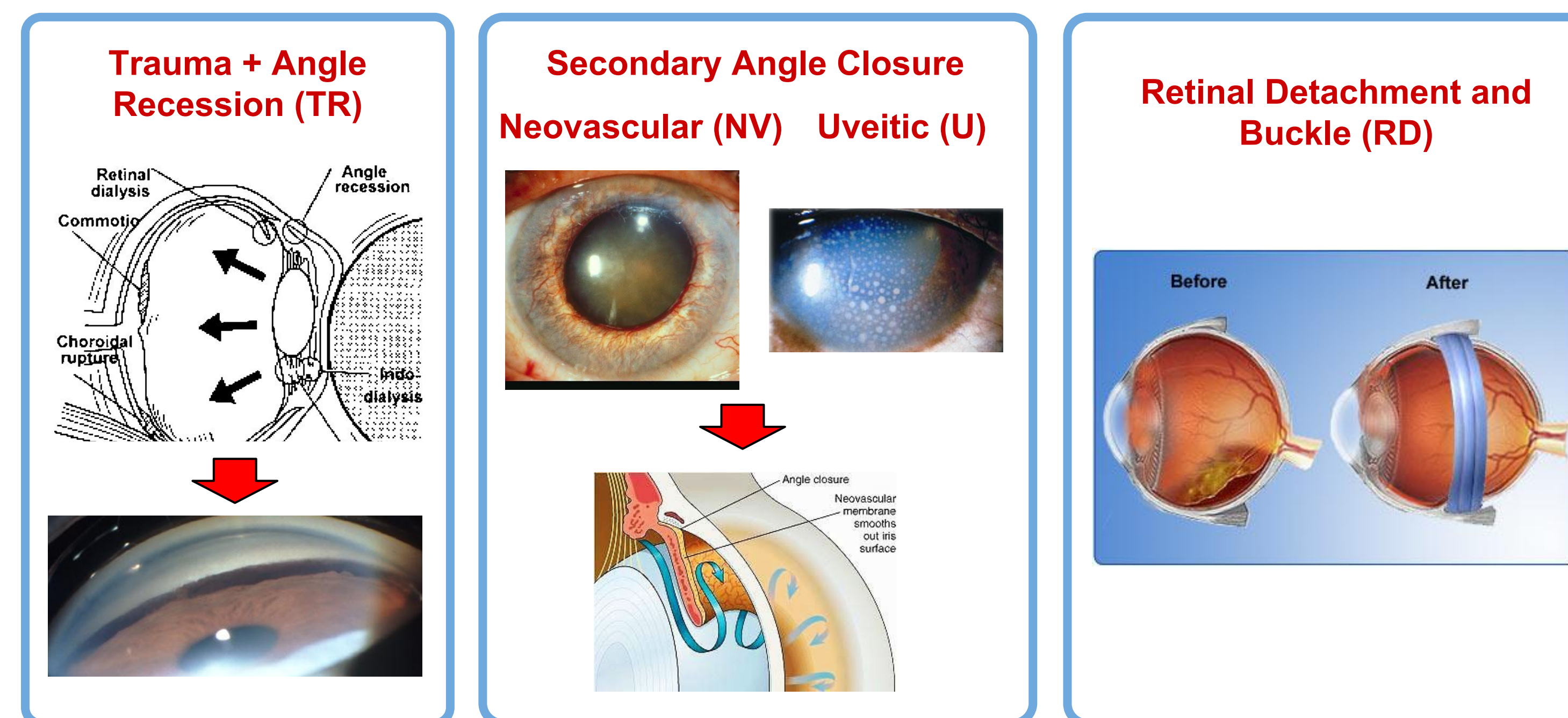


- 1. Visualization**
 - excellent microscope (xenon, large tilt)
 - no visco at start
 - hypotony, identify
- 2. Technique**
 - anterior, flared incision
 - no outward push
 - near 180° ablation
- 3. Reducing hyphema**
 - viscoelastic tamponade: after ablation + after phaco
 - intracameral dexamethasone, pressurize well



Results

Complex, Mixed-Mechanism Glaucomas



Of 127 eyes with 1 year follow up, 17 were selected with complex mixed mechanism glaucomas. One eye in **U** had a prior failed tube and one eye in **RD** had a prior failed tube and trab. Following trabectome surgery, one different patient in **U** needed CPC for further IOP reduction. No other complications or vision loss occurred.

Discussion

Trabectome-mediated trabecular meshwork ablation, a minimally invasive glaucoma surgery modality that relies on patency of the downstream conventional outflow system, can be surprisingly effective in complex and high risk mixed mechanism glaucomas. Traditionally, conventional outflow pathways were thought to be irreversibly damaged in glaucoma from **TR, NV, U** and **RD**.

Serious complications are rare in trabectome surgery for POAG and also seem uncommon in high risk, complex glaucomas with mixed mechanisms as treated here.

In challenging eyes, glaucoma surgeons should consider this low risk and fast procedure as an alternative approach to traditional glaucoma surgeries.

Good outcomes can be achieved as long as the angle can be visualized and key steps are followed that are meant to minimize outer wall trauma and to maximize ablation arc and number of drainage segments accessed.

Disclosures

NAL: trabectome trainer. RTL, EL: none.

Author Contact

Ralitsa Loewen, MD: loewen.ralitsa@gmail.com
Evan Lagouros, MD: evanlagouros@gmail.com
Nils Loewen, MD, PhD: loewen.nils@gmail.com