

Cataract Surgery

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Nebraska Laser Eye Associates

Fall 2018

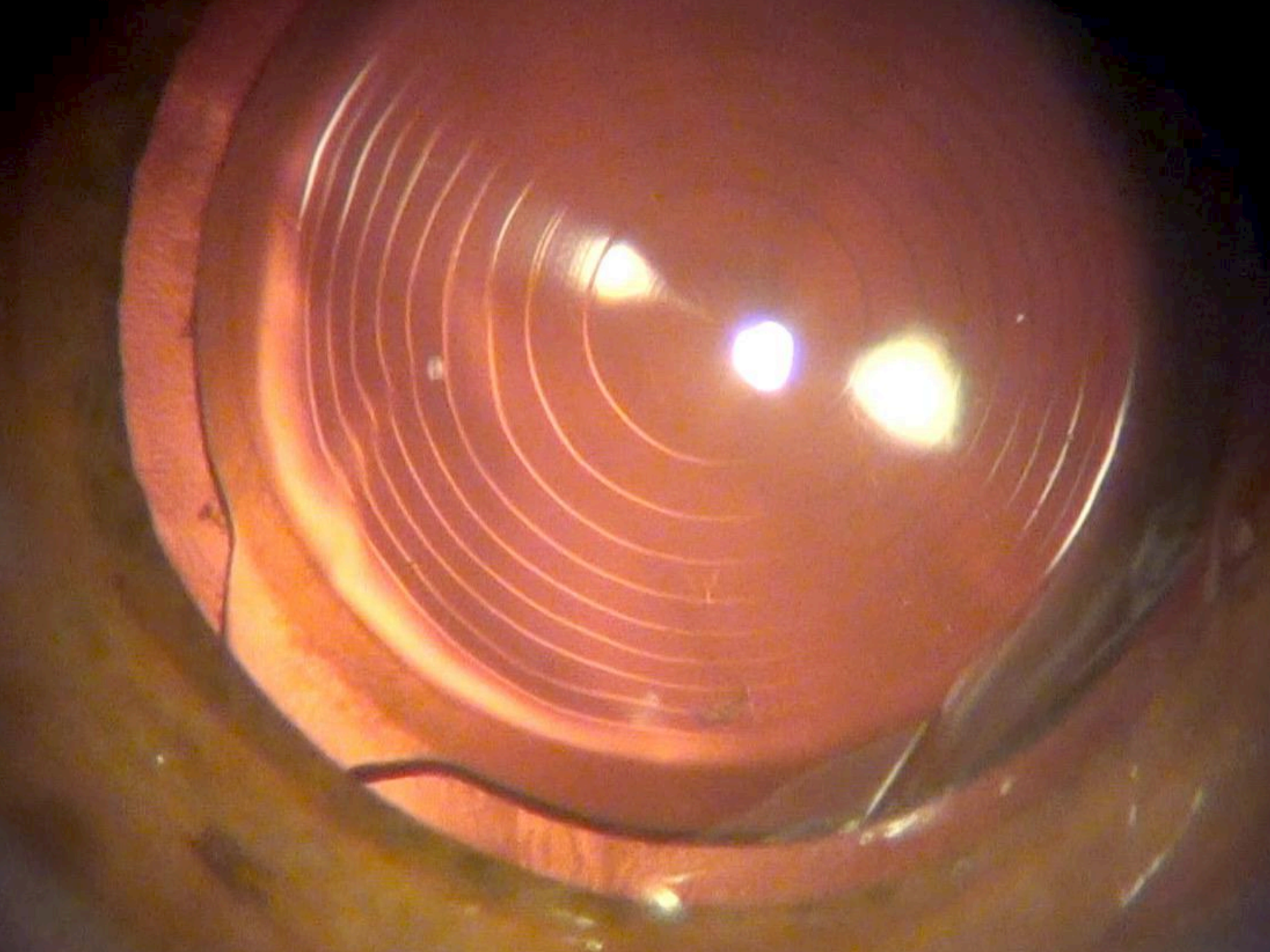
Objectives

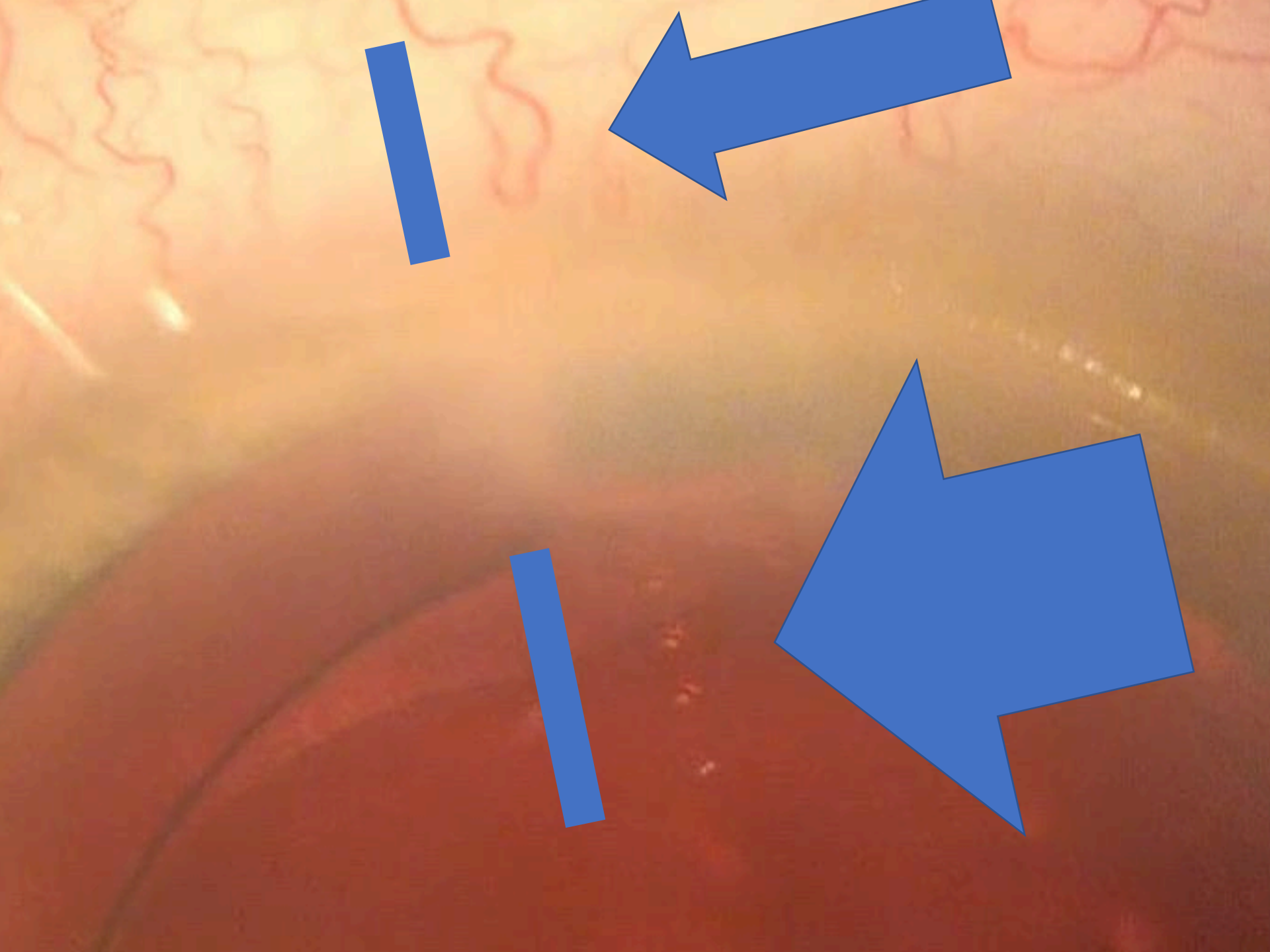
1.Safety

2.Results

3.Cost

4.Patient Satisfaction



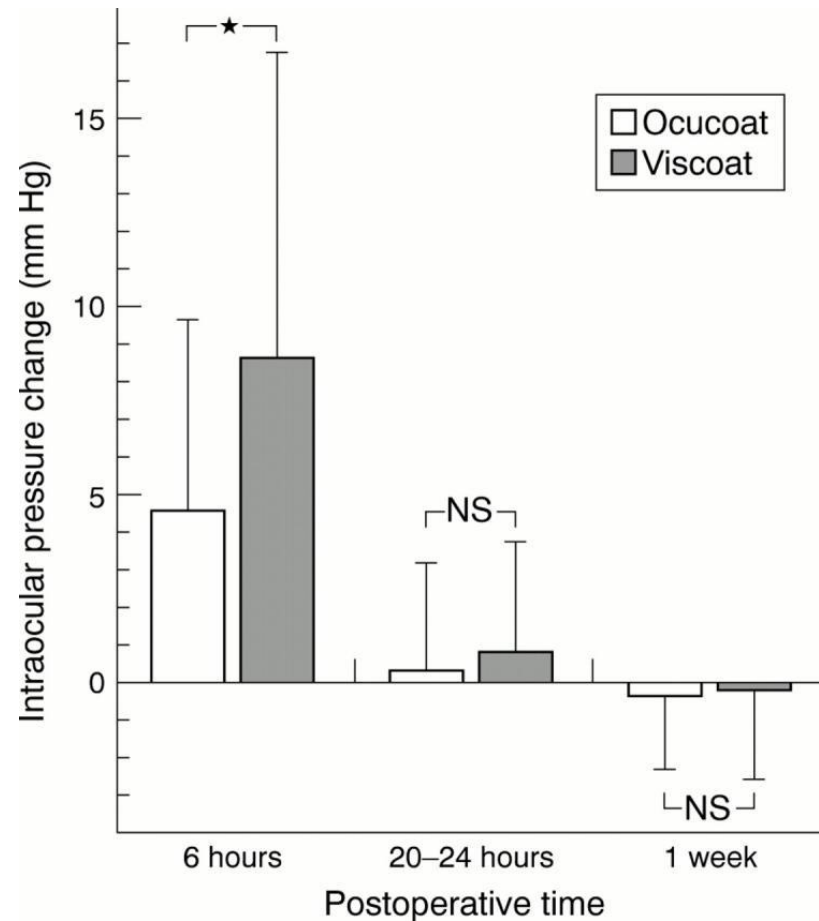




Recall: CyPass Micro-Stent Withdrawn Amid Concerns of Endothelial Cell Loss



Viscoelastic related post-op pressure increase



Safety of Decreased OVD Volume Using a Balanced Salt Solution Bubble During IOL Insertion

Mark Edmund Johnston MD FRCSC

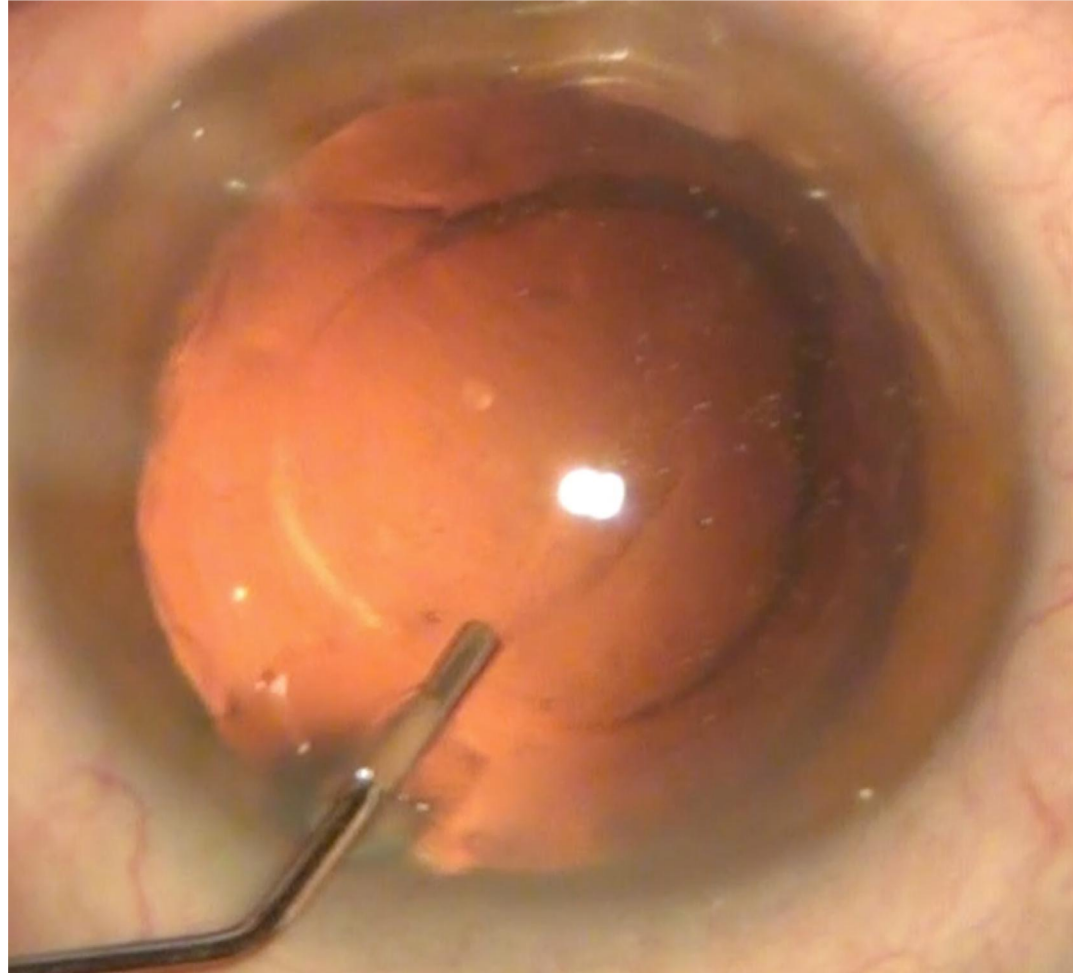
Nebraska Laser Eye Associates

Omaha, NE

Presented at the American Society of Cataract and
Refractive Surgery Annual Meeting
Washington DC, April 2018

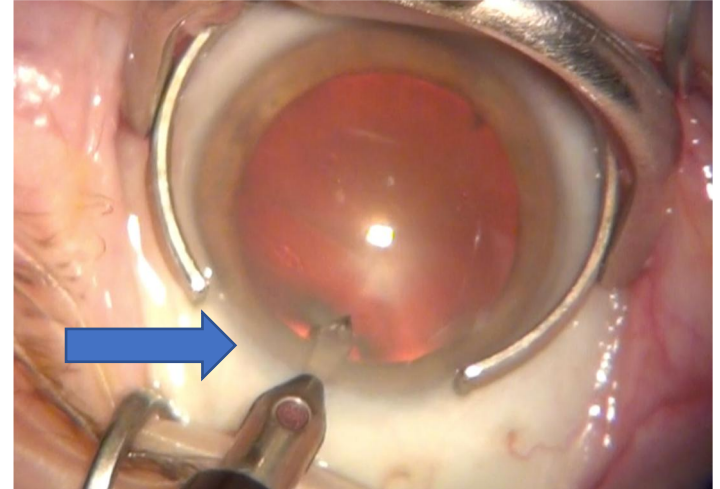
Purpose

- To assess and compare the safety and efficacy of a simple technique which decreases the use of viscoelastic during routine and complex cataract surgery.

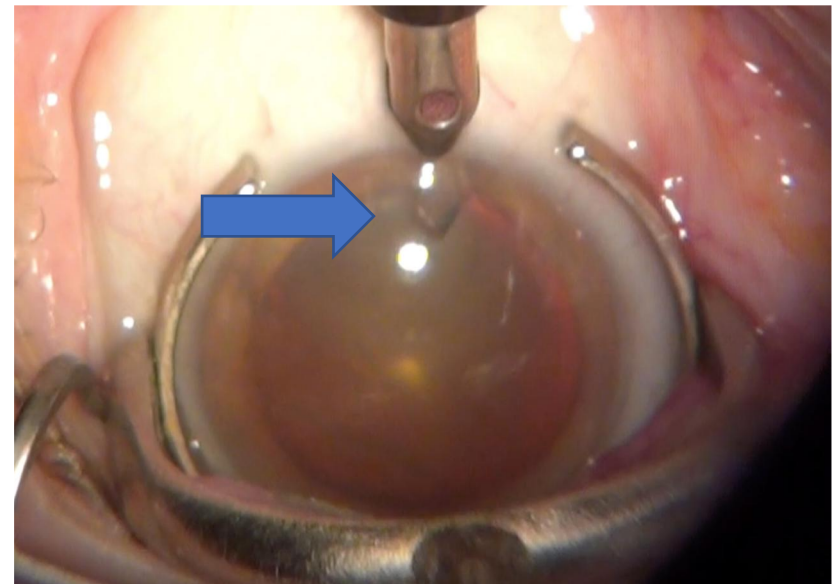


Methods

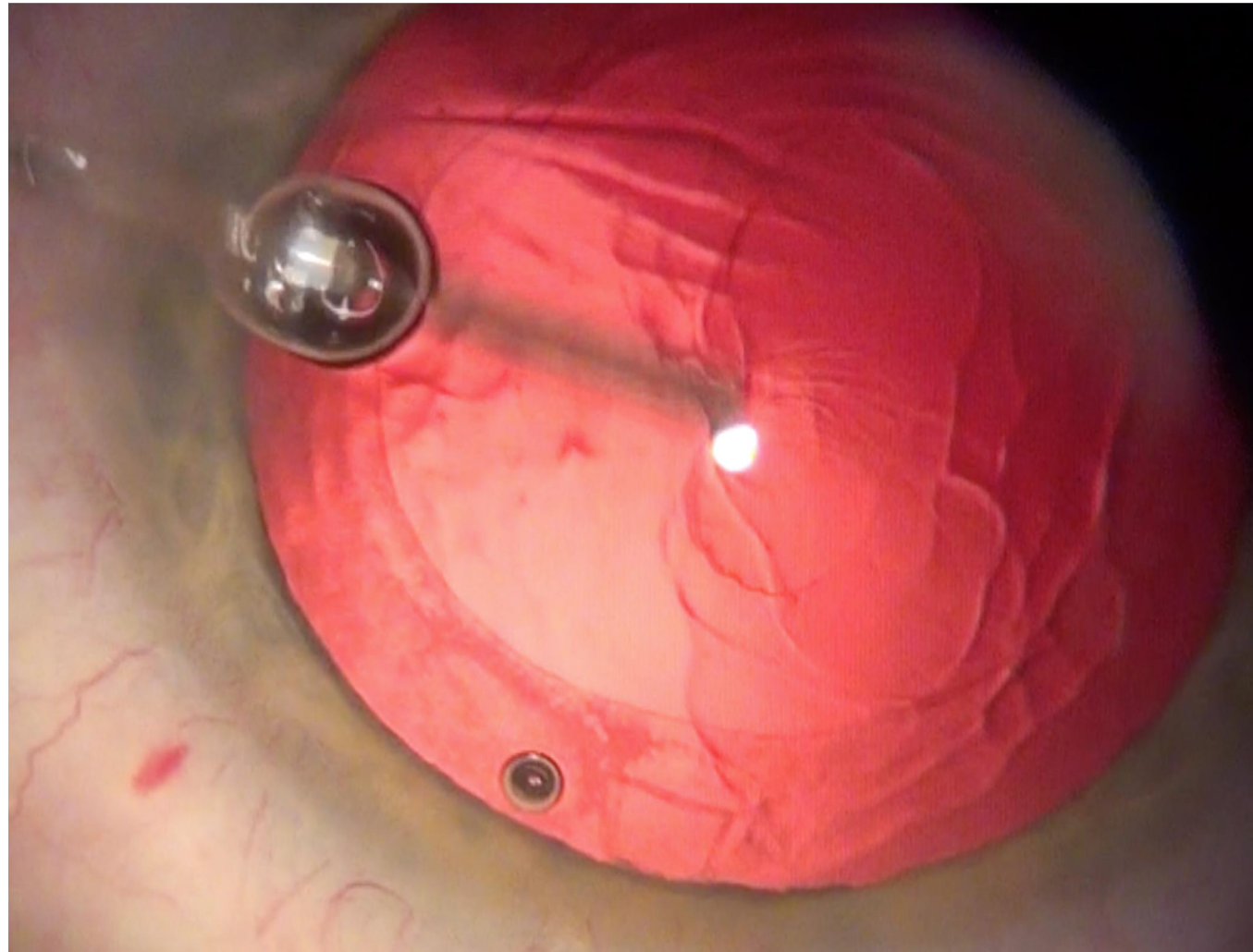
- Sequential cataract surgeries were studied over a pre-determined period.
- No modifications in technique were made during the study.
- A commercial viscoelastic containing Chondroitin and Hyaluronate, in 0.5 ml vials, was used.



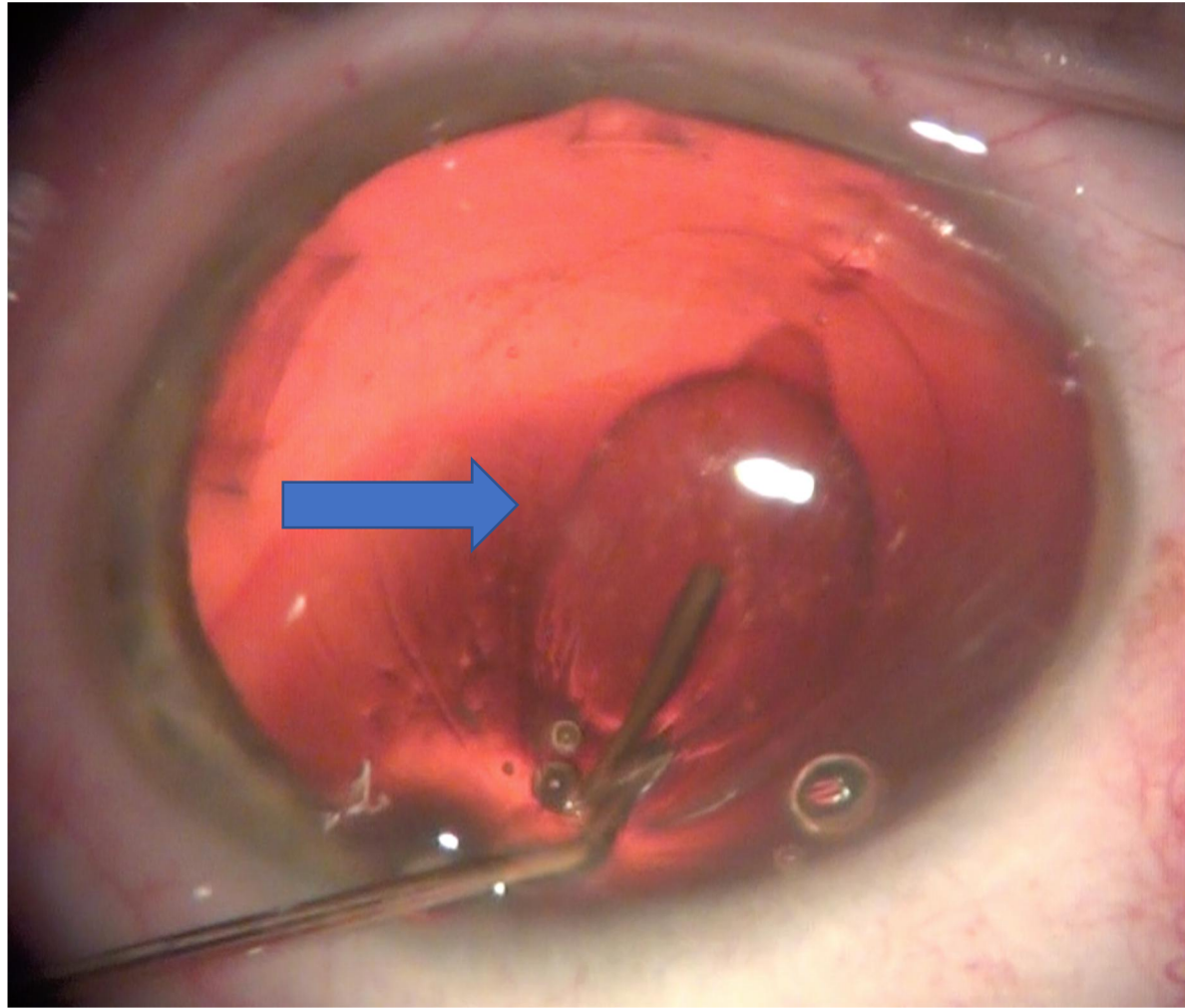
Both superior and inferior side-port incisions were made



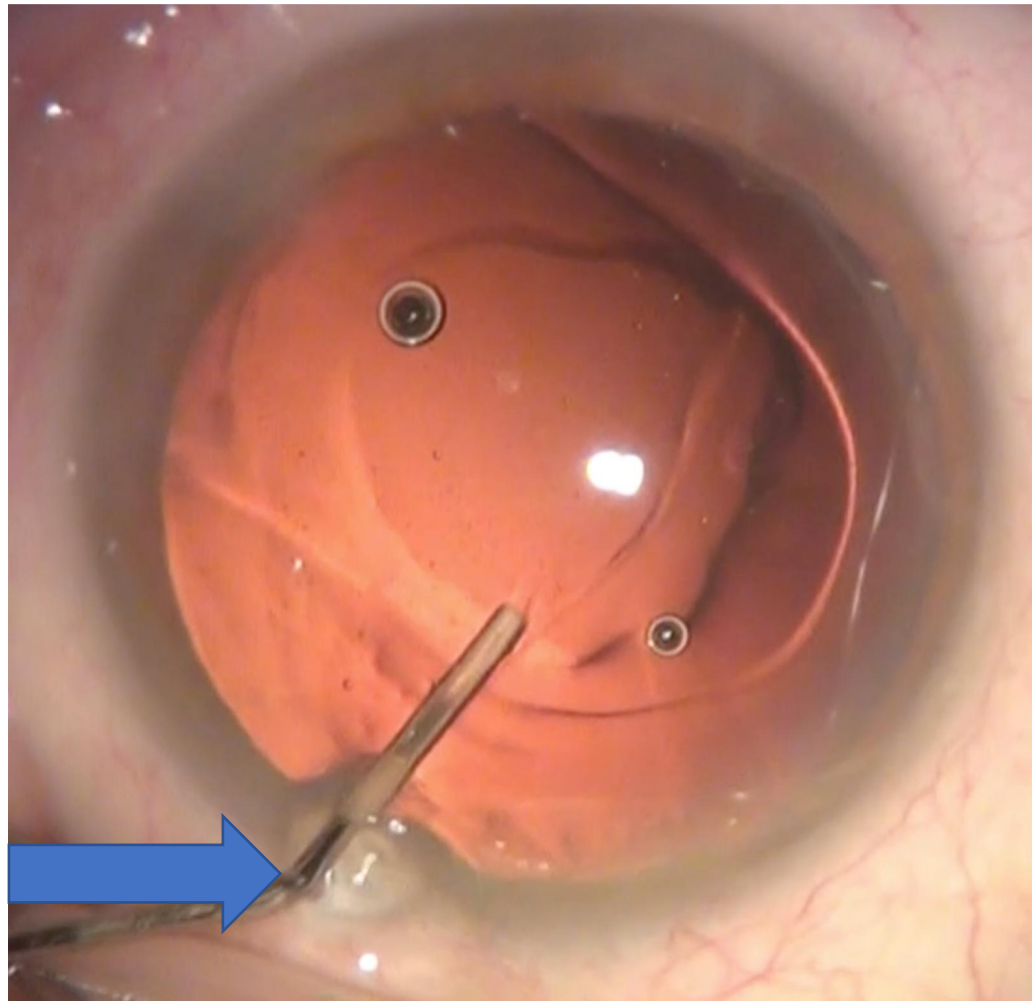
- After removing the cataract, viscoelastic was placed into the anterior chamber through the main incision.



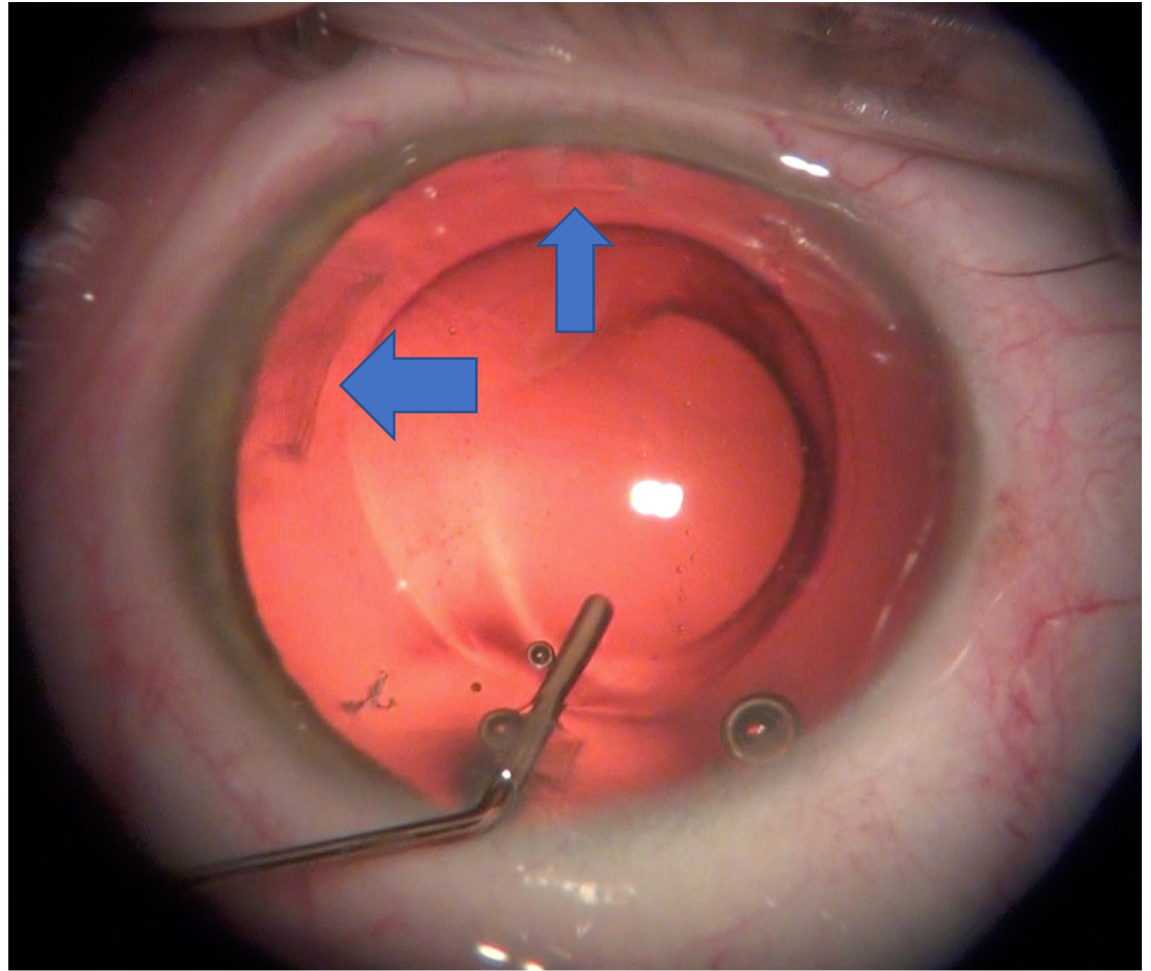
- Using the secondary side-port incision, Balanced Salt Solution (BSS) was slowly inserted into the capsular bag, thus creating a BSS “Bubble” in the central capsular bag.

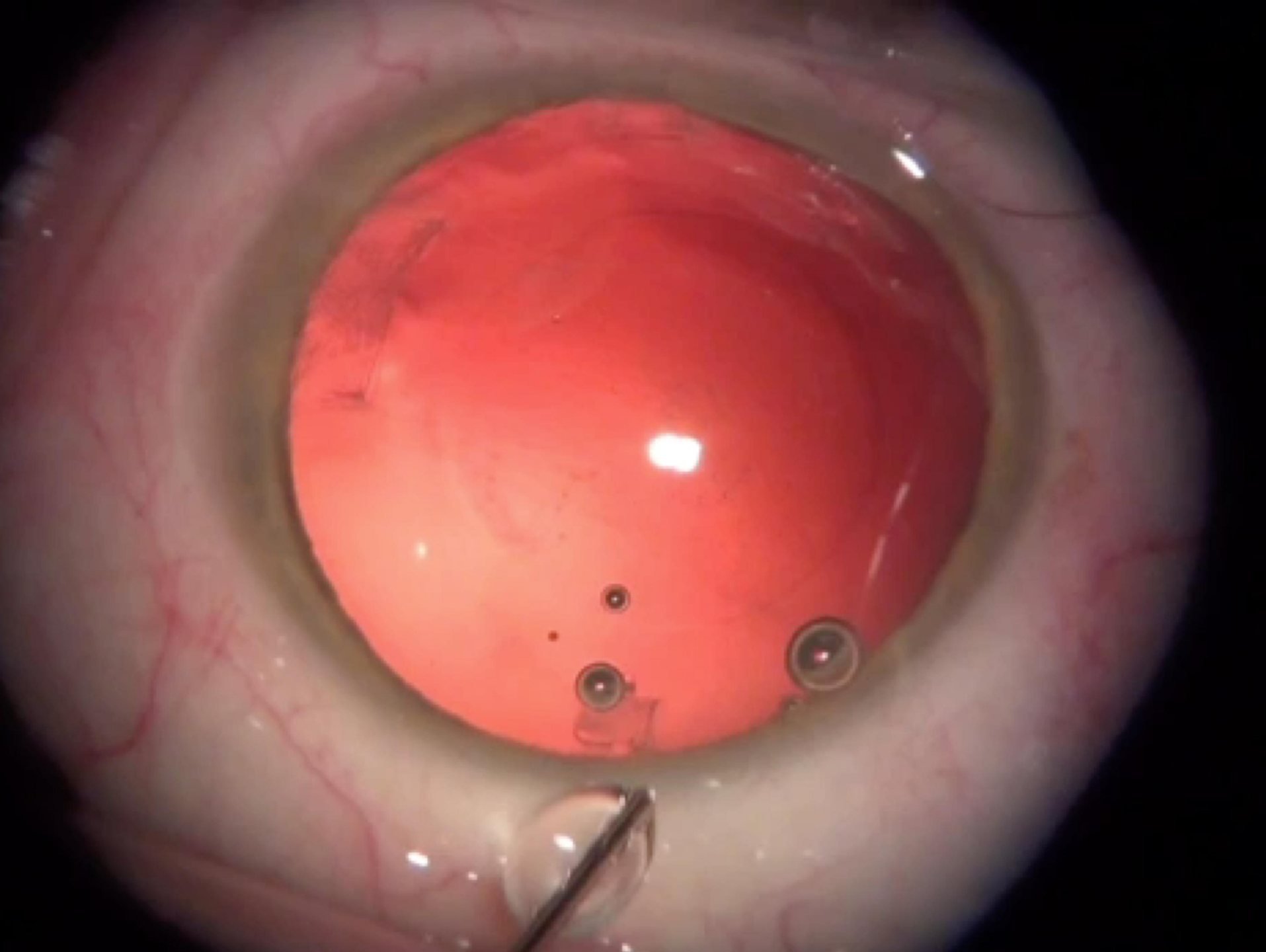


- The BSS and viscoelastic may track along the cannula towards the secondary incision
- Note the viscoelastic at the secondary side-port incision

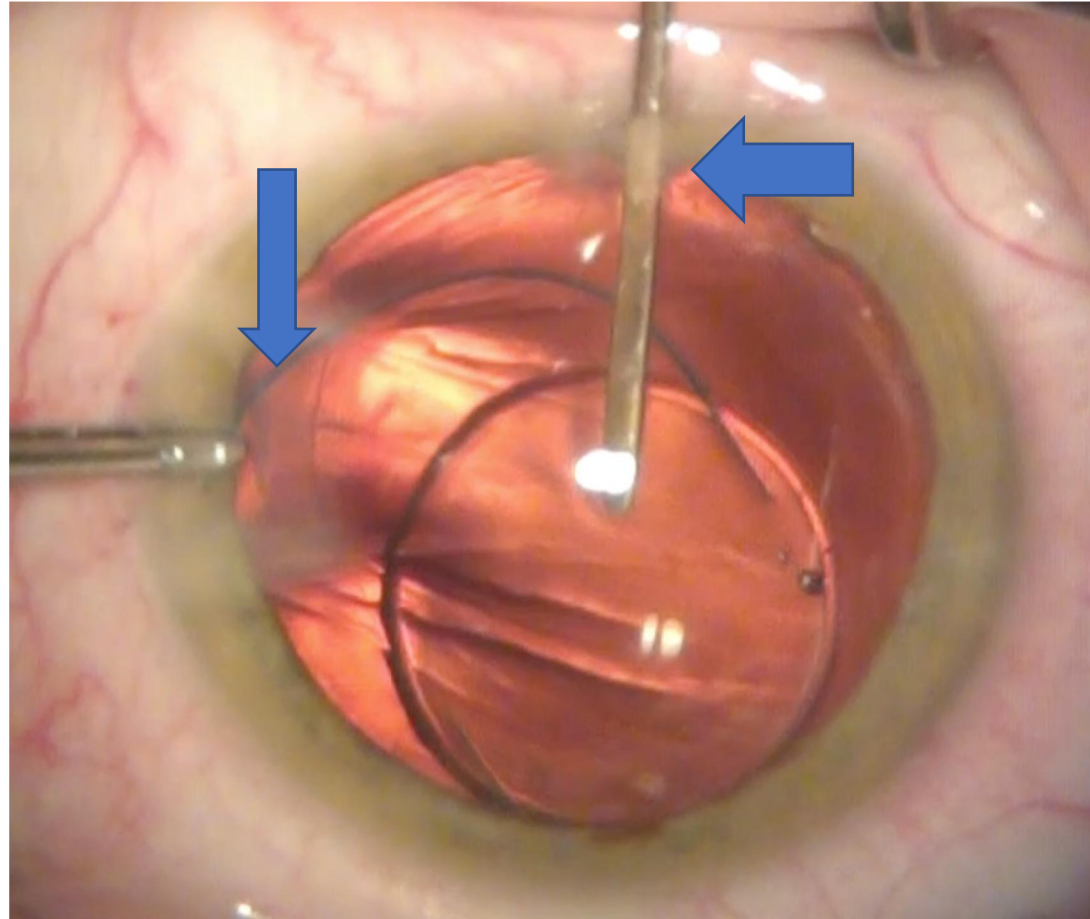


- This “**Bubble**” **pushes** the Viscoelastic toward the main incision and primary side port incision





- The viscoelastic that is pushed up to the main and primary side-port incisions allows for good control of the chamber during insertion of the intraocular lens.



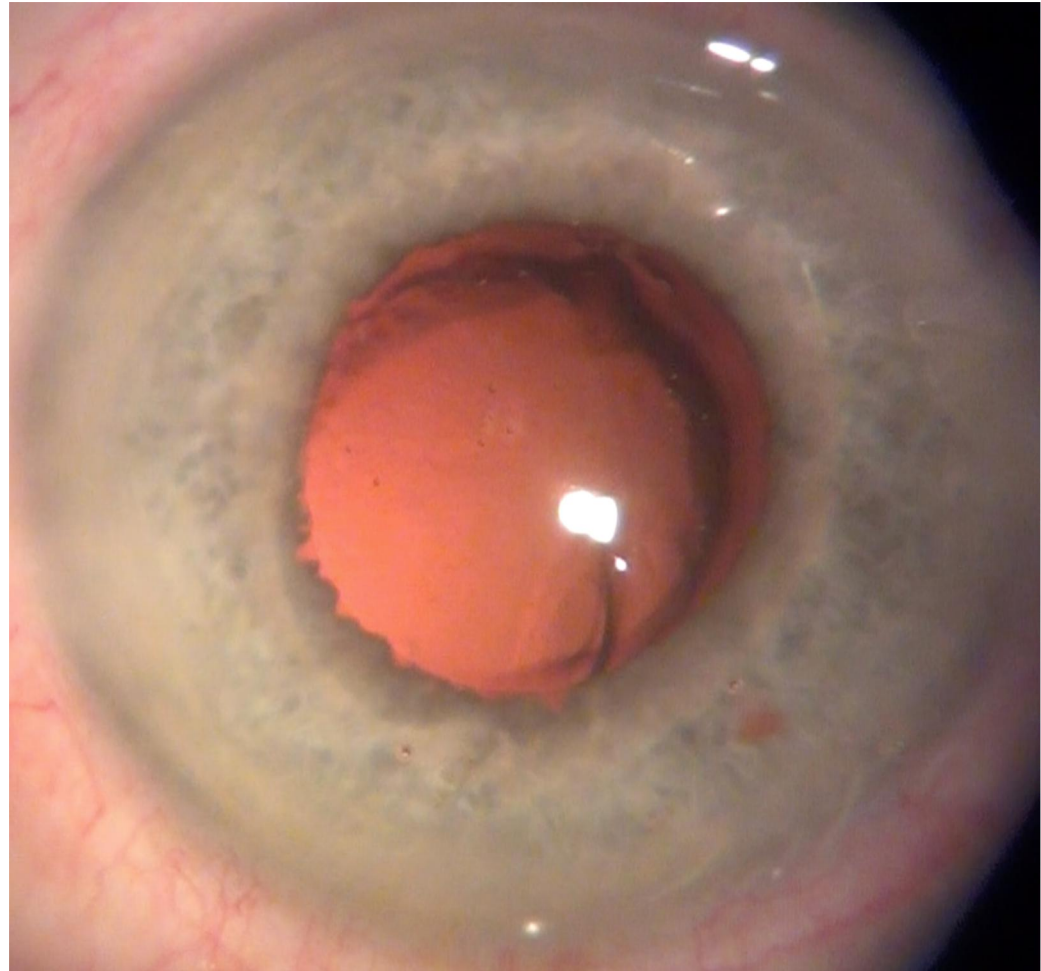
Results

- A total of 95 eyes were included in the study.
 - Only **one vial** of viscoelastic was used in **67 cases** (70.5 %).
 - For all **16 cases** (16.8 %) in which a **toric** or multifocal lens was inserted, a second vial was used routinely to optimize placement.
- A **second** vial was also used in a further **12 cases** (12.6 %).

- Excluding toric and multifocal lens, indications for using a second vial were
 - 9 men with small pupils and/or floppy iris syndrome.
 - intraoperative aqueous misdirection,
 - anatomically shallow anterior chamber with a small pupil
 - repositioning of a lens loop

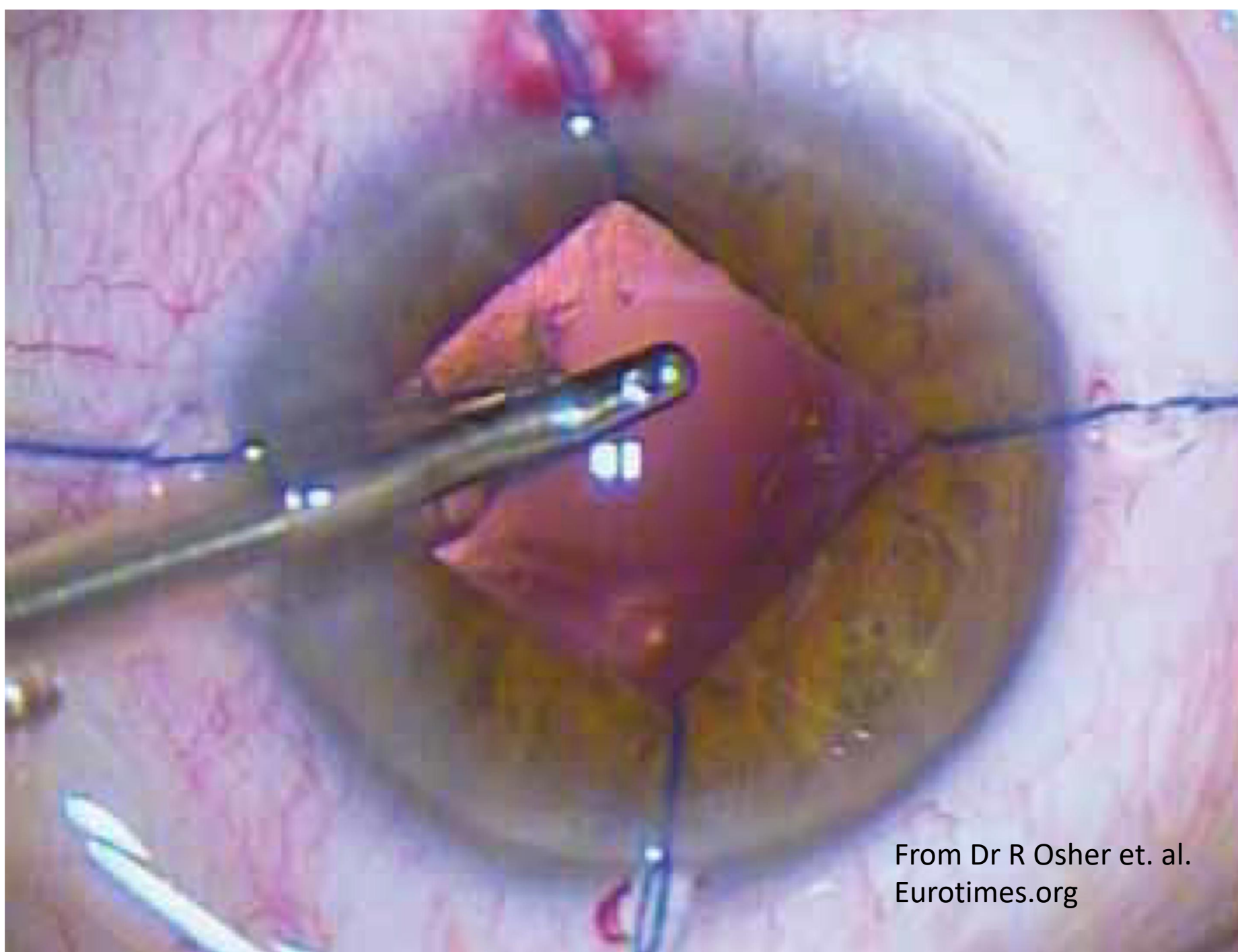
Results

- There were no cases of posterior capsule rupture or significant post-operative complications in any subgroup.

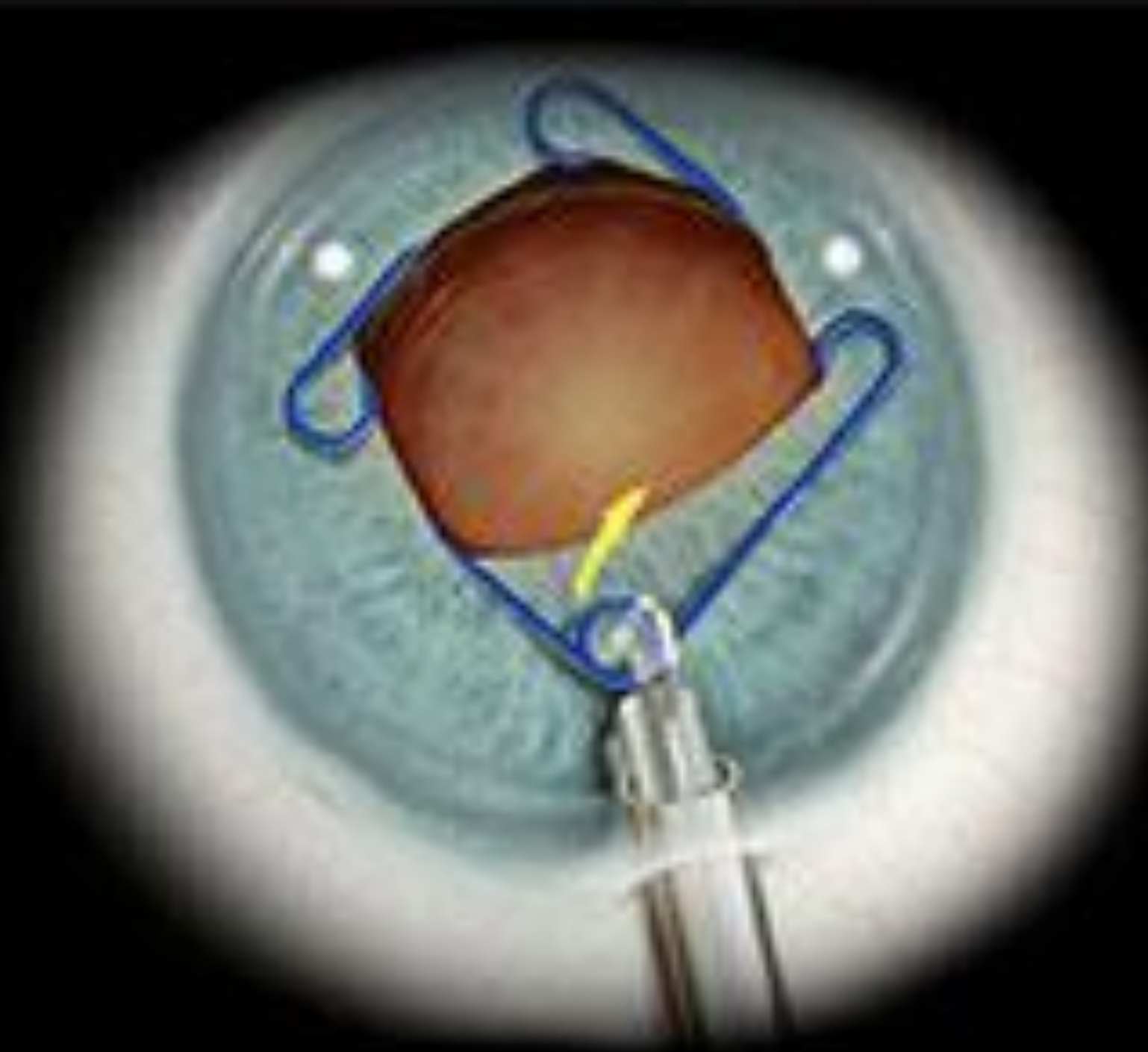


Conclusion

- A simple surgical technique using a “Bubble” of Balanced Salt Solution during the insertion of an intraocular lens is associated with a safe and controlled decrease in viscoelastic use during both routine and complex cataract surgery.



From Dr R Osher et. al.
Eurotimes.org



Comparison of the frequency of use of a pupil expansion device with and without an intracameral **phenylephrine** and ketorolac injection 1%/0.3% at the time of routine cataract surgery

With injection, the use of Malyugin ring was decreased from 24.5% to `12.7%

Clinical Ophthalmology 2017:11 1039–1043



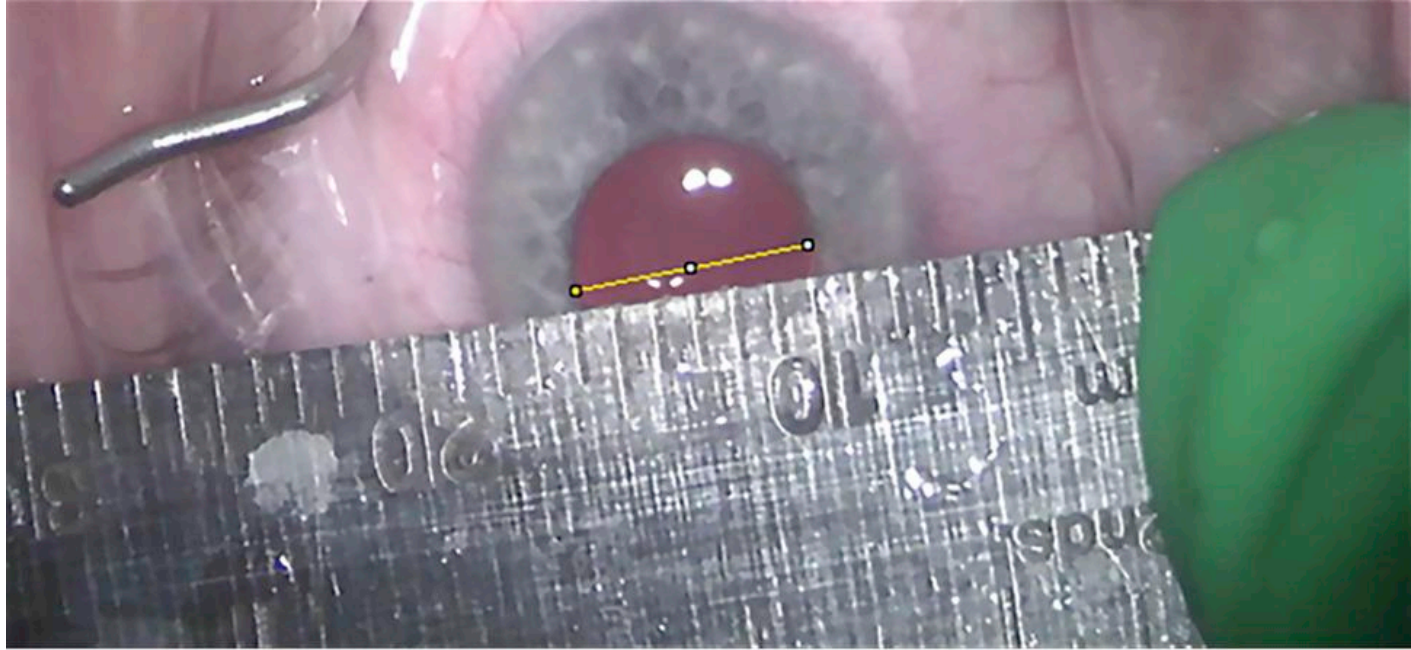
Floppy iris with
wound prolapse

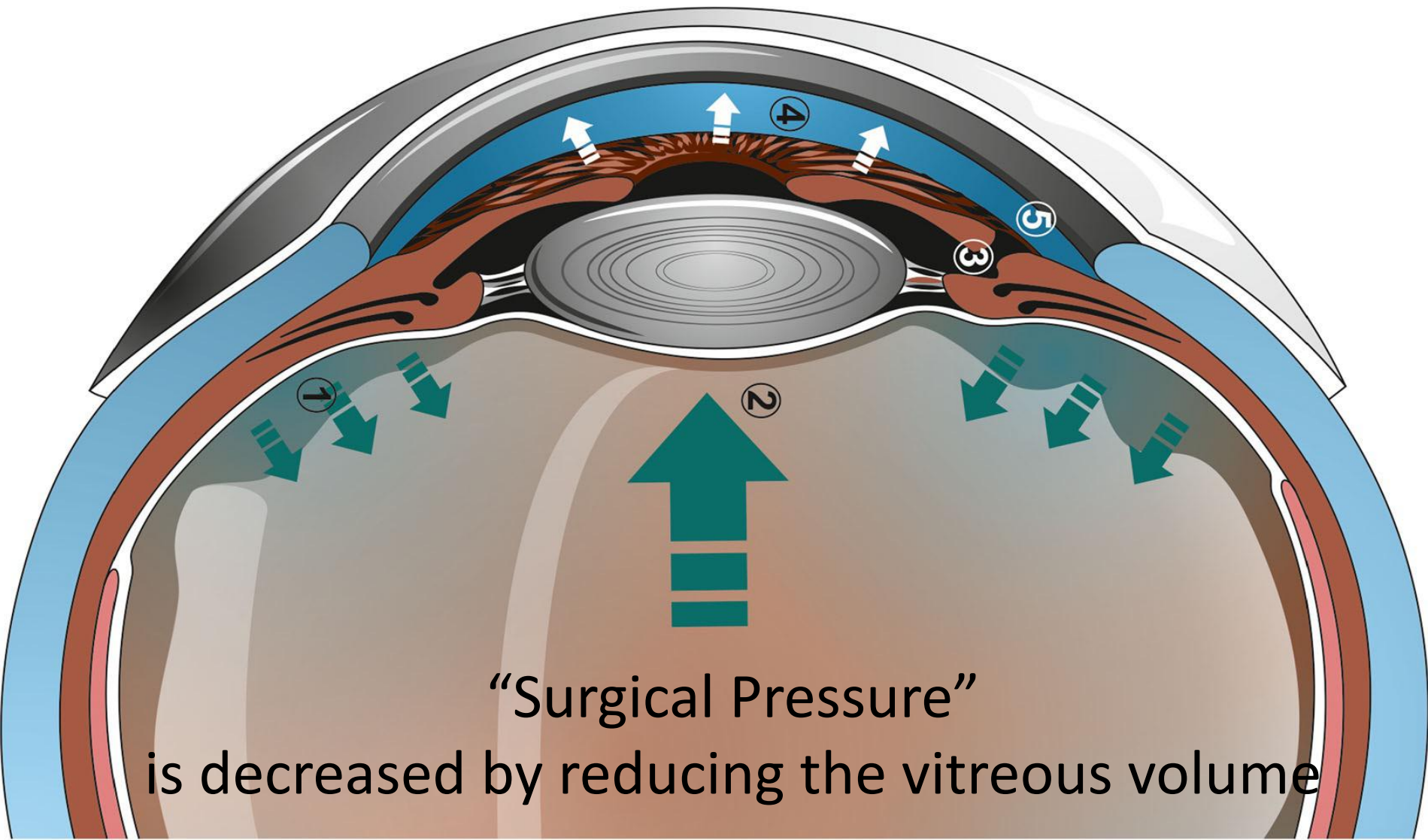
From Dr R Osher et. al.
Eurotimes.org

Effect of **phenylephrine** 1.0%–ketorolac 0.3% injection on tamsulosin-associated intraoperative floppy-iris syndrome

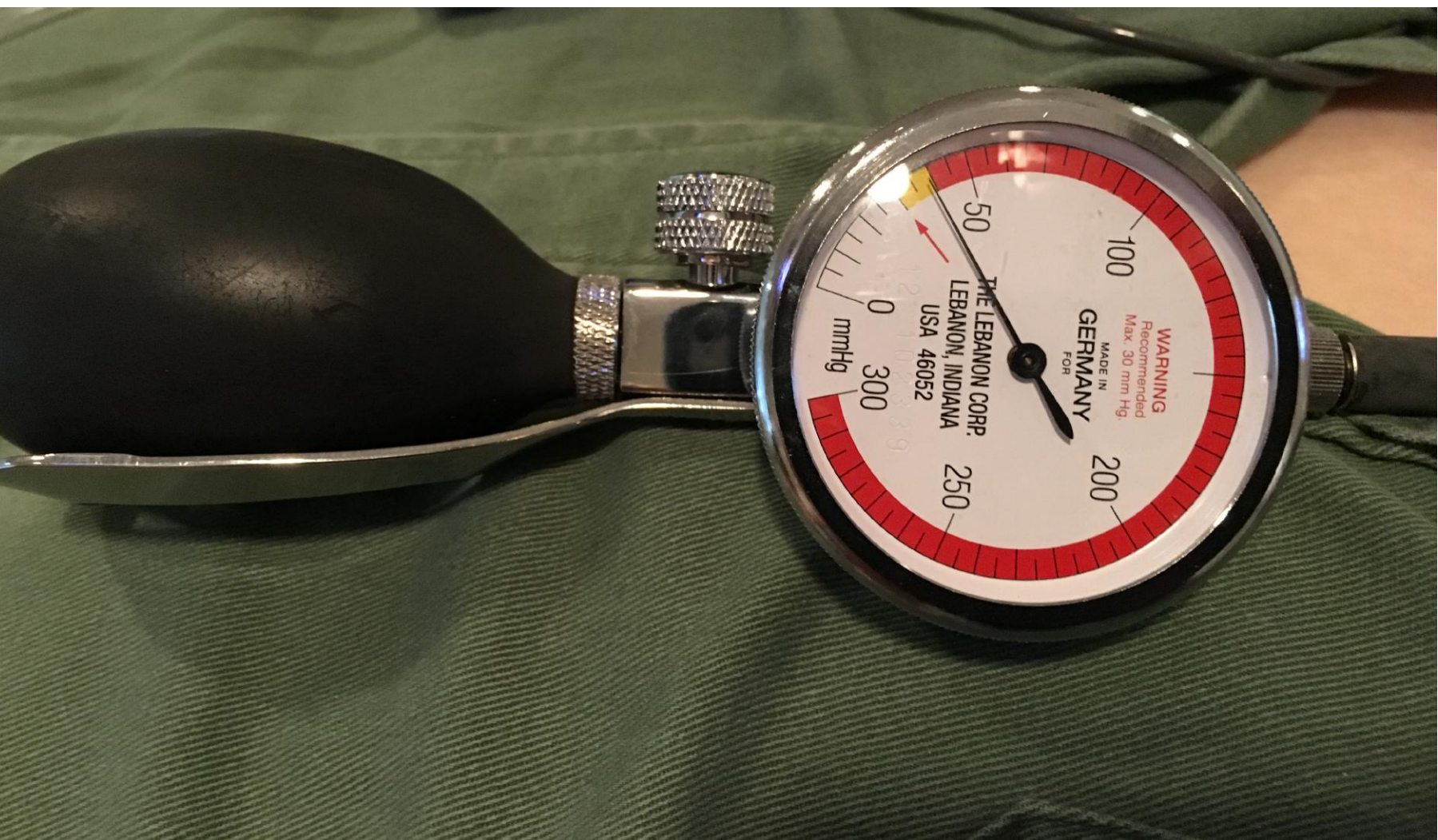
Decreases risk **iris prolapse** from 56% to 12%

J Cataract Refract Surg 2018; 44:1103–1108 Q 2018 ASCRS and ESCRS









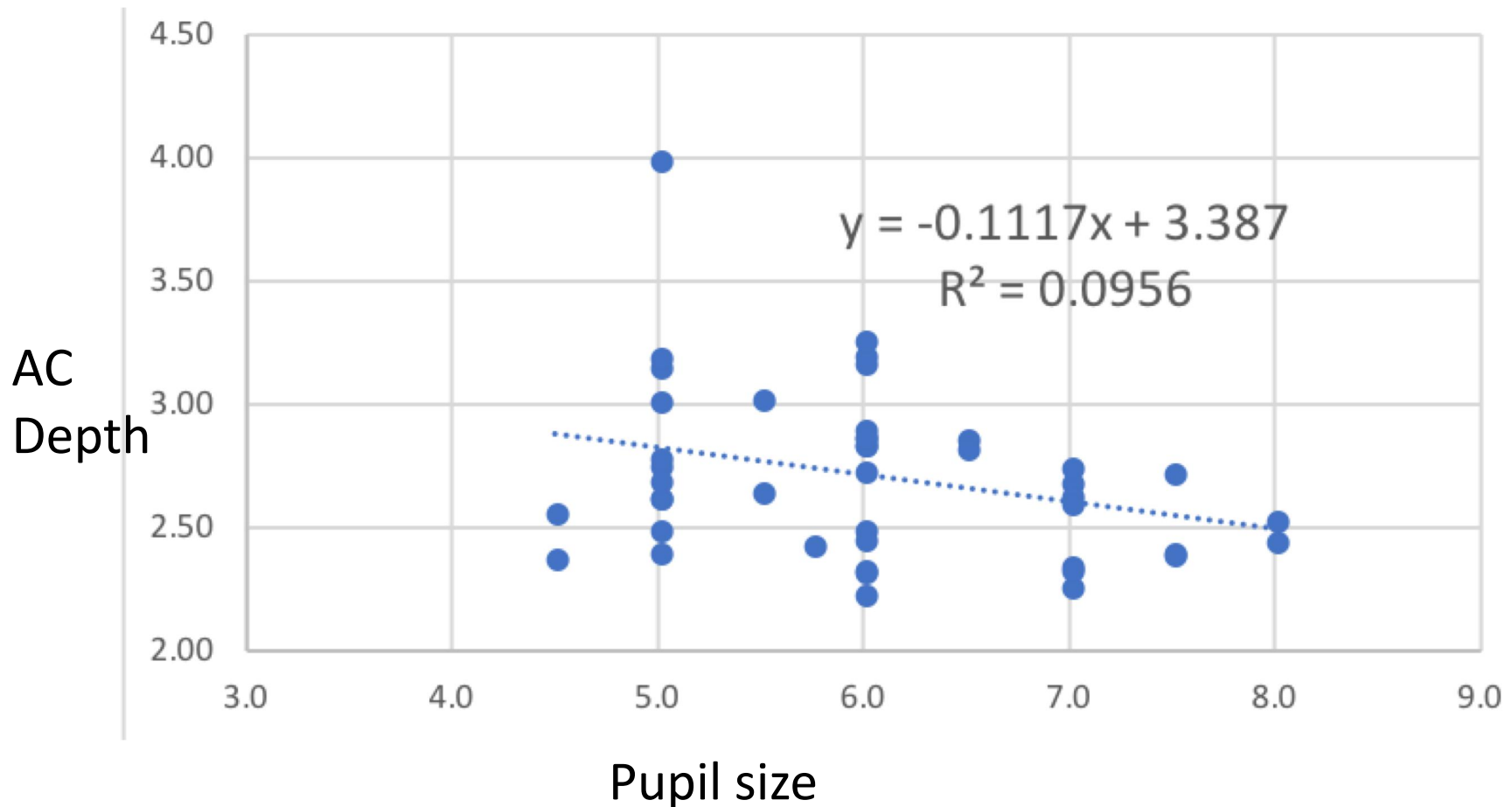
Safety of a Honan Balloon For High Risk Cataract Surgery

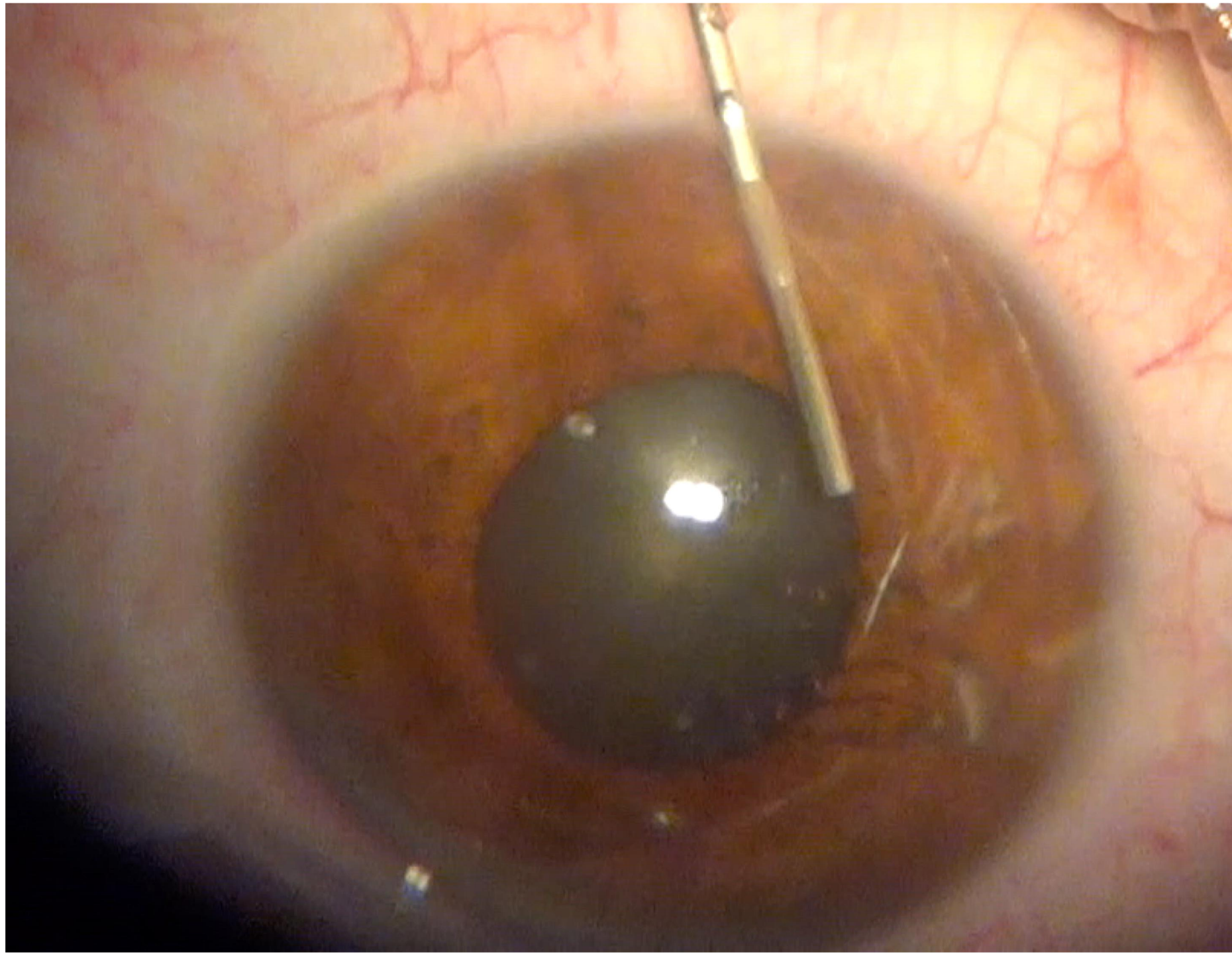
- All patients undergoing cataract surgeries during a one year period
- All patients assessed pre-operatively for higher risk factors for disruption of the posterior capsule during surgery
 - Increased age
 - Male
 - Flomax or Amlodopine (Oral alpha-adrenergic and Ca blocker)
 - Pupil size
 - Anterior Chamber Depth
 - Increased Axial Length
 - Diabetes (smaller pupil size)
- Surgeon choice on the use of the Honan Balloon (59 of 371)
- All honan and select non-honan cases were done with adjunct intraoperative epinephrine 1% , one ml mixed with 2 ml BSS

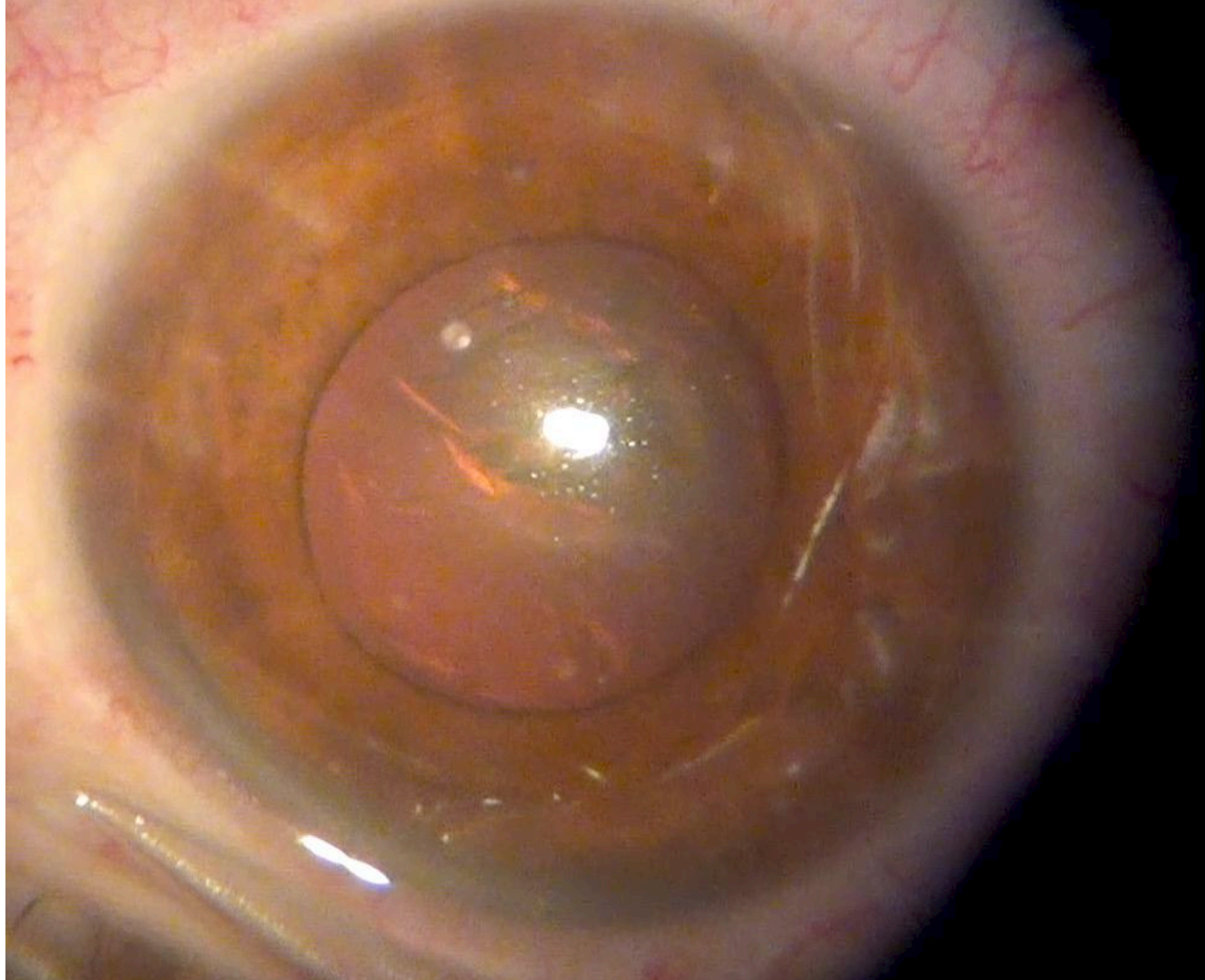
Honan Balloon was typically used with:
Small Pupils and/or Shallow Chambers

Average Pupil Size: **6.0** mm

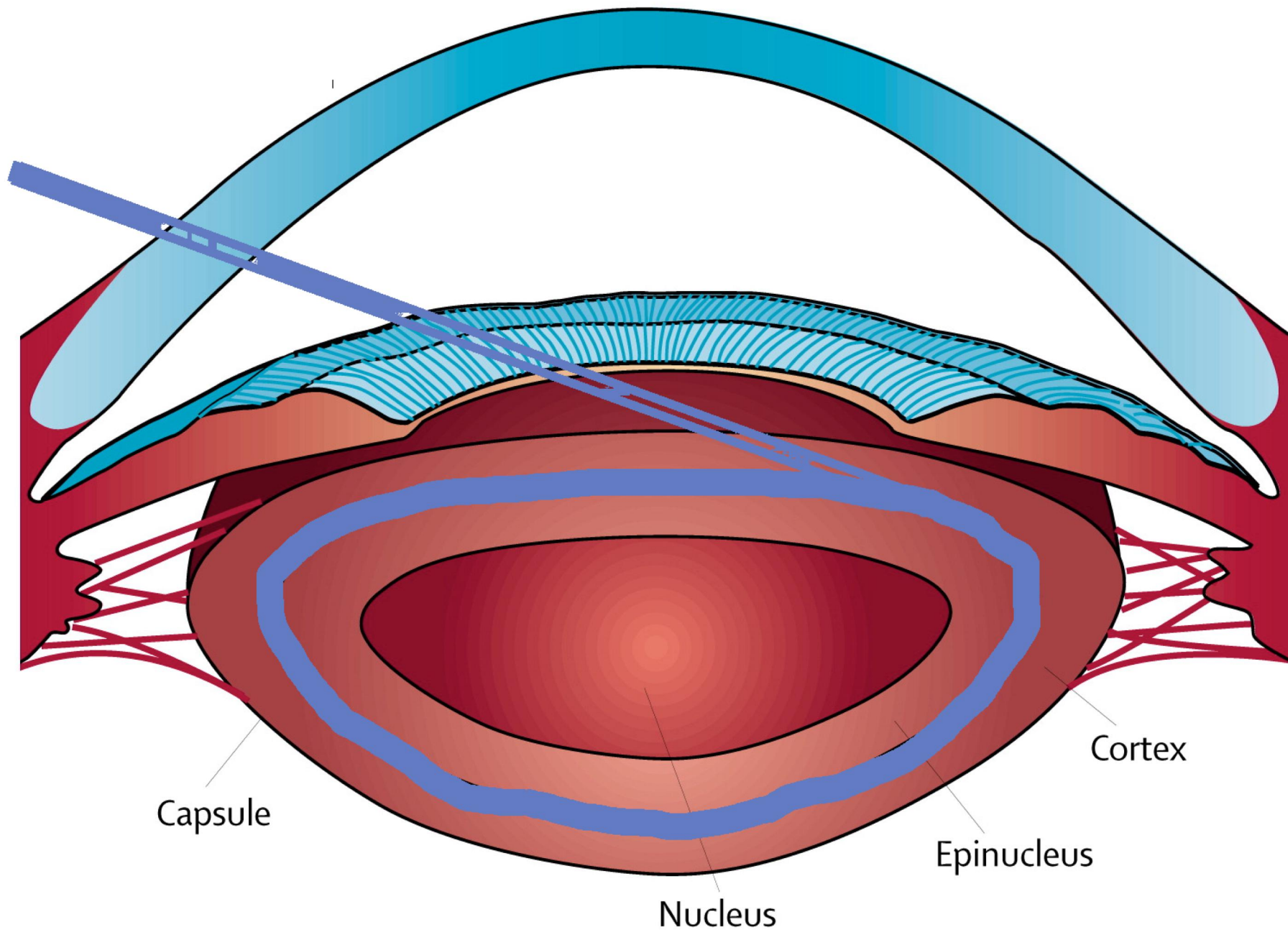
Average AC Depth: **2.65** mm

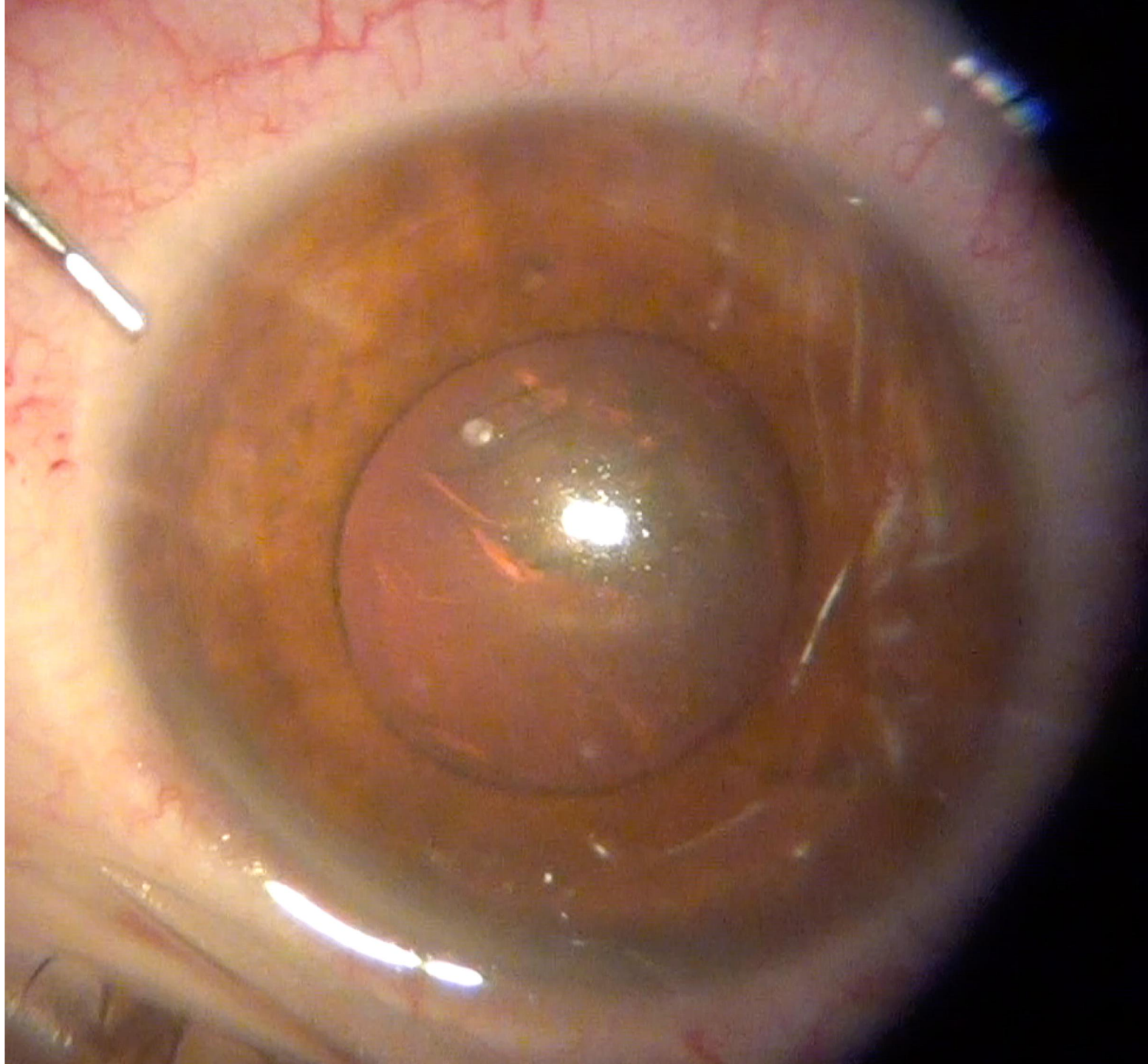




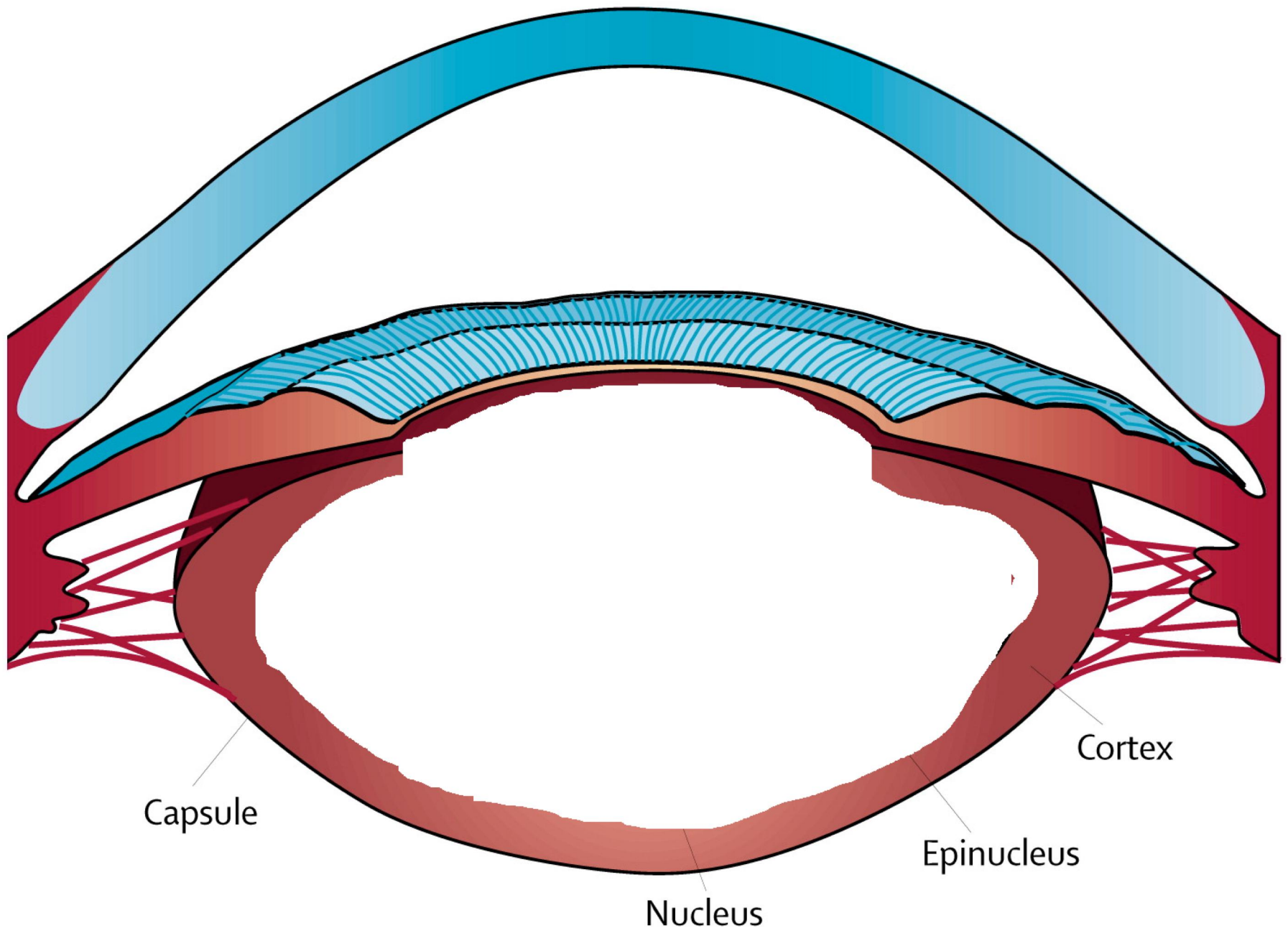


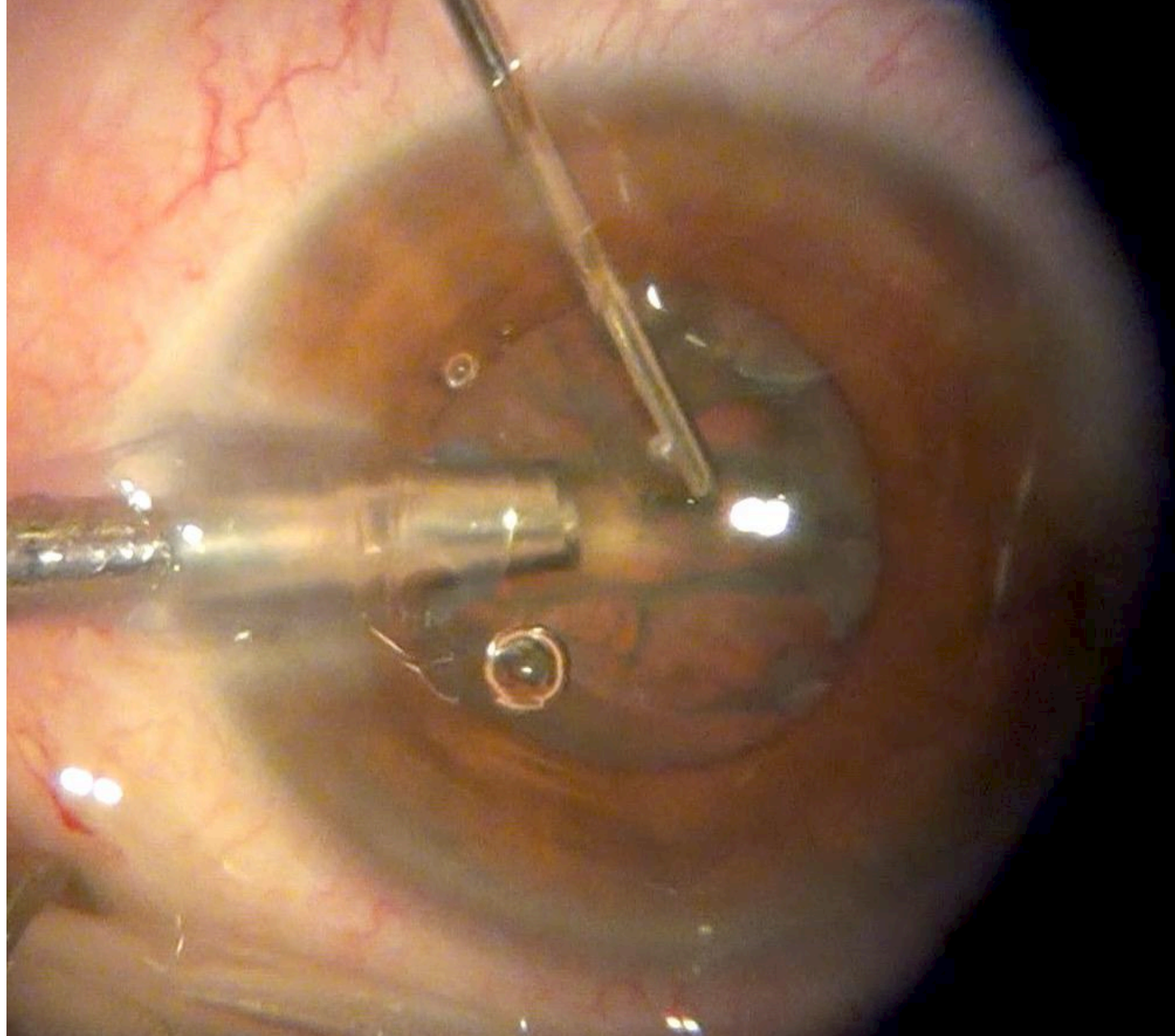
HYDRO-DISSECTION

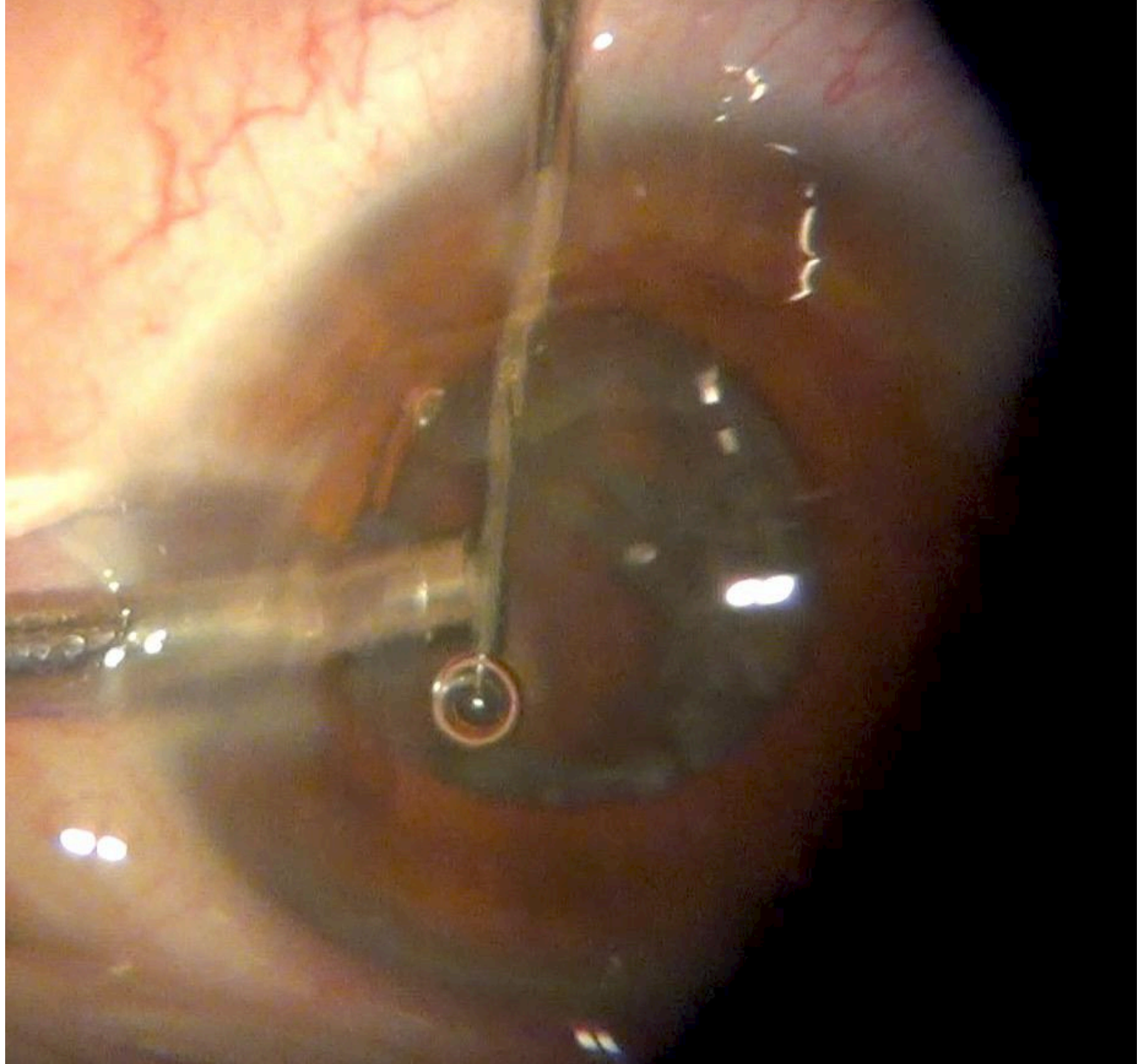


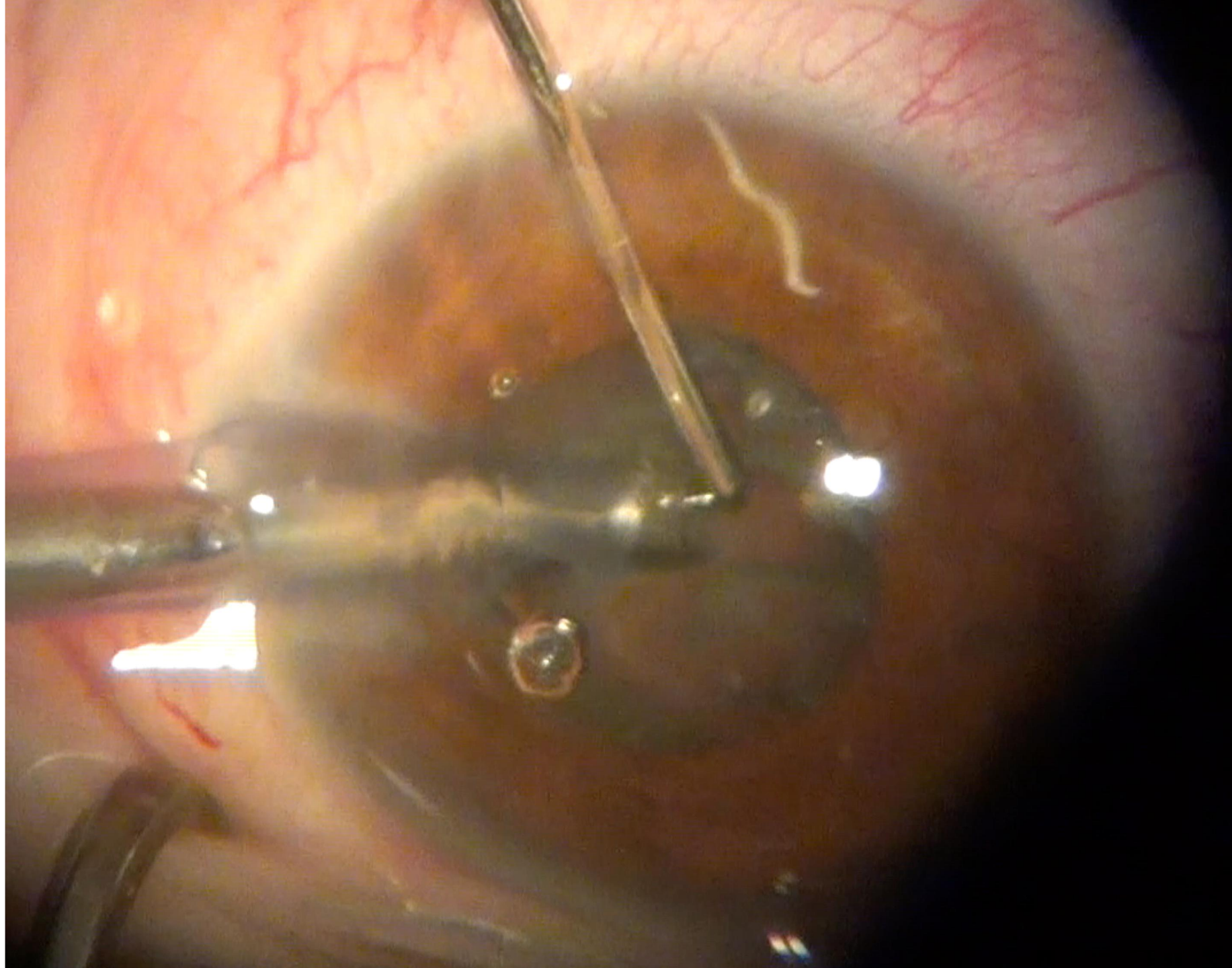


PHAKO—EMULSIFICATION NUCLEUS

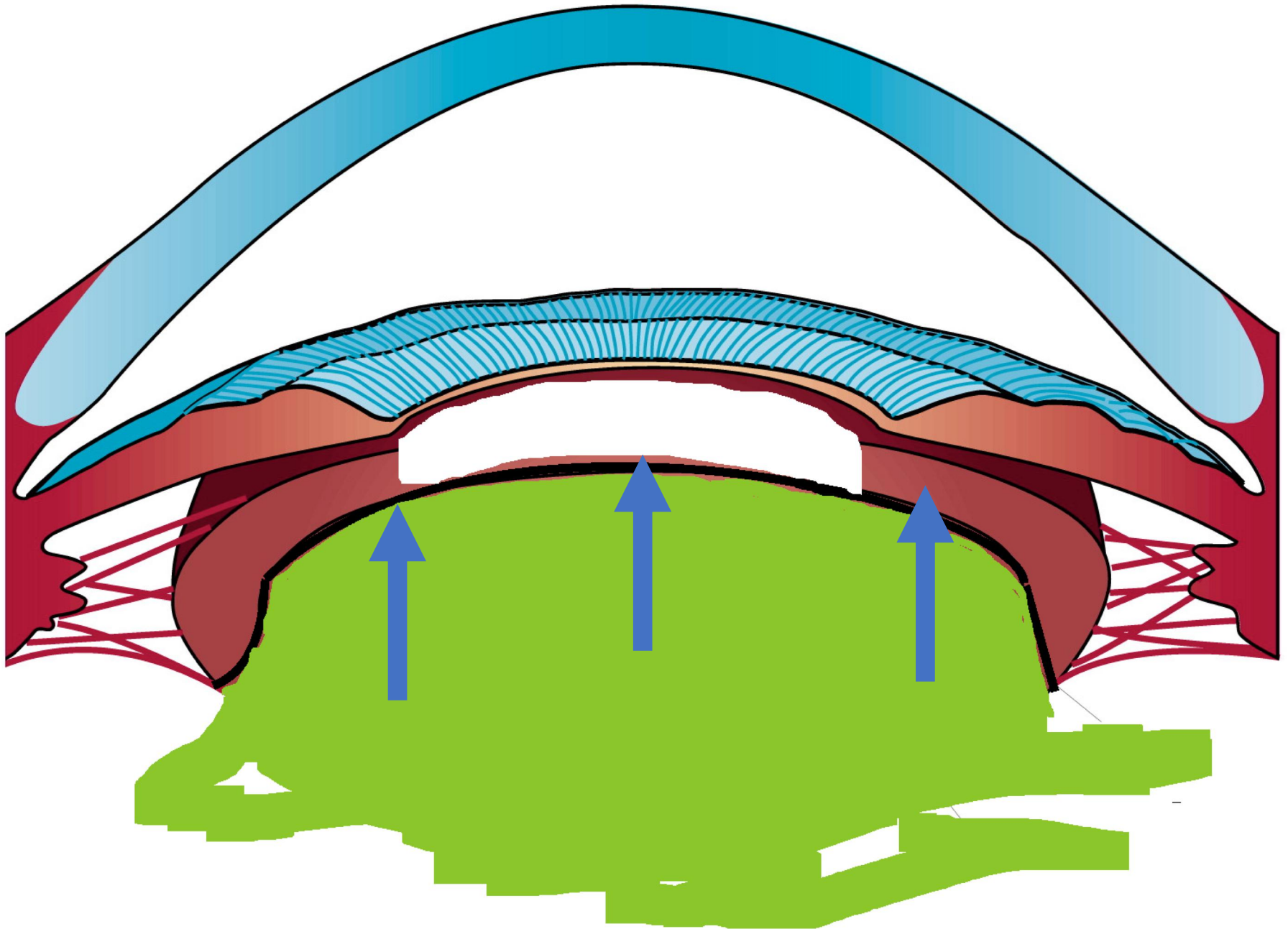


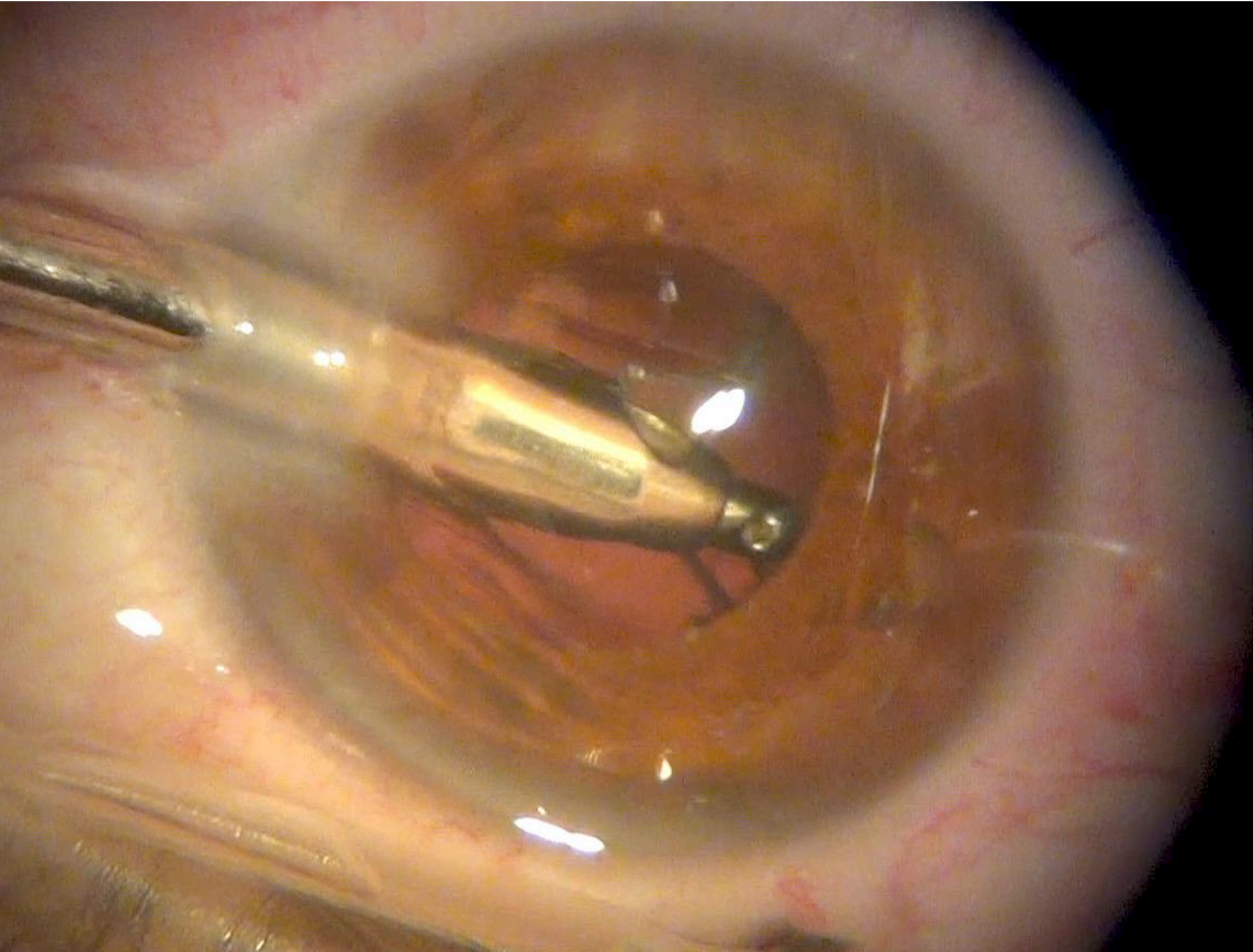


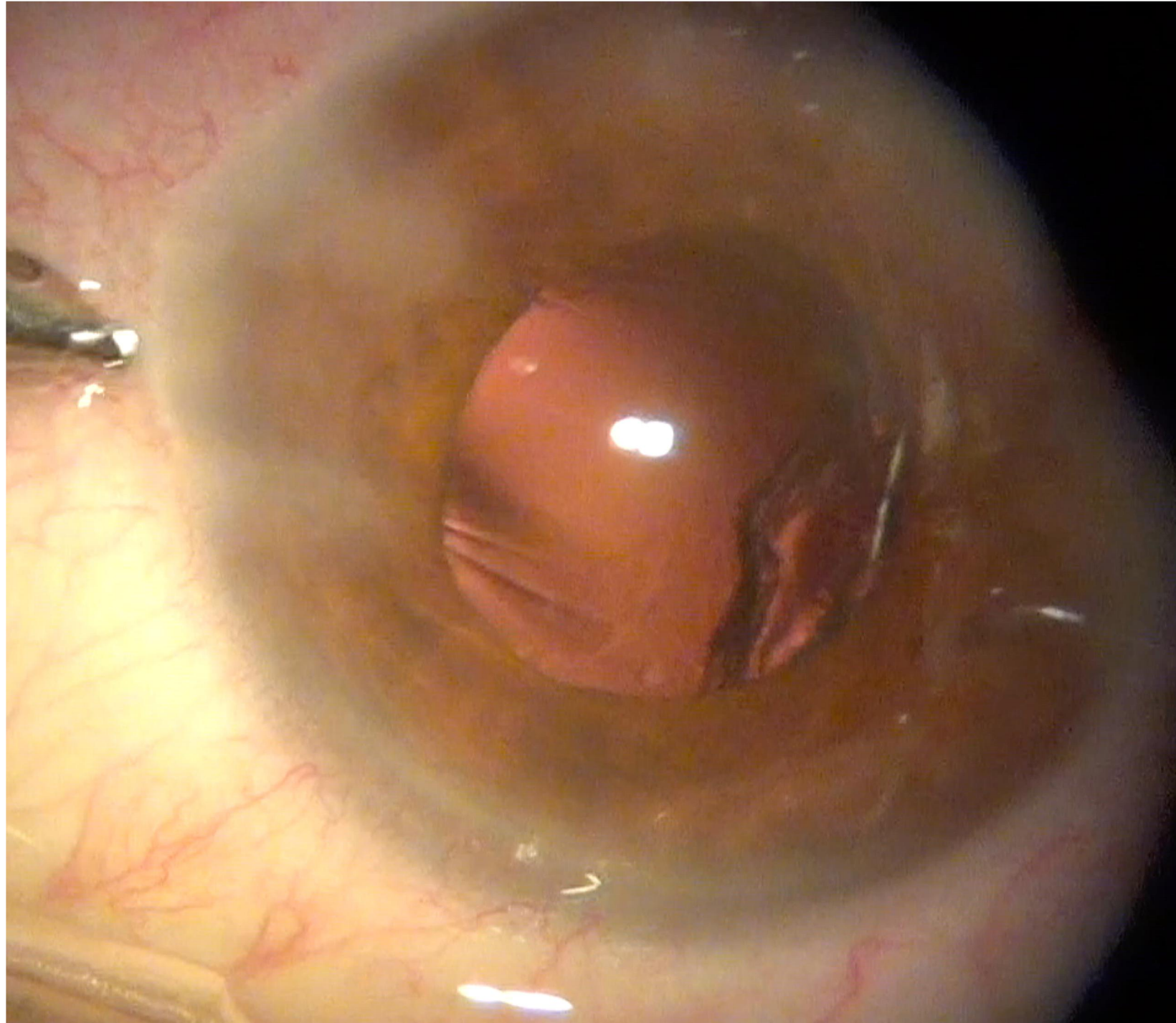


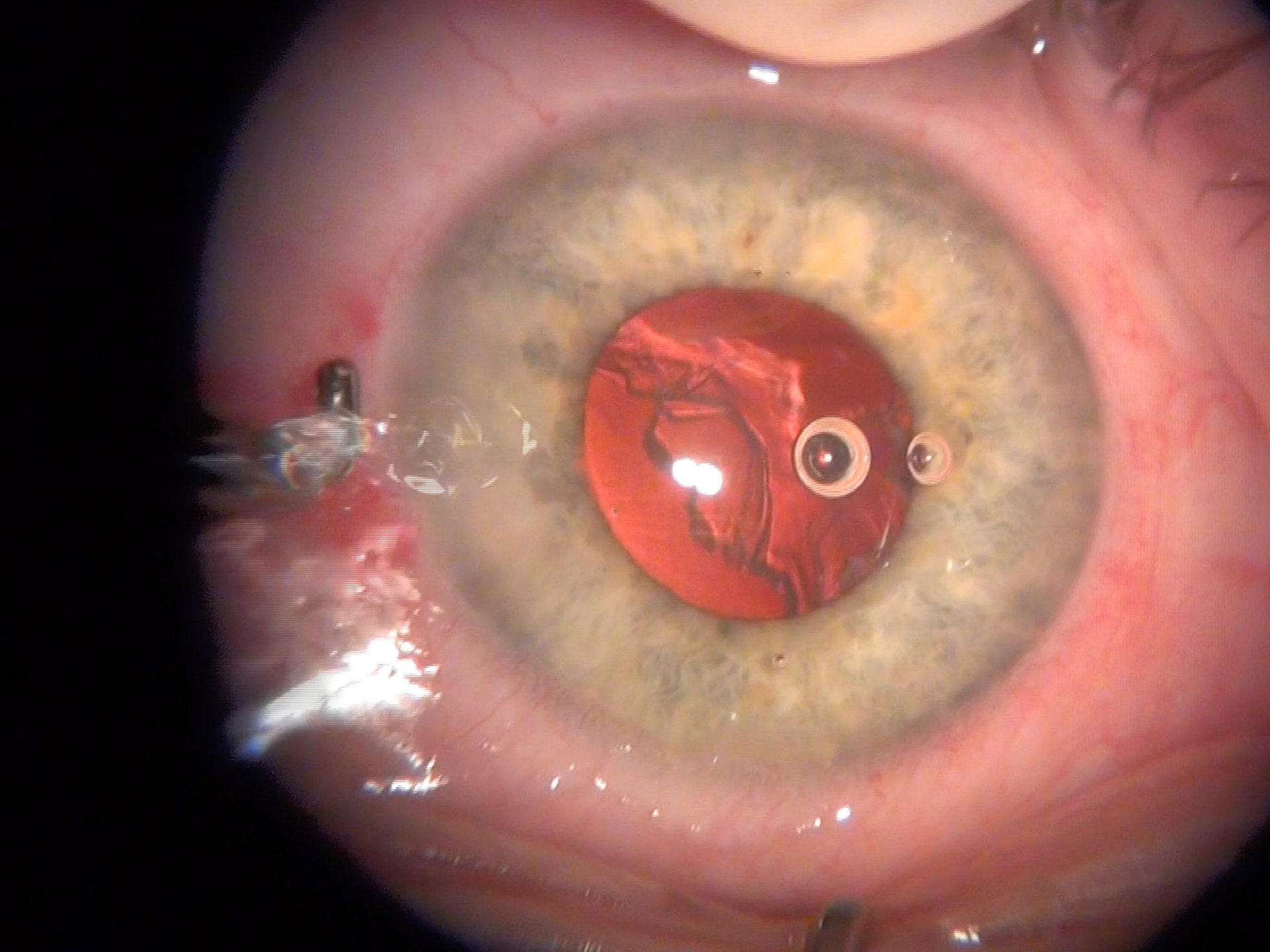


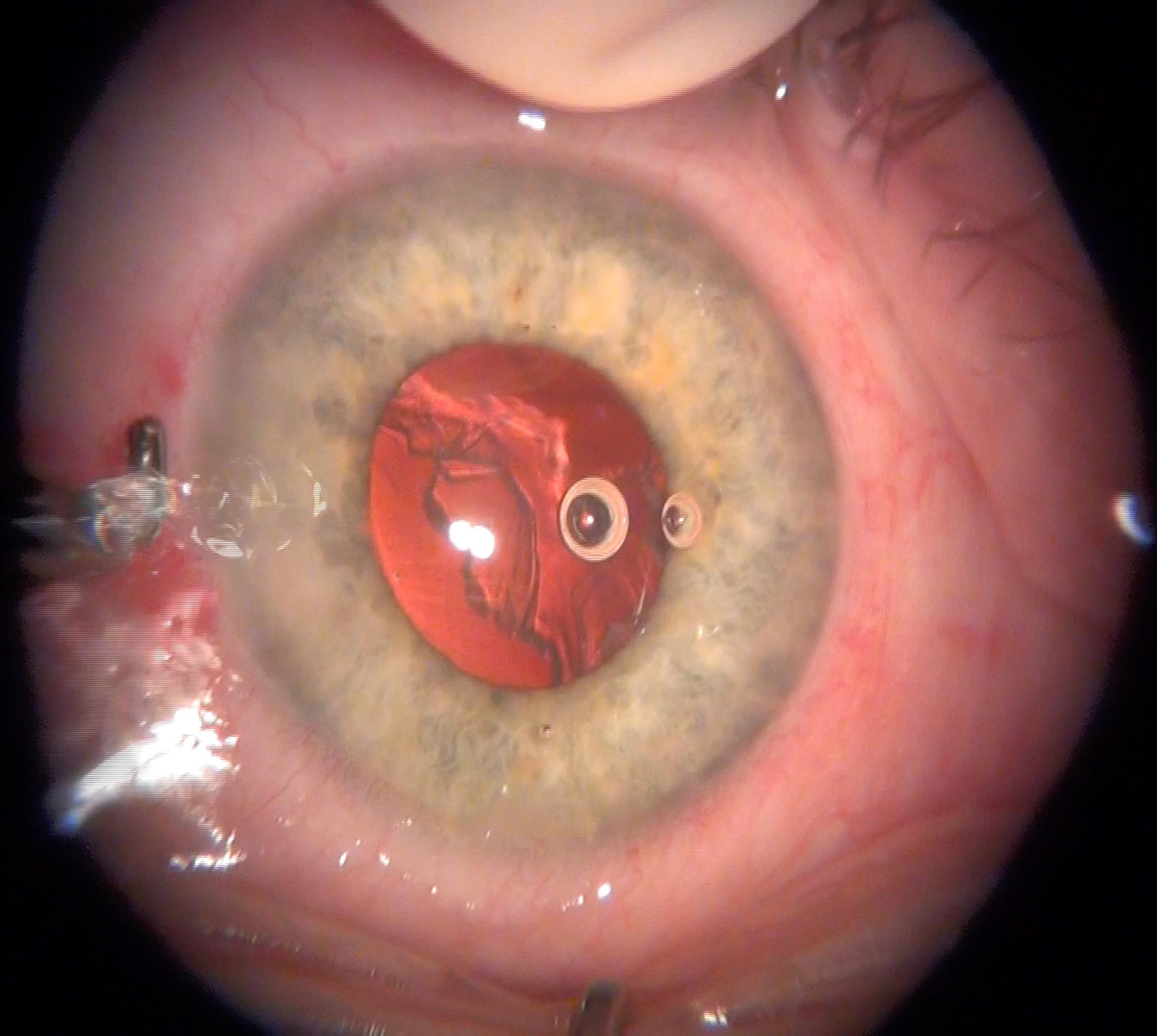
CORTEX **STUCK** IN THE CAPSULAR BAG BY PRESSURE FROM THE VITREOUS

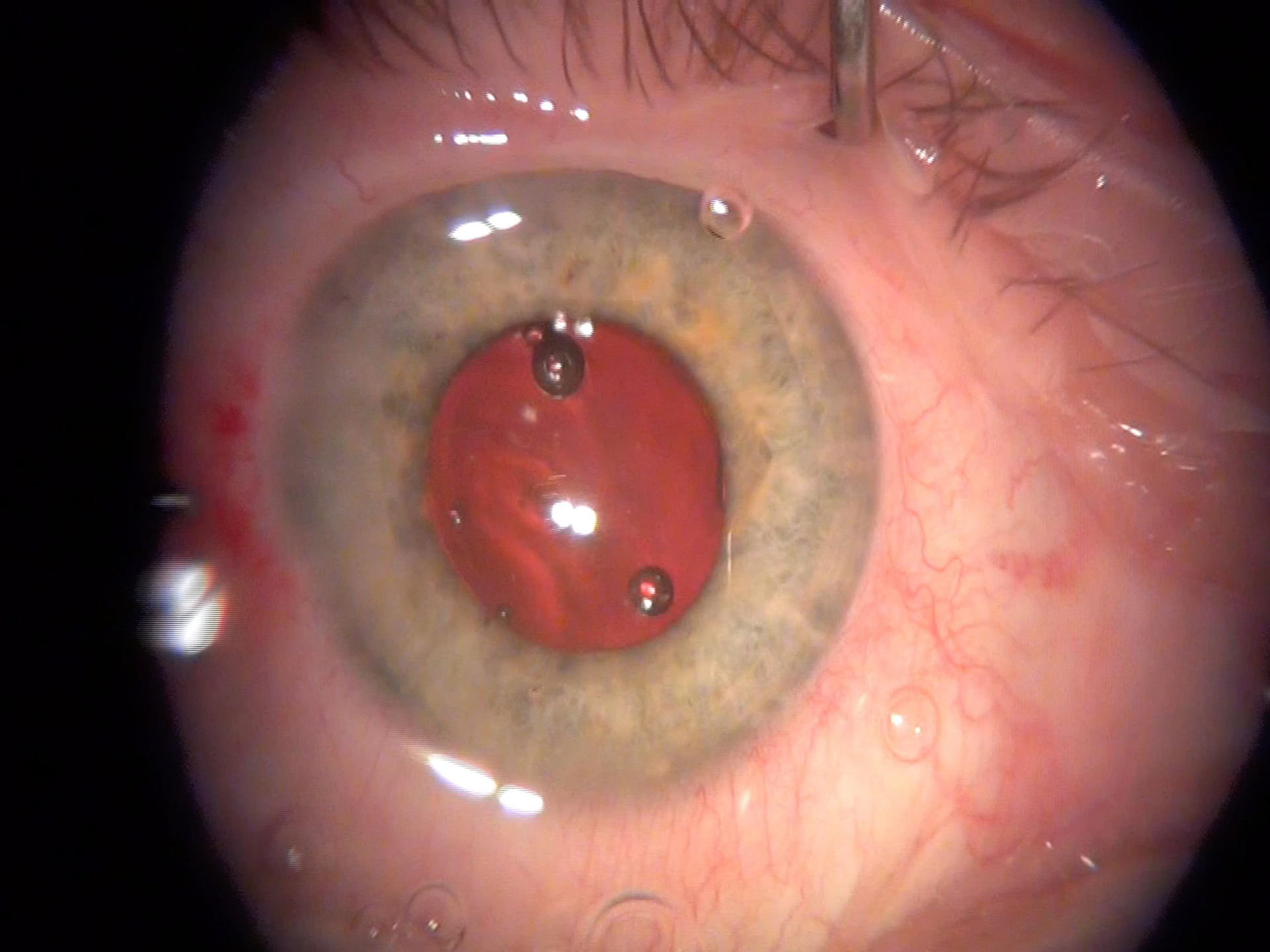




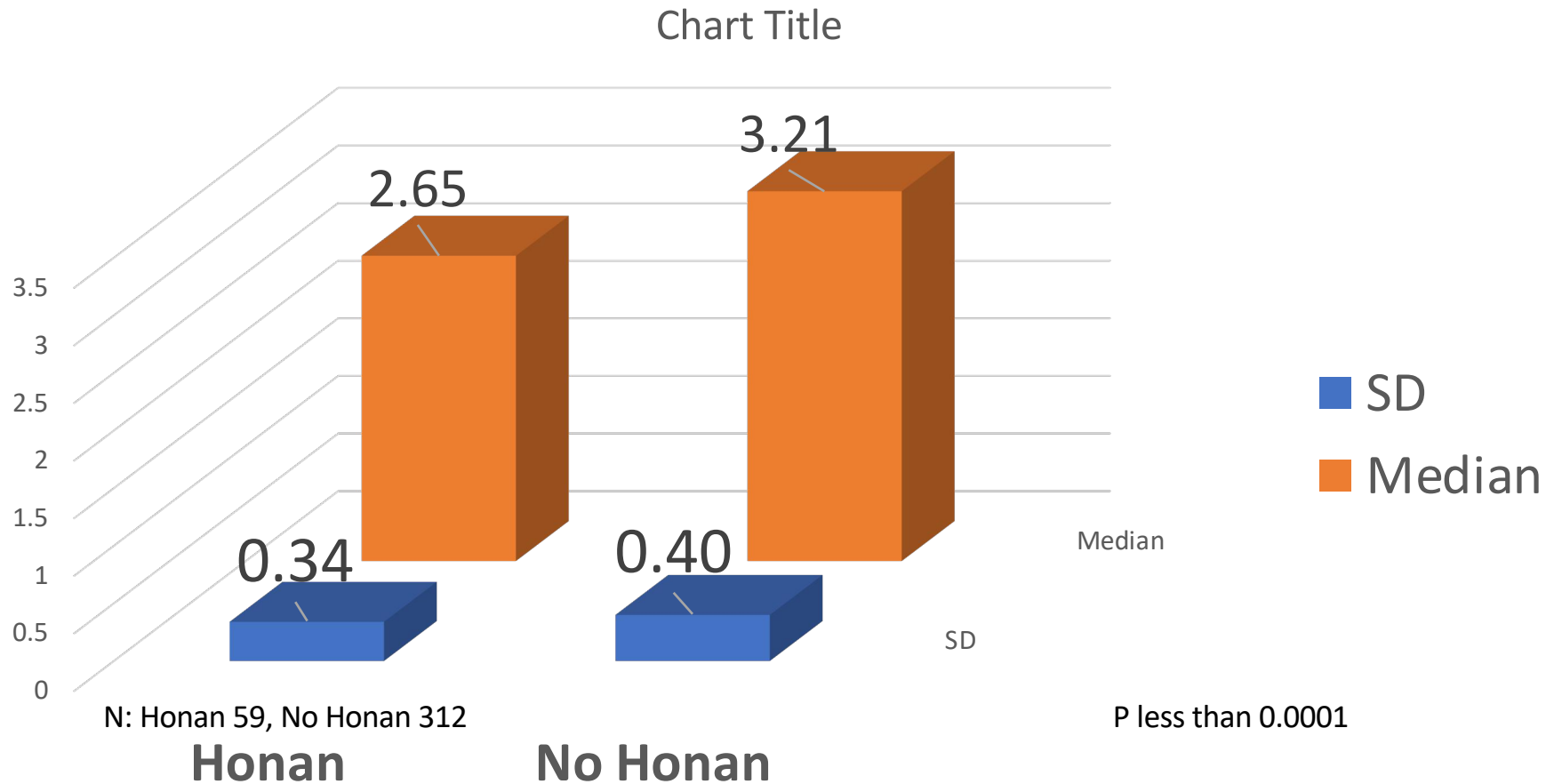






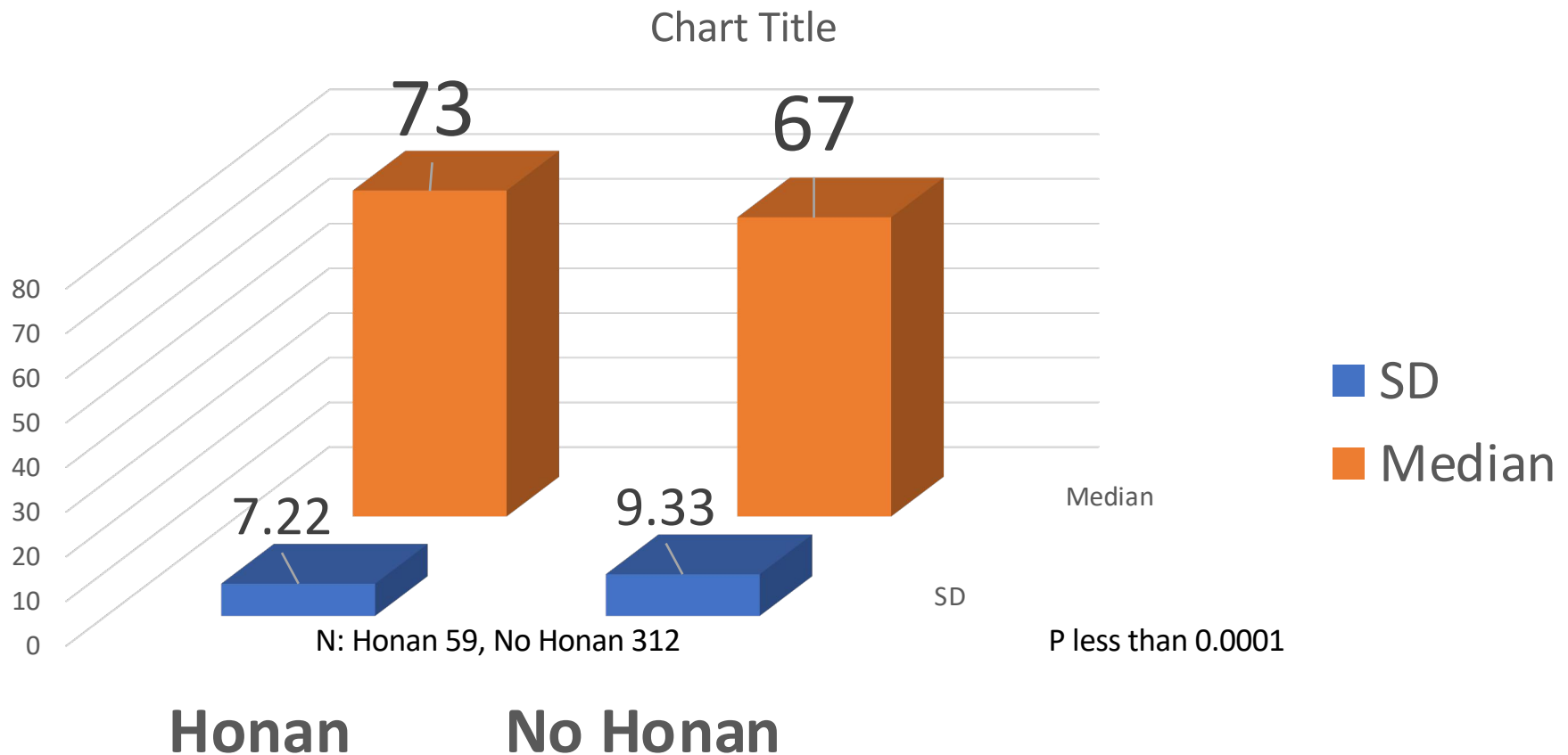


Anterior Chamber Depth: Significantly less in the Honan Group



Age:

Honan group significantly older



Complications

- All cases:
 - No mechanical pupil dilation necessary
 - No cases of Iris Prolapse
- Non-Honan:
 - One case of zonular dehiscence during phako-emulsification required a vitrectomy

Conclusion

- There were no operative complications associated with adjunct use of a Honan balloon

