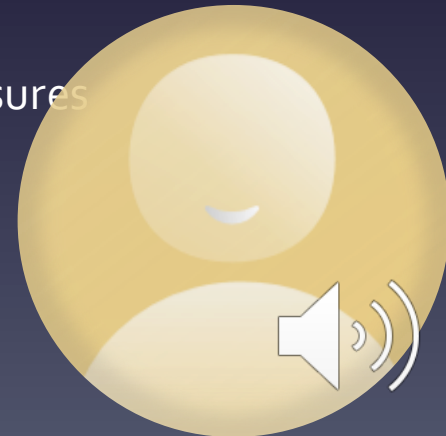


“Dead Bags, “Zombie” Bags and the UGHusual Suspects

Steven G. Safran MD



No financial disclosures
relative to this talk



Dead Bags dislocations are removed and replaced

Beware the
"Dead Bag"

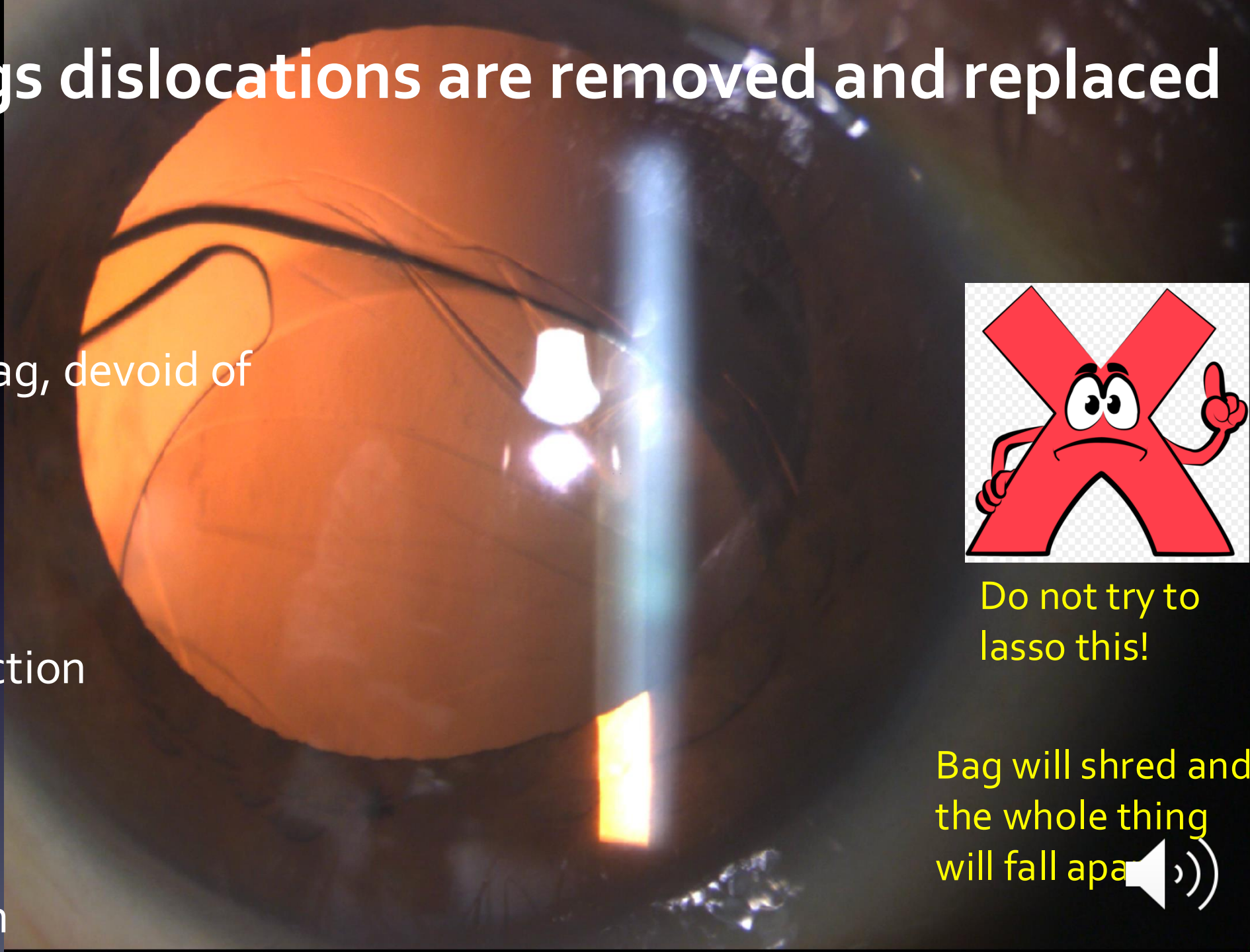
Thin, diaphanous bag, devoid of
LECs

No fibrosis at all

No capsular contraction

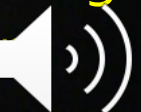
Zonules disinserted

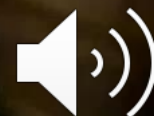
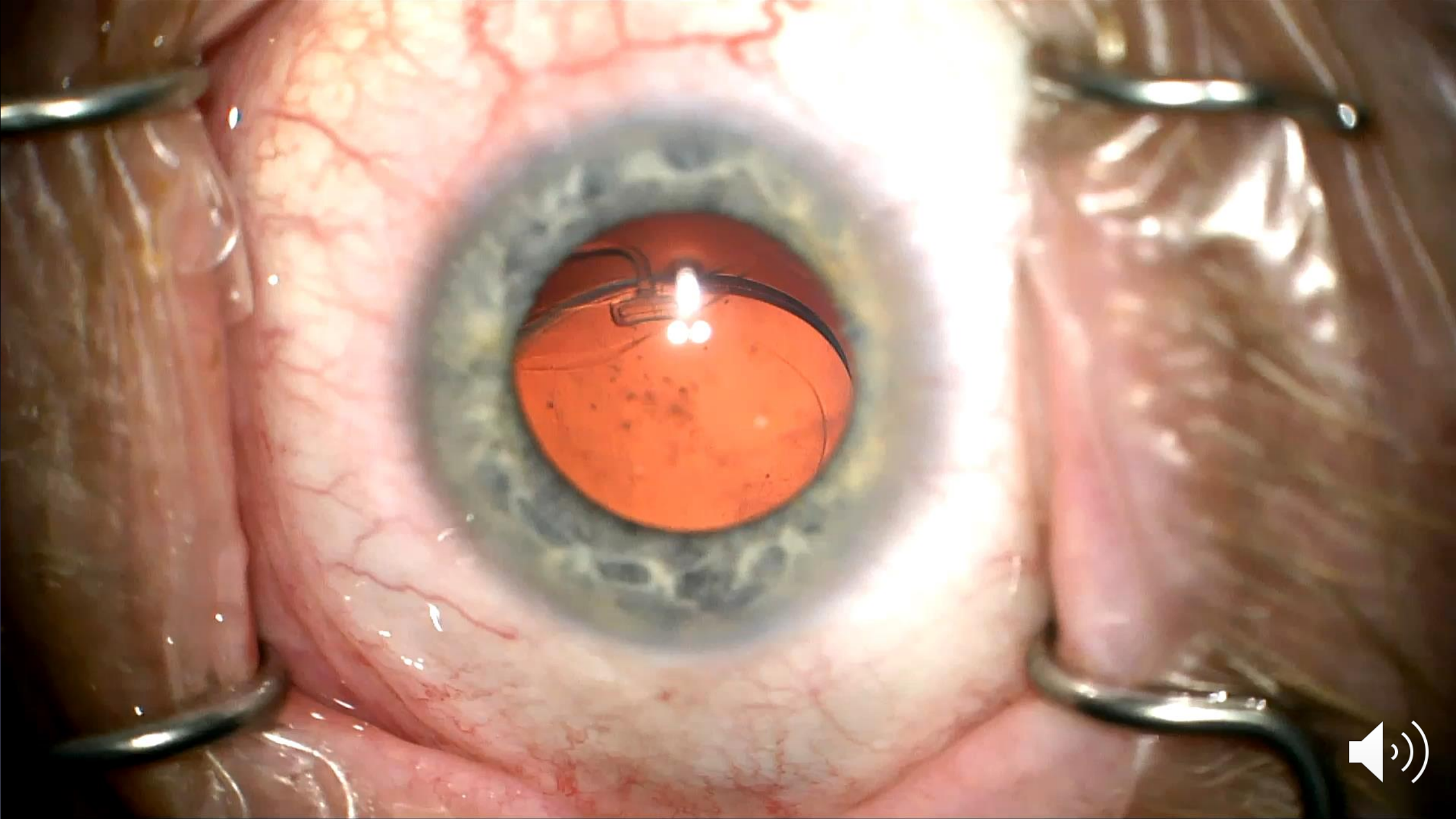
Prone to dislocation



Do not try to
lasso this!

Bag will shred and
the whole thing
will fall apart





Single piece Acrylic IOLs within a “Dead”
bag can cause UGH syndrome

By Iris chafing through the shear anterior
capsule

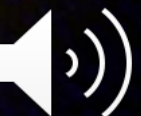
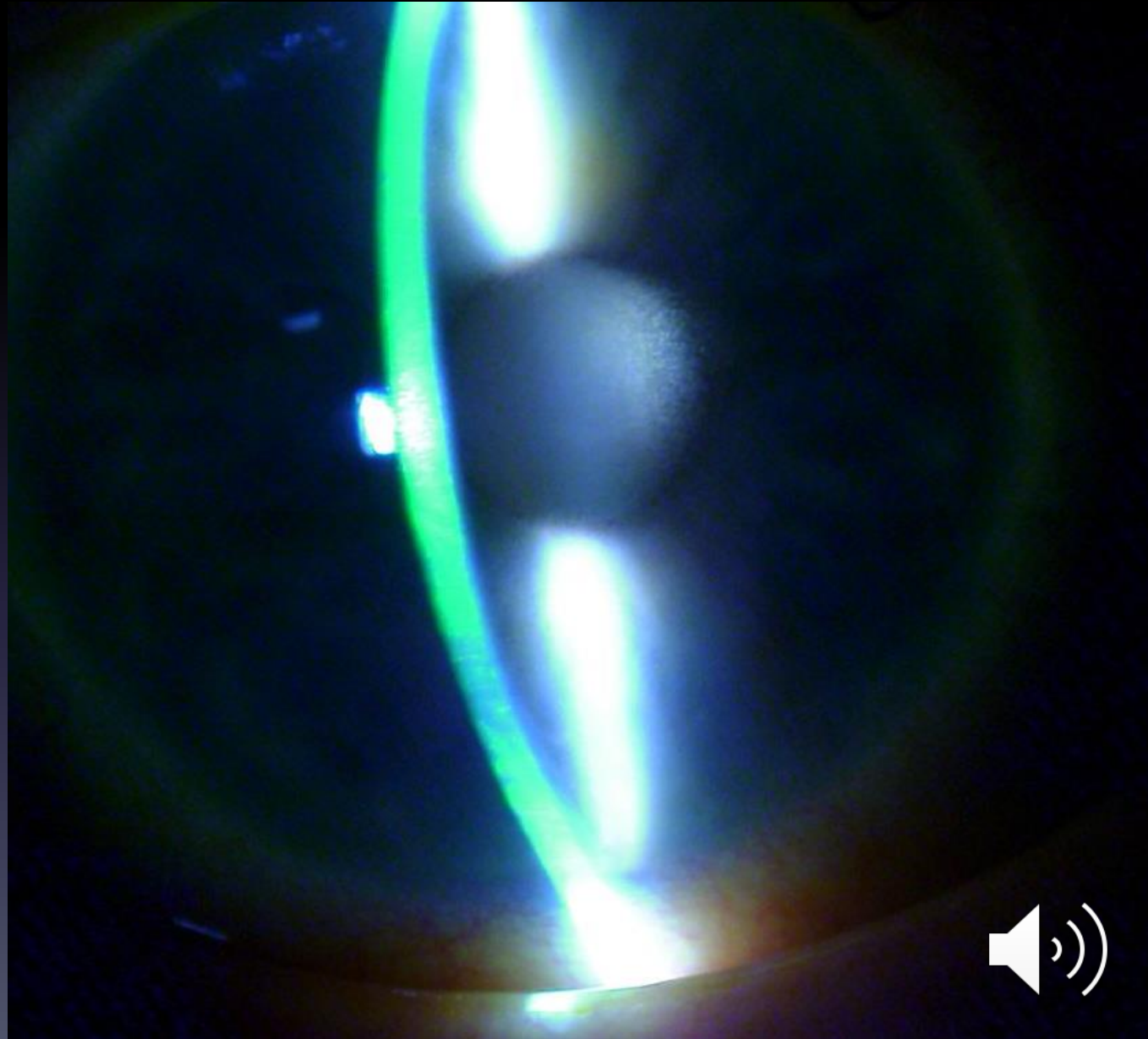


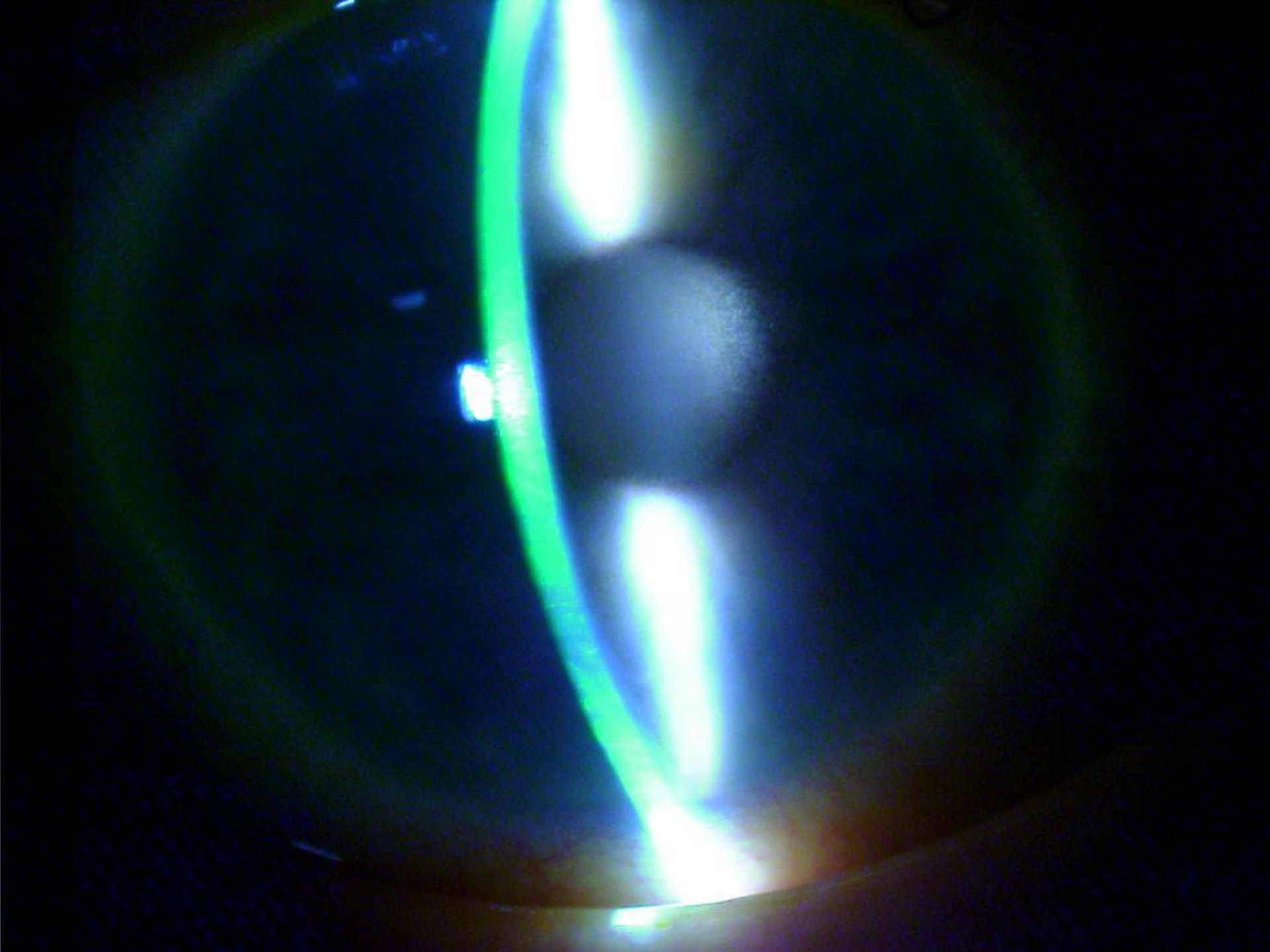
**78 year old referred in 10 years
after cataract surgery:**

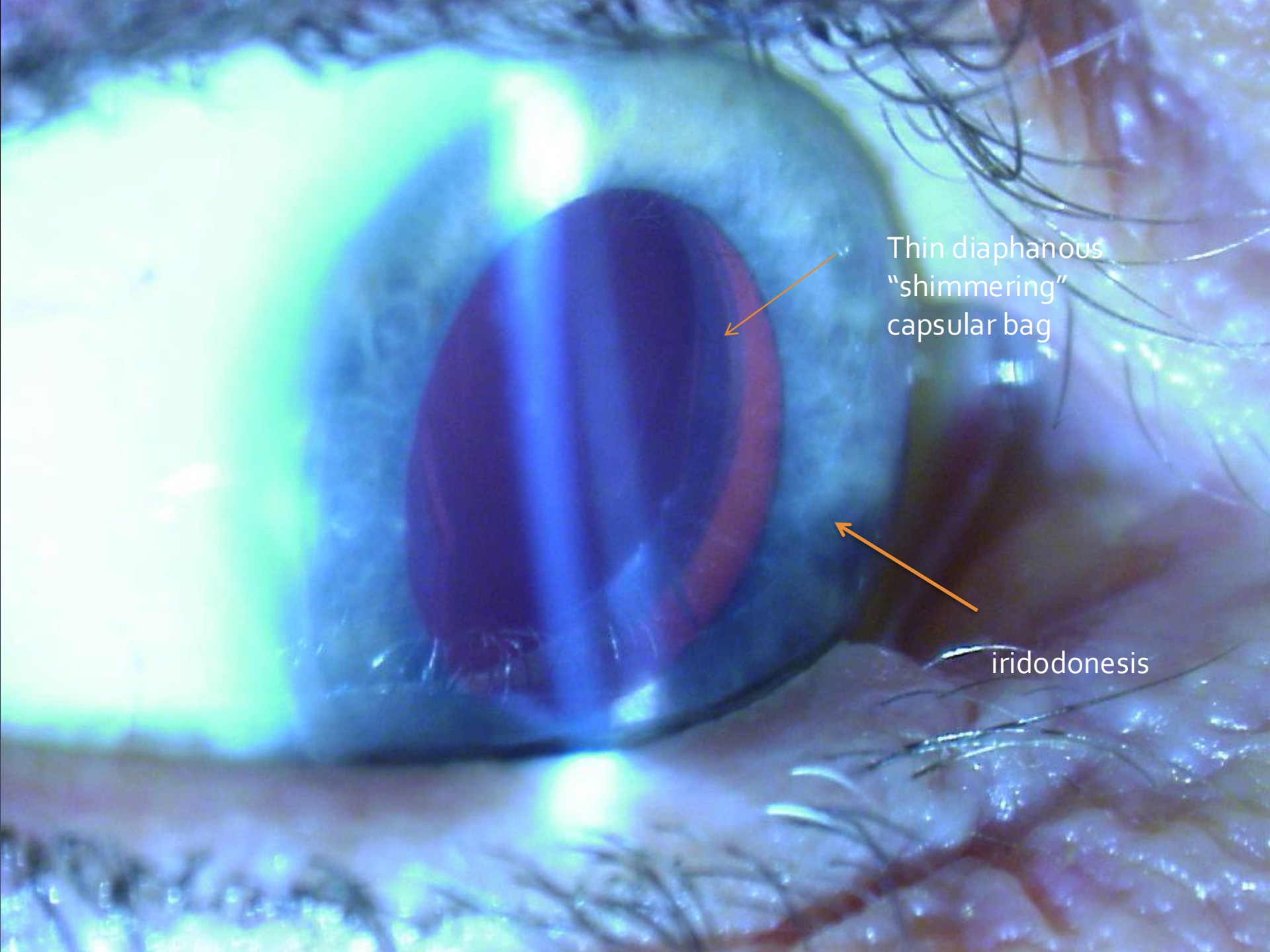
Acrysof lens in the capsular bag

Wakes up every morning with blurred
vision due to microhyphema (clears as day
goes on)

IOP=32 on cosopt







Thin diaphanous
"shimmering"
capsular bag

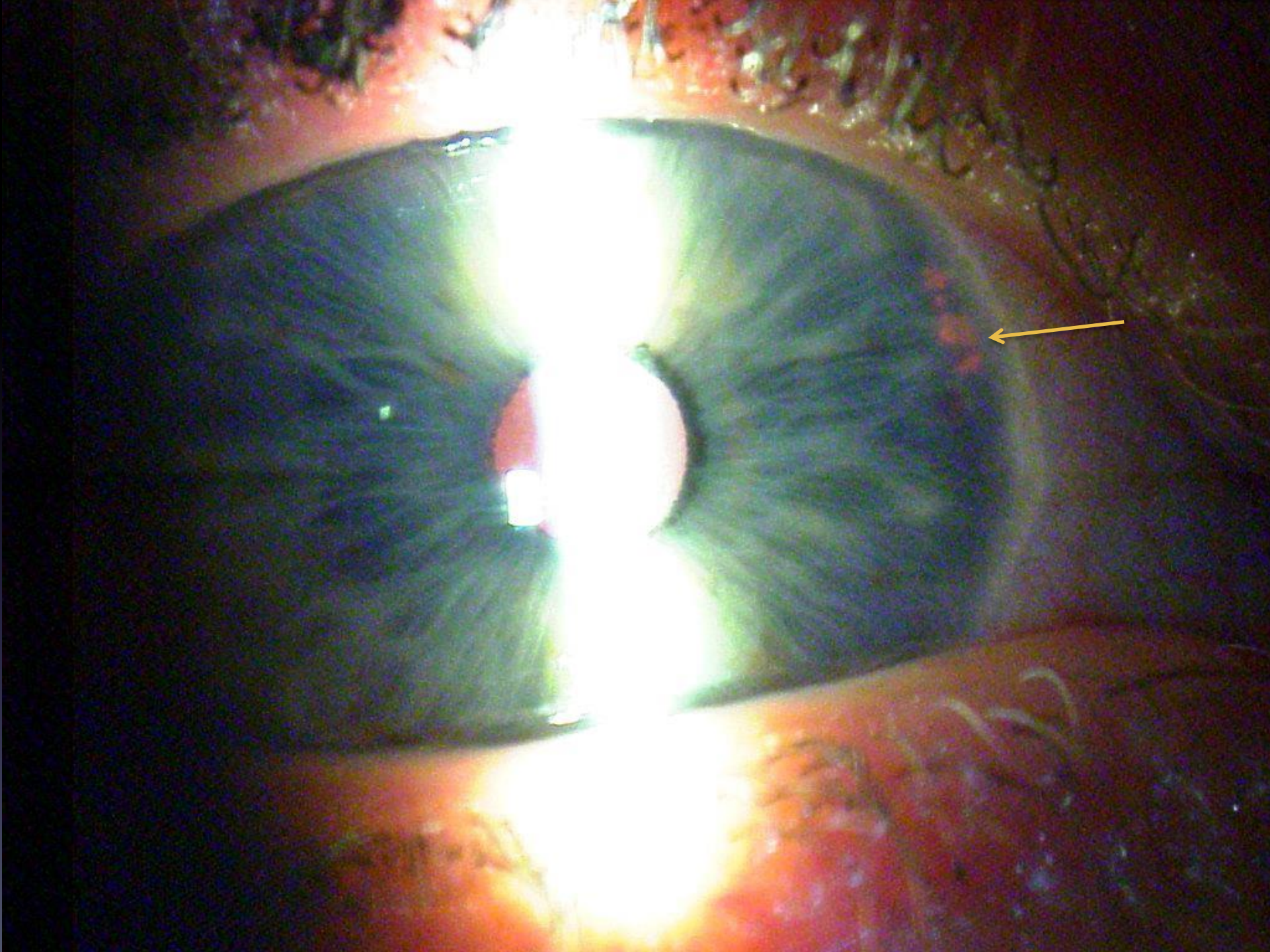
iridodonesis

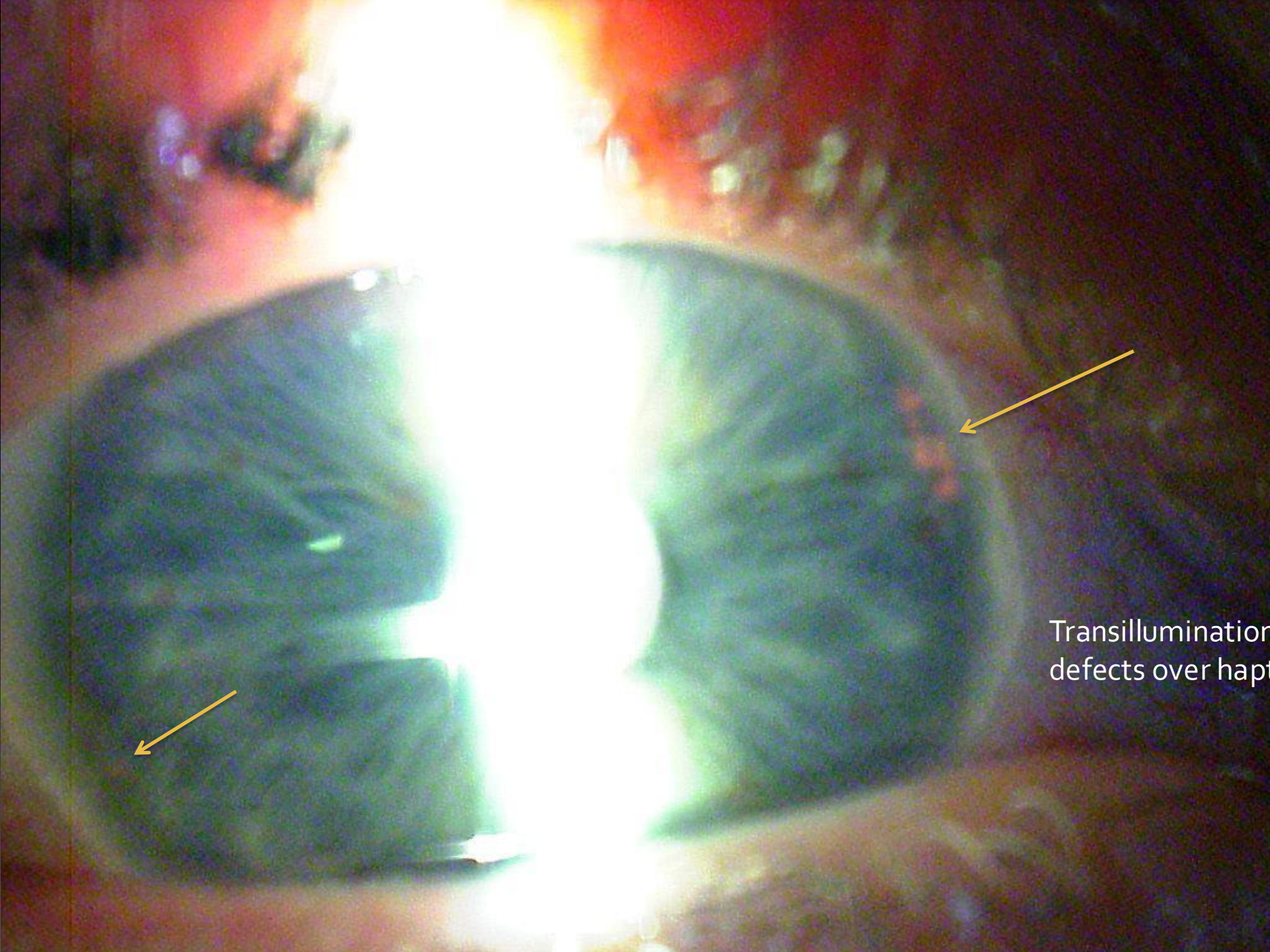




...the particular bag which is

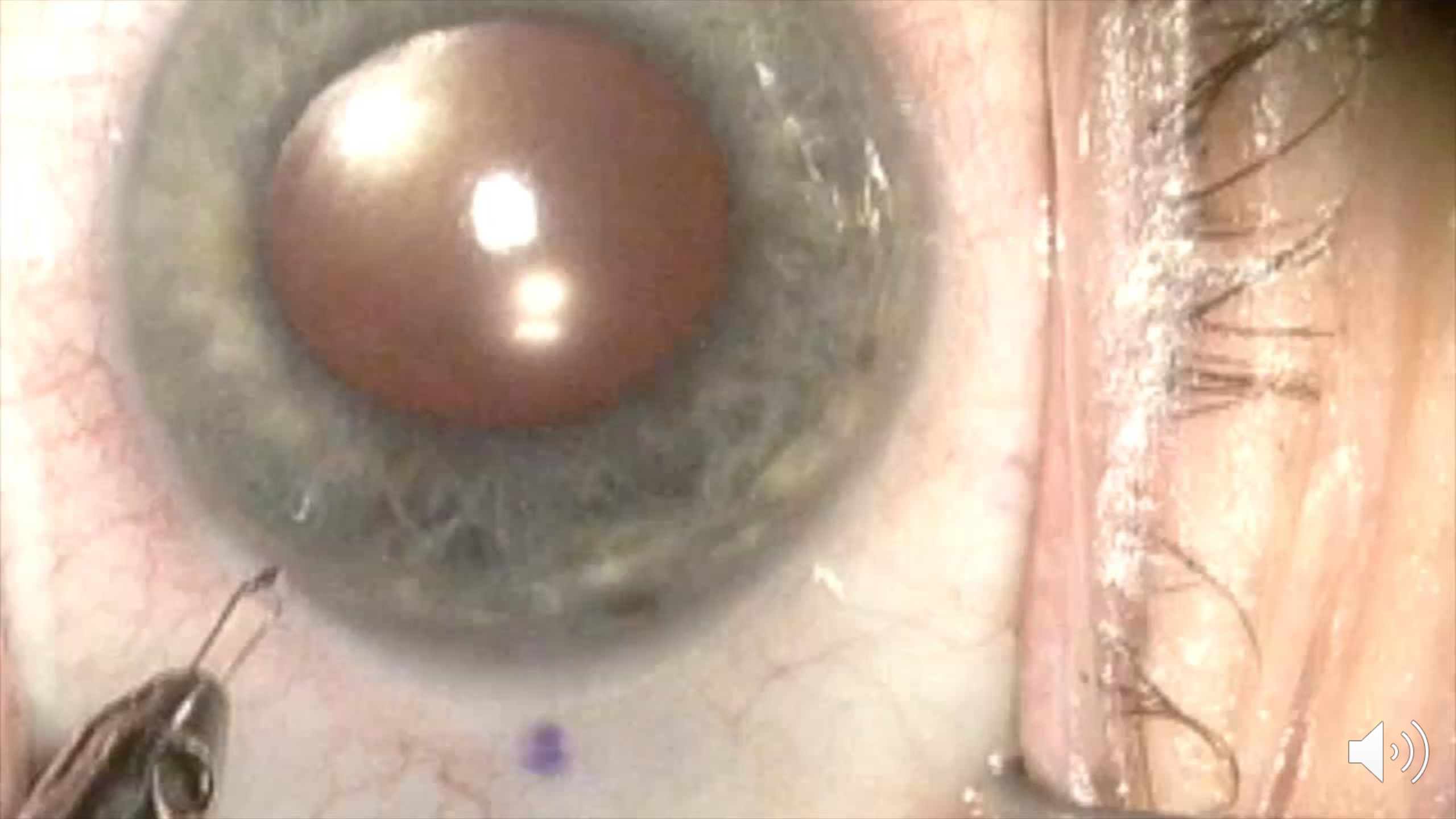




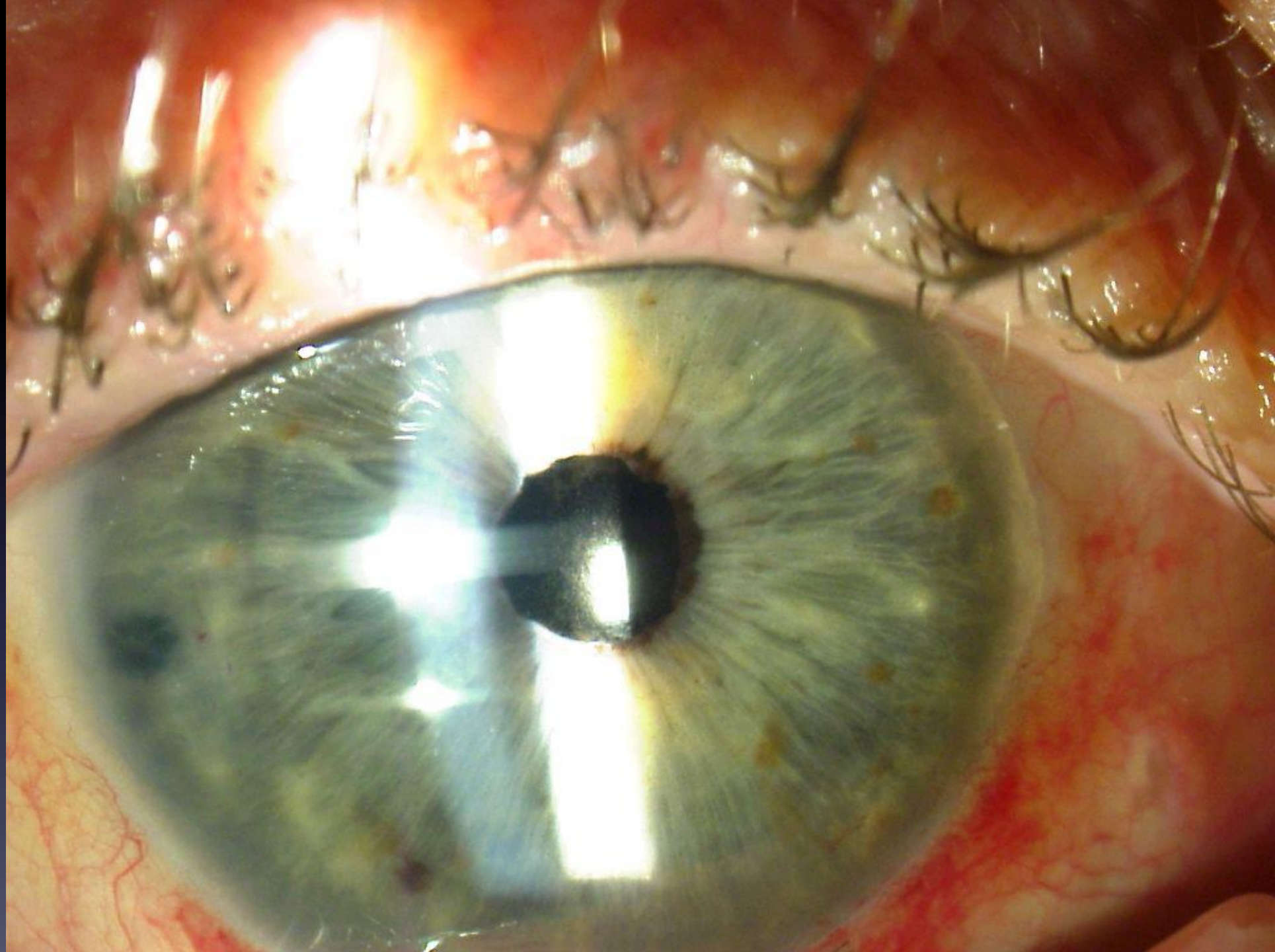


Transillumination
defects over haptics





Day 1
post op



Patient now 10 years out with
no further hyphema
incidents.

Off all glaucoma meds

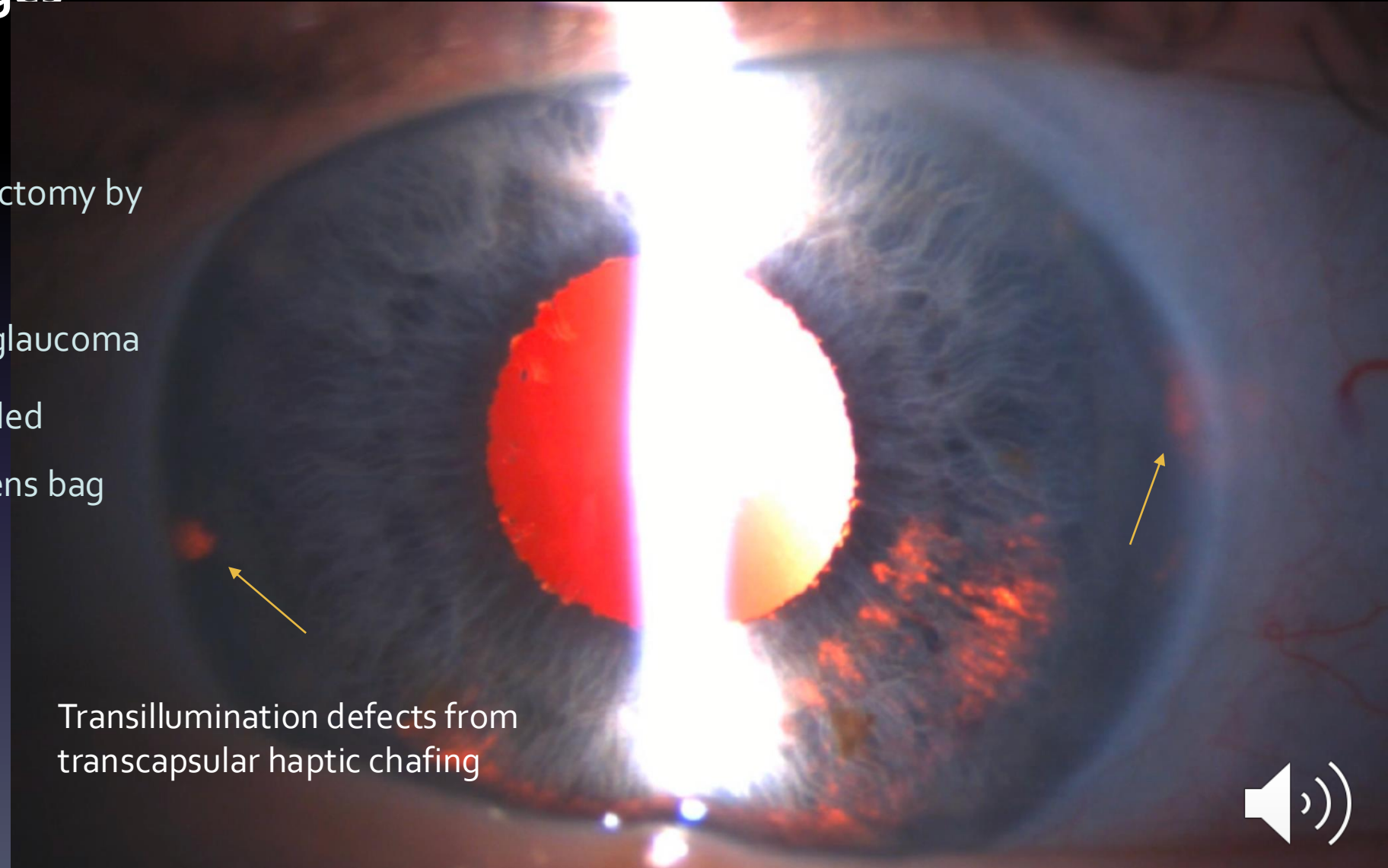


Physician with recurrent vitreous hemorrhages

Treated with pars plana vitrectomy by retina

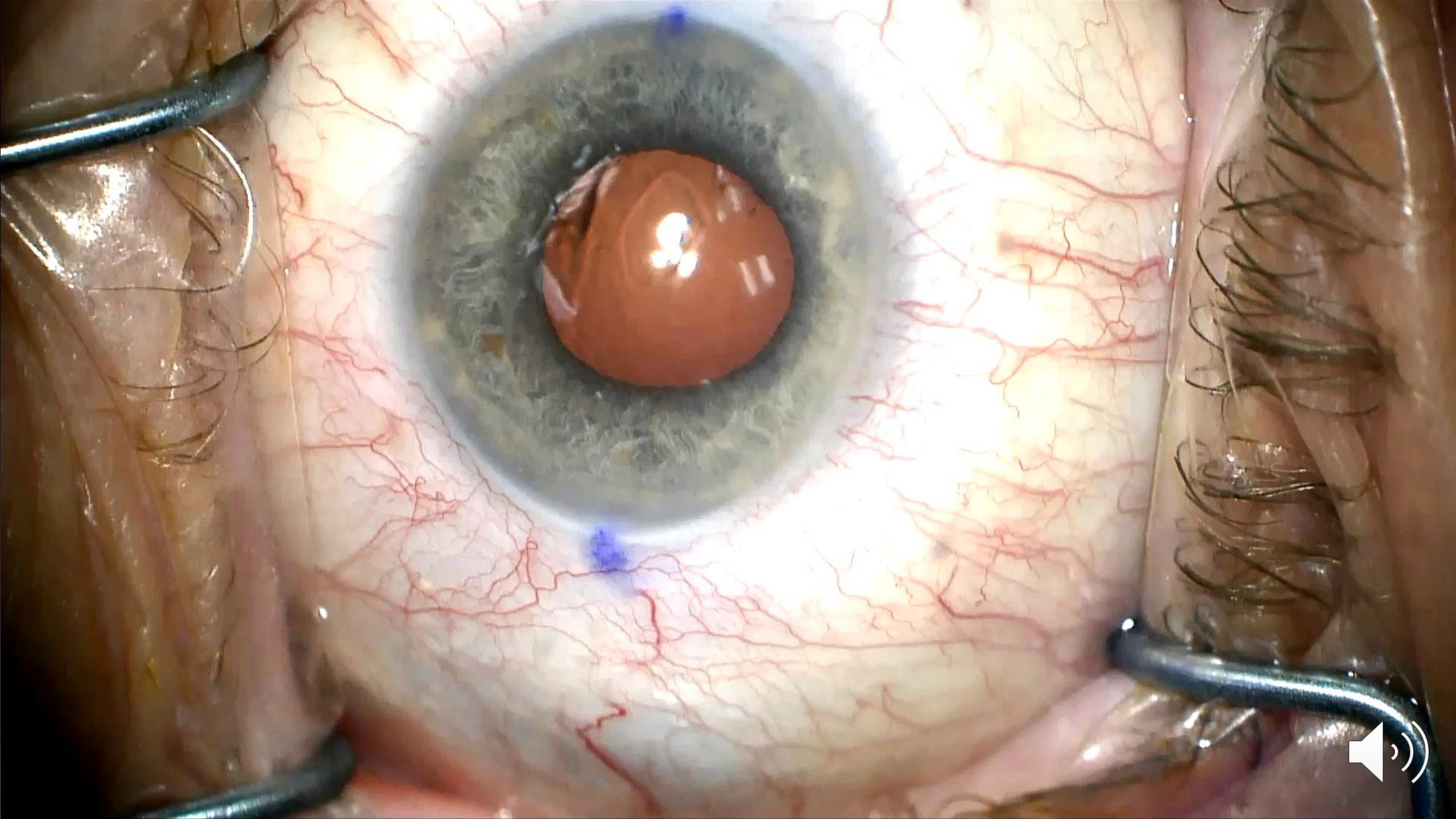
Still had recurrent bleeding/glaucoma

Referred to me after he "healed himself" by dislocating his lens bag complex onto the retina!



Transillumination defects from transcapsular haptic chafing







Zonular and capsular bag disorders: a hypothetical perspective based on recent pathophysiological insights

Erica Darian-Smith, MMed, Steven G. Safran, MD, Minas T. Coroneo, MD, MS

The purpose of this article was to look at the pathophysiology behind and devise a classification system for the causes of zonular apparatus–capsular bag (ZACB) insufficiency. Also discussed is dystrophic bag syndrome, including clinical cases and addressing where it lies on the ZACB spectrum. There has been interest in the emergence of in-the-bag intraocular lens (IOL) subluxation, the prevalence of which is increasing. There has also been a recent report of dead bag syndrome, which the authors believe is part of the same disease spectrum. The authors put these phenomena into perspective and provide a classification system based on the

possible causes of what they have termed ZACB insufficiency. The basic aspects of capsular bag–IOL ocular pathophysiology are summarized with a focus on functional aspects and the consequences for IOL fastening. Within this framework, dystrophic bag syndrome is a form of primary capsular ZACB insufficiency. The contribution of factors such as intraocular drugs may suggest a reconsideration of agents used and their mode of application.

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Dead bag

- There is a complex interaction between basement membrane (lens capsule) and lens epithelial cells where they sustain each other
- Dead bag LECs left behind “wither on the vine”....die off
- Capsular bag loses its integrity, zonules have nothing of substance to insert into, bag dislocates over time.
- Like soil that you plant seeds in but nothing grows, no trees to sustain it so it then erodes.



Does removing LEC's lead to “dead bags”?

- Removing LECs from anterior capsule does not remove equatorial LECs
- These proliferate and cause PCO...thus the rationale for sharp edged IOLs that sequester the posterior capsule and reduce PCO.
- Removing LEC's from anterior capsule has no effect on PCO rate (many studies)it just reduces anterior capsule contraction and phimosis
- In Dead bags the LEC's left behind “wither on the vine” and the bag loses its structural integrity.
- If you COULD remove ALL LECs it MIGHT lead to loss of capsule integrity over time .



What's a Zombie bag?

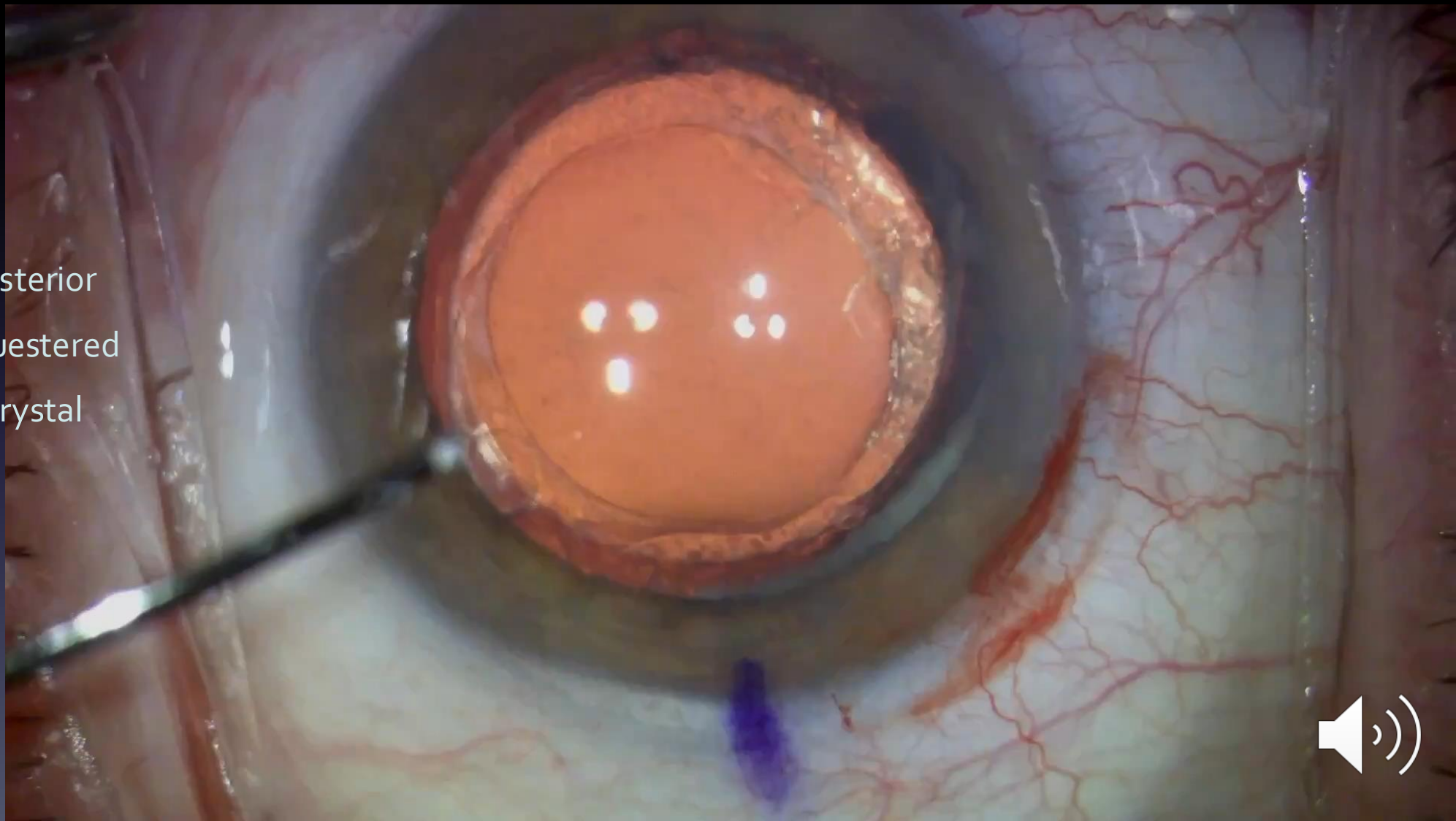
- Only partially dead.....bag still standing!
- Posterior capsule sequestered by sharp edged IOL is devoid of LECs and has lost functional integrity but anterior capsule and zonules intact
- Has variable capsular bag fibrosis and Soemmerring's ring material present

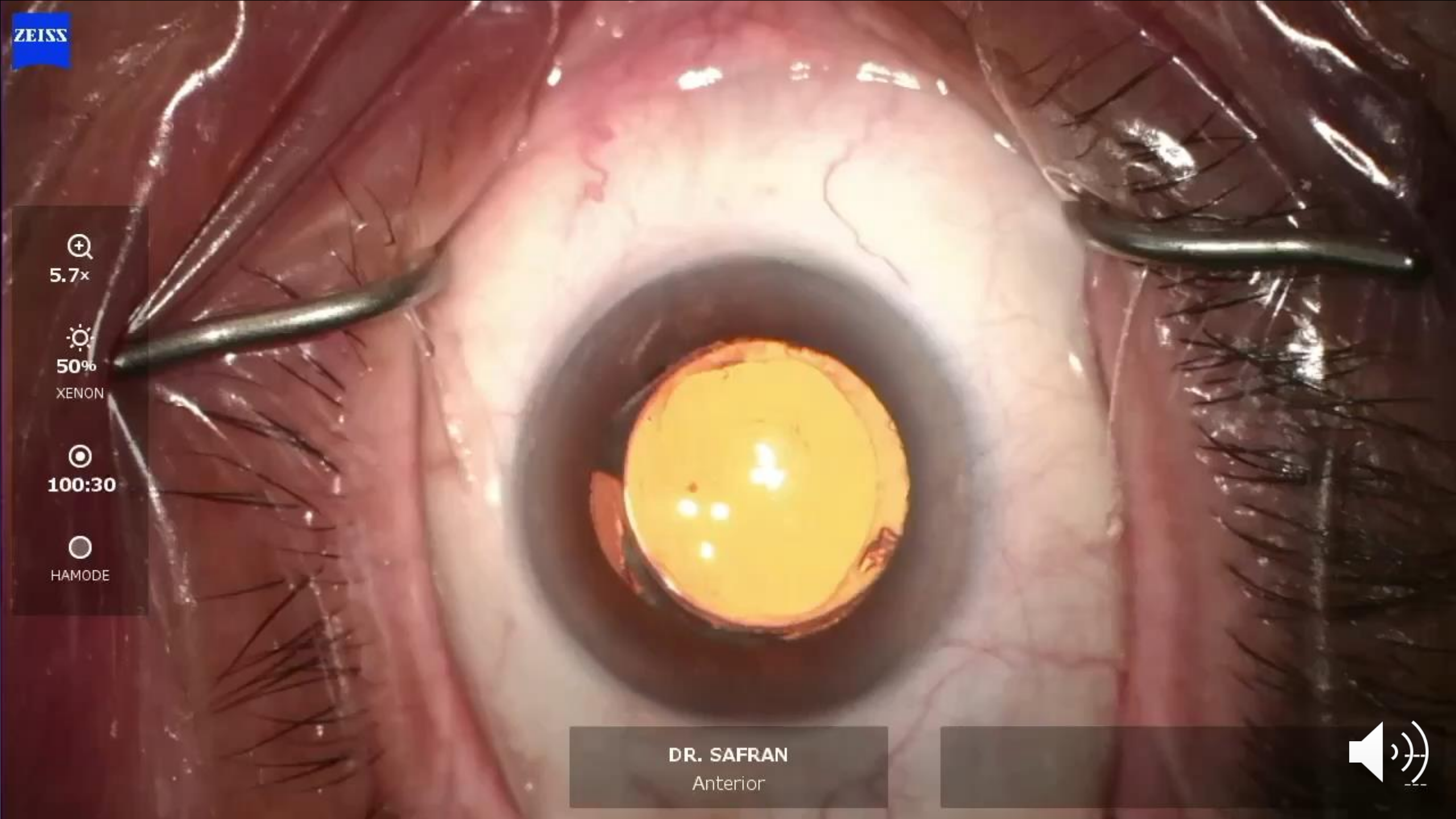


Even in presence of anterior capsule fibrosis and intact zonules.....

Posterior capsule can become “dead” and shred!

Most common when posterior capsule has been sequestered by IOL for years and is crystal clear





5.7x



50%

XENON



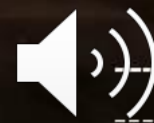
100:30



HAMODE

DR. SAFRAN

Anterior



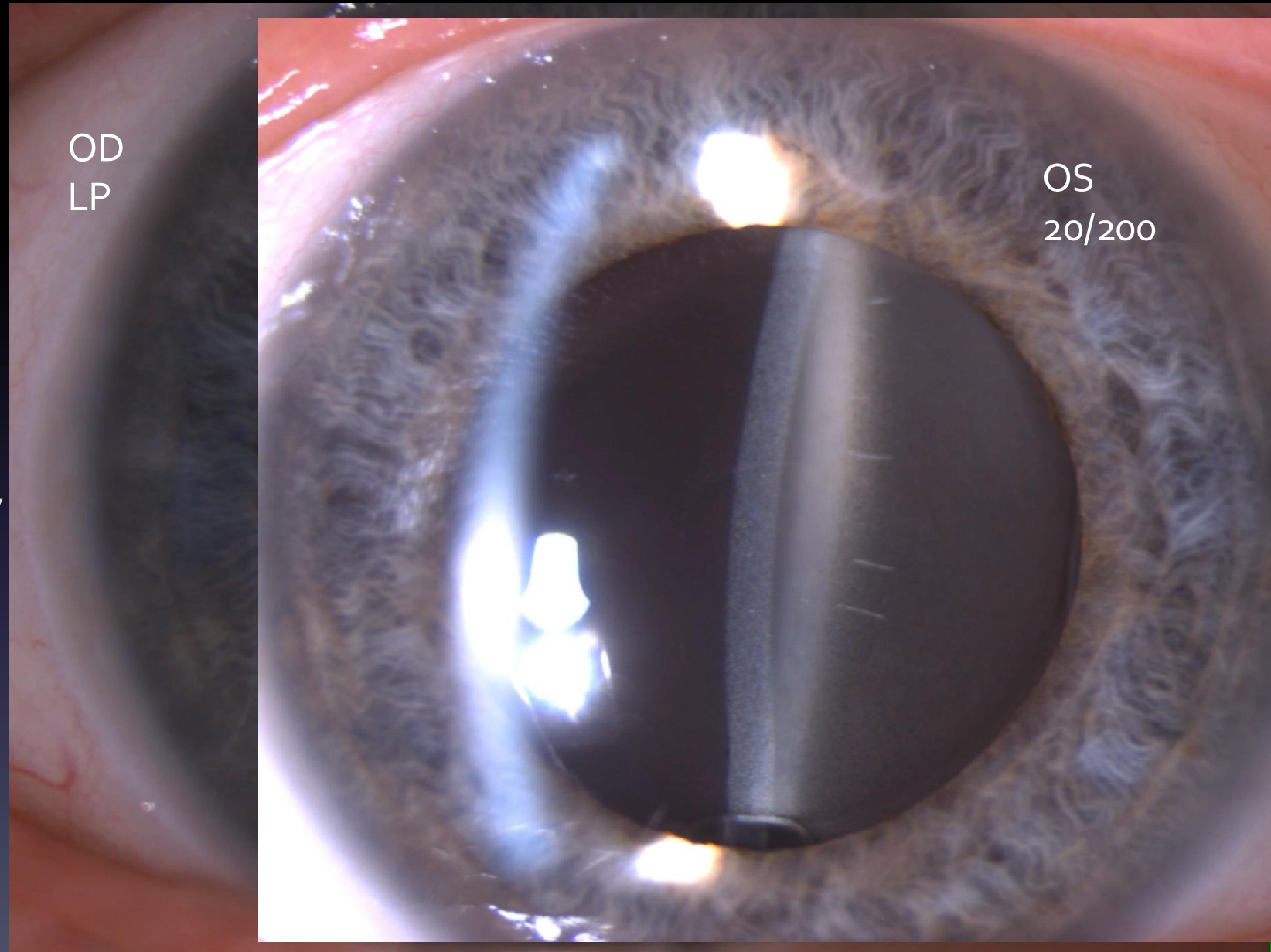
Patient referred from Australia:

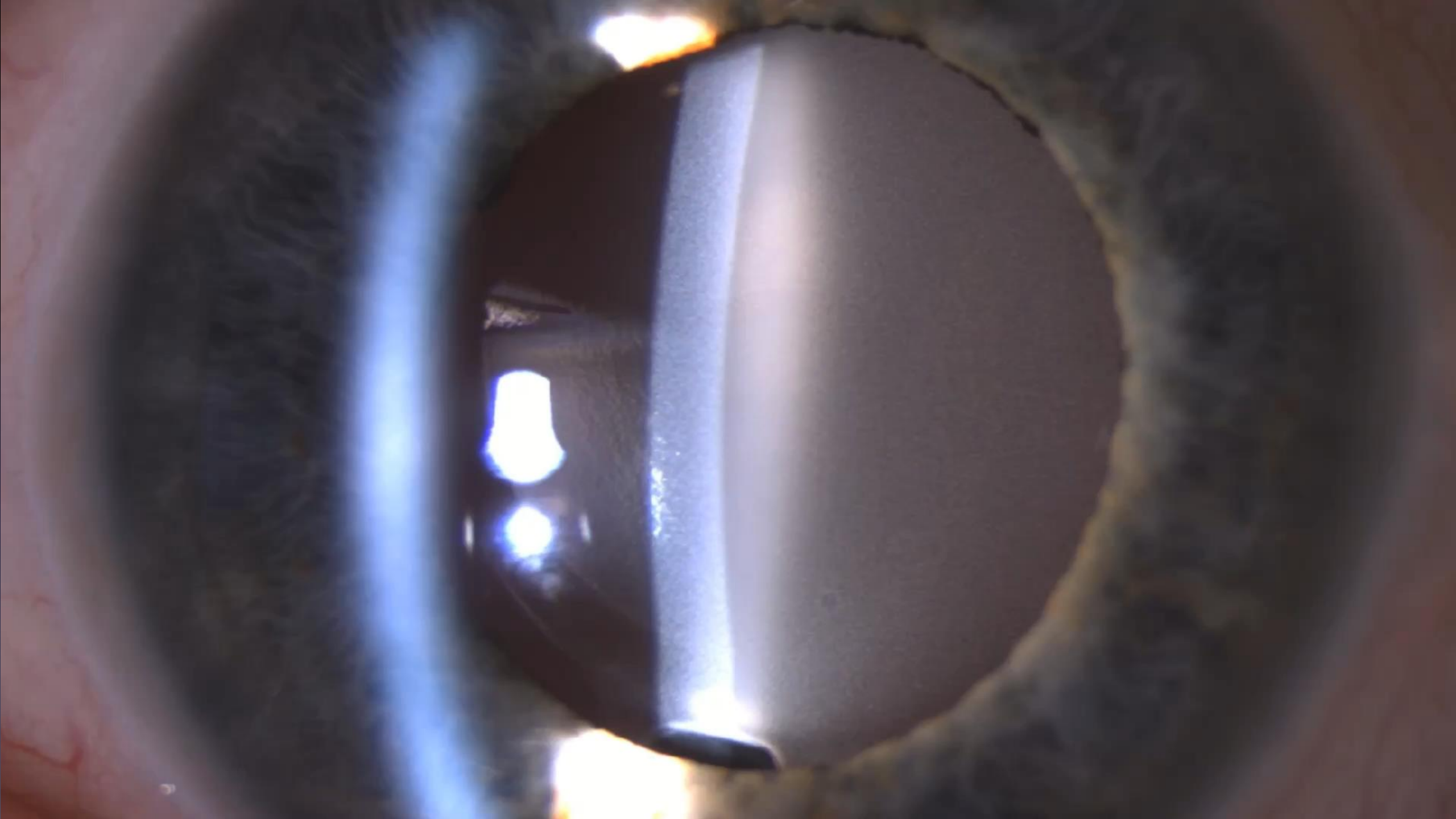
Calcified Occultis hydrophilic acrylic

LP vision in this eye

Her visit to see me was first delayed by the pandemic and then treatment for breast cancer

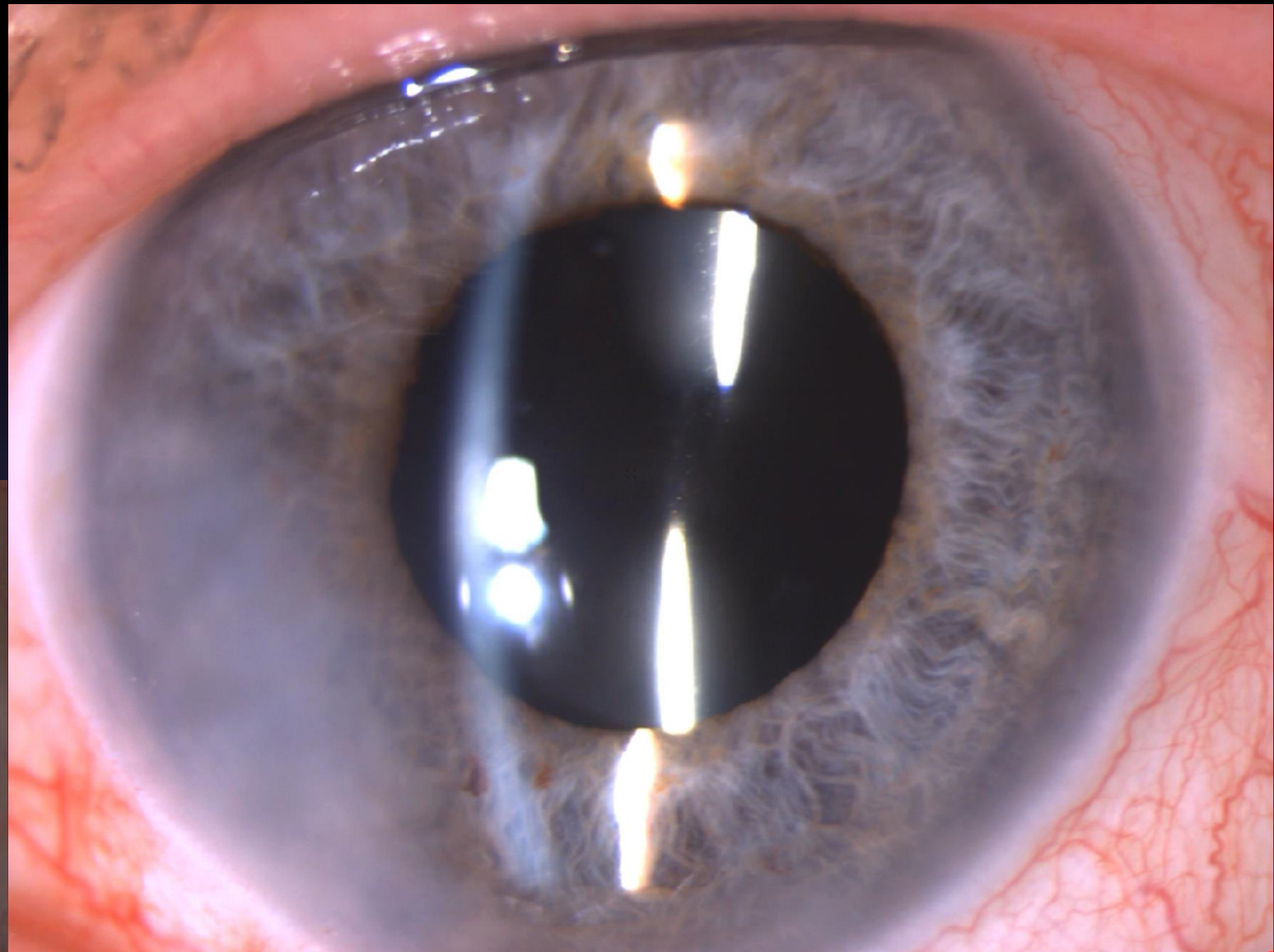
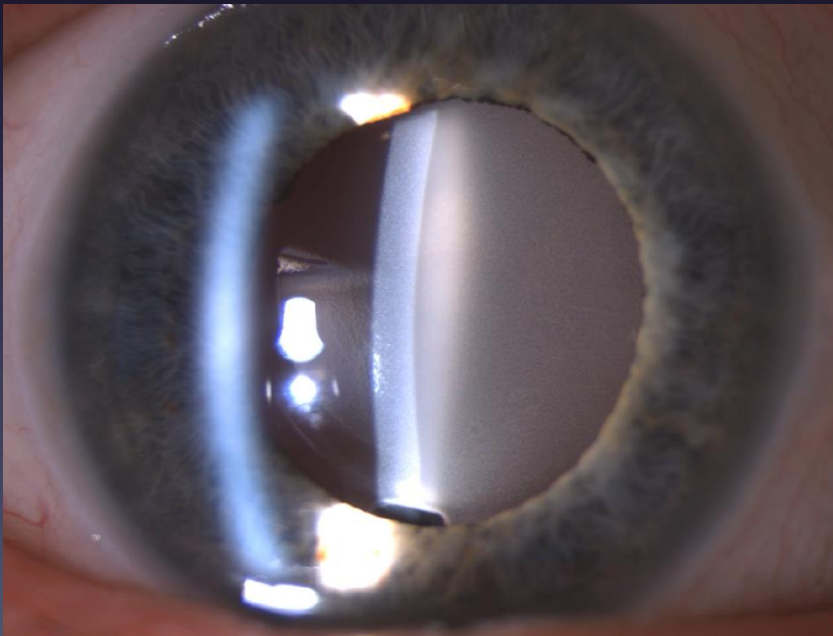
During that 3 year period this eye progressively got worse and the other eye's implant also calcified!





Day 1 post op

20/25 uncorrected



SPA acrylic haptics can also erode
through the posterior capsule...



And cause
UGH
Syndrome via
uveal
irritation!!

68 year old referred from Upstate NY

Cataract surgery with Restor OU done 13 years earlier

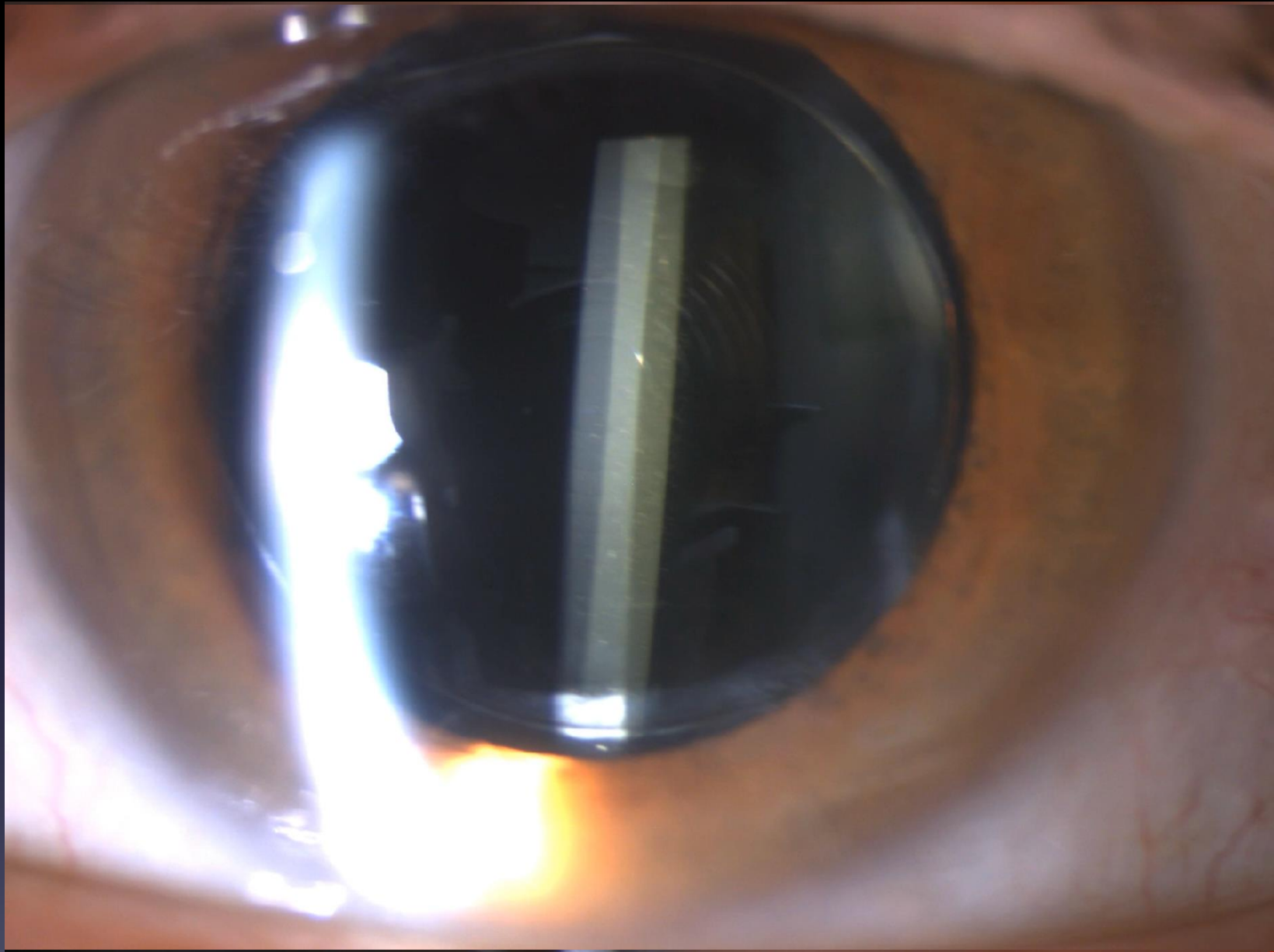
Repeated vitreous hemorrhages from UGH syndrome OD causing vision loss

S/P PPV for vit heme but recurred

Acrysof Restor IOL in capsular bag

Zero power Silicone Piggyback IOL placed in sulcus but bleeding recurs despite that every few months

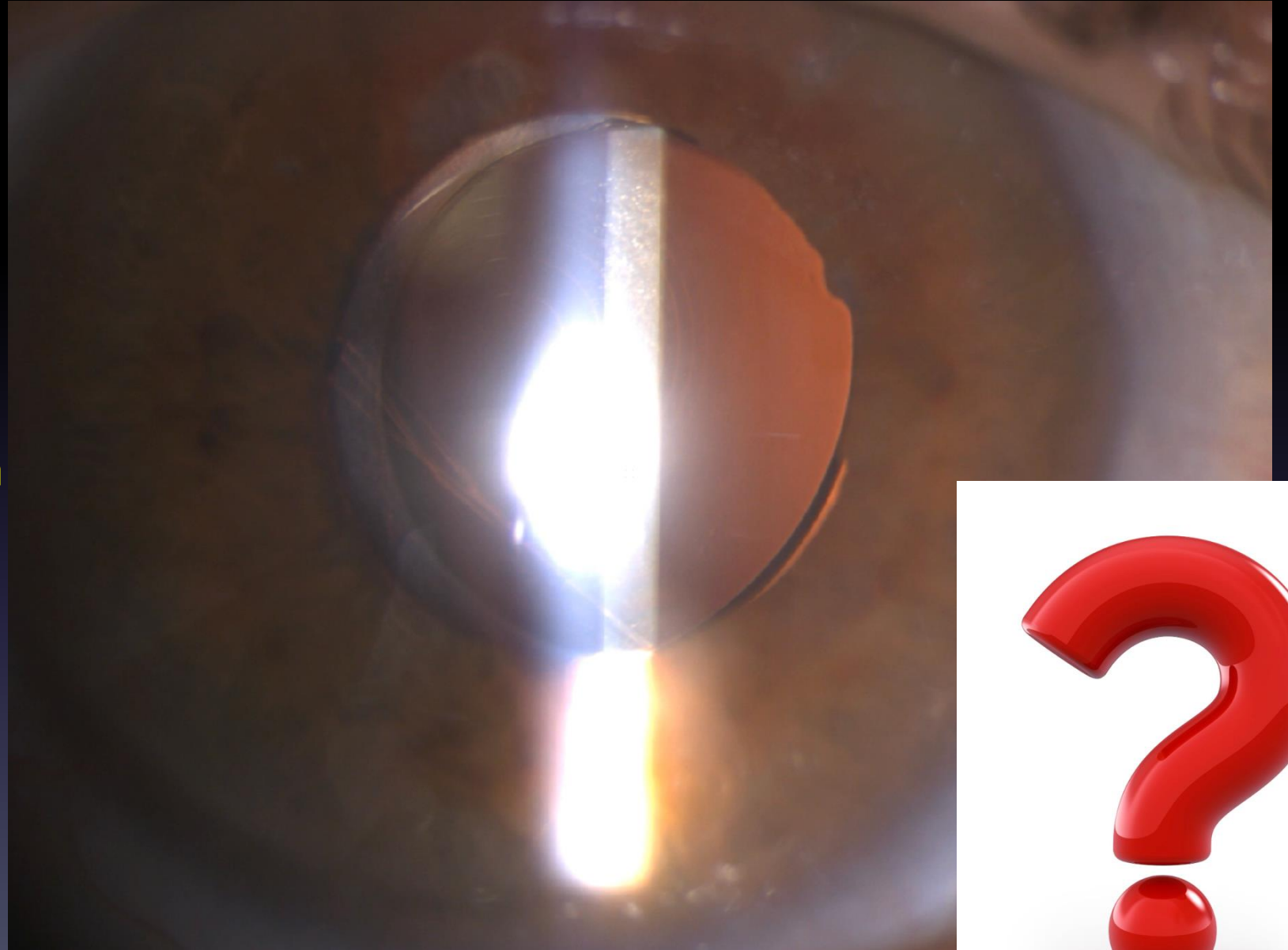
Other eye with no issues Restor in bag

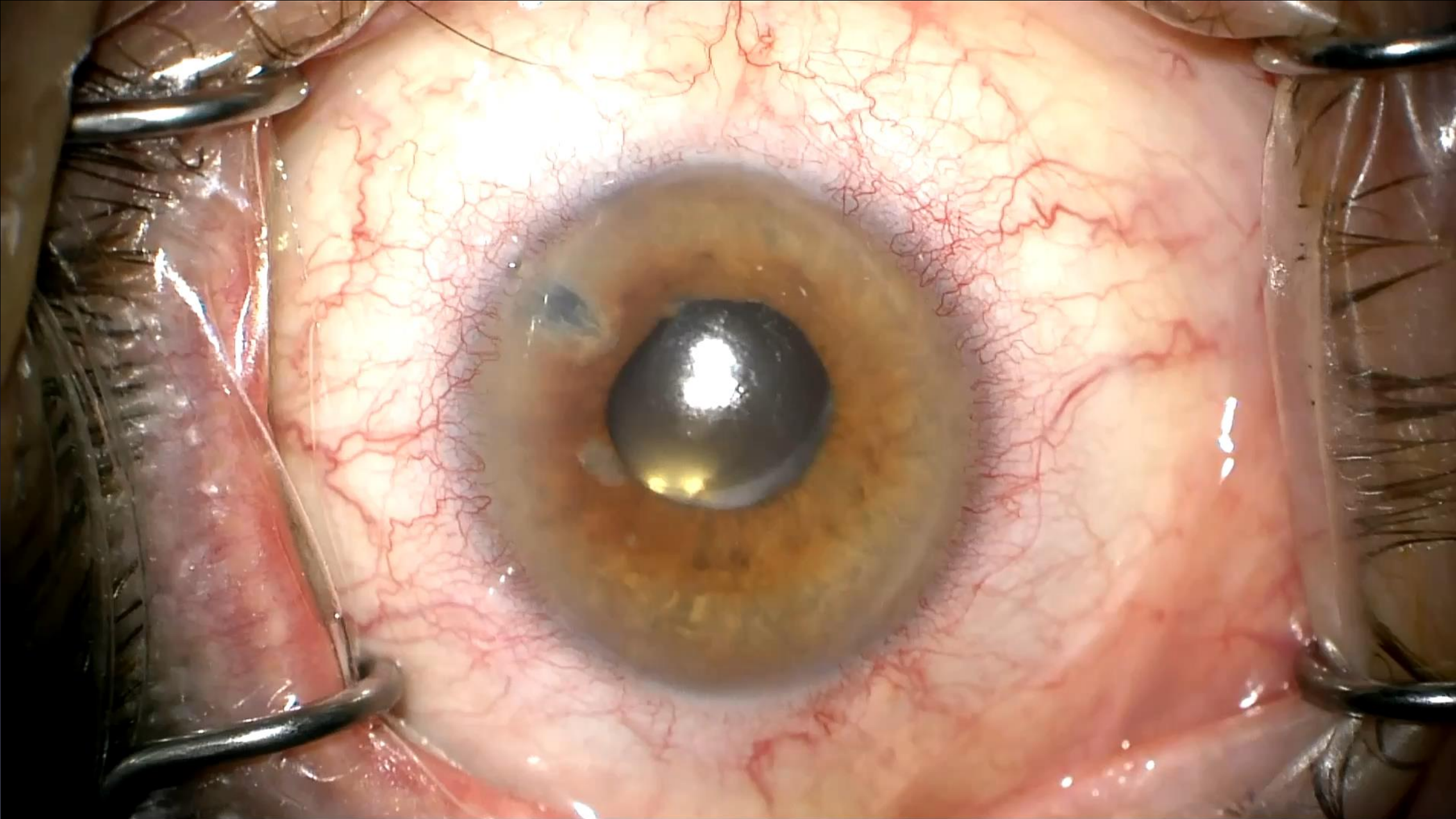


I decided to
watch him for a
few months....

But he returns with CF vision
and vitreous hemorrhage

"Something has to be
done!"





Day 1 post op

20/30 sc

IOL securely optic
captured and stable

Now over 2
year post op
with no
recurrence of
bleeding

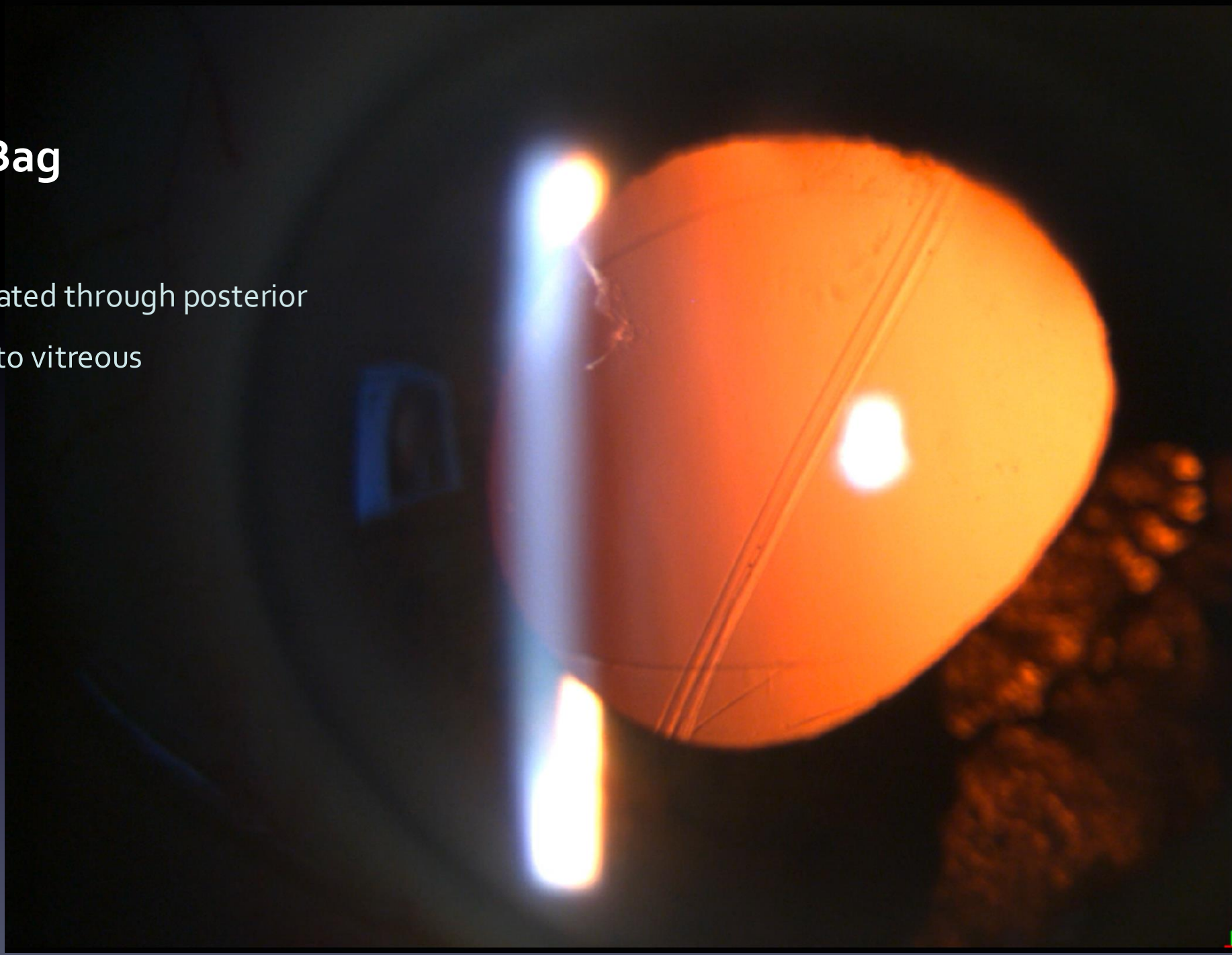


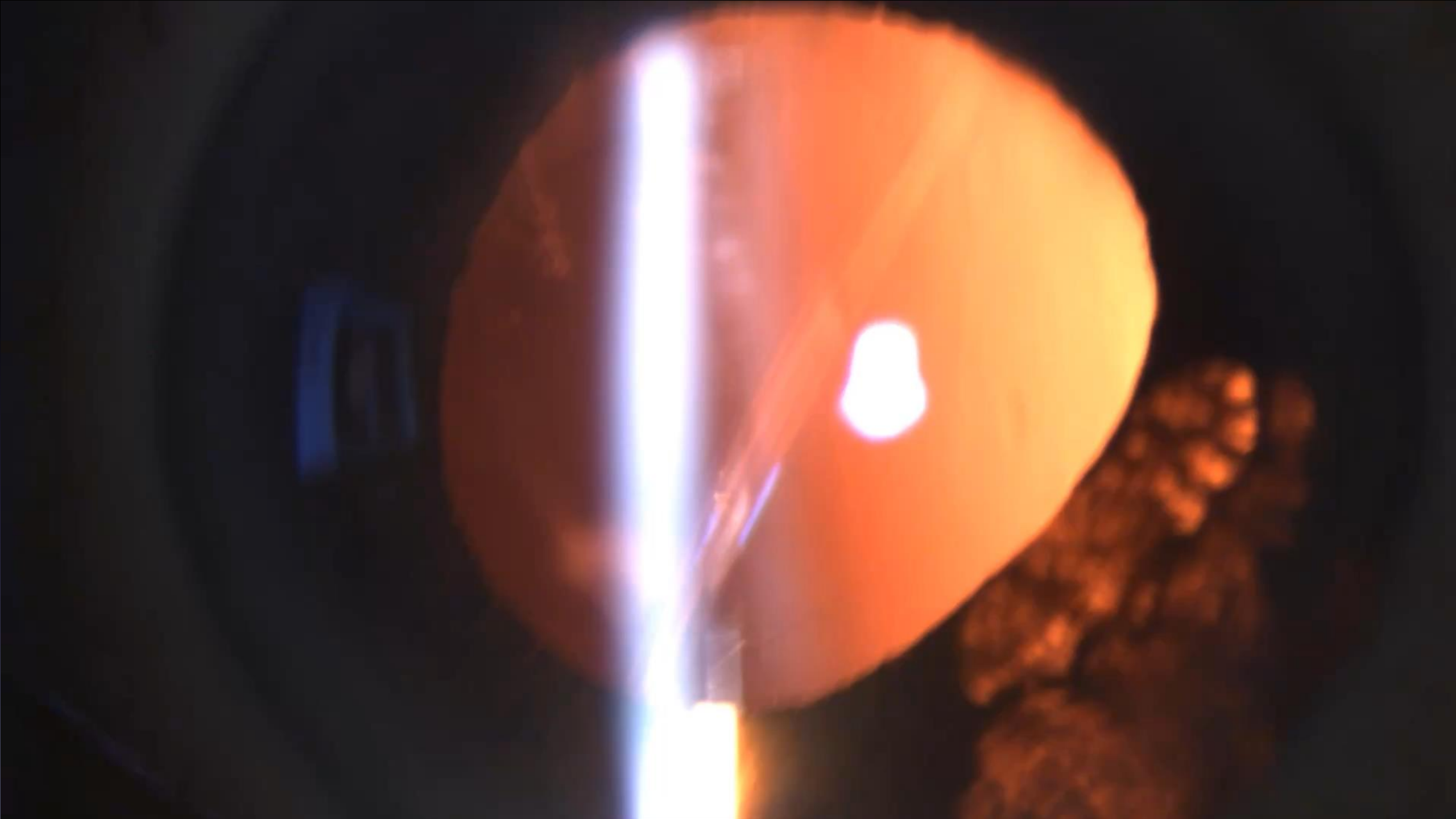
Haptics can erode through
the “dead” posterior capsule

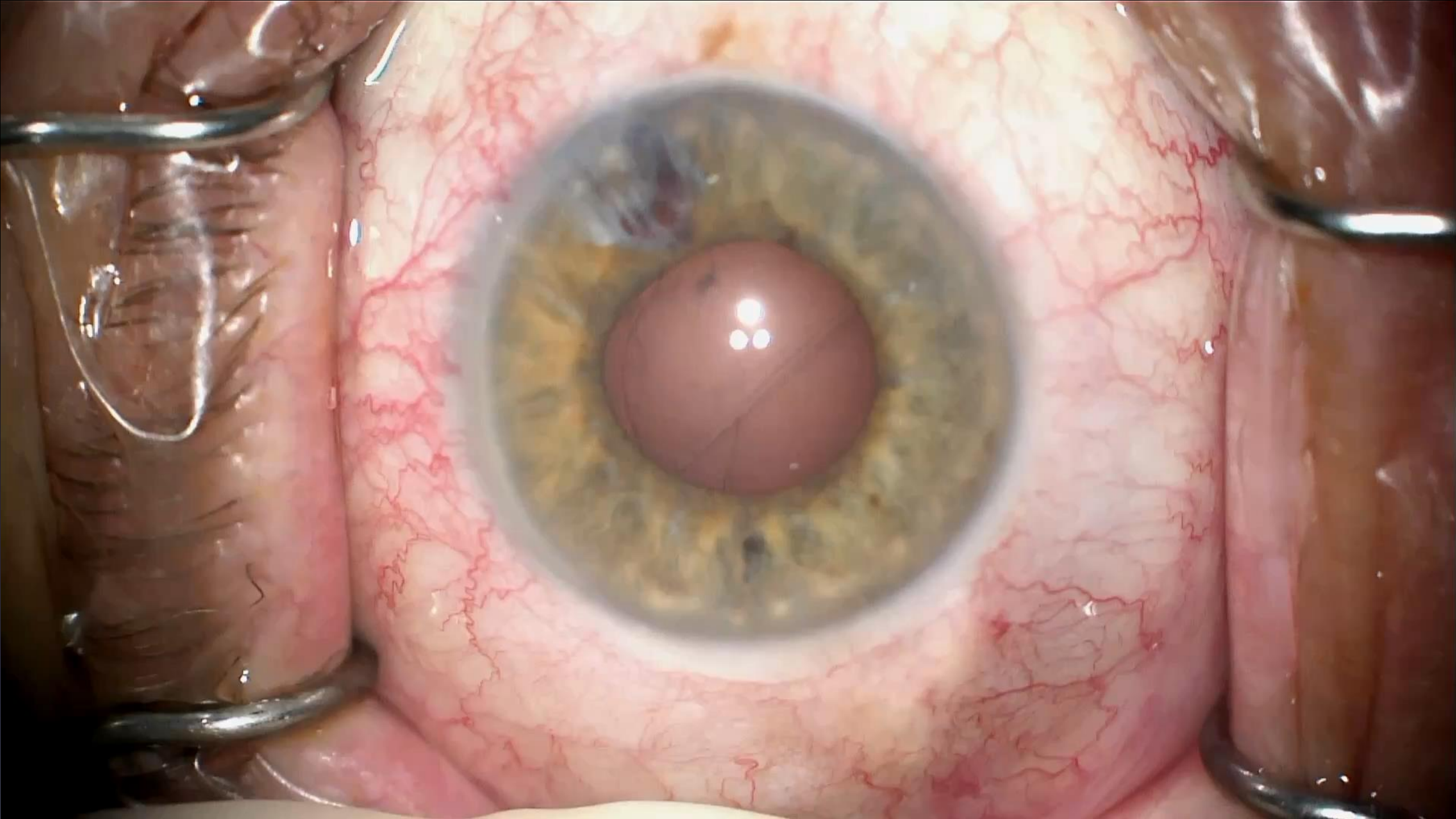
And IOL can dislocate into vitreous!

Dead Bag

IOL dislocated through posterior capsule into vitreous







For all scleral fixated IOLs
please make at least 1 P.I.

To prevent reverse pupillary block!

Reverse Pupillary Block can occur in vitrectomized eyes with sulcus IOLs

This can cause

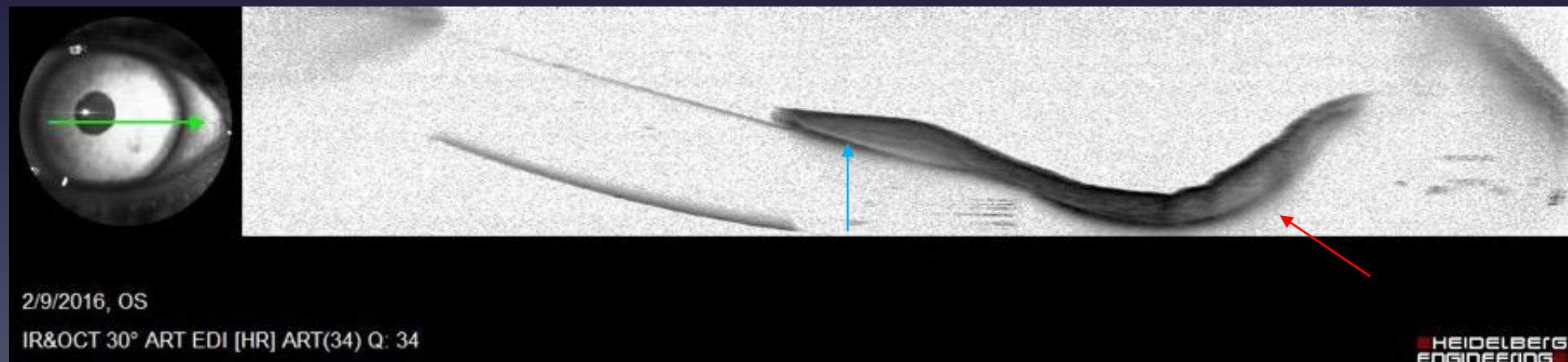
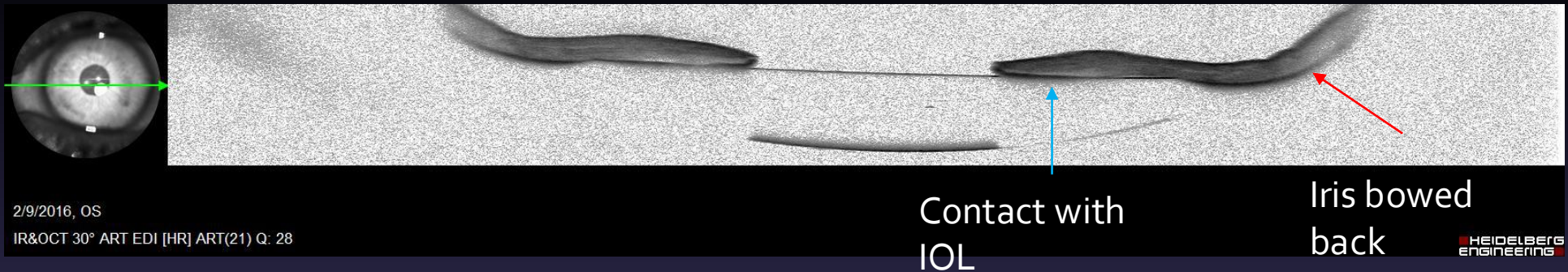


UGH!!

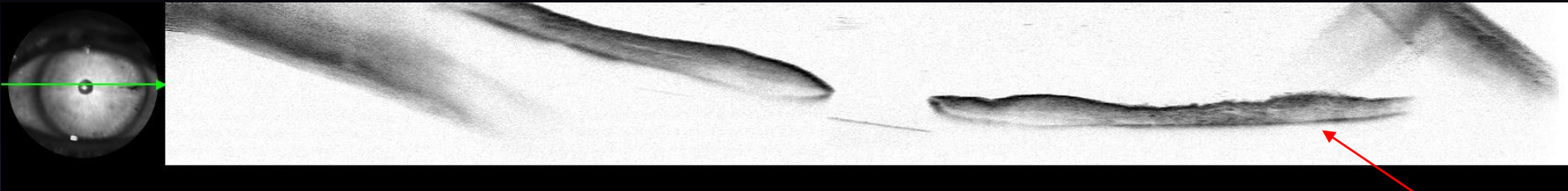
- One way ball valve effect of iris in contact with IOL
- Can get dramatic posterior iris bowing against IOL leading to hyphema
- Can cause recurrent optic capture by iris
- Usually resolves immediately with Laser iridotomy



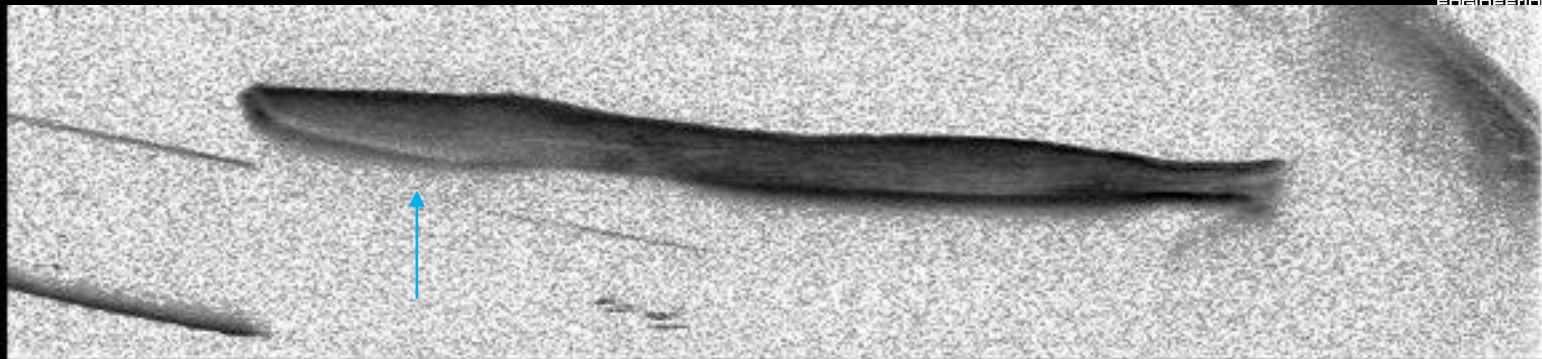
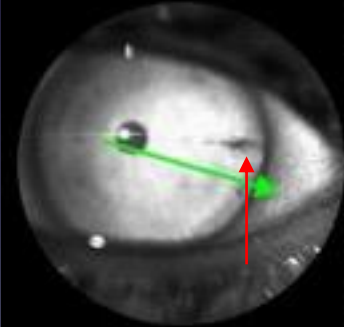
RPB with pigment dispersion glaucoma: 3 piece acrylic in sulcus



Same eye immediately after P.I.



2/9/2016, OS
IR&OCT 30° ART [HR] ART(17) Q: 31



2/9/2016, OS
IR&OCT 30° ART EDI [HR] ART(14) Q: 23

Gap between iris
and IOL

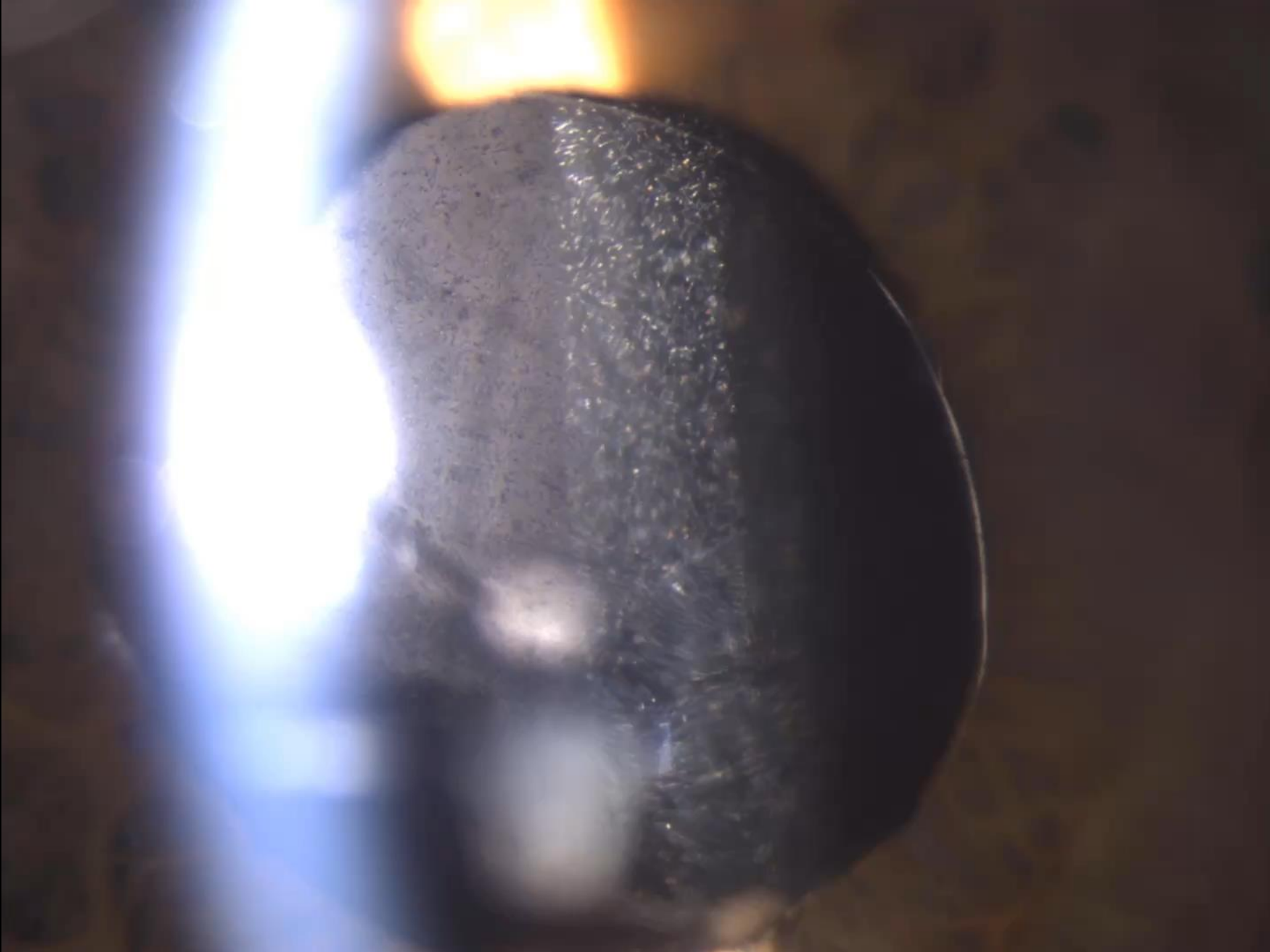
Mechanism of RPB?

- When you create laser P.I. opening for RPB see OPPOSITE of what you see with pupillary block.....instead of gush of fluid INTO AC you the pigment/fluid sucked out of the AC !
- Indication IOP is higher in anterior chamber than posterior chamber/ vitreous cavity: A compartment syndrome
- Iris stretch and chafing =UGH syndrome with blood/pigment blocking TM and elevated IOP
- Vicious cycle relieved with either optic capture of IOL by iris or P.I.

How can IOP be higher in Anterior chamber than posterior chamber?







Thank You!

