

18th International Conference of the
Research Institute of Ophthalmology

RIO 2026

Posterior Capsule Rupture Management - From Panic to Protocol



NETOROSATELLI





06:01:19

PCR!!! 🤯Vacuum
0
mmHg
0 650**STOP.** Stabilize the anterior chamber!

- 1 - Don't take the probe out yet
- 2 - Reflux and release aspirate vitreous; stop irrigation
- 3 - Fill the AC with OVD
- 4 - Withdraw the probe
- 5 - Assess the tear's extension and boundaries

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NOENTITY





Immediate Response



Stay Calm and Assess the Situation

- **Stop** immediately!
- Remain composed to ensure clear decision-making
- Determine the size and location of the rupture



Stop Phacoemulsification

- Cease phacoemulsification immediately to prevent further damage to the capsule and vitreous prolapse
- Reflux if there is aspirated vitreous



Stabilize the Anterior Chamber

- Inject viscoelastic into the anterior chamber to maintain intraocular pressure and prevent collapse
- **Only then withdraw the probe**



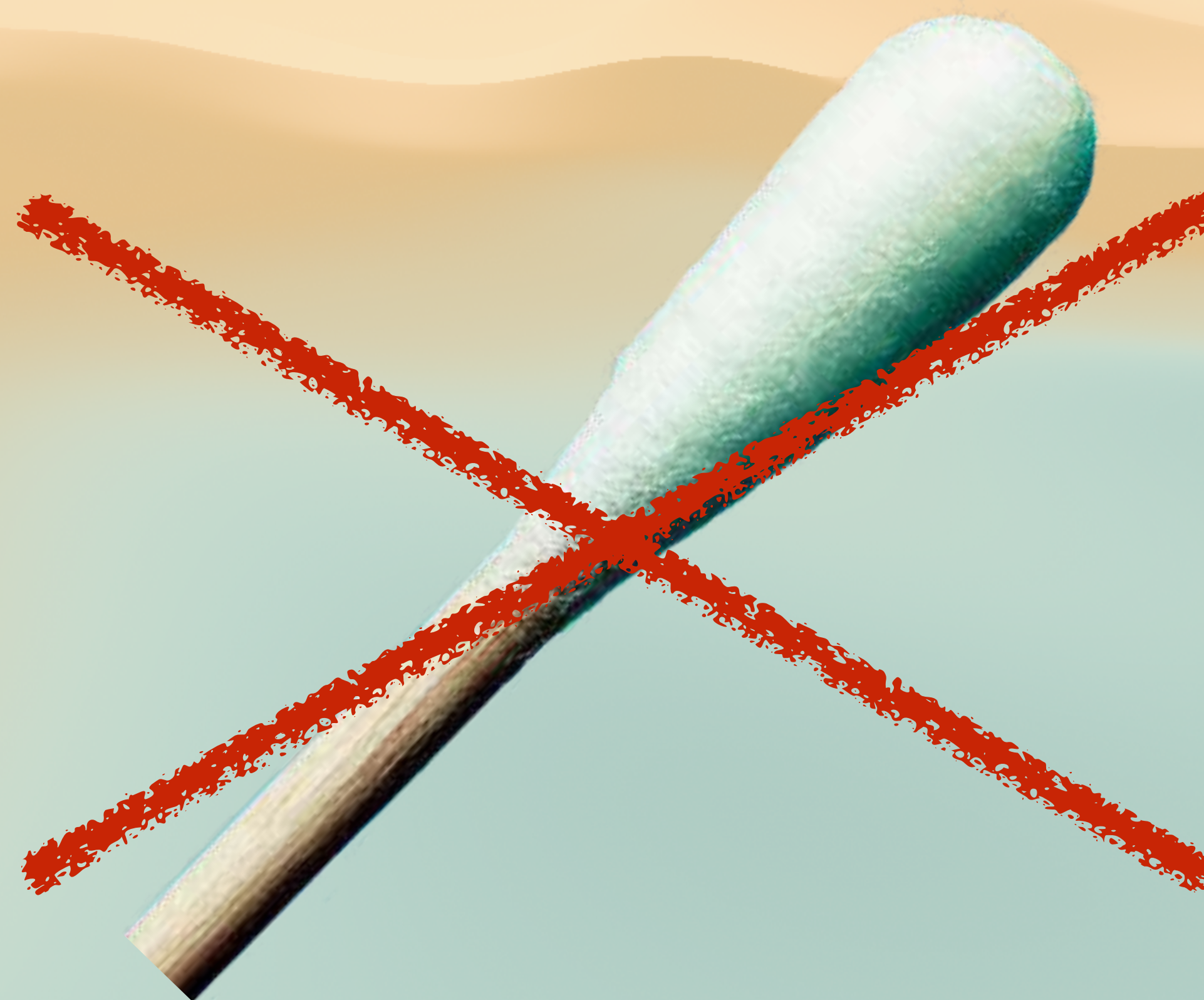
Vitreous Management

- Perform anterior vitrectomy if there is any vitreous prolapse in the anterior chamber
- Pars plana anterior vitrectomy
- Use triamcinolone acetonide to stain the vitreous and identify vitreous strands that need removal
- Use the peaked pupil as a clue to vitreous strands



Vitreous Management

NO!!!





Lens Fragments Management



Remove Remaining Cortex

- Use bimanual I/A carefully to remove remaining cortex without further disturbing the posterior capsule



Convert to a Different Technique if Needed

- Consider converting to manual extraction or extracapsular cataract extraction (ECCE) if phacoemulsification is not feasible
- MSICS is the better way



IOL Implantation and Placement



Determine IOL Placement

- Capsular support **present**: sulcus-placed IOL or optic capture technique can be considered
- Capsular support **absent**: consider possible IOL fixation techniques that are adequate to the present situation
- Avoid placing an IOL in the capsular bag if it's compromised!
- Consider leaving the eye aphakic!



Postoperative Care



Close Monitoring

- Carefully monitor the patient postoperatively for signs of increased intraocular pressure, inflammation, or retinal detachment.
- Schedule follow-up visits to assess the IOL's stability and position and ensure there are no complications, such as cystoid macular edema.



Address Any Complications Promptly

- Manage any secondary complications, such as retinal tears or detachments, promptly in collaboration with a vitreoretinal surgeon if necessary.

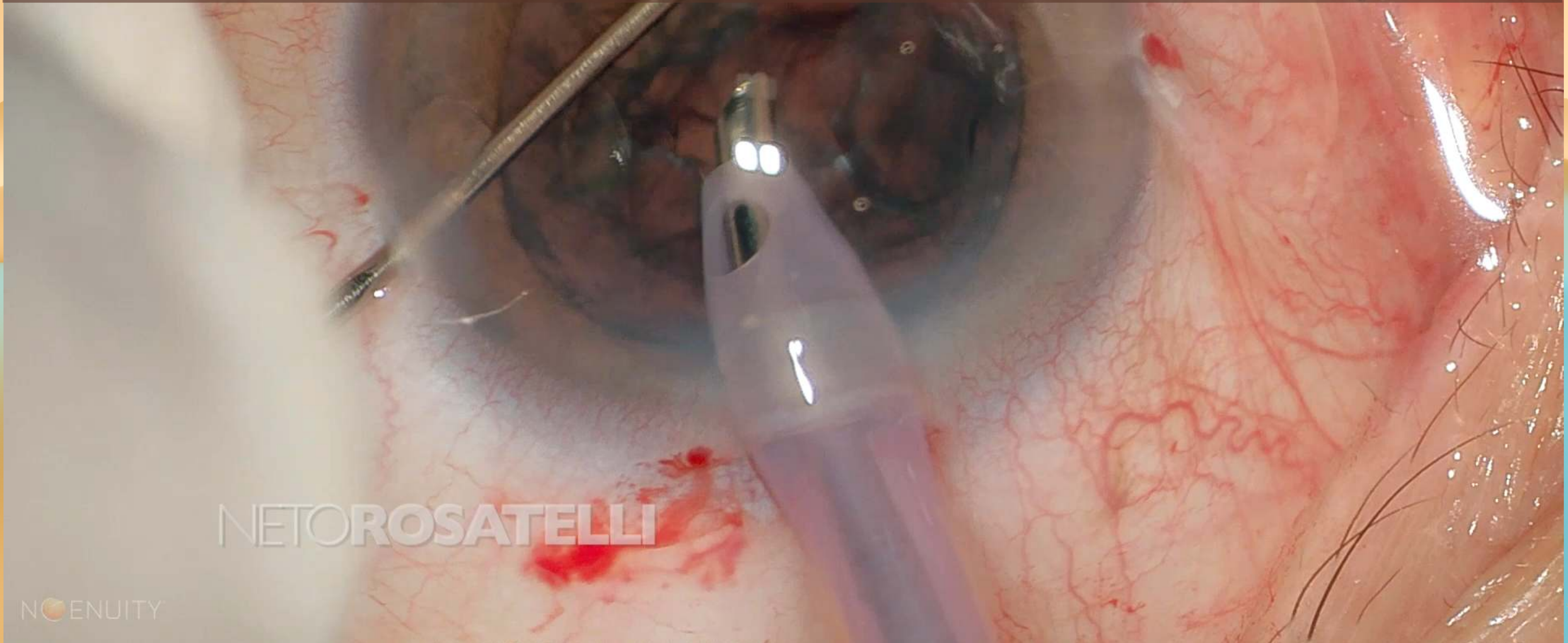


Little-Discussed Management Techniques for Posterior Capsule Rupture

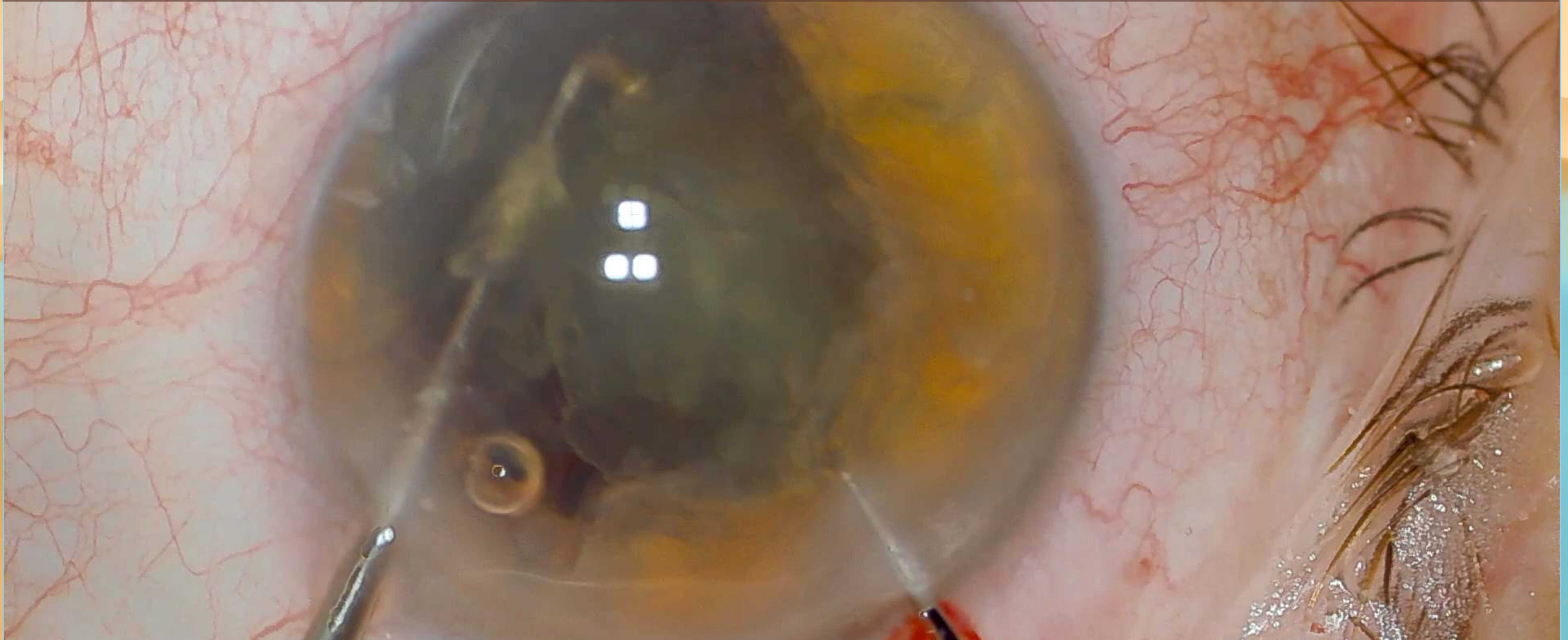


16:44

PCR to Posterior Capsulorhexis Conversion



Anterior Chamber Nucleus Chopping With The Jacobovitz Chopper





47:23

Dry Cortex Aspiration Under OVD

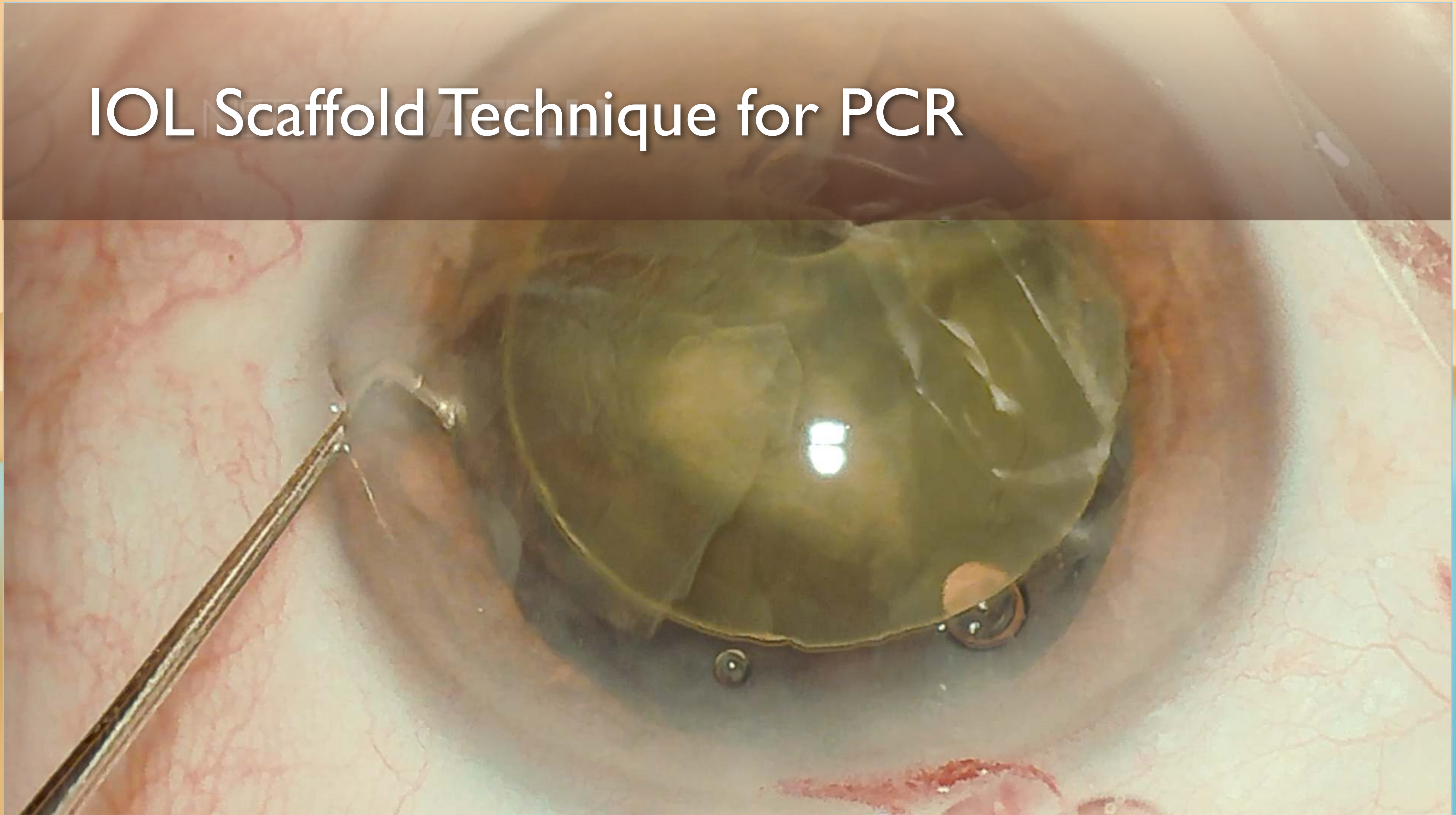
Vacuum
284
mmHg
0 650

Irrigation
110
cmH₂O

NOENUITY.



IOI Scaffold Technique for PCR





05:11:19

NETOROSATELLI

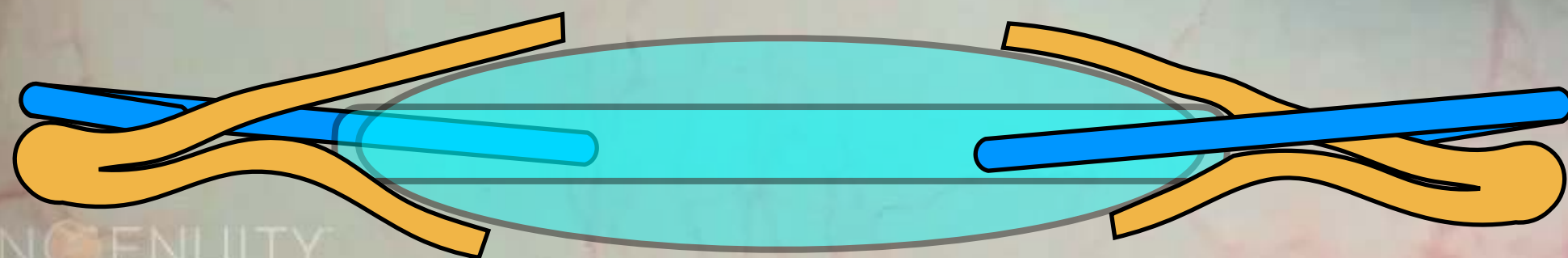
IOL Rhexis Optic Capture

Vacuum

0

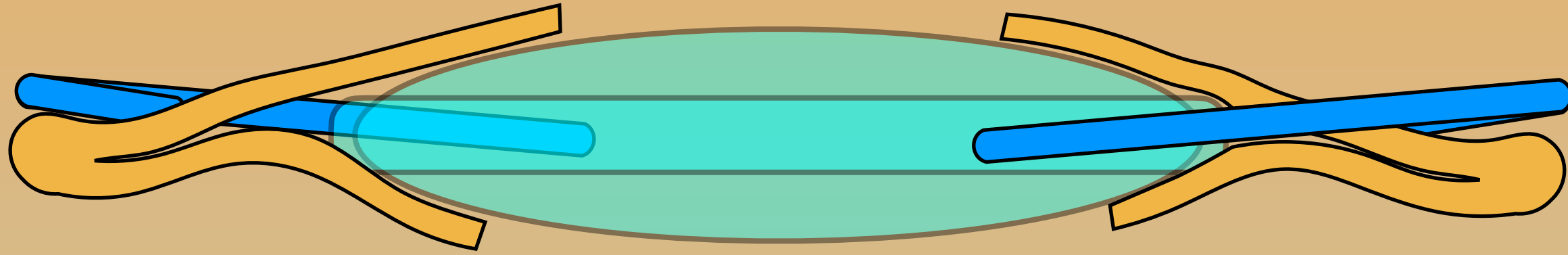
mmHg

0 650

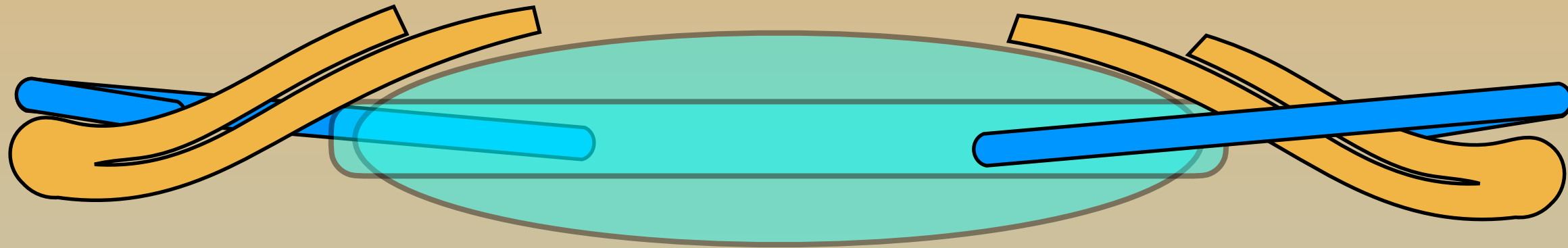


NOENUITY

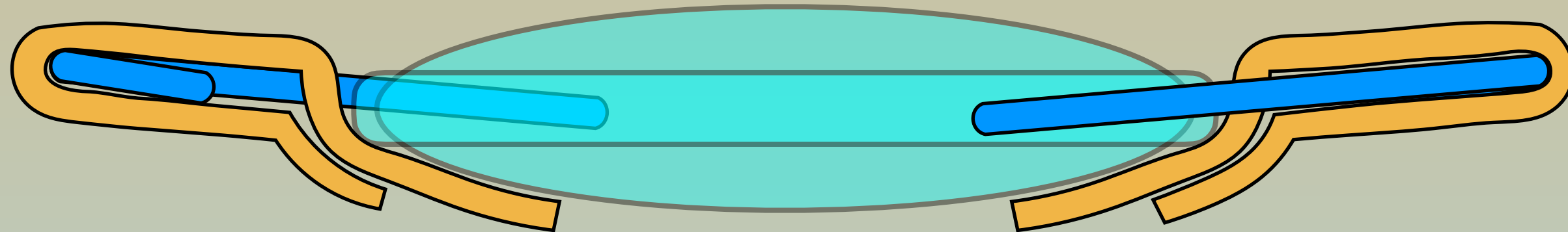




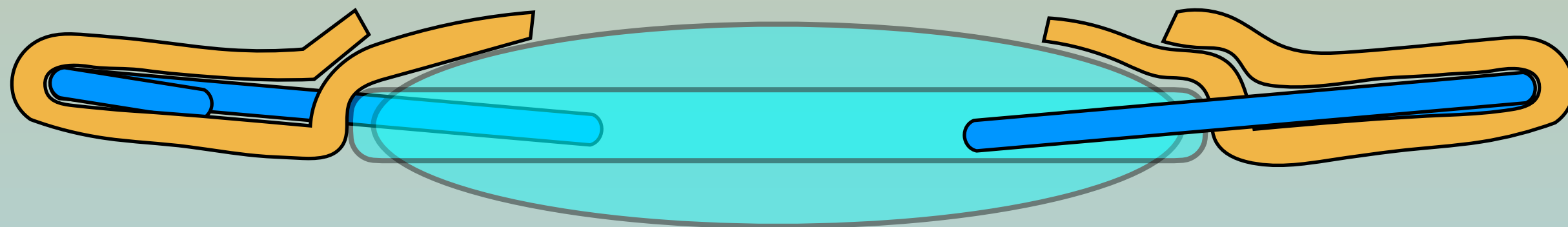
Haptics in the sulcus
Optic under the anterior rhexis



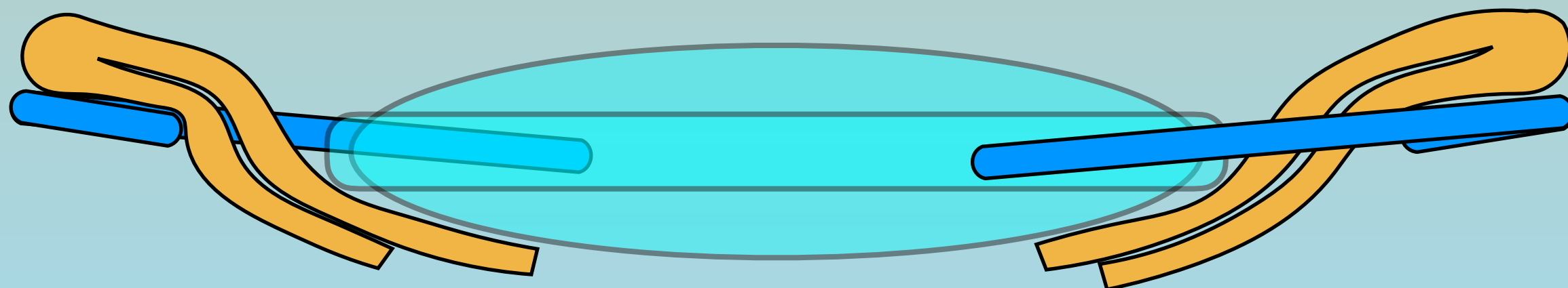
Haptics in the sulcus
Optic under the posterior rhexis



Haptics in the bag
Optic over the anterior rhexis



Haptics in the bag
Optic under the posterior rhexis

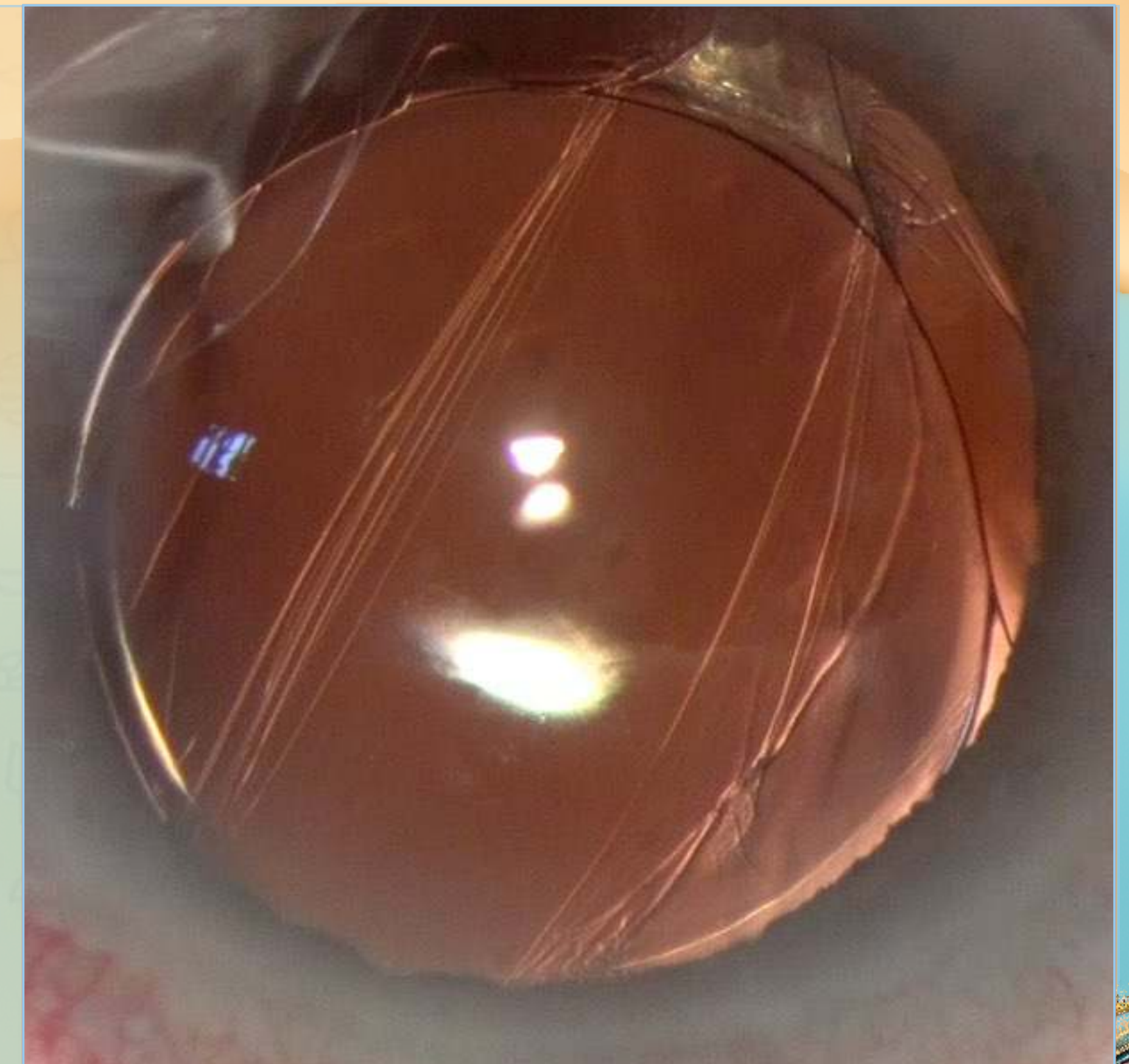


Haptics under the bag
Optic over both the capsules openings



Advantages of IOL optic capture

- Enhanced IOL **centration** and **stability**
- Allows use of single-piece IOLs in selected situations
- Barrier against PCO
- Maintains anterior-posterior segment separation
- May reduce vitreous disturbance





If a surgeon has never had a PCR, this is an outstanding surgeon! (as he/she has been standing outside the surgical room...)



*"I am not afraid of storms, for I
am learning how to sail my ship"*

"أنا لا أخاف العواصف، فأنا أتعلم كيف أبحر بسفينتي"

LOUISA MAY ALCOTT





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