

# Hydrodissection & Hydrodelineation

BY

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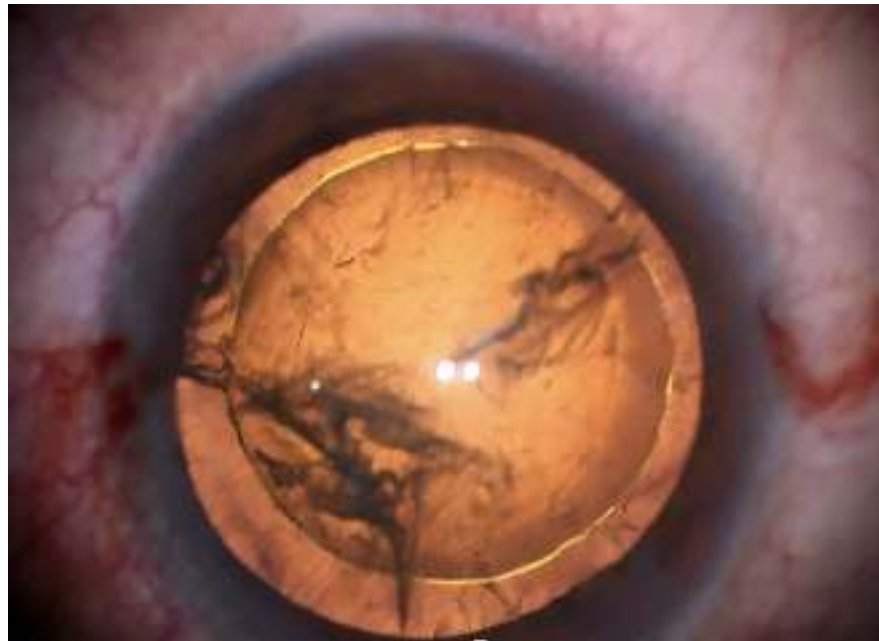
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Board member of the EOS, ESOIRS,

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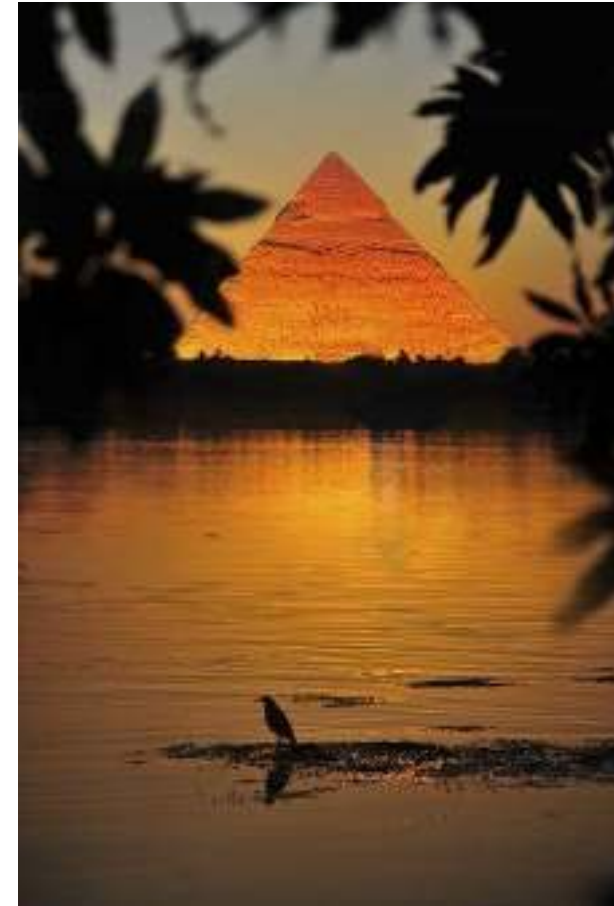
Egypt



# ***Financial Disclosure***

- *Alcon (speaker)*
- *Novartis (speaker)*
- *Johnson&Johnson (speaker)*
- *Jamjoom Pharma (speaker)*
- *Orchidia (speaker)*
- *Eva Pharm(speaker)*

No Financial Interest



# Hydrodissection

# Definition

Freeing the capsulo-cortical and cortico-nuclear adhesions using fluid

## Functions and objectives

- Free mobilization of the nucleus
- Avoid zonular stress on subsequent phaco steps
- Evaluate the hardness of the nucleus and the degree of difficulty expected in phaco.
- Facilitate removal of the residual lens matter after phaco

**1** minute of hydrodissection  
saves **10** minutes of I/A

## Instruments

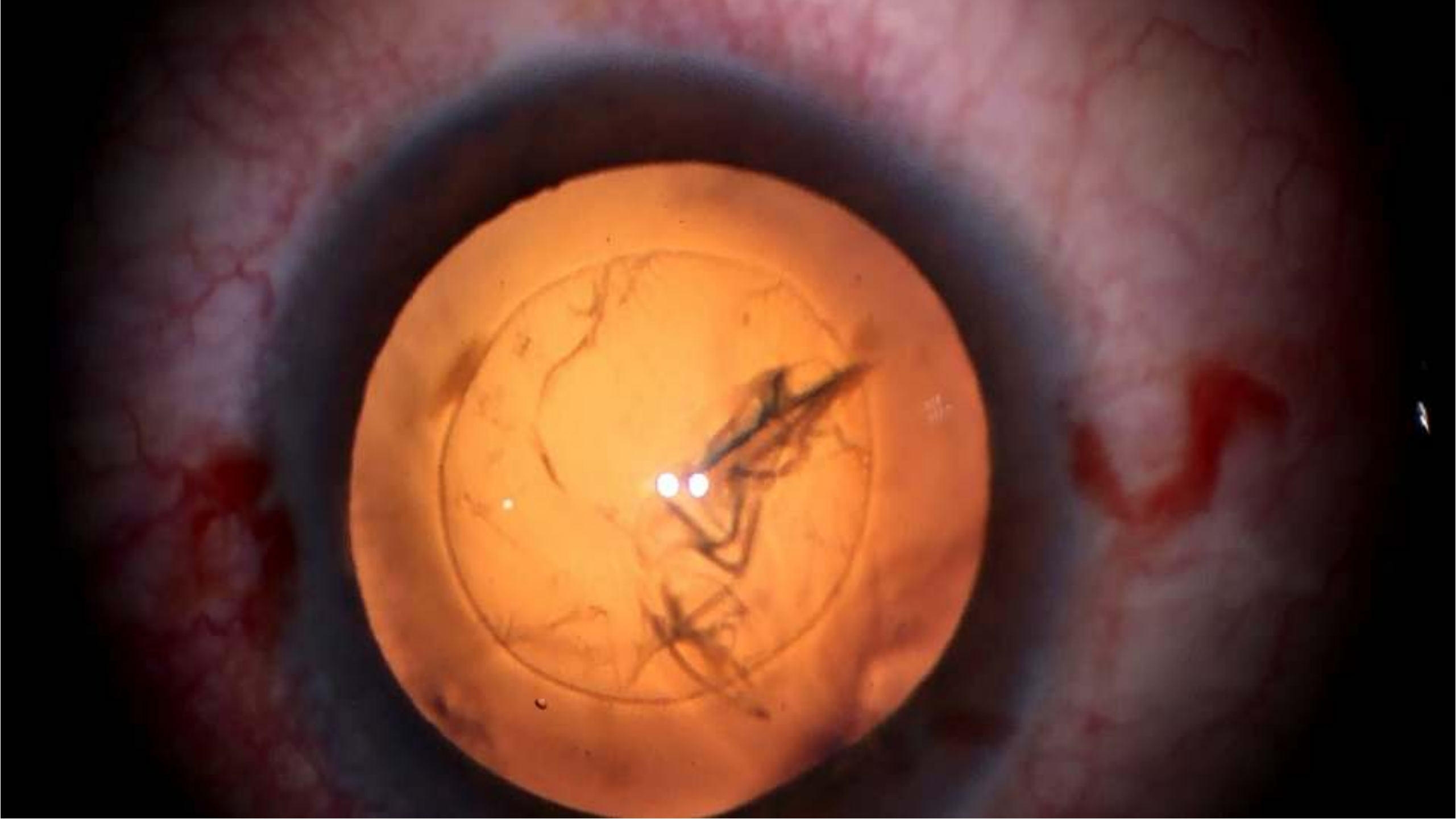
27 G cannula mounted on a 3mm syringe full of irrigating solution.

# Technique

- Check the flow
- Depress the posterior lip of the wound with the cannula
- Slide the blunt cannula under the anterior capsule
- Elevate the anterior capsule with the tip and move until you reach the equator



- Inject some fluid
- Look for the fluid wave passing across helped by gentle depression on the nucleus to massage the fluid wave
- Depress and push the nucleus towards the site of injection
- Injection can be repeated in different quadrants until free rotation of the nucleus is achieved



Dr.Hatem Ammar

OZII

0

3

C.D.E.  
0.00

Irr

95

Asp

24

Rise

0

Vac

100

0

Ampl

100

30

INFINITI  
Alcon

The most common **pitfall** is **too gentle** injection of the fluid , so the wave of the fluid cannot find its way around

# Contraindications

- Morgagian cataract
- Posterior polar cataract
- Rhexis extension or can –opener capsulotomy

# Hydrodelineation

# Definition

Separation of the central harder nucleus from the softer peripheral portion

# Functions and objectives

- Reduce the size of the nucleus
- Create a cushion of epinucleus and soft outer nucleus to protect the post capsule during phaco, so it adds extra safety for the beginners
- Evaluate the hardness of the nucleus
- Important in soft cataracts



# Instruments

27 G cannula mounted on a 3mm syringe full of irrigating solution.

# Technique

- Insert the cannula within the nucleus at the edge of the rhexis
- Inject the fluid intermittently into different quadrants until you see the golden ring(s)
- Each ring delineates one stage of nucleus formation

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OZI

0

4

C.D.E.

0.00

Irr

95

Asp

28

Rise

0

Vac

100

0

Ampl

100

0

INFINITI  
Alcon



*Take care*

Too gentle injection ,so the wave of fluid can not find its way around

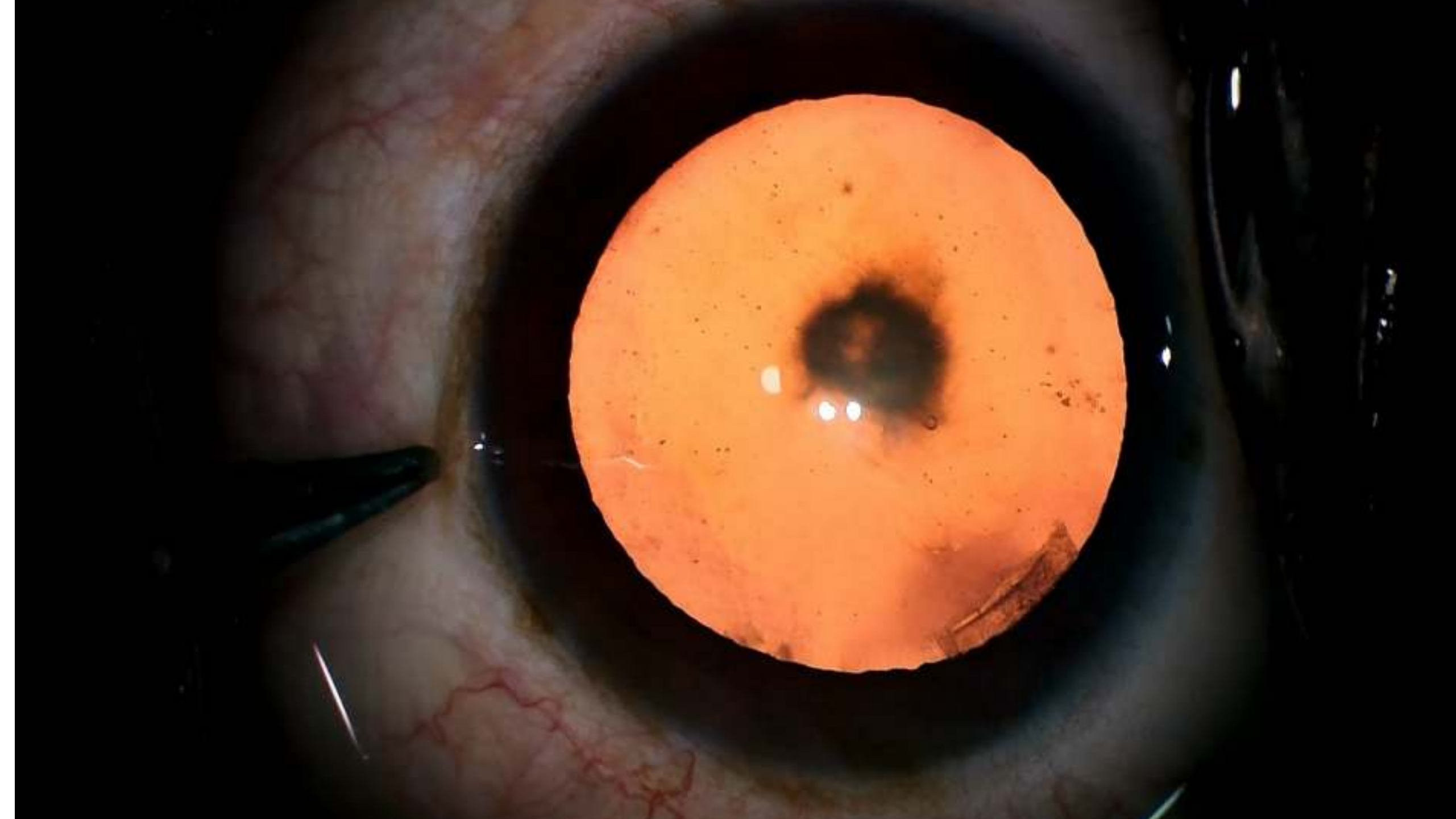
Special situations

Post Polar cataract

# Controlled hydrodelineation







Very soft

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OZII

0

4

C.D.E.

0.00

Irr

95

Asp

28

Rise

0

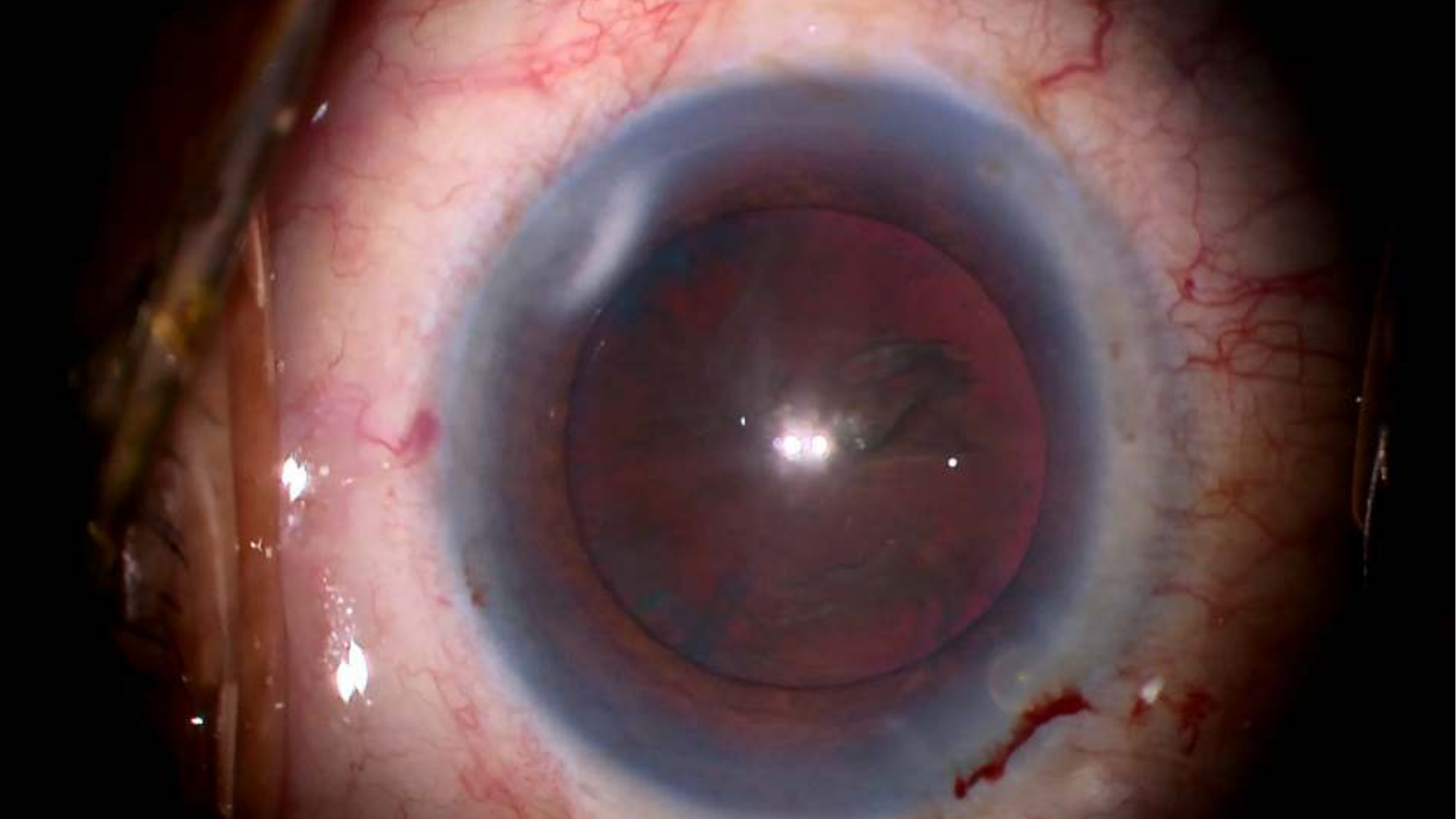
Vac

100

Ampl  
100  
0

INFINITI  
ARON

Very hard



# Capsular Block syndrome

## ***Predisposing factors :***

- Small capsulorhexis
- Large nucleus
- Aggressive fluid injection

### *Signs:*

- Must expect
- Rise in the pressure with the injection
- Popping of the nucleus

*If this happens*





- Convert to ECCE
- Do not try phaco
- Otherwise you will induce posterior dislocation

*Thank you*

