Hydrodissection in Femto-assisted cataract surgery

*The Why and the How*

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no financial interest

Do you need to perform hydrodissection?
Hydrodissection in traditional phacoemulsification

- Hydrodissection of the nucleus in cataract surgery has traditionally been perceived as the injection of fluid into the cortical layer of the lens under the lens capsule to separate the lens nucleus from the cortex and capsule.
- With increased use of continuous curvilinear capsulorrhexis and phacoemulsification in cataract surgery, hydrodissection became a very important step to mobilize the nucleus within the capsule for disassembly and removal.


Do you perform hydrodissection with your femto cataract surgery?

- YES
- NO
- MAYBE

Learning Curve
Are there any differences in the capsulorhexis performed by the femtolaser?

Capsulorhexis Edge Architecture

Capsulorhexis Edge Architecture

- Patient movement
- Laser Algorithms

Femto CCC

- Complete CCC

Potential Weakness

Risk of Rip and Extention
- Hydrodissection
- Nucleus manipulation
- Irrigation aspiration
- Lens Insertion
Hydrodissection in Femtocataract Surgery
Modified Conventional Hydrodissection

- Hydrodissection is slightly modified to allow the release of gas bubbles trapped behind the lens.
- Failure to release these trapped gas bubbles has been reported to cause posterior capsular rupture in rare cases.

Modified Conventional Hydrodissection

• Technique of “Releasing Gas”

Gently tapping on the lens or tilting it slightly with the hydrodissection cannula brings the bubbles forward quickly to allow them to escape.

Using a prechopper or blunt-tipped side-port instrument with the phaco tip to split the laser-cut nuclear segments to allow the gas to come forward.

VIDEO 1

• Modified Conventional Hydrodissection
VIDEO 2

• Modified Conventional Hydrodissection

WHY MUST YOU RELEASE YOUR GAS

• ANIMATION from Translenticular Hydrodissection in Femtosecond Laser Cataract Surgery
• Sheraz M. Daya; Marcela Espinosa, Centre for Sight, UK
VIDEO

- Translenticular Method of Hydrodissection/delineation

Potential Complications
COMPLICATIONS

• Capsular Block
• Posterior Capsular Rupture
• Capsular Rips
• *Dropped Nucleus*

Good Luck and Remember to Release your gas…
THANK YOU
A Presentation by
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