Black and White Cataract

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The Black

The Challenge

The White
The Black Cataract

Dense cataract can be a challenge for the phaco-surgeon:

- Incision burn
- Shallow AC
- Compromized endothelium
- Poor pupillary dilatation
- Difficult anterior rhesis
- Very dense nucleus
- Leathery, cohesive, tenacious fibers
- Posterior capsule rupture
- Loss of nuclear fragments
- Iris trauma
- Prolonged post operative inflammation
Anesthesia

• Use local anesthesia rather than topical.

• Lengthy surgery, risk of complications.
The incision

• Can be difficult due to very shallow AC

• Incision burn

• Consider slightly wider tunnel temporal incision minimizes vertical angulation of the probe
Poor pupillary dilation

- Minute sphincterotomies
- Iris retractors
- Other techniques
Difficult Capsulorhexis

• Avoid a large rhexis – friable capsule

• Use of high viscosity cohesive viscoelastic
Phacoemulsification

• Use of a high flow rate to enhance cooling at the incision and maintain AC depth
• Use of power modulation
• Sculpting or chopping techniques are both effective
Difficult division due to leathery, cohesive, tenacious fibers at the posterior part of the nucleus.
Iris trauma
Posterior capsule rupture is always a risk
The White Cataract
The Challenges

- The anterior capsulorhexis
- Any type of nucleus hardness can be encountered
- Mobile small nucleus
- Late capsular bag contraction
Anesthesia

• Local anesthesia + Facial akinesia

• Possibility to convert to ECCE
The Anterior Capsulorhexis Challenges

• No red reflex
• Difficult control over the rhexis due to increased intra-capsular pressure
• Milky cortex obscuring the view
• Decompressed bag
• Tendency of the rhexis to escape peripherally
The Anterior Capsulorhexis

The creation of a complete intact CCC is the most crucial step in white cataract. Once accomplished the success rate is as a routine case.
CCC - Trypan blue staining under air
CCC - Trypan blue staining under Visco
CCC in white cataract – Our technique

- Initiation of a central tear
- Aspirate any “milky” cortex
- Inject more viscoelastic
- Do the rhexis in a spiral manner enlarging it as necessary
- A complete small rhexis is better than a wide one that extends to the equator
Expect any degree of nucleus hardness
Usually no cortex is left for aspiration
IOL Implantation
Consider ECCE

• From the start
  – Advanced brown cataract
  – PXS with zonular instability
  – Previous vitrectomy

• Conversion
  – Incomplete rhexis
  – Ineffective phaco
  – Posterior capsule rupture
Planned ECCE is still a viable option with good results
Thank You