Retained Lens Material

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Disclosures

• Speaker’s Bureau: Allergan, Thrombogenics

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The Dropped Lens

- Factors influencing outcomes
- Surgical management
- Timing of vitrectomy
- PPV after Femtosecond Laser
Introduction

• Prior to 1990 only 2 series, then phaco
• 20/40 or better in 55% (44-72%) cases
• Problems that limit outcomes
Problems Limiting Outcomes

- CME 12% (0-46%); chronic CME 4% (2-13%)
Problems Limiting Outcomes

- Retinal detachment 11% (4-23%)
Problems Limiting Outcomes

• Glaucoma 8% (0-31%)
Problems Limiting Outcomes

- Chronic uveitis, corneal edema, choroidal, endophthalmitis (up to 23%)
Primum Non Nocere

• When the lens has wanderlust:

➢ Remove anterior lens fragments
➢ Perform an anterior vitrectomy
➢ Place a lens if can be done with stability

▷ If the IOL drops back, leave it
Primum Non Nocere

- Remove viscoelastic
- Suture the wound
- Talk to the patient and family

- Get to know your friendly neighborhood retina surgeon
What’s the most important equipment you’ll need for this case?
Timing of Vitrectomy

• Most studies show no difference
• Suggestion that early vitrectomy beneficial
  > Increased incidence in RD if delay more than 30 days
  > No macrophages if PPLx within 3 days

Merani et al. AJO 2007
• If can have immediate vitrectomy, great!

> Hard; ASCs, retina specialist not around

> Retina doctors don’t know the patients

• POD #1, often corneal edema
The Retina Approach

- Things we look for:
  - Wound integrity
  - IOP
  - Corneal edema
  - Inflammation
  - Stability of the lens
  - Gonio
• Retina surgeon

> Complete vitrectomy

> Examine the retinal periphery for breaks!
• Cortical material easily removed
• Small nuclear fragments - PPV handpiece
• Larger nuclear material - PPV vs. fragmatome
• Traditionally, we enlarge one sclerotomy to use the Fragmatome

• Frag is longitudinal phaco, effective, but:
  > Causes RLF to be pushed away
  > Lots of energy
  > Clogs
  > Migrates up shaft

• Anterior segment surgeons use torsional
In addition to longitudinal phaco, torsional phaco “shaves” the lens fragments, more efficient
Procedure

- 23-g PPVx, enlarge one sclerotomy with 20g MVR
- Sleeveless OZil handpiece with 30° or 45° Kelman tip
Video: Sunir Garg, MD and Andre Witkin, MD
MONTY PYTHON'S
AND NOW FOR
SOMETHING
COMPLETELY
DIFFERENT
PPL after Femtosecond

- Femtosecond laser
- Recently approved for cataract surgery

- Increased risk of capsule rupture
  - Learning curve
  - Anterior capsulorrhexis not as stable
  - Increased pressure within capsule
Anterior Capsulotomy Integrity after Femtosecond Laser-Assisted Cataract Surgery

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Objective: To compare the incidence of anterior capsular tears after femtosecond laser-assisted cataract surgery (FLACS) versus phacoemulsification cataract surgery (PCS) and to assess the ultrastructural features of anterior capsulotomy specimens (FLACS and PCS) using electron microscopy.

Conclusions: Laser anterior capsulotomy integrity seems to be compromised by postage-stamp perforations and additional aberrant pulses, possibly because of fixational eye movements. This can lead to an increased rate of anterior capsule tears, and extra care should be taken during surgery after femtosecond laser pretreatment has been performed. A learning curve may account for some of the increased complication rate with FLACS. However, the SEM features raise safety concerns for capsular integrity after FLACS and warrant further investigation. Ophthalmology 2014;121:17-24 © 2014 by the American Academy of Ophthalmology.

Femto capsulotomy

Manual CCC
Thank you