IOL Exchange for Malfunctioning and Malpositioned PCIOLs

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Introduction

- Malfunctioning IOLs
  - Dysphotopsias
  - IOL power error
- Malpositioned IOLs
  - Zonulopathy (PEX, PPV)
  - Trauma (Blunt or surgical)
    - UGH
    - Dysphotopsias
    - Corneal Edema
    - CME
Malfunctioning PCIOLs

Case #1: Unhappy Multifocal Patient

- Patient understood risks...
- Multifocal PCIOL 2014
- Intractable glare/halos 2014
- Distant history of Uveitis 1965
- Long conversation discouraging multifocal PCIOL 2013
- Patient understood risk... 2014
- Multifocal PCIOL 2014
- Intractable glare/halos 2014
Case #2: Positive and Negative Dysphotopsia

Treatment: Malfunctioning PCIOLs

- **Multifocal PCIOLs**
  - Positive Dysphotopsia
    - Pharmacological treatment
    - Removal and replacement for different IOL material
  - Negative Dysphotopsia
    - Reverse (anterior) optic capture
    - Sulcus placed IOL

Malpositioned PCIOLs
Case #4: Recurrent Vitreous Hemorrhage

Possible UGH
Plan: Removal and replacement
2013
2014
RD repair x 3
recurrent vitreous hemorrhage
Possible UGH
Plan: Removal and replacement

Ultrasound Biomicroscopy

2012-2013
2013
2014
Avoiding an Oval Pupil

Iris Suture Fixation Pearls

- Clear corneal incision 3.5-4mm
- Fold 3 piece IOL at 3 and 9 o’clock: bucket handle delivery
- Intracameral pharmacological control of pupil size
- Start with McCannel Suture technique
- Suture retrieval: present suture to yourself with additional hook if there is peripheral corneal edema
- Push down on the optic rather than rotating while placing optic behind the iris
Iris Suture Fixation: Check list

- 10-0 polyester PC7 needle (Alcon) or
  10-0 prolene CIF-4 needle (Ethicon)
- Bonn microhooks (FST, No.10031-13)
  or sinskey hook
- Dispersive viscoelastic
- McCannel suture technique
- Siepser suture technique

Case #5: Malpositioned IOL/Corneal Edema

- Complicated Cataract surgery OD
- PPV/subluxed lens fragment/PCIOL ISF
- Malpositioned IOL
- Repositioning ISF x 2
- Ahmed valve
- Dislocated PCIOL
- Corneal Edema

2009 2011 2012 2014
Small Incision SSF: Pearls

- Mark sclerotomies 180 degrees apart; avoid 3 and 9 o’clock if possible
- Clear corneal incision 4mm (temporally)
- Fold IOL over spatula; crooked haptic is on the right
- Make sclerotomies 4mm apart and 2.0-2.5mm posterior to the limbus; use 1mm sideport blade or 23 gauge MVR blade
- Bury knots in sclerotomies
- Watch for hypotony on day one and high IOP day 5-7

Small Incision Scleral Suture Fixation: Checklist

- GoreTex CV-8 thread TTc-9 needle (off-label use; W. L. Gore & Associates, Inc.)
- Anterior chamber maintainer 23 gauge
- 1mm sideport blade (23 gauge equivalent)
- 25 gauge grieshaber max grip forceps (Alcon)
- 23 gauge MST forceps
- Akreos AO60 (BAL) (**Off label use)

Caution: calcium phosphate deposits on IOL documented after gas/air in combined DSEK/DMEK with hydrophilic acrylic IOLs.

**Off label Use

Ventura BV, Ventura M, Werner L, Santiago MR.
Ultrasound Biomicroscopy

Treatment: Malpositioned PCIOLs

Single piece acrylic IOL

- Sulcus
- In the bag
- Lasso scleral suture fixation (SSF)
- Removal and Replacement ISF 3-piece IOL Glued IOL
- Capsular support
- Yes
- No
- ISF
- SSF/Glued IOL

Three-piece IOL

- Sulcus
- In the bag
- Lasso scleral suture fixation (SSF)
- Capsular support
- Yes
- No
- ISF
- SSF/Glued IOL

Thank You!