Surgical Management of Malpositioned IOLs and Subluxated Cataracts

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Disclosures: Samuel Masket MD

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Subluxated Cataracts: Issues

- Etiology of Zonulopathy - progressive?
- Extent of Zonulopathy
- Associated Ocular Conditions
  - Cataract type
  - Glaucoma
  - Iris/Pupil
  - Vitreous herniation
  - Posterior segment
- The Capsulotomy - key

Bag Fixated
- Morcher Pre-Loaded
- Henderson Ring
- Ciomma Modified CTR

Suture Fixated
- Morcher Pre-Loaded CTR
- Malyugin/Cionni Pre-Loaded CTR

<table>
<thead>
<tr>
<th>Type</th>
<th>Definition</th>
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<tbody>
<tr>
<td>14A</td>
<td>≤ 24 mm</td>
</tr>
<tr>
<td>14A</td>
<td>≥ 26 mm</td>
</tr>
<tr>
<td>14C</td>
<td>24-28 mm</td>
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Type 1-G is Ideal
When To Place a CTR

- "At late as you can, but as early as you must" - Ken Rosenthal
- Capsule hooks allow bag contents to be emptied and avoid dealing with CTR issues if the capsule tears; CTR interferes with cortex
- Employ capsule support devices:
  - Standard Iris hooks
  - Mackool CSS
  - MST
  - Yaguchi-Kozawa

Place CTR and IOL of choice

Yaguchi-Kazawa Double Hooks

- 2 point fixation for each hook
- Ends are smooth
- 5 per package
- Available only in Japan
  info@handaya.co.jp
Yaguchi-Kazawa Double Hooks
MST Hooks

- 4 per package
- Broad capsule contact
- Reaches to periphery of bag
- Keeps posterior capsule on stretch
Malpositioned IOLs - Etiology

- Early
  - Iatrogenic - capsule rupture, bag miss by one or both haptics, iatrogenic zonulysis, IOL haptic damage
  - Endogenous zonulysis
  - Previous trauma

- Late
  - Capsule contraction and phimosis with zonulysis
  - PEX, Uveitis, Trauma, ROP, RP
  - Scleral suture hydrolysis

Malpositioned IOLs - Management

- Work under jaw light
- Microsurgical Instruments
- Reopen Capsule Bag
- Stabilize/Capture IOL
- Pars Plana approach
  - "Basket" suture
  - Capsule Capture
- Vitrectomy - Anterior/Pars Plana
- Cutting/folding IOLs for removal
- McCannel and Seipner (Hs) Suture
- Scleral Fixation
  - Sutures - "Lasso"/"Other" technologies

Microsurgical Instruments
Treatment: Malpositioned PCIOLs

Single piece acrylic IOL

- Sulfur
- Removal and Replacement
- SF 3-piece IOL
- Glued IOL

Three-piece IOL

- Sulfur
- Removal and Replacement
- SF 3-piece IOL
- Glued IOL

In the bag

Lasso scleral suture fixation (SSF)

Capsular support

Yes

No

ISF

SSF/Glued IOL

Reopening the Capsule Bag

1 – Posterior Capsule Rent
2 – Anterior Capsule Rent
3 – Zonular Disinsertion
4 – Success!
Basket Safety Suture To Stabilize Loose IOL – Post Vitrectomy

Materials

- **Suture – 10-0 Prolene**
  - Ethicon STC-6
  - Bend 15 degrees

- **Needle:**
  - 27 gauge
  - 30 gauge

- **A/C maintainer**
High Myope S/P PPV/buckle

Malpositioned AC IOL
- 73 year old male
- Tamsulosin user - IFIS
- Cat surgery with PCR retained nucleus – PPV
- Iris sphincter tear
- AC IOL loop dislocated into superior PI