SURGERY FOR DEFECTS OF THE IRIS

Samuel Masket MD
Advanced Vision Care
Clinical Professor - UCLA
Los Angeles
Loss of Iris Tissue or function can have devastating effects on quality of vision, glare, cosmesis, and general quality of life.

Some cases are amenable for non-surgical means, some can be sutured, while others require an artificial iris.
Non Surgical Options For Iris Defects Include:

1 – Dark Spectacles
2 – Custom Contact Lenses
3 – Corneal Tattoo
4 – All of the Above
How many clock hours of iris defect can reliably be closed by sutures?

• 1 – 1
• 2 – 2
• 3 – 3
• 4 – 4
IRIS SUTURING
IRIS SUTURING MAY PROVIDE ONLY LIMITED BENEFITS
IRIS SUTURING

Indications

- Repair peripheral and pupil margin iris defects
- Fixate IOLs
- Cerclage for atonic pupil
- Repair iridodialysis

Basic Methods

- McCannel Technique via common paracentesis
- Siepser Sliding knot method
- 10-0 polypropylene suture material
IRIS CERCLAGE
SEIPSER SLIDING KNOT
How many clock hours of iris defect can reliably be closed by sutures?

- 1 – 1
- 2 – 2
- 3 – 3
- 4 – 4
MORCHER COLOBOMA/CTR FOR LIMITED IRIS DEFECTS
ORIGINAL AND MODIFIED
ANIRIDIC RING
MODIFIED RING SEGMENTS
OUTCOME
POST-TRAUMATIC SUBLUXATED MATURE CATARACT WITH ATONIC PUPIL
MORCHER – IRIS DIAPHRAGM IOL
OPHTEC ANIRIDIA DEVICES
Limitations of the Morcher and Ophtec Devices for Aniridia Include:

• 1 – Less than ideal cosmesis
• 2 – Large incision size
• 3 – Poor color match
• 4 – Inadequate sizing
• 5 – All of the above
HUMANOPTICS SILICONE CUSTOM ARTIFICIAL IRIS
“HARNESSING” THE HUMANOPTICS IRIS

- Bag Fixation
- Sulcus Fixation
- Sewn to IOL
- Sewn to Sclera
- Sewn to Native Iris Remnant
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PERFORATING INJURY

• 49 y/o woman sustained perforating corneal injury to LE in 1980

• RE – normal all aspects

• LE – CF VA
OUTCOME LE
“HARNESSING” THE HUMANOPTICS IRIS

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- **Sulcus Fixation**
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IFIS – NON TAMSULOSIN
ICE – SP: KPE/PKP/SHUNT
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FISH HOOK INJURY AGE 5
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CONGENITAL ANIRIDIA

- Mutation PAX6 Gene – neuro-ectodermal abnormalities
- Wilm’s Tumor 1:70
- Aniridia (rudimentary stump)
- Photosensitivity, nystagmus
- Corneal stem cell deficiency with neovascularization, haze ulceration, and scarring
- Cortical, PSC, polar cataracts, THIN FRIABLE CAPSULE
- Zonulopathy
- Glaucoma- Aniridic Fibrosis Syndrome
- Foveal Hypoplasia or Aplasia – reduced visual acuity
29 Y/O MALE – CONGENITAL ANIRIDIA - HUMANOPTICS ARTIFICIAL IRIS LE
Advantages of the Humanoptics Artificial Iris Include:

• 1 – Variable size implant
• 2 – Outstanding Cosmesis
• 3 – Able to be implanted through small incision
• 4 – May be attached to eye tissue in many locations
• 5 – All of the above