Different approaches to surgical Pupilloplasty


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INTRODUCTION

• Patients with pupil abnormalities, whether from congenital, traumatic or other causes, suffer from varying amounts of visual disability, including reduced visual acuity, glare and photophobia

• In addition, significant cosmetic issues may also be present

• When we have enough tissue, iris stroma can be stretched and handled to create a new pupillary aperture. Suture repair is an economical and promptly available surgical option.

PURPOSE

To describe three different minimal invasive surgical approaches to correct traumatic and congenital pupil abnormalities
PATIENT 1

- 26 years old
- Penetrant Keratoplasty OD 8 years before
- Traumatic aphakia, pupillary distortion with iridodialysis and partial iris loss OD
  - Low vision (20/80 OD)
  - Photophobia and glare

Pupilloplasty was performed with several iris sutures in order to create a central pupil, giving support to an anterior chamber Iris-Claw IOL

- Final BCVA: 20/32
- Less glare and photophobia
- Good aesthetic outcome

10-0 polypropylene suture & double long straight needle
**PATIENT 2**

- 35 years old
- Pseudophakia OS
- Postraumatic mydriasis OS
  - Reduced visual acuity (20/32) OS
  - Photofobia and glare

**McCannel-like imbricating sutures with a Siepser slipknot** was used and passed at **3 and 9 o’clock** to decrease pupil size.

**Before**

**After**

- Final BCVA: 20/20
- Less glare and photofobia
- Good aesthetic outcome

10-0 polypropylene suture & double long straight needle
PATIENT 3

3 months old child
Absence of pupil due to extensive persistent pupillary membrane OS
OD – normal
Systemic work-up - normal

Membrane removal creating a normal and centered pupil

Before

After

3 months later

✓ Excellent aesthetic and functional outcome
Traumatic and congenital pupil abnormalities are relatively common problems that can be addressed by a simple, economical and readily available **pupilloplasty**, without the need of iris prosthesis.

Pupilloplasty may improve visual outcome, reducing glare disability and photophobia.

This minimal invasive surgery showed to be a good option to correct pupil defects with good functional and cosmetic outcome.

**REFERENCES**


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