Phaco In Narrow Pupil

Mahmoud N. Afifi, MD
Research Institute Of Ophthalmology
CAIRO - EGYPT

Causes of narrow pupil:

- Pseudoexfoliation:
  - fibrotic sphincter
  - atrophic capsule
  - friable zonules
- Anterior uveitis
- DM
- IFIS
- Glaucoma
- Old age
- Trauma
Management:

Pharmacological:
- Atropine 1%
- Cyclopentolate 1%
- Phenylephrine 2.5% - 10%
- Tropicamide 1% (Mydriacyl)
- NSAID

Surgical:

- Synechialysis:
  - Viscodissection
  - Blunt surgical dissection
- Iris stretch (pupil expan. devices):
  - Iris hooks
  - Malugin ring
  - Morcher ring
  - Beehler dilator (3)
  - Iris retractors

(Dinsmore, 1998, Fine, 2000, & Gimbel, 2001)
Morcher ring:

Malugin ring:
- Multiple sphincterotomies
  0.5 mm – up to 8 in number

- Sector iridectomy

(Graether & Fine, 2000)

Synechialysis – Iris hooks
Iris retractors:

- Longer op time with iris hooks
- PO ant uveitis & corneal edema less with iris hooks
- Less sphincter damage with iris hook
- Iris hooks are more economic
- No significant diff in PCR, zonular dialysis and PO-DVA

(Nderitu and Ursell, 2019)
Useful Iris Entangling (IFIS):

Consequences of iris manipulations:

- Flail iris
- Iris prolapse
- Iris injury
- Iridodialysis
- Capsular injury
- PO distorted pupil

( Masket, 1998, & Allan, 1995)
Postop. disorted pupil, after iris retractors

Phaco. plan:
- Diminish iris manipulations
- Limbal stab location
- Diminish infusion
- Diminish vacuum
- Tight wound
- Visco application

( Samuelson, 1999)
Take home message:

- Pharmacologic
- Membrane dissection
- Hook dilatation (stretching)
- Retractors OR rings
- Surgical plan

THANK YOU