

Phaco In Narrow Pupil



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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 % (Mydracil)
- NSAID



Surgical:

Synechialysis:

Viscodissection

Blunt surgical dissection

Iris stretch (pupil expan. devices):

Iris hooks

Morcher ring

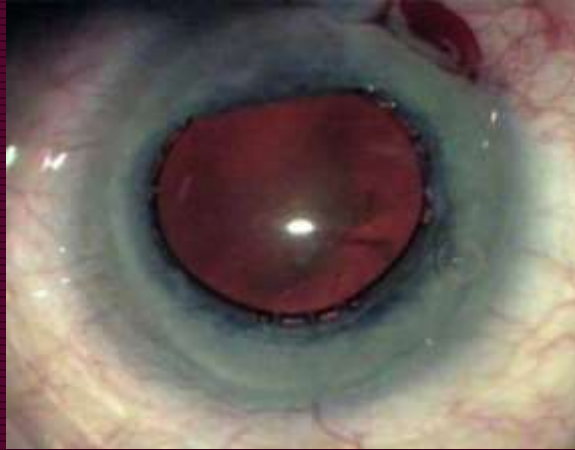
Malugin ring

Beehler dilator (3)

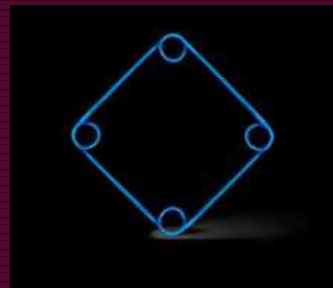
Iris retractors

(Dinsmore,1998, Fine,2000, & Gimbel,2001)

Morcher ring:



Malugin ring:



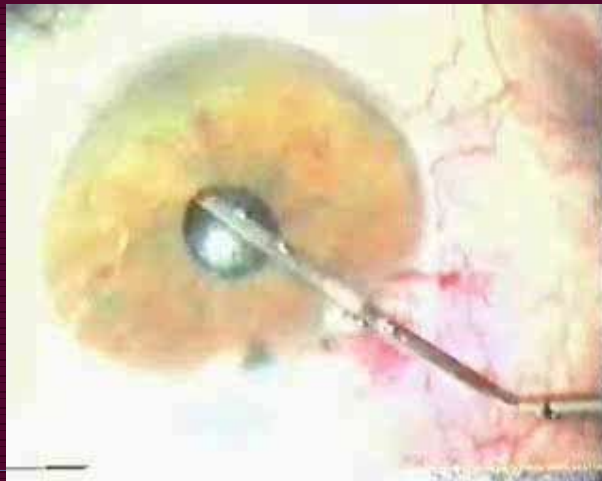


- Multiple sphincterotomies
0.5 mm – up to 8 in number

- Sector iridectomy

(Graether & Fine, 2000)

Synechialysis – Iris hooks



Iris retractors :



Iris hooks VS Malyugin ring:

- 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*)
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Useful Iris Entangling(IFIS):



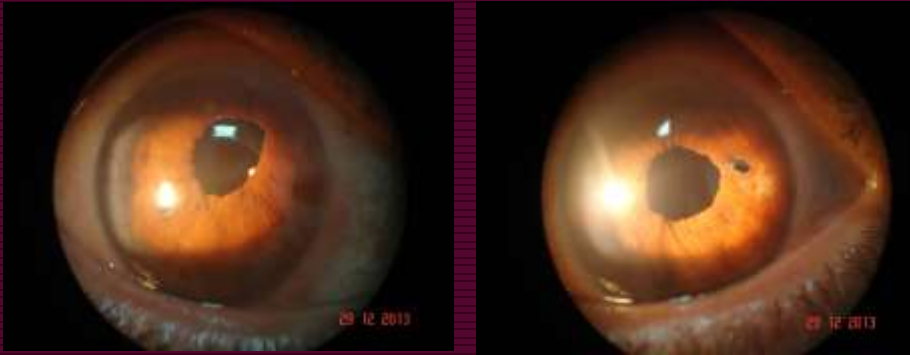
Consequences of iris manipulations:

- 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
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THANK YOU

