Narrow and Closed Angle Glaucomas: Diagnosis and Therapy in 2014

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Disclosures

- Aerie
- Allergan
- Alcon
- Aquesys
- AVS
- Glaukos
- Ivantis
Narrow Angles and Glaucoma Risk
Narrow Angles

Higher Risk Patients:

• Small eye with hyperopia
• Early to moderate NS
• Demographics:
  • More common in Chinese, Eskimo
  • Less likely in pts of African descent
Narrow Angles

Determined by:

- Angle appearance of PAS
- Axial length: Nanophthalmos
- Lens thickness:
  - Spherophakia
  - Ectopia Lentis
  - Phacomorphic
Gonio Imaging - Angle Structures

Normal angle - inferior view

- Schwalbe’s Line
- Trabecular Meshwork
- Scleral Spur
- Ciliary Body Band
Diagnosis of Narrow Angles

Gonioscopy

OCT
Diagnosis of Narrow Angles

Gonioscopy

OCT
HD-OCT Anterior Segment Imaging

Angle Structures

- Scleral spur (red arrow)
- Schlemm’s canal (blue arrow)
- Schwalbe’s line (green arrow)
Narrow Angles
SD-OCT: Plateau Iris
SD-OCT: Provocative Testing of Angle Closure

Lights On

Wider angle with room lights on

Lights Off

Narrow angle with room lights off
Case Presentation: MCR

- 50 y/o hyperopic OD
- No symptoms and healthy exam except grade 0-1 angles on gonio
- Despite gonio evidence of narrow angles, she refused YAG laser PI until SD-OCT
Case Presentation: MCR

Pre YAG

Post YAG
When to do PI vs Lens Removal

PI is a good first choice

PI will not work
How Many PI’s and Where to Place Them?

[Images of eyes with annotations showing specific locations]
Lens Removal
Lens Removal
Microspherophakia
Tumor in the Anterior Chamber
What would you recommend?
What would you recommend?
Iris Cyst
Diagnosis and Treatment?
What would you recommend?

Images courtesy of Martha Leen, M.D. & Paul Kremer M.D. Achieve Eye and Laser Specialists, Silverdale, WA
What would you recommend?
What would you recommend?
Phaco for Narrow Angle Glaucoma

Advantages
- Decongests the anterior segment
- More definitive

Disadvantages
- Higher risk than laser
- In younger pts, loss of accommodation
Summary

- YAG PI is a safe and very effective means of preventing angle closure in high risk patients.

- Lens removal is necessary in high hyperopia, nanophthalmos, and lens induced glaucomas.
Case Report – GR

44 y/o Asian male

One year history of intermittent elevated IOP with up to 50mmHg.

Childhood injury lost right eye.

PMH: Healthy

Meds: Xalatan OS qhs

Cosopt OS bid
Case Report - GR

Exam: (left eye only)

Acuity:  -2.25 + 3.25 170 = 20/40
Fields:  Sup arcuate defect
IOP: 27
SLE: Shallow AC
Gonio: Grade 0-I angle, broad PAS
Fundus: 0.8 cup
Pach: 530
What differentiates chronic angle closure glaucoma (CACG) from POAG?

How would you manage this patient?