

GL-14 A Stranger in a Strange Land Anterior Chamber Angle Examination

I) Rational

- A) Major decision point in glaucoma therapy
- B) Essential for ongoing glaucoma therapy
- c) Reimbursable procedure, CPT Code: 92020

II) Anatomy

- A) Iris
 - B) Last roll of the iris
AKA: Iris recess
- C) Ciliary Body
 - 1) Three muscle tissue
 - 2) Anatomy
 - a) Pars Plana
 - b) Pars Plicata
 - c) Anterior Segment extension
 - d) Iris insertion
- D) Scleral Spur
- E) Trabecular meshwork
 - 1) Functional
 - 2) Non-Functional
 - 3) Schlemm's Canal
- F) Schwalbe's Line
 - 1) Posterior embryotoxin
 - a) Anteriorly displaced Schwalbe's line
 - b) Visible by slit-lamp examination (without gonio)
 - c) Clinical appearance
 - i) Thin, white, posterior, peripheral line
 - ii) Circumcorneal
 - iii) Usually most easily visualized on lateral cornea

III) Lens Selection

A) 3-mirror contact lens

1) Description

- a) Parabolic mirror (single) for the angle
 - i) Rectangular mirror peripheral retina
 - ii) Trapezoidal mirror equatorial retina
 - iii) Scleral

b) Advantages

- i) Stable
- ii) Versatile

c) Disadvantages

- i) Large size
- ii) Limited usefulness (single mirror)
- iii) Mirror is "short"
- iv) Mirror is has a "flat" angle
- v) Eccentric mirror position
- vi) Requires cushioning solution
- vii) 270° rotation for anterior chamber evaluation

B) 2-mirror contact lens

1) Description

- a) Both mirrors for the angle
- b) Both mirrors are "tall"
- c) Both mirrors are "close-in"
- d) Scleral

2) Advantages

- a) Easier insertion
- b) Effective even in narrow / steep angles
- c) Only 90° rotation for anterior chamber evaluation

C) 4-mirror contact lens

1) Description

- a) 4 mirrors
- b) Corneal

2) Advantages

- a) Small profile
- b) No cushioning solution
- c) No rotation to see entire angle
- d) Compression gonioscopy

3) Disadvantages

- a) Less stable
- b) Steep learning curve

IV) Technique

A) The Corneal Wedge

B) Broad Focal Illumination

C) Compression/Indentation

V) Grading Schemes

A) Spaeth Classification

1) Letter A-E to describe deepest tissue visible

Letter	Description
A	Anterior to Schwalbe's line
B	Behind Schwalbe's line – Trabecular meshwork visible
C	Scleral spur
D	Ciliary body visible
E	Wide band of Ciliary body visible

2) Angular width of angle recess 0-50%

3) Configuration of the peripheral iris, r, s, or q

Letter	Description
r	Regular
s	Steep – Anterior Peripheral Ectasia
q	Queer – Posterior Peripheral Ectasia

B) Shaffer and Modified Shaffer system

	Grade 0	Grade I	Grade II	Grade III	Grade IV
Shaffer	Closed	10°	20°	30°	40°
Modified Shaffer	Schwalbe's line not visible	Schwalbe's line visible	Anterior TM Visible	Scleral spur Visible	Ciliary band visible

V) Pathology of the Anterior Chamber

A) Pigment Deposition

1) Pigmentary Dispersion Syndrome

2) Pigmentary/Exfoliative Glaucoma

B) Narrow/Closed Anterior Chamber

V) Pathology of the Anterior Chamber (cont.)

C) Angle Recession

- 1) Blunt trauma to globe
- 2) Unilateral
- 3) Conversion to a 2° glaucoma

D) Neovascularization

- 1) Ischemia
- 2) Progression
- 3) Management

E) Iridocorneal Endothelial Syndrome – ICE

- 1) Cogan-Reese
- 2) Chandler's
- 3) Progressive iris atrophy

V) Application of new technology

VI) Examples