Case Presentation

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12/15/09

- CC: 62yrs old lady presented with progressively decreased vision OD.

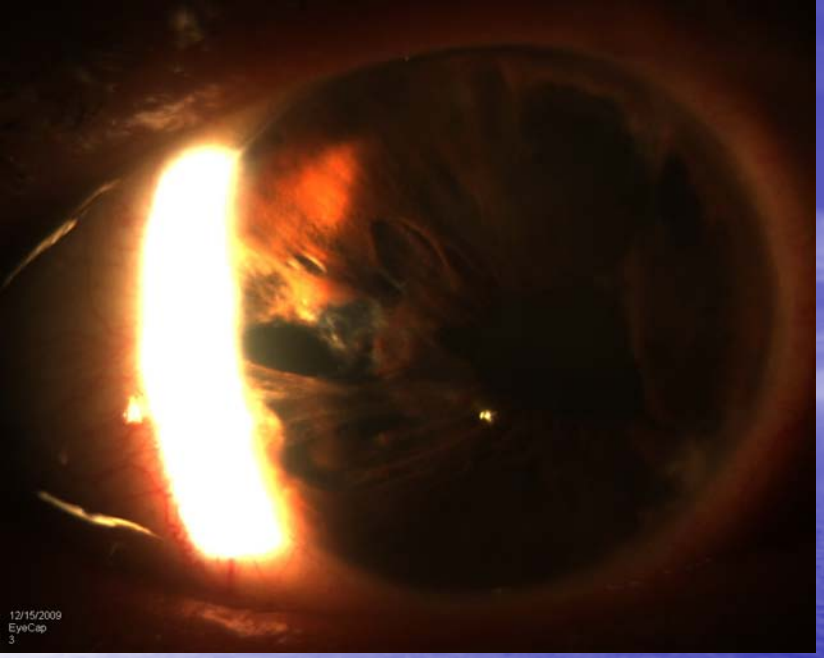
HPI

- In 1984-episodes of blurry vision-corneal edema
- In 1997-some scarring in her angle
- In 2001-first episode of Iritis OD tx with topical steroids
- Raised IOP
- In 2004 CE OD with improvement in vision
- Blurry vision 4-5 weeks after surgery

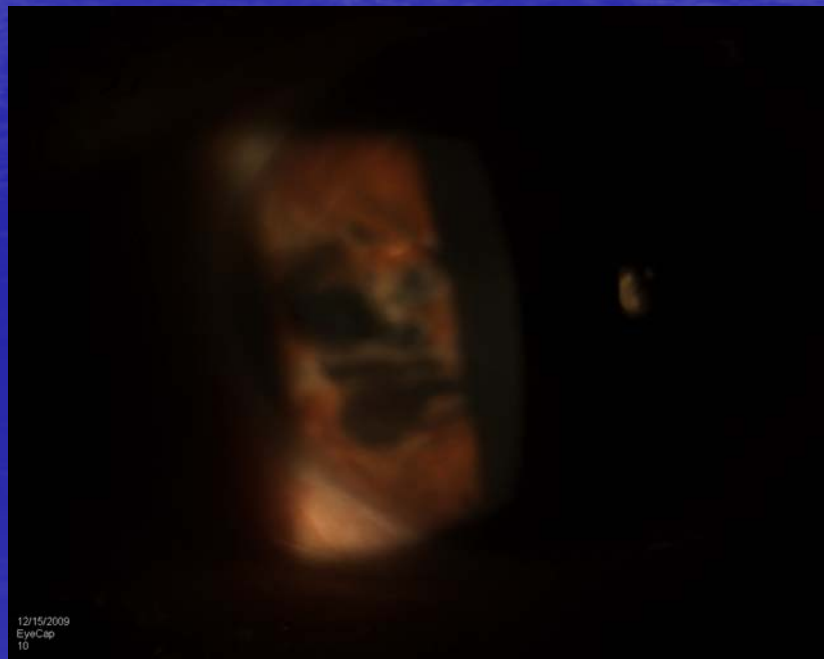
- PMHx:
  - Planter fasciitis
  - Diverticulitis
  - MVP
  - Costochondritis
- FHx:
  - Diabetes mellitus
  - Cancer
  - Arthritis
- SocHx:
  - No tobacco or IVDU; unremarkable
- Meds:
  -Caltrate
  -Clindamycin
  -Fish Oil
- Allergies:
  - NKDA

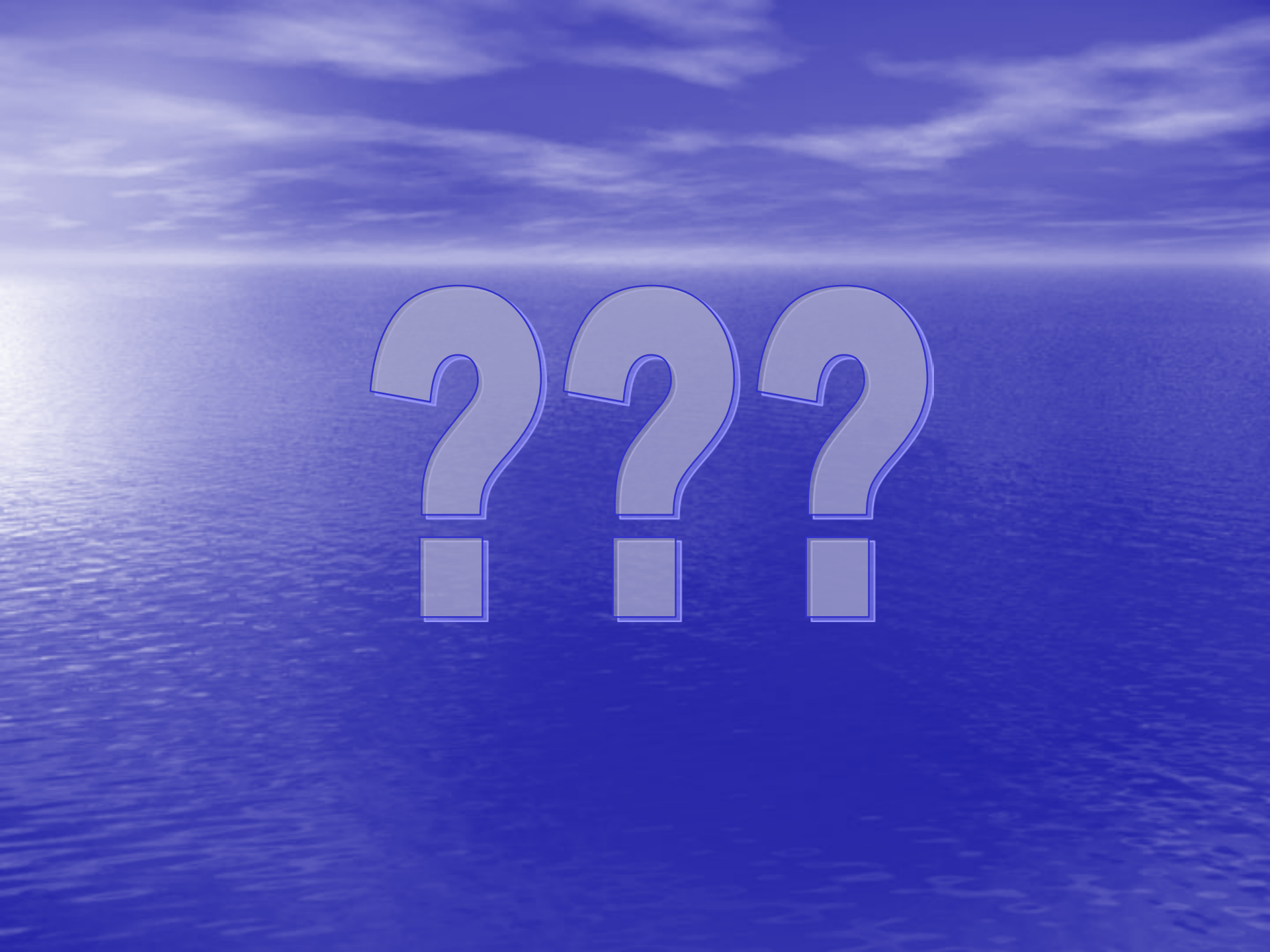
- OD
  - VA: 20/300
    ph 20/60
  - IOP: 15
  - Extnl
    - NML
  - SLE
    - Correctopia
    - Anterior synechiae
    - Iris atrophy
    - PCIOL
  - Fundus
    - No View

- OS
  - VA: 20/25
  - IOP: 13
  - Extnl
  - NML
  - SLE
    - 2+ nuclear sclerosis
  - Fundus
    - C:D 0.35 x 0.35



Slit Lamp Examination



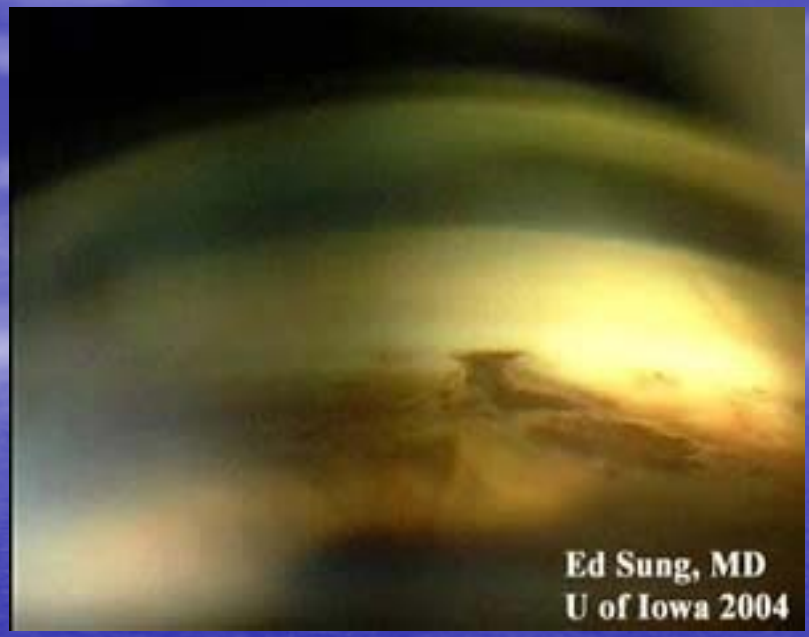


DIFFERENTIAL DIAGNOSIS

- ICE syndrome
- Posterior polymorphous corneal dystrophy
- Axenfeld-Rieger
- Fuchs heterochromic iridocyclitis
- Epithelial downgrowth
- Post surgical/Pseudophakic bullous keratopathy
- Trauma
- Pigment Dispersion Syndrome
- Neovascular glaucoma

- Assessment-

Iridocorneal Endothelial Syndrome



Plan

- Gonioscopy
- Biomicroscopy
- Glaucoma medication
- Corneal transplant

Iridocorneal Endothelial Syndrome

- ICE syndrome proposed in 1979 by Yanof.

THREE MAIN FEATURES:

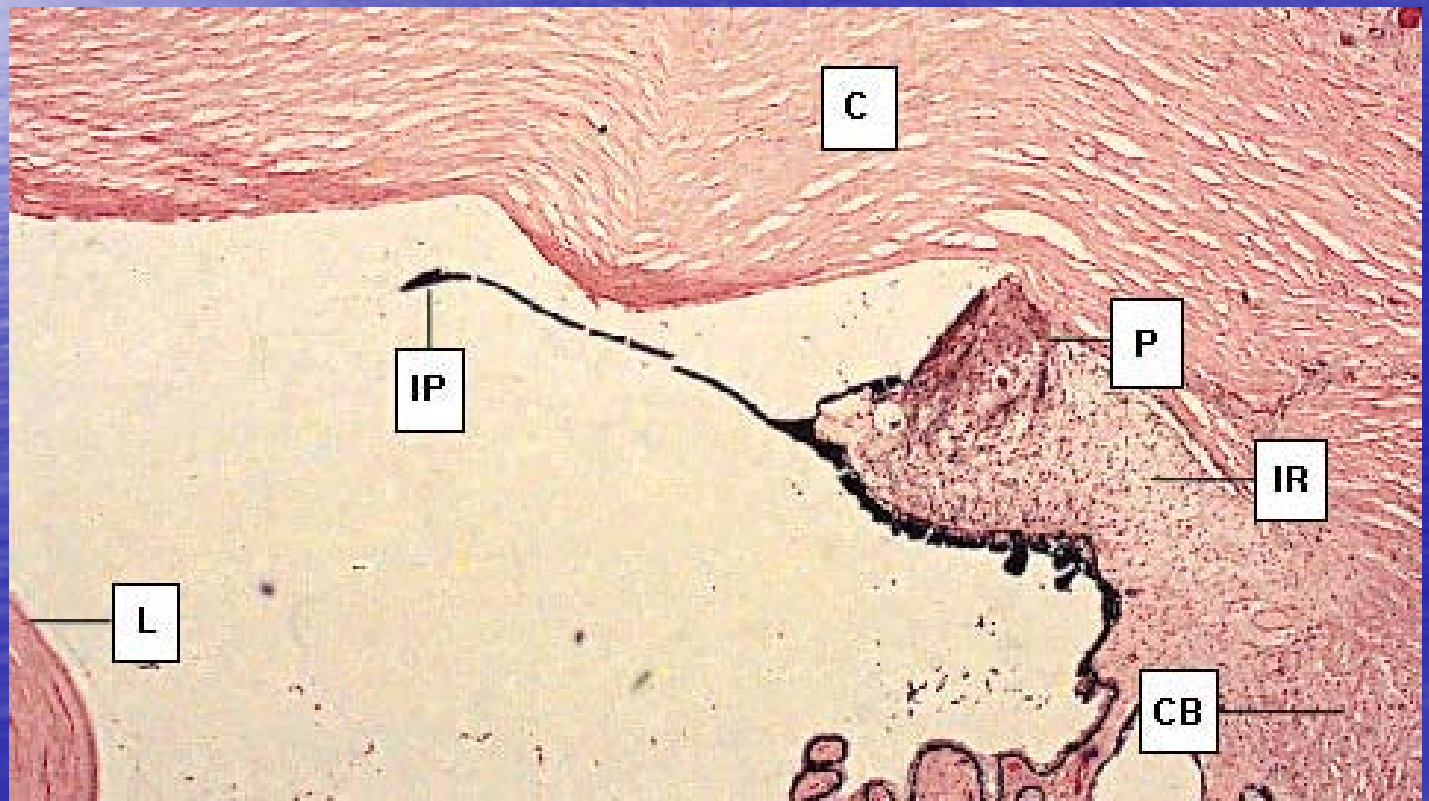
(1)Visible Changes in the iris-Cogan Reese
(2)Swelling of the cornea-Chandler's
(3)The development of glaucoma

ICE SYNDROME

- WOMEN
- AGES 30-50yrs
- U/L
- Sporadic
- Herpes simplex viral DNA or antigens
- 50% Chandler's syndrome; the other two 25% of all cases.
- Glaucoma 50%
- progressive iris atrophy and Cogan-Reese>severe

Histopathology

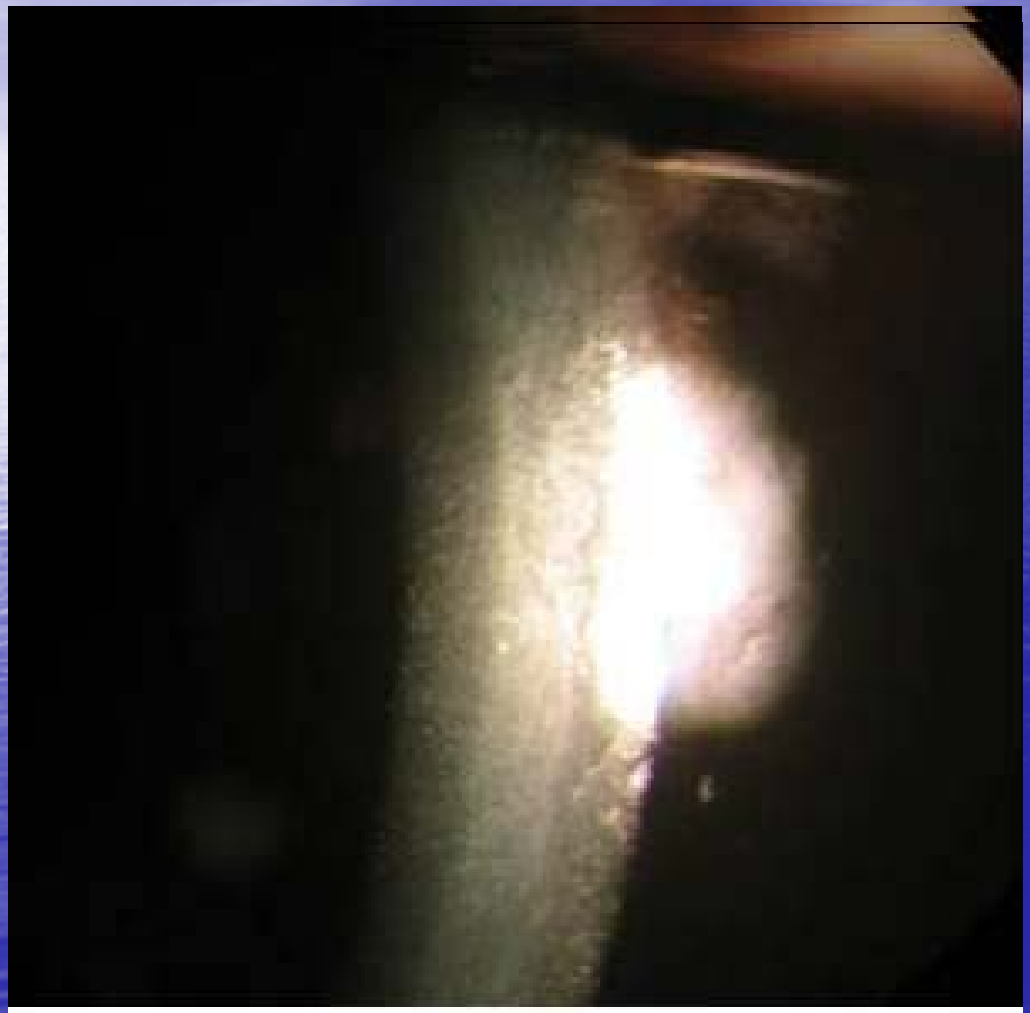
- Abnormalities in the mesenchymal cells
- Single or multilayered endothelium
- Multilaminar basement membrane



s/s

- Asymptomatic early in disease.
- Pain, decreased vision, and an abnormal iris appearance

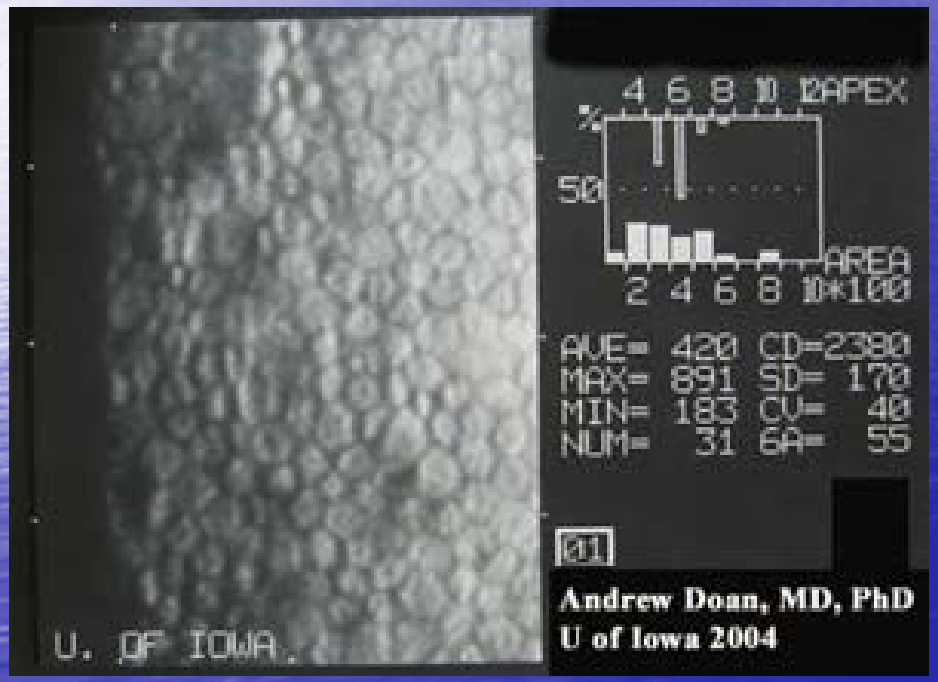
SLE Photography of Cornea



Cornea with hammered silver appearance of endothelium.

Magnified view

Specular Microscopy



Normal, hexagonal shaped cells.
Normal cell count (2380)

Abnormal endothelium with large spaces between cells and low cell count (1353).

Distinguish between ICE and PPD

Management

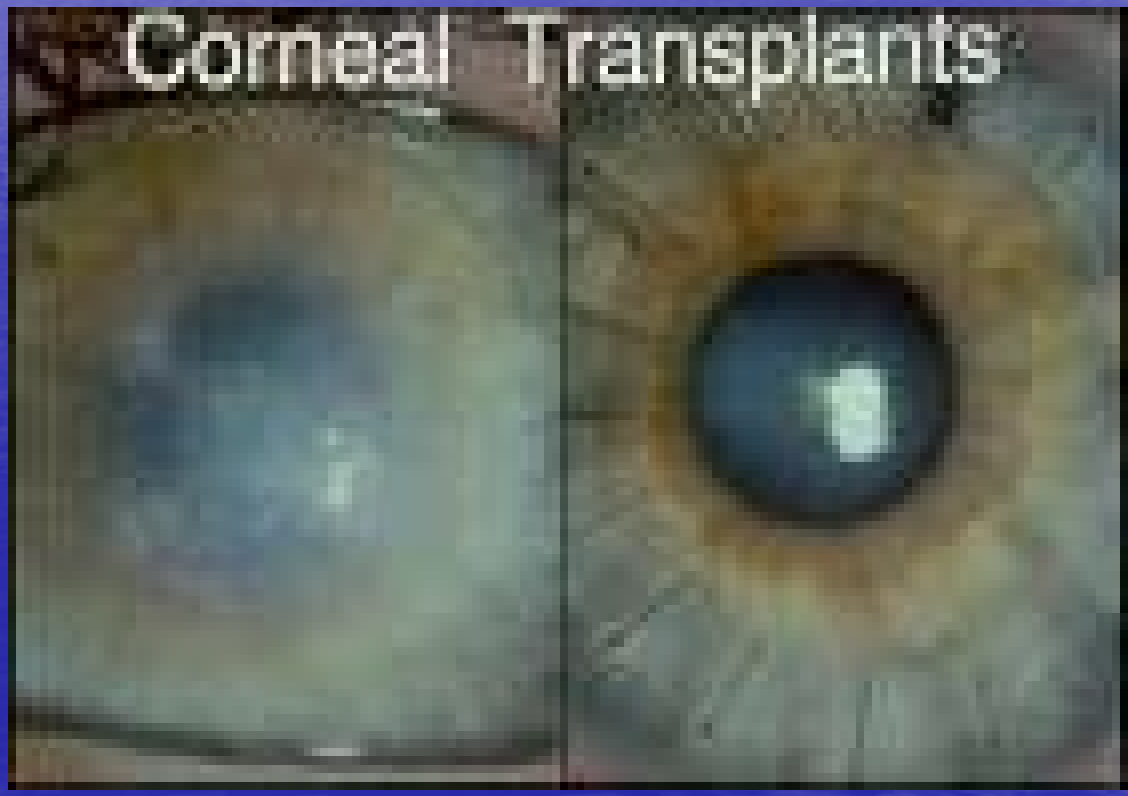
- Routinely followed with intraocular measurements, optic nerve exam, gonioscopy, and visual field testing

Management

- Hypertonic
- Topical anti-glaucoma medications.
- Valve surgery.
- Trabeculectomy.
- Initial trabeculectomy at 1 year - 64%
- 2nd and 3rd operations at 1-year intervals were both 58%

Corneal Transplants

- Corneal transplants- chronic intraocular inflammation, glaucoma, rejection
- Posterior endothelial keratoplasty



Cornea. 2007 May;26(4):493-7.

Descemet stripping with endothelial keratoplasty for treatment of iridocorneal endothelial syndrome.

Price MO, Price FW Jr.

- Results- BCVA was 20/20 to 20/30, mean refractive cylinder of 1.2 D.
- CONCLUSIONS: Visual recovery is rapid and refractive changes are minimal compared with replacement of the full corneal thickness with a traditional penetrating keratoplasty.


THANK YOU

- Arch Ophthalmol. 2009 Jan;127(1):33-6.
- **Deep lamellar endothelial keratoplasty for iridocorneal endothelial syndrome in phakic eyes.**
- Huang T, Wang Y, Ji J, Gao N, Chen J.
- RESULTS: Corneas were clear in all eyes. At the last follow-up, best spectacle-corrected visual acuity ranged from 20/67 to 20/30; the mean (SD) corneal astigmatism was 2.0 (0.7) and the mean (SD) corneal curvature was 44.6 (1.5) D. The mean (SD) endothelial cell density was 1917 (156) cells/mm(2) 9 months after surgery. CONCLUSIONS: DLEK is efficacious in the treatment of ICE syndrome in phakic eyes, with rapid visual rehabilitation and low incidence of postoperative complications. DLEK may be a good option for ICE syndrome in phakic eyes.