# ADVENTURES IN THE VITREOUS

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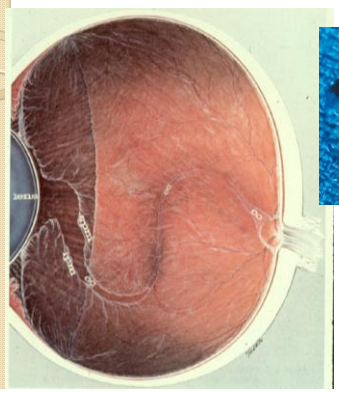
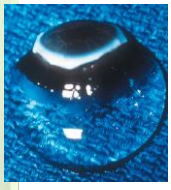


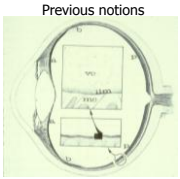


The vitreous is a gel

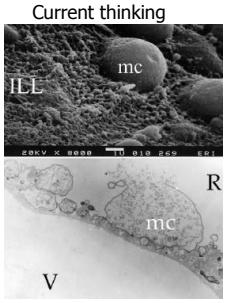


## Normal Vitreous Attachments

Previous notions



Current thinking

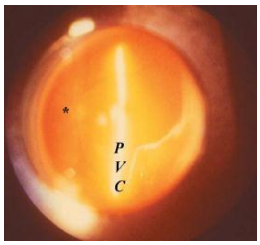



Mueller cells and biological adhesive keep the retina and vitreous together



## Clinical Vitreous Anatomy

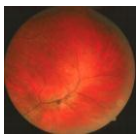
- Molecular composition
  - Water (99%)
  - Solids
- Interfaces
  - Cloquet's canal
  - Hyaloid
  - Lacunae
  - Fibrils






## Anatomy & Physiology

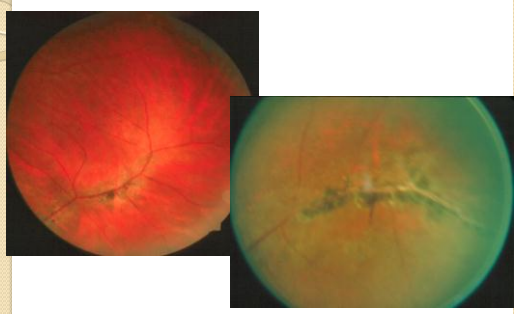
- Abnormal clinical attachments
  - posterior pole – "ERM", macular hole
  - blood vessels –radial lattice
  - between ILM & hyaloid face – cystic tuft, lattice retinal degeneration



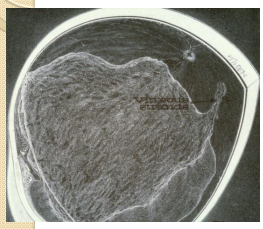
Bishop PN. Structural macromolecules and supramolecular organization of the vitreous gel. Prog Ret Eye Res 2000; 19 (3): 323-344.

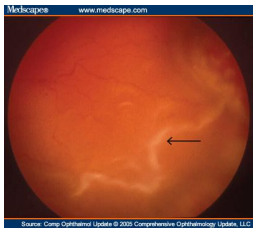


## Radial "Lattice"



## PVD w/ continued macular traction



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## ERM

BCVA 20/60

BCVA 20/20

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## Examining the Vitreous

- At slit lamp – anterior vitreous
  - Hyaloid membrane
  - Compacted fibers
- At slit lamp with PCL– posterior vitreous
  - Weiss ring *
  - Hyaloid
    - Detached
    - Remaining attachments
- OCT!!!

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09/05 64 B/M
Dx ERM- OD / 2001
Next follow up: 09/ 04
VA in $1^0$ position 20/70
BSCVA: 20/25 (w/ head turn)

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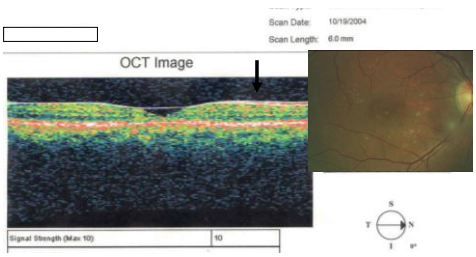


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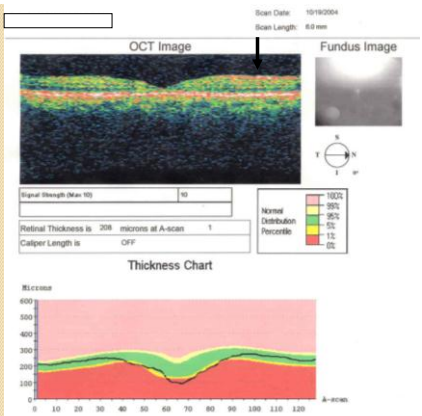


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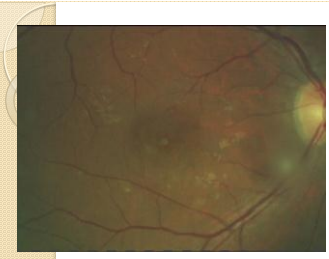

No surgical recommendation
Stable at follow-up 09/05

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## 63 F C/O ↓VA; 20/30


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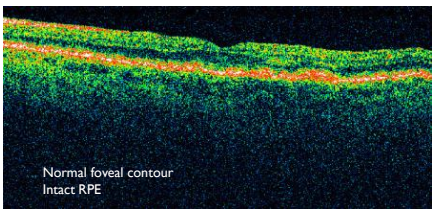
## TD OCT

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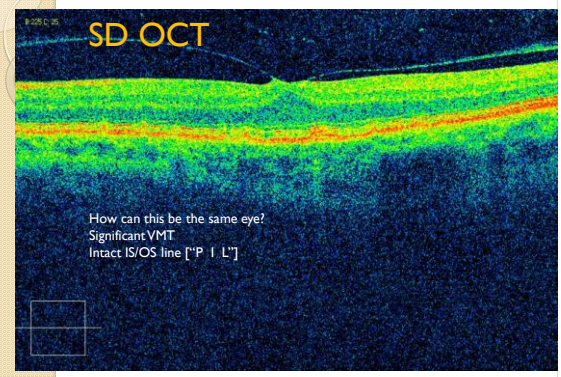
## SD OCT

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## PVD w/ continued macular traction

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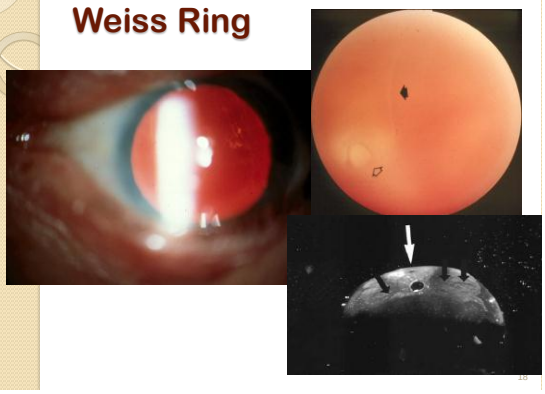
## Weiss Ring



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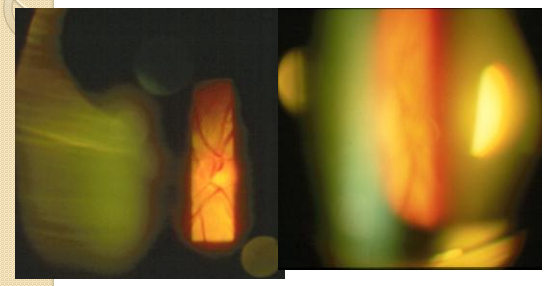
## PVD – Weiss ring



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## Clinical Management of PVD

- Stereoscopic examination for complications (breaks, blood)
- 95% of PVD are uncomplicated!!!
- 50% of patients w/ acute PVD are asymptomatic

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## Clinical Management of PVD

- Patient education (S & R of RD) and reassurance
- Follow-up in 2-6 weeks

http://bjo.bmjjournals.com/cgi/reprint/84/11/1264.pdf

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**Suggested Approach for Referral of Patients With Presumed Posterior Vitreous Detachment - Clinical Scenario Recommended Action**

- Floaters and/or flashes with "red flag" sign of acute retinal detachment
- Monocular visual field loss ("curtain of darkness")

Same-day referral to retinal surgeon; high risk of having retinal detachment

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- New-onset floaters and/or flashes with high-risk features including subjective or objective visual reduction.
- Vitreous hemorrhage or vitreous pigment on slitlamp examination,

Same-day referral to retinal surgeon for dilated eye examination



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**Suggested Approach for Referral of Patients With Presumed Posterior Vitreous Detachment - Clinical Scenario Recommended Action**

- New-onset floaters and/or flashes without high-risk features

Dilated eye examination within 1 to 2 weeks; counsel patient regarding high-risk features that should prompt urgent reassessment.

By whom????



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•Recently diagnosed uncomplicated posterior vitreous detachment with out new retinal tear or detachment.

- New shower of floaters
- New subjective visual reduction

Rule out high risk features

The retinal surgeon or your clinical judgment should determine urgency.



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• Stable symptoms of floaters and/or flashes for several weeks to months, not particularly bothersome to the patient and without high-risk features.

Elective referral to retinal surgeon; counsel patient regarding high-risk features that should prompt urgent reassessment.

SYMPTOMS and RISKS of RETINAL DETACHMENT

2248 JAMA, November 25, 2009—Vol 302, No. 20 (Reprinted) ©2009

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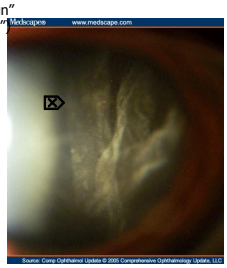
## Clinical Management of PVD

- **Stereoscopic examination for complications (breaks, blood)**

Note RBCs ("Shaffer's sign" "tobacco dust")

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## Vitreoretinal Disorders

**Macular membrane**

- Natural history
  - VA – stable
  - Macular appearance changes
- Surgical alternative
  - Same VA pre and post OP W or W/O pseudohole

Greven CM, et al. Am J Ophthalmol 1998; 125: 360-366.
Massin P et al. Ophthalmology 1999; 106: 580-585.

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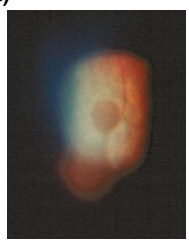
## Acquired Vitreoretinal Disorders

**Posterior pole (con't)**

- Macular hole
  - Pathogenesis
  - Staging / clinical observations
  - Management options



14e

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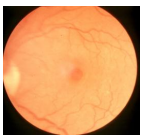
## Vitreoretinal Disorders

- **Macular hole – Pathogenesis**
  (current evidence)
  - Hyaloid detachment (perimacularly)
  - Attachment persistent at foveal center
  - Intraretinal split ⇒ cystic space
  - Lifting of outer retina ⇒ opening of foveal floor
  - ! Full-thickness macular hole …



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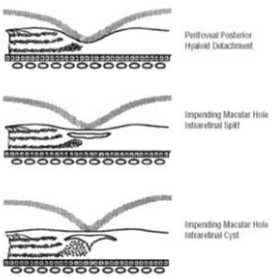
## Macular Hole – Pathogenesis & Staging




From: Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.

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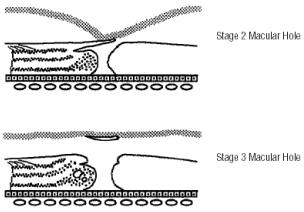
## Macular Hole – Pathogenesis & Staging

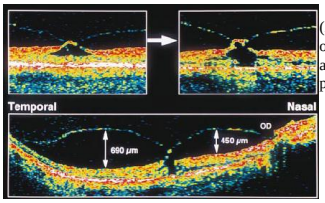



From: Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.



## Evolution of MH – 2 months

Cystic formation @ foveal center (anterior posterior traction by posterior hyaloid)



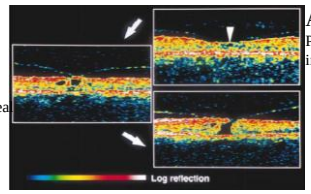

(X 2 mo: operculum adherent to posterior hyaloid)

Note: convex posterior hyaloid (anterior-posterior traction)



## Evolution of MH – 5 months

B. X 2 mo: Intrafoveal cysts, increased perifoveal detachment




A. Impending: Perifoveal detachment intraretinal split (▼)

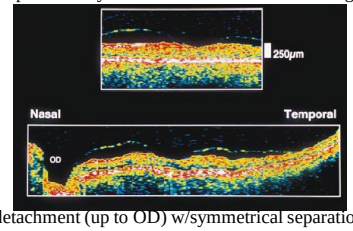
C. X 5 mo: single, large cyst, Stage 2 hole with thickened edge

Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.



## Evolution of MH (Asymptomatic fellow of a patient with macular hole)

Perifoveal posterior hyaloid detachment adherent at edge of macula



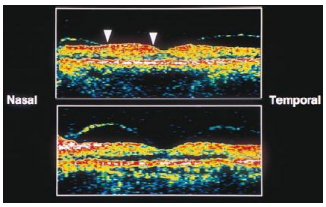

Vitreous detachment (up to OD) w/symmetrical separation to macula

Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.



## Evolution of MH

Asymmetric posterior hyaloid detachment w/adherence @ nasal macula (▼▼)



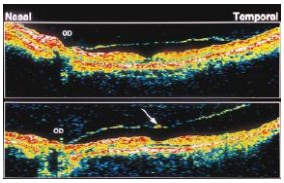

Convex perifoveal posterior hyaloid detachment adherent at clivus

Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.



## Fellow eye of MH

Posterior hyaloid attached at OD; detached over posterior pole

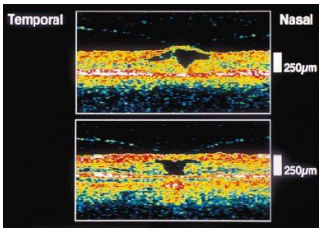



Complete posterior hyaloid separation @ posterior pole with attachment remaining at OD; pseudo operculum (↘)

Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.

## Evolution of MH – Impending in fellow eye

Foveal thickening w/cystic space & intraretinal split (inner retina)

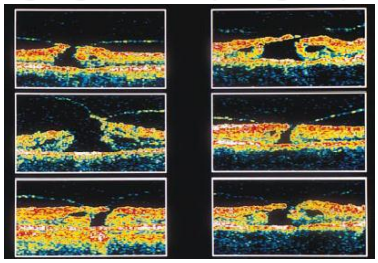



Cyst extends to RPE but roof (inner retina) remains intact

Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.



## Staging of MH (Stage 2)



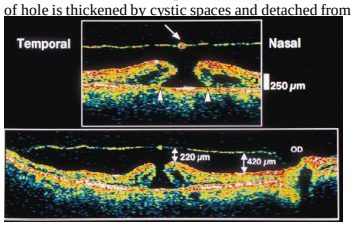
6 different cases with posterior hyaloid adherent to operculum incompletely detached (paradoxically) from the hole edge to which it seems to belong

Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.



## Staging MH (Stage 3)

Operculum (↘) attached to posterior hyaloid;
Edge of hole is thickened by cystic spaces and detached from RPE (▲▲)

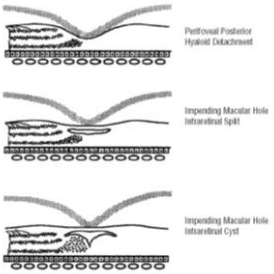



Complete (from p pole) posterior hyaloid detachment

Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.



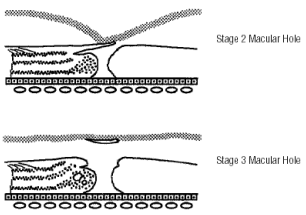
## Macular Hole – Pathogenesis & Staging




From: Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.



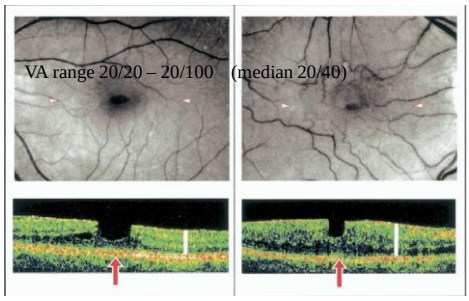
## Macular Hole – Pathogenesis & Staging




Gaudric A, Et al. Arch Ophthalmol 1999; 117: 744.

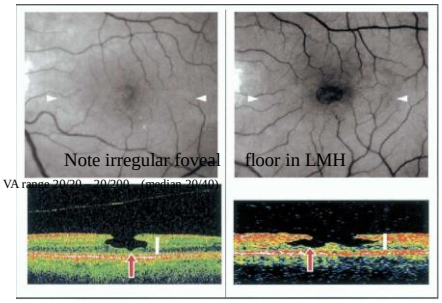


## Macular pseudohole (MPH) vs. lamellar hole (LMH) – DDx by OCT




Haouchine, B et al. Am J Ophthalmol 2004;138:732–739.

## Macular pseudohole (MPH) vs. lamellar hole (LMH) – DDx by OCT




VA range 20/20 – 20/200 (median 20/40)

Haouchine, B et al. Am J Ophthalmol 2004;138:732–739.

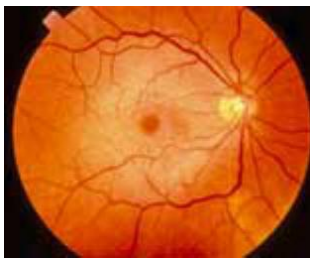


## MH – Prognosis & Management

- **Macular hole - Management options**
  - **Surgical for impending (stages I & II)**
    - **Membrane peel (dissection of posterior hyaloid face from ILM @ macula)**
    - **injection of gas bubble between hyaloid face and ILM to induce PVD**

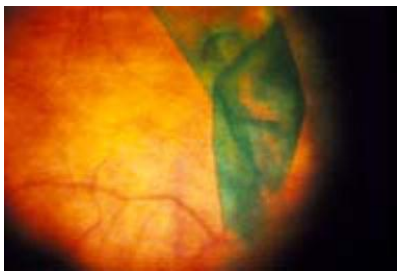


## Pre-op



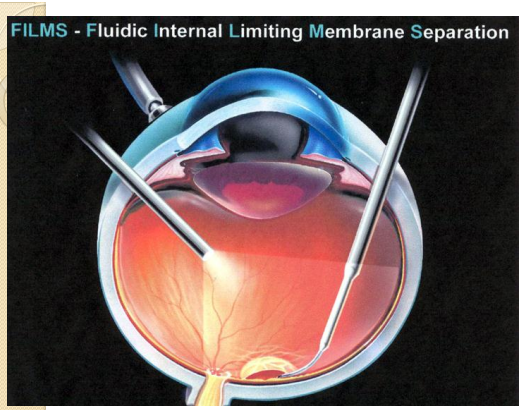


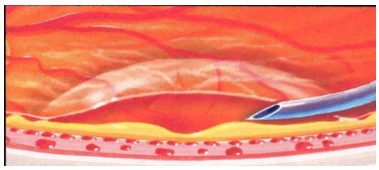
## Intra-op









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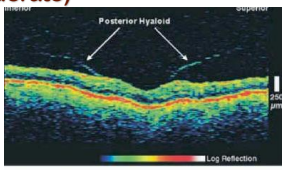
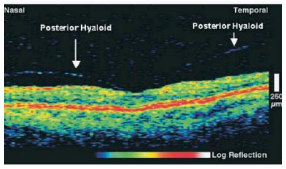
## Prognosis based on imaging studies (Severe and Moderate)

- Stage "0" MH
- Persistent traction @ one (moderate) or both (severe) sides




Chan A, et al. Ophthalmology 2004; 111:2027–2032

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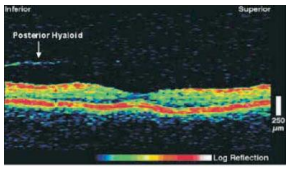
## Prognosis based on imaging studies (Mild)

Lowered risk if NO clear point of insertion is evident; posterior hyaloid is imaged but no PVD on clinical examination




Chan A, et al. Ophthalmology 2004; 111:2027–2032

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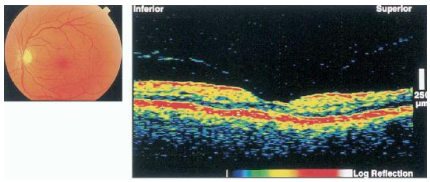
## Clinical example – Stage 0 to 2

### 59 F 20/20




Normal appearing macula and OCT with persistent vitreous insertion (inferior)

Chan A, et al. Ophthalmology 2004; 111:2027–2032

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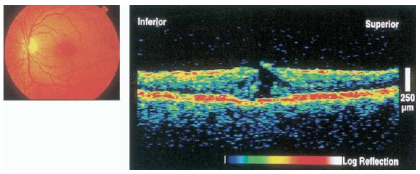
## Clinical example – Stage 0 to 2

### 59 F 20/80




At 6-mo FU, Stage 2 hole

Chan A, et al. Ophthalmology 2004; 111:2027–2032

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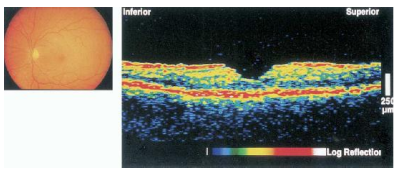
## Clinical example – Stage 0 to 2 to resolution with surgery (PPV)




At 2-mo Post-op, Resolved MH and normal foveal contour 20/20

Chan A, et al. Ophthalmology 2004; 111:2027–2032

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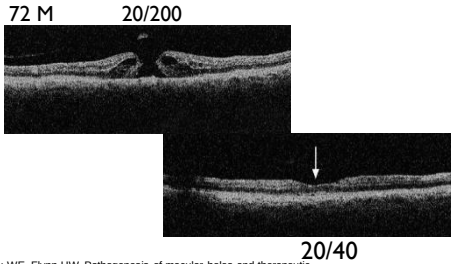
## Spontaneous Macular Hole Resolution




Smiddy WE, Flynn HW. Pathogenesis of macular holes and therapeutic implications. Am J Ophthalmol 2004;137:525–537.

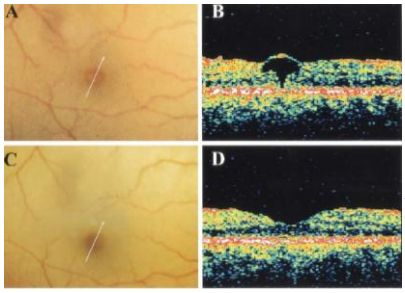
55

## MH – Prognosis & Management

- Macular hole - Management options - Observation (? PVD)
  - prognosis for involved eye is dependent on spontaneous PVD if "impending" (stage 1 or 2)
    - follow-up monthly if VA is stable for up to 6 months
  - prognosis for fellow eye (regardless of stage) may be dependent on presence /absence of PVD; risk is ~ 15% over 5 years

56

## Spontaneous Resolution of MH (OD)



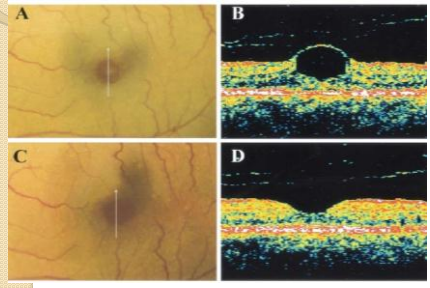

Stage 1 (OD20/20)

X 6 mo (20/20)

Asrani H, et al. Am J Ophthalmol 2002; 134: 447.

57

## Spontaneous Resolution of MH (OS) !!!



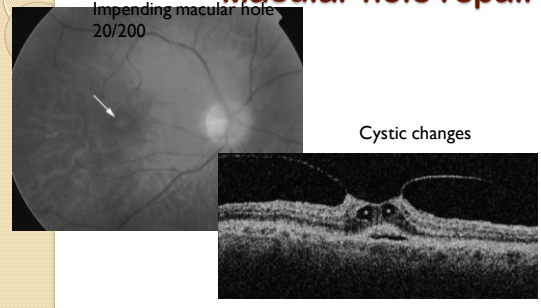

Stage 1 (OS 20/30)

X 10 mo (20/20)

Asrani H, et al. Am J Ophthalmol 2002; 134: 447.

58

## Macular hole repair




Smiddy WE, Flynn HW. Pathogenesis of macular holes and therapeutic implications. Am J Ophthalmol 2004;137:525–537.

59

## Macular hole repair


Smiddy WE, Flynn HW. Pathogenesis of macular holes and therapeutic implications. Am J Ophthalmol 2004;137:525–537.

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# Time lapse Macular hole repair

http://www.clinical-ophthalmology.com/index.php?option=com_content&view=article&id=901:open-access-macular-hole-formation-progression-and-surgical-repair-case-series-of-serial-oct-and-time-lapse-morphing-video-study&catid=27:news-articles&Itemid=71

61

55 BF presents for follow-up (x 4 mo.)

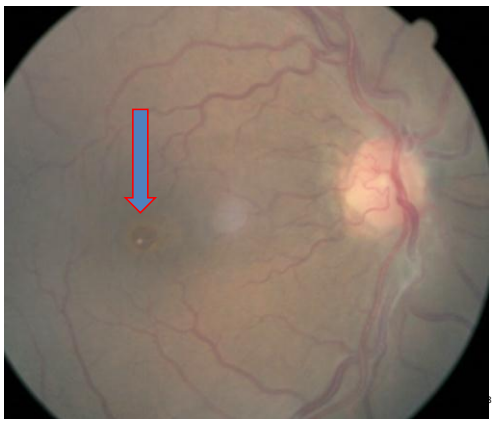
[Macular hole]

**<u>VA 20/200 OD</u>**

20/25 OS

1

62



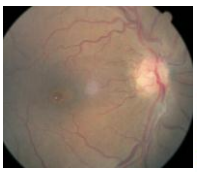
The left eye appears be uninvolved

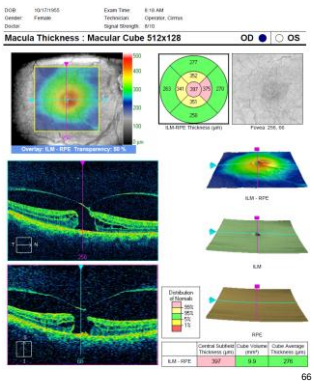
VA 20/200 OD

**<u>20/25 OS</u>**

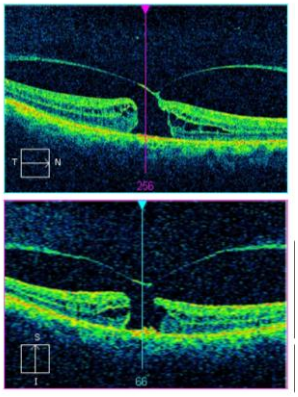
64

Correlation between clinical and OCT

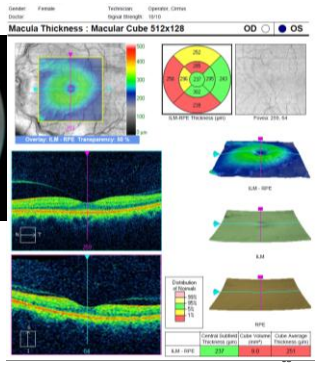





66

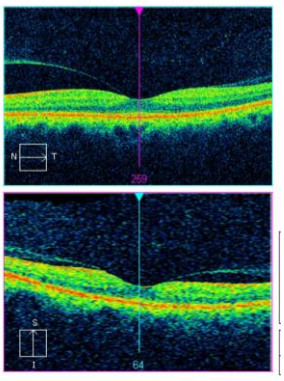


67

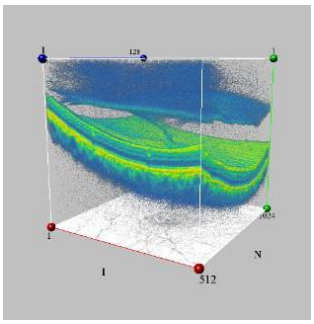



The LEFT eye is normal except for vitreo-macular traction.

Note VMT



## 3D cube OD



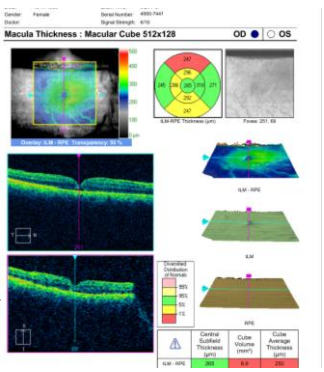

70

## Management and follow-up

- Visit of 14 March 2012
- VA
  - 20/80 OD!
  - 20/25 OS – no change in OCT
- Further update: seen 6/19/2012
- Scheduled for mac hole repair (OD)

71

## Post-op OD



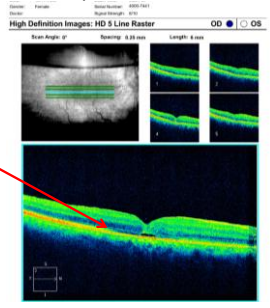

Note:

- relatively normal macular contour & thickness
- But *absence* of PRL

GP: S/P vitrectomy, IOL (OD)
(9/18/12); VA = 20/400

High-definition images

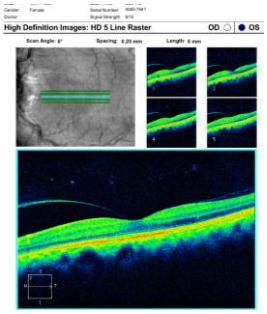
Note absence of photoreceptor layer.




High-definition images

*Fellow eye* with remaining VMT but no retinal defect.

Contrast this to the next case with lamellar macular hole




## MH – Prognosis & Management

- **Macular hole - Surgical**
  - **Surgery for stages *III and IV***
    - **Membrane peel (dissection of posterior hyaloid face from ILM @ macula) plus gas bubble**

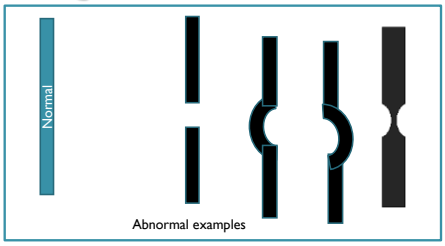
***[surgical prognosis is better than 50/50 for stages III and IV***

***(posterior segment complications occur in 41% of cases; mainly due to RD and disruption of RPE which may be due to light toxicity or surgical trauma)]***

***Nonsurgical complication includes ulnar neuropathy***

75

## MH Diagnosis – Watzke-Allen




Shown to patients to assist in their description of the slit beam
Beam can be positioned vertically (traditional) or horizontal

From: Tanner V, et al. Arch Ophthalmol 2000; 118:1059.

76

## MH Diagnosis – Watzke-Allen

| Slit Beam Description When Placed Over Center of Macula | | No. of Holes (Total = 40) |
|---|---|---|
| Thinned in Both Vertical and Horizontal Orientations | | 24 |
| Broken in Both Horizontal and Vertical Orientations | | 9 |
| Thinned Vertically and Broken Horizontally | | 5 |
| Thinned Horizontally and Broken Vertically | | 1 |
| Kinked Vertically | | 1 |

Beam positioned vertically & horizontally

Tanner V, et al. Arch Ophthalmol 2000; 118:1059.

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## MH – Differential Diagnosis

- **ERM (pseudohole)**
- **ARM**

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## Macular Hole - Prognosis

- 60% of stage 1 holes abort (thought to be due to spontaneous PVD)
- Progression of the reminder to stage 4 is from 1-4 mo.
- Initial VA predicts outcome (i.e., better VA better prognosis; if VA 20/50-20/80, 2/3 will progress to full-thickness hole)

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## Macular Hole - Prognosis

- Risk Factors: female gender, age > 55 years
- Majority of stage 2 hole progress (best case - 33% resolve)
- Spontaneous resolution of stage 3 or 4 holes is < 10%
- Fellow-eye involvement - between 3 and 22%; PVD - ? protective

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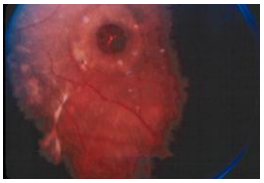
## Macular Hole - Prognosis

- Surgical intervention is better in early low-stage cases
  - vitrectomy with gas bubble placement - (growth factors confer no improvement in outcome)
- WHAT ABOUT TRAUMATIC MACULAR HOLE???



LS

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## Peripheral VRT

- Retinal breaks
  - Round (Hole)
  - Linear (Tear)
- Lattice retinal degeneration
- Retinoschisis
- Retinal detachment

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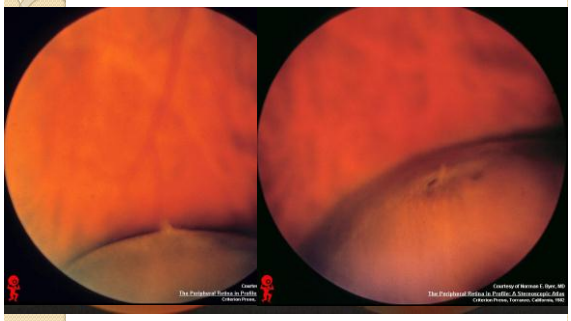
## Retinal Breaks

- I. Operculated holes
  - Probably arise from *cystic retinal tufts*
  - Generally asymptomatic and stable
  - Always secondary to vitreous detachment (local or general)

V

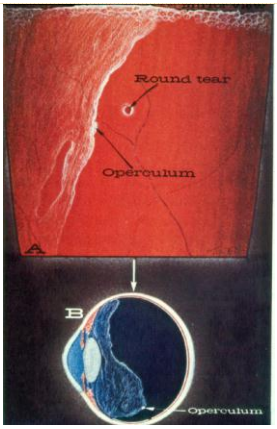
90

## CRT w/retinal break @ indentation



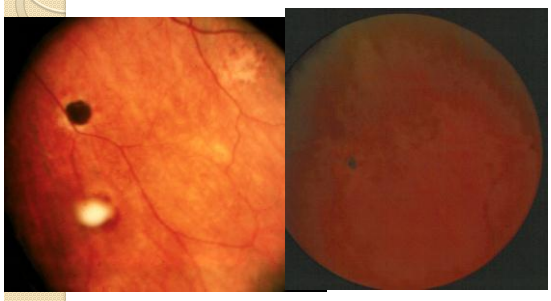
91

## Operculated Break



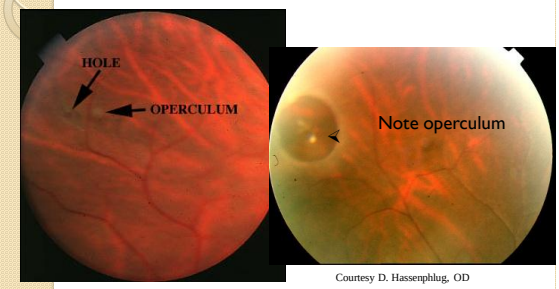

92

## Operculated Breaks



93

## Operculated Breaks




Courtesy D. Hassenphlug, OD

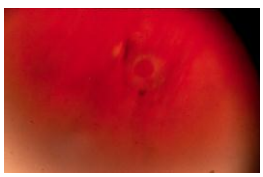
94

## Large flap tear @ indentation

95

## Retinal Breaks

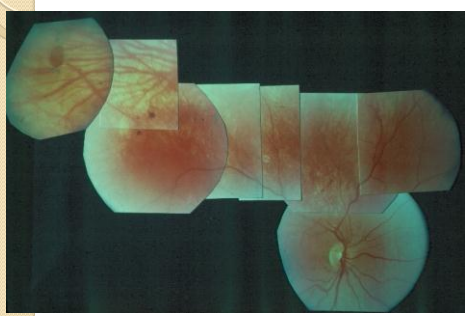
- II. Atrophic holes
  - Small (< 1 DD) and stable
  - Asymptomatic
  - Pigment and / or fluid surround
  - Management: Observation for *progression*



v

96

## Atrophic Round Break



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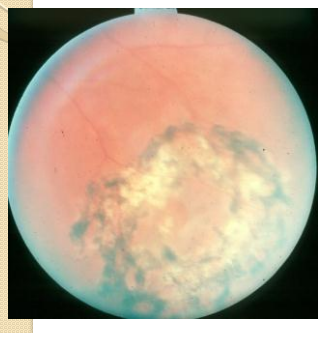
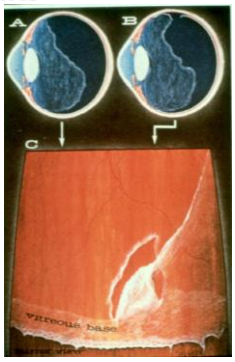
## Atrophic Round Break - Repaired



98

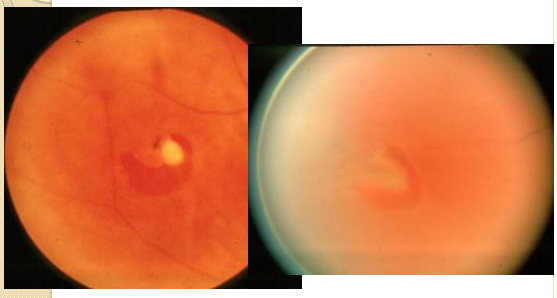
## Retinal Breaks

- III. Tears
  - Arise secondary to PVD
  - May be symptomatic and require consideration for prophylaxis
  - Margins are: anteriorly – vitreous base; posteriorly – hyaloid




99

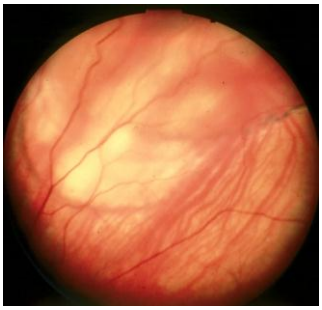
## "Flap Tears"
(linear retinal breaks)



100

## ???

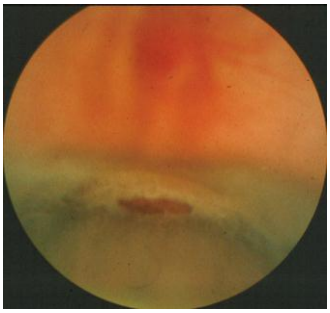
- Obscured choroidal vasculature
- Retinal vessels change course
- Pigment at margin



101

## Retinal Erosion at Ora Serrata

- Intrabasal location
- Asymptomatic
- Seen on indentation
- Observe



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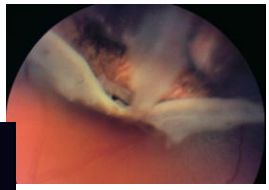
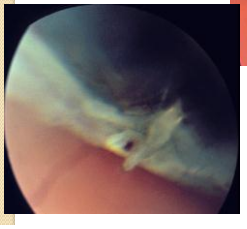
## Retinal Dialysis

- Secondary to trauma
- Safe to indent?





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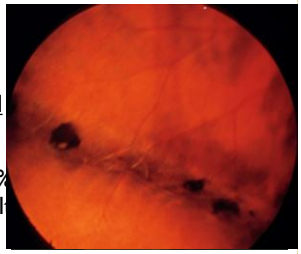
## Lattice Retinal Degeneration

- Prevalence: 10% maximum
- The disorder most frequently associated with RD
- BUT… only about 1% of all lattice will result in RD



104

## Lattice Retinal Degeneration

- Clinical appearance
  - Circumferential arrangement parallel to equator
  - 2/3 within 1 clock hour of 12 or 6 o'clock positions
  - Size ranges from .16 to 12 DD in length and 0.1 to 2.5 DD in width
  - Average number of lesions = 2/eye (range: 1-19)
  - Usually (always?) Bilateral…

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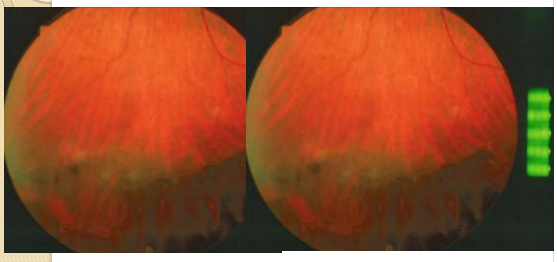
## Lattice 27 WF



106

## Lattice Retinal Degeneration

- Clinical characteristics in a Primary Care Population* (600 consecutive patients; n= 31 subjects [5.2%])
  - Prevalence consistent with other studies from selected populations (6-8%)
  - No gender predilection compared to general clinic population
  - *Lesions (n = 62) in all cases were within 1 clock hour of 12 or 6 O'clock and*
    - 42/62 (77%) inferiorly

*Semes LP, Holland WC, Likens EG. Optometry 2001; 72: 247-50.

107

## Lattice Retinal Degeneration

- Clinical characteristics in a Primary Care Population*
  - *20/62 lesions were found to have holes*
    - Of 31 patients, 19 (61.3%) bilateral
      - Other studies reported 33.7 – 51.6%

*Semes LP, Holland WC, Likens EG. Optometry 2001; 72: 247-50.

108

## Lattice Retinal Degeneration

- Characteristic Clinical appearance (con't)
  - Thinned retina due to loss of inner layers
  - Liquefied vitreous complementary to thinned retina
  - Surround of vitreous adherent to the retina

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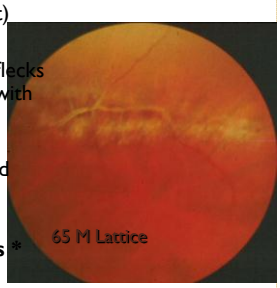
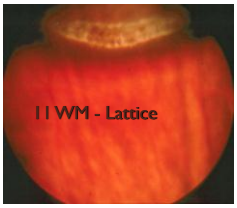
## Lattice Retinal Degeneration

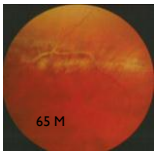
- Clinical appearance (Con't)
  - Pigment alterations
  - Whitish-yellow surface flecks (best seen in profile or with fundus biomicroscopy; "Snowflake")
  - Round, oval, or linear red craters
  - Small atrophic holes
  - **Branching white lines** *




110

- Yellow atrophic spots (depigmentation of the RPE)
- Tractional tears at the ends or posterior margins of lesions (with PVD)

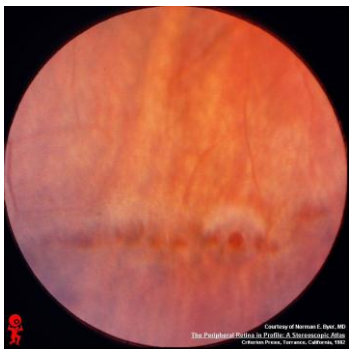



111

## Lattice

with round hole and small cuff of SRF
11 YOM



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## Lattice

In two parallel rows

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## Lattice Retinal Degeneration

- Other clinical characteristics
  - *Begins early in life* (greatest number of new cases is discovered between the ages of 10 and 20 years)
  - *95% of changes occur before the age of 19 years*
  - *Tears* result secondary to PVD
    - Frequency is between 1.0% and 2.4%
  - May have a hereditary component
    - Transmittance = AD
  - No gender or race bias

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## Lattice Retinal Degeneration

- Clinical management – basis for observation
  - History of prophylactic treatment
  - Natural history studies of Byer and Hyams *et. al.*
  - Indications for prophylactic consideration (fellow eye RD *; See Tables)
  - Risk factors for retinal break predisposing to RD

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## Lattice Retinal Degeneration

- Risk factors for retinal breaks predisposing to retinal detachment (RD)
  - *Myopia > 3.00D + age < 30 years (when associated holes within lattice lesions); Myopia > 6.00D (any age)*
  - *PVD in myopic patients over the age of 49 years (acute retinal tear and subsequent RD)*
  - *Fellow-eye detachment due to LRD*

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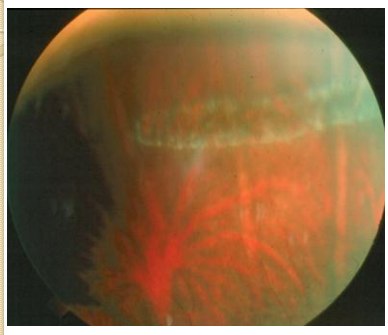
## Lattice 30 WF



v

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## Lattice Retinal Degeneration

- Additional risk factors for retinal breaks predisposing to retinal detachment (RD)
  - Lattice > 6 clock hours (180 degrees)
  - Application of miotics
  - Intraocular surgery (cataract extraction); *YAG capsulotomy*

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## Lattice Retinal Degeneration

- Management of LRD
  - Observation
  - Documentation
  - Education (**Symptoms & precautions RD; E&U**)

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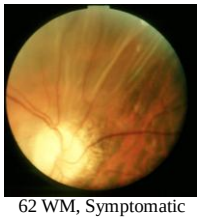
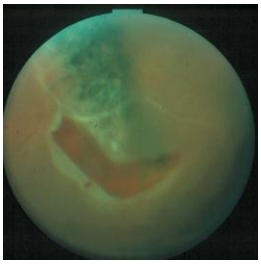
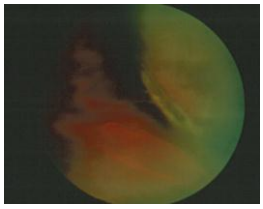


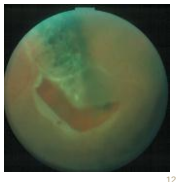
62 WM, Symptomatic



120



S/P buckle



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## Other disorders/degenerations

- **Retinoschisis**
  - more prevalent > 40
  - inferior temporal
  - breaks (holes may be in either layer i.e., outer [next to the RPE], or inner, [next to the vitreous])

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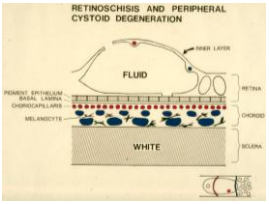
## Retinoschisis

- RD is unlikely; greatest probability is with holes in <u>both</u> layers
- histopathology -

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## Retinoschisis

- <u>Definition</u>: a split between the inner (neural) and outer (epithelial) retinal layers with potential for breaks in either layer;
- elevated, bullous appearance
- DDx: retinal detachment

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## Retinoschisis

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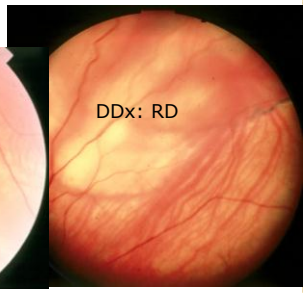
## Retinoschisis (49 M) OD: -6.50D




Note wrinkled inferior retina

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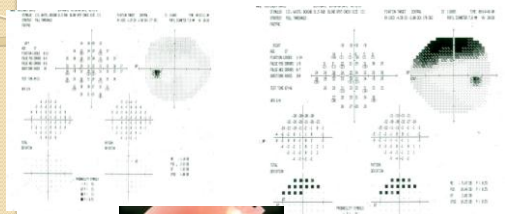
## Retinoschisis (49 M)



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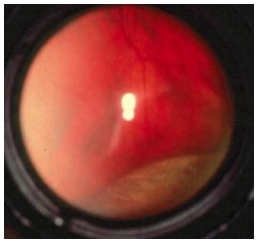
## Retinoschisis



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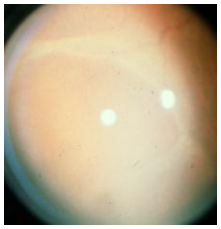
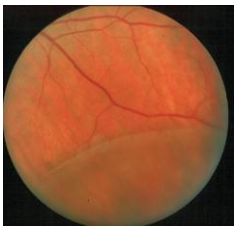
## Retinoschisis





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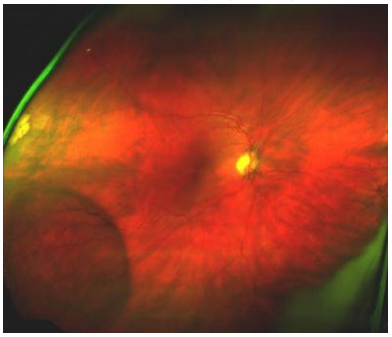
## Retinoschisis Imaged With Panoramic 200 (Optos system)



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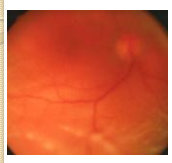
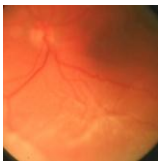
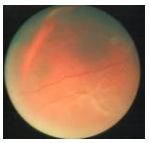
## Schisis-Detachment







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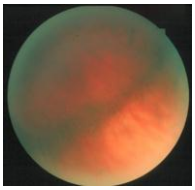
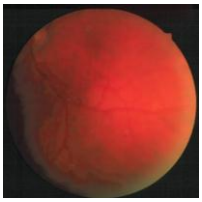
## Schisis-Detachment
(S/P Scleral buckle)





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## Retinoschisis

- Rare under the age of 40
- Generally stable but distinct appearance
- Inferior temporal quadrant most frequent site
- Breaks in both layers increase risk for RD
- Management is observation with photo documentation and visual fields

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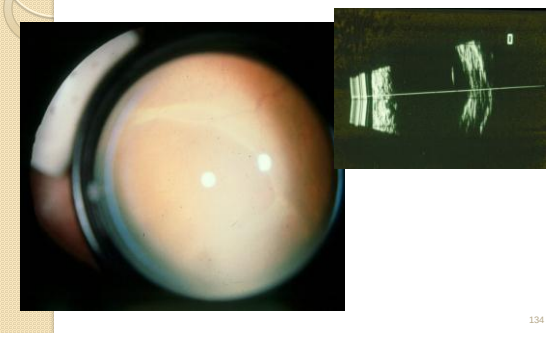
## Retinoschisis



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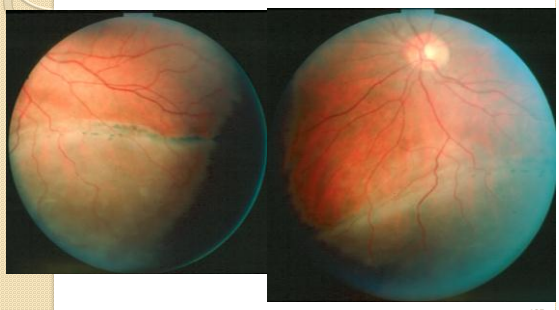
## RD w/ "demarcation lines"



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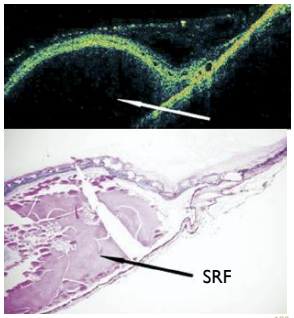
## Localized retinal detachment

- Recent correlations between OCT and histology
- Note retinal cysts, SRF, vitreous [in OCT image], sensory retina separated from RPE

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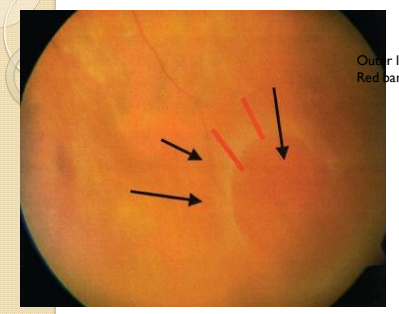

Outer layer break (arrows)
Red bars = OCT sections

Kamppeter BA, Jonas JB. Optical coherence tomography of a peripheral retinal schisis with an outer retinal layer break. Acta Ophthalmol Scand. 2004 Oct;82(5):574-5.

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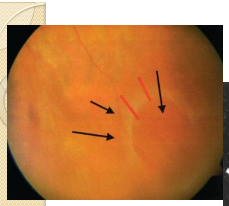
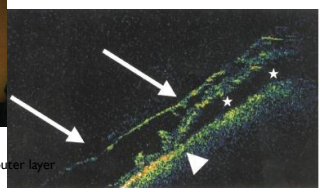
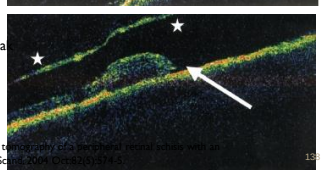




Inner layer (arrows)
Arrowhead attached and detached outer layer

Arrow shows edge of outer layer break
* Is detached inner layer



Kamppeter BA, Jonas JB. Optical coherence tomography of a peripheral retinal schisis with an outer retinal layer break. Acta Ophthalmol Scand. 2004 Oct;82(5):574-5.

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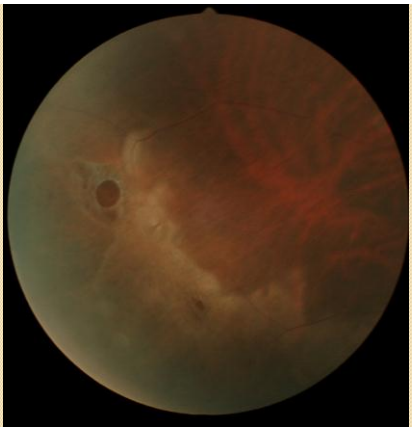

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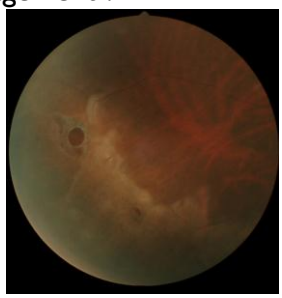
## Atrophic Retinal Hole w/o significant SRF w/in WWOP

- Management ?



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## Prophylaxis Guidelines - **Symptomatic** Patients

| Lesion | Treatment |
|---|---|
| • Flap Tear | Frequently |
| • Operculated Holes | Sometimes |
| • Atrophic Holes | NO |

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## Prophylaxis Guidelines - **Asymptomatic** Patients

| Lesion | Circumstance | Treatment | Alternative |
|---|---|---|---|
| Flap Tear | Fellow Eye/Cataract Sx | Frequently | Rarely otherwise |
| Operc. Holes | Regardless | Rarely | Rarely (Fellow Eye) |
| Atr. Holes | NONE | NO | Rarely (Fellow Eye) |
| Subclinical RD* | Fellow Eye/Cataract Sx<br>Hi Myopia, Pseudophakia | Frequently | Sometimes if Phakic |

*2% will progress to RD and 2% will spontaneously regress (8 mo – 33 yr F/U)
(Byer NE. Ophthalmology 2001; 108:1499-1504)

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## Final Thought…

*Always assess the status of the vitreous (i.e, "attached or detached"; "clear or cloudy")*

*And examine the retina in profile.*

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