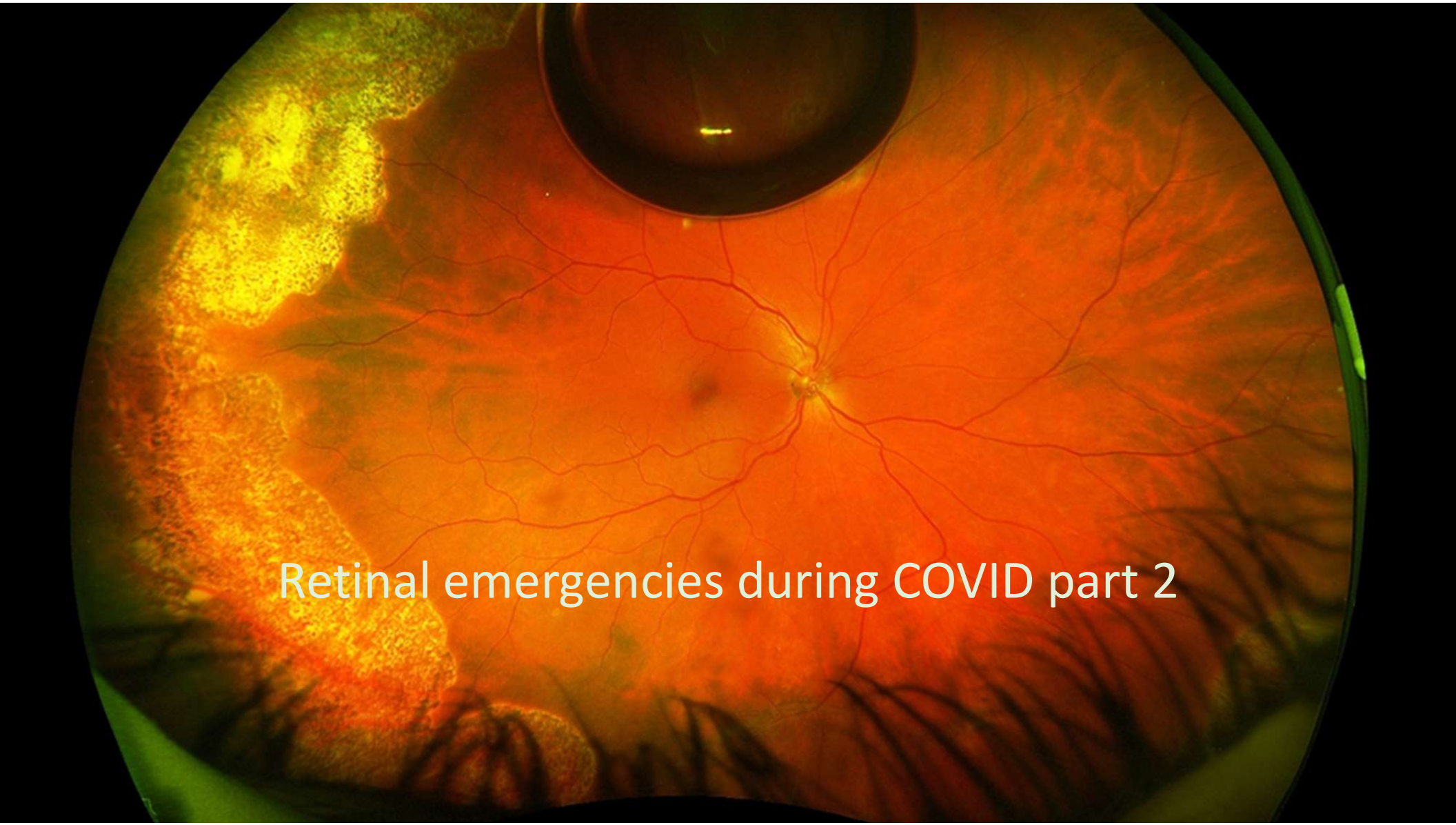
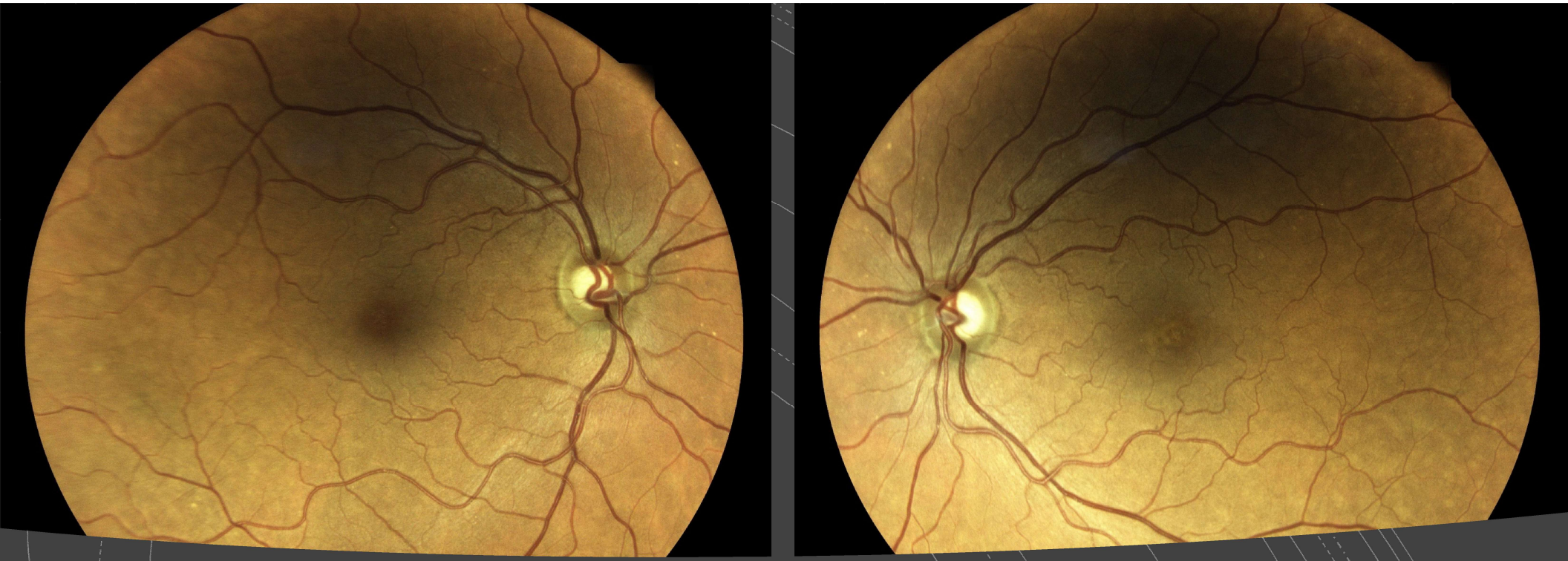
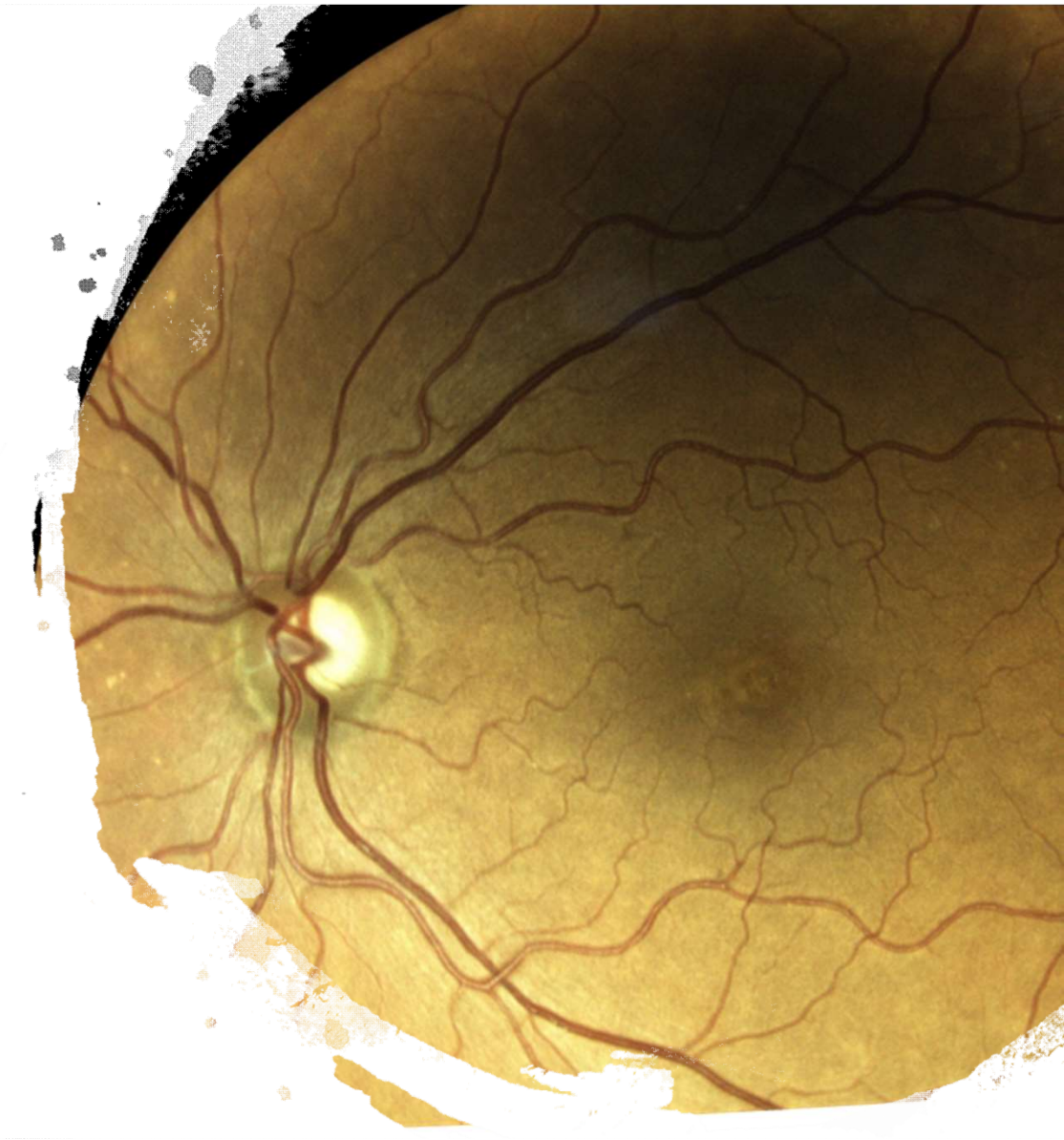

Retinal emergencies during COVID part 2



Mrs. S.C.

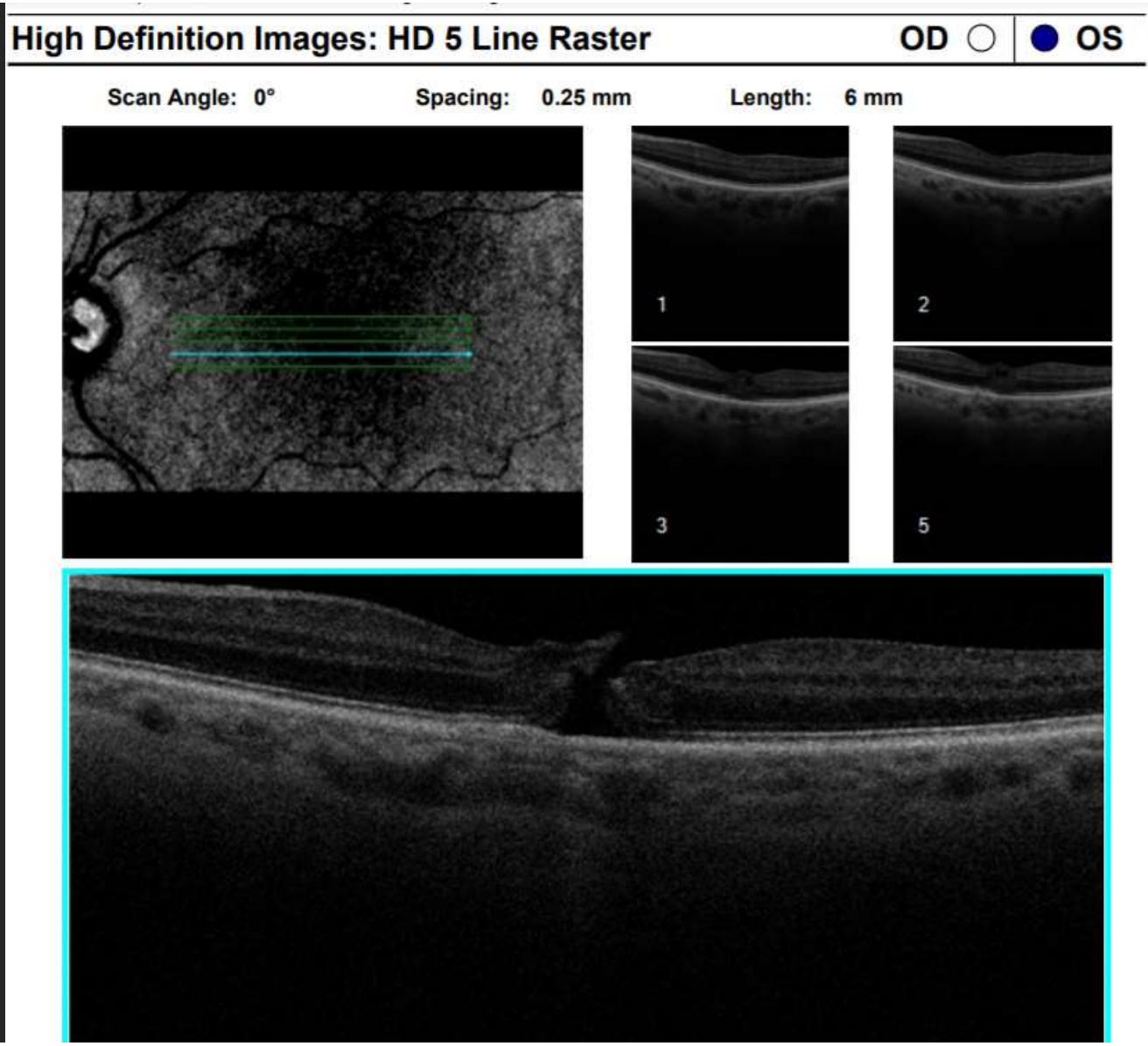
Mrs. S.C. aet 65

- Retired radiographer
- Font larger over last 6/12
- +7.00/-1.25 x 100 6/6 +7.25/-0.75 x 72.5 6/19
- PI OU
- ACLO narrow AC
- L amsler +ve
- IOP 19 R 22 L



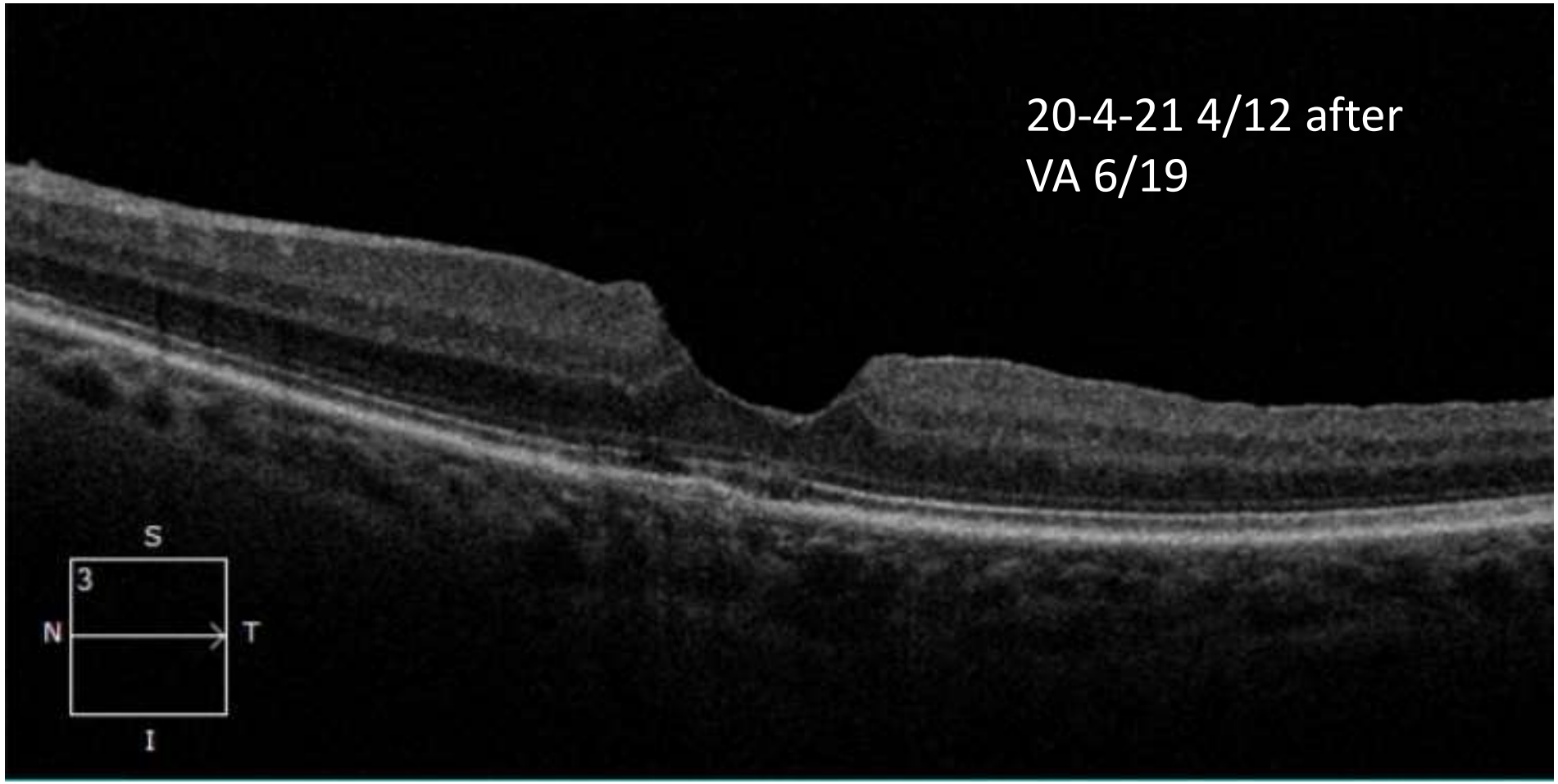
Mrs.S.C.

Urgency Or emergency?



Mrs. S.C. Urgency or emergency?

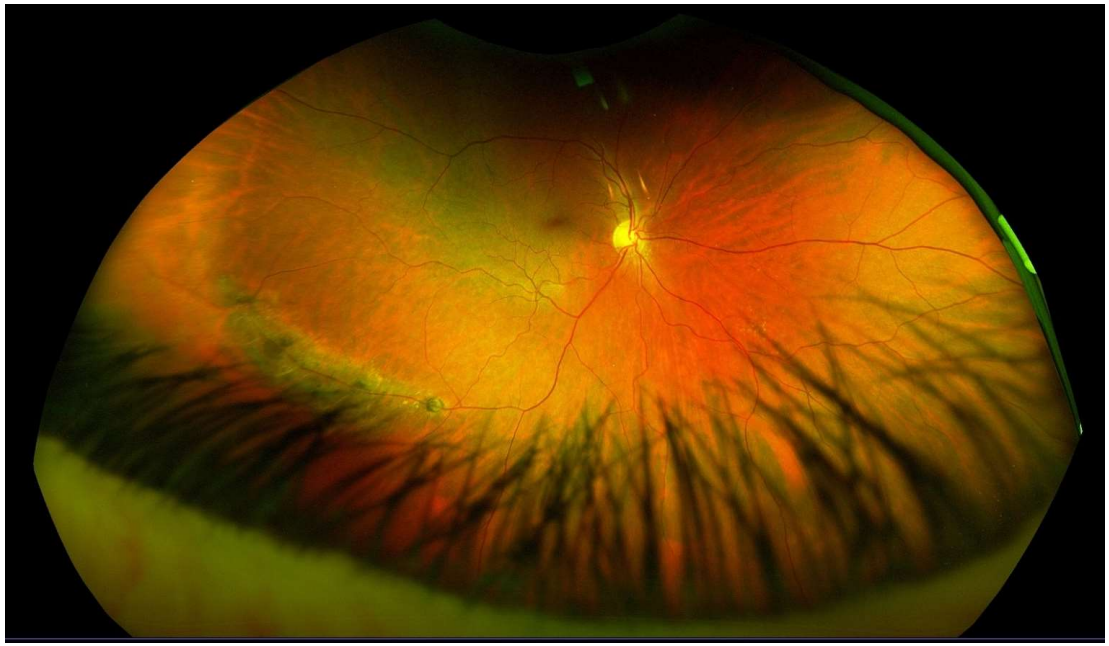
- Sx to repair macular hole scheduled 1/12 later
- High hyperope, shallow AC
- ILM peel, Vitrectomy, gas tamponade = AC closing and high IOP
- Cataract combined procedure
- The bubble acts as an internal, temporary bandage that holds the edge of the macular hole in place as it heals.
- Chin Face down position for 1/52
- Operate within 3/12 if acute or sooner
- PF or maxidex 4/52 and IV triamcinolone if CMO

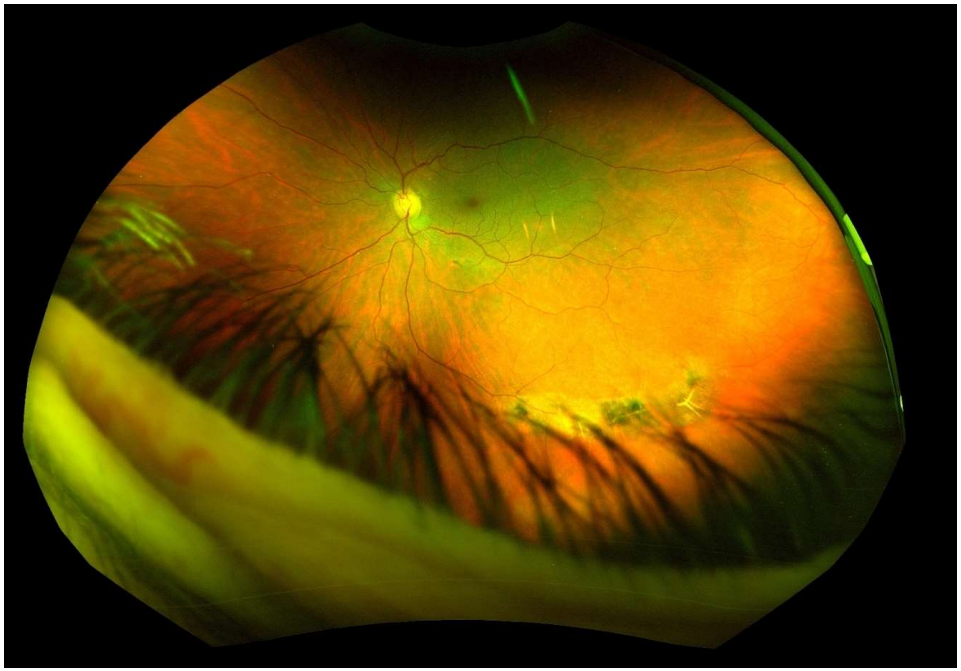

20-4-21 4/12 after
VA 6/19
S
3
N
T
I

Mrs. A.D. aet 58 17-7-20

Binocular flashing temporal side past 3/12
COVID couldn't attend
Vision fine
Esp in dark & head movement
Prior floaters, none recently
Prior Hx retinal issues

Mrs. A.D.





LD progress to RD?

Sclerosed vessels, irregular pigment, thin retina, atrophic holes

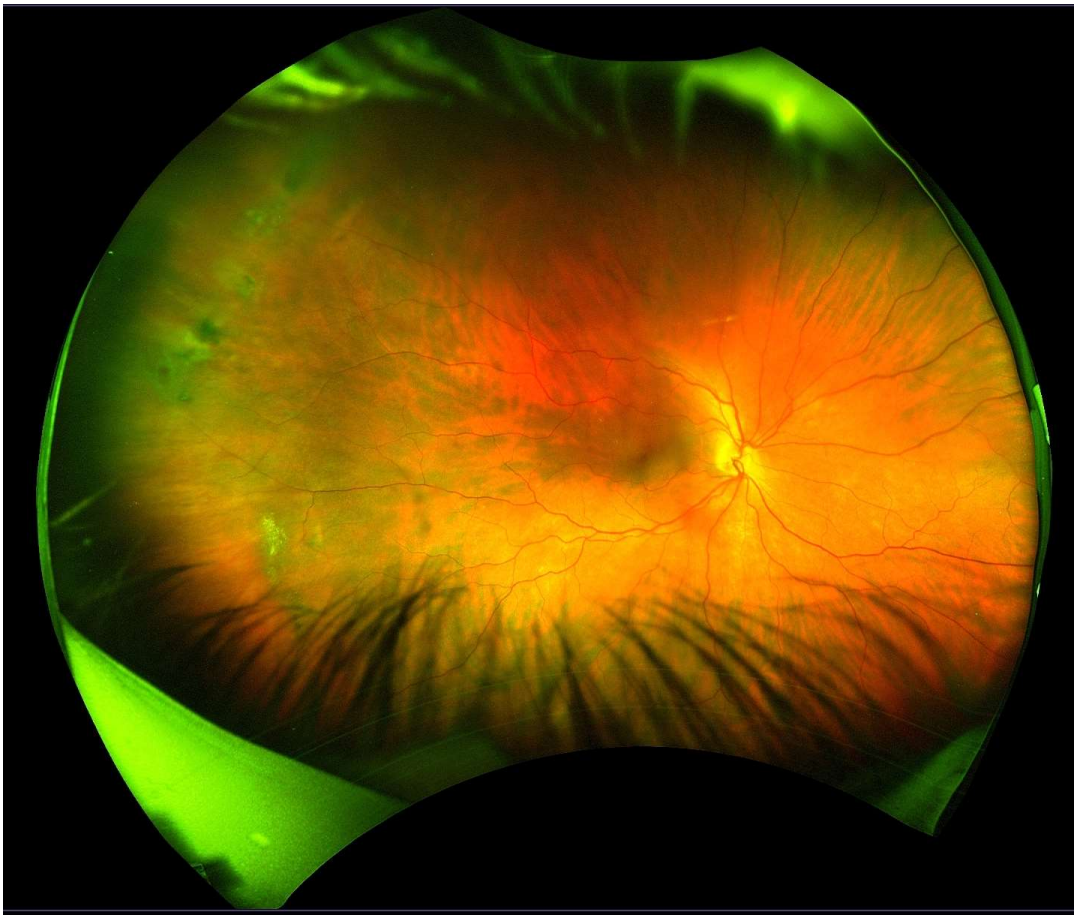
- General population < 10%
- Myopes → 25% including children
- Higher prevalence of LD in high myopes

Lattice most important risk for RD

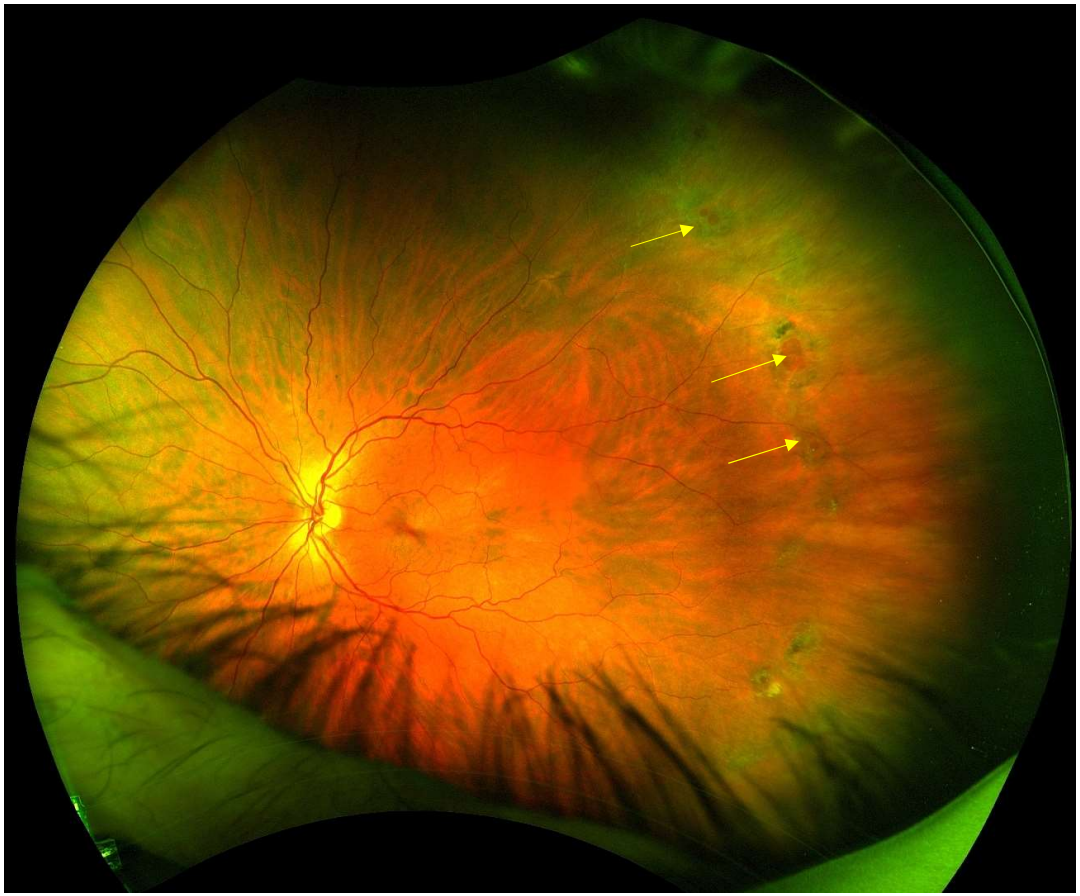
- Up to 60% in cases of rRD have LD via VR traction and stronger vitreal adhesion Sasaki et al 1995; Tilllery et al 1976; Byer 1974
- Search for tears/holes near edge or outside of lattice
- Those IN LD often pigmented over and SAFE
- Fellow eye?
- OCT shallow elevation (Monaco?)

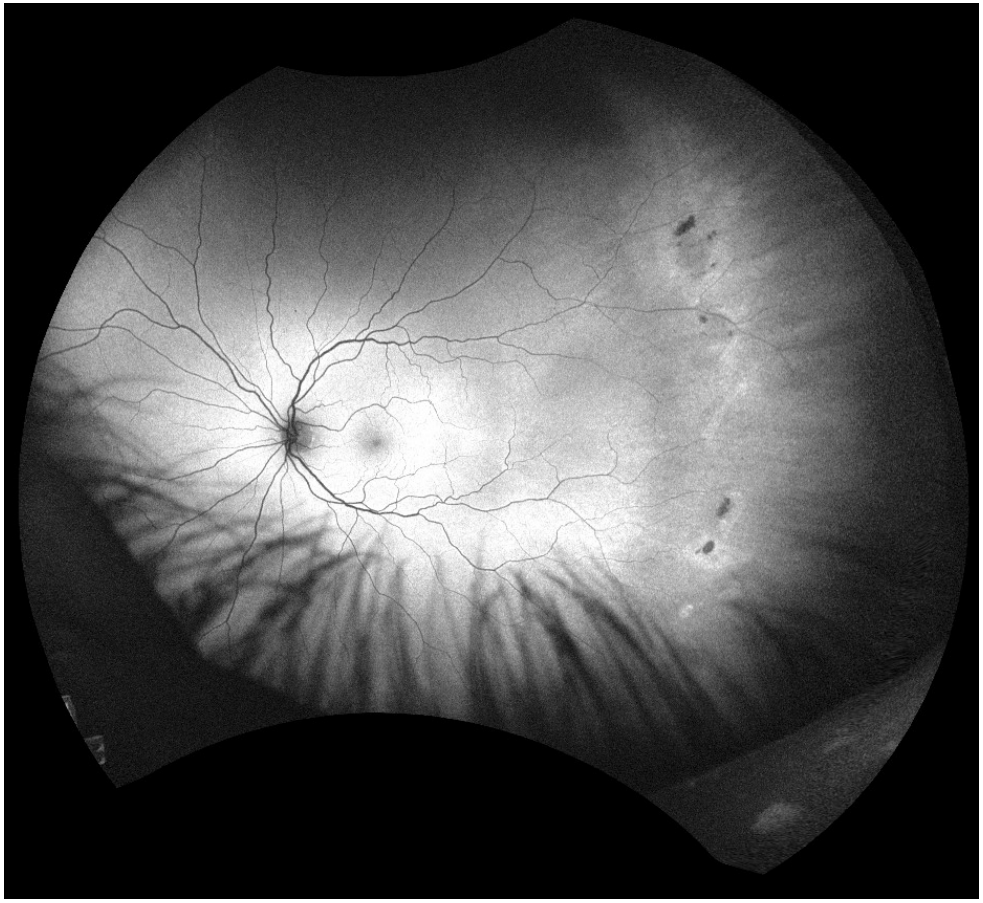
Mr. J.B. aet 63

attending clinic since aet 52 (2009), sister also has lattice and are both emmetropes areas of Hypoautofluoresence



Mr. J.B. aet 63 LE with atrophic holes within lattice and pigment hypertrophy surrounding

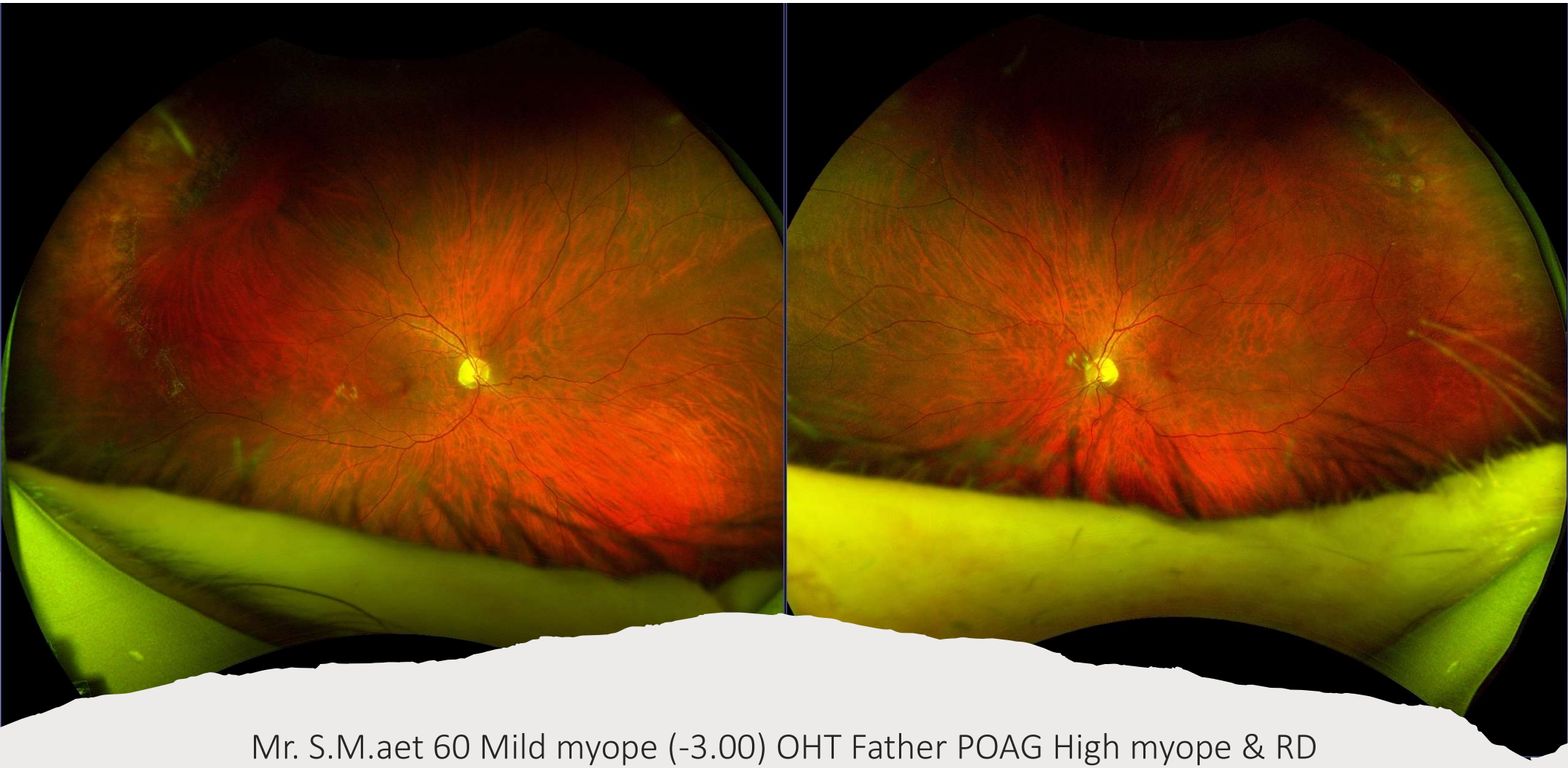




Long-term Natural History of Lattice Degeneration of the Retina

Norman E. Byer, MD AAOVOLUME 96, ISSUE 9, P1396-1402, SEPTEMBER 01, 1989

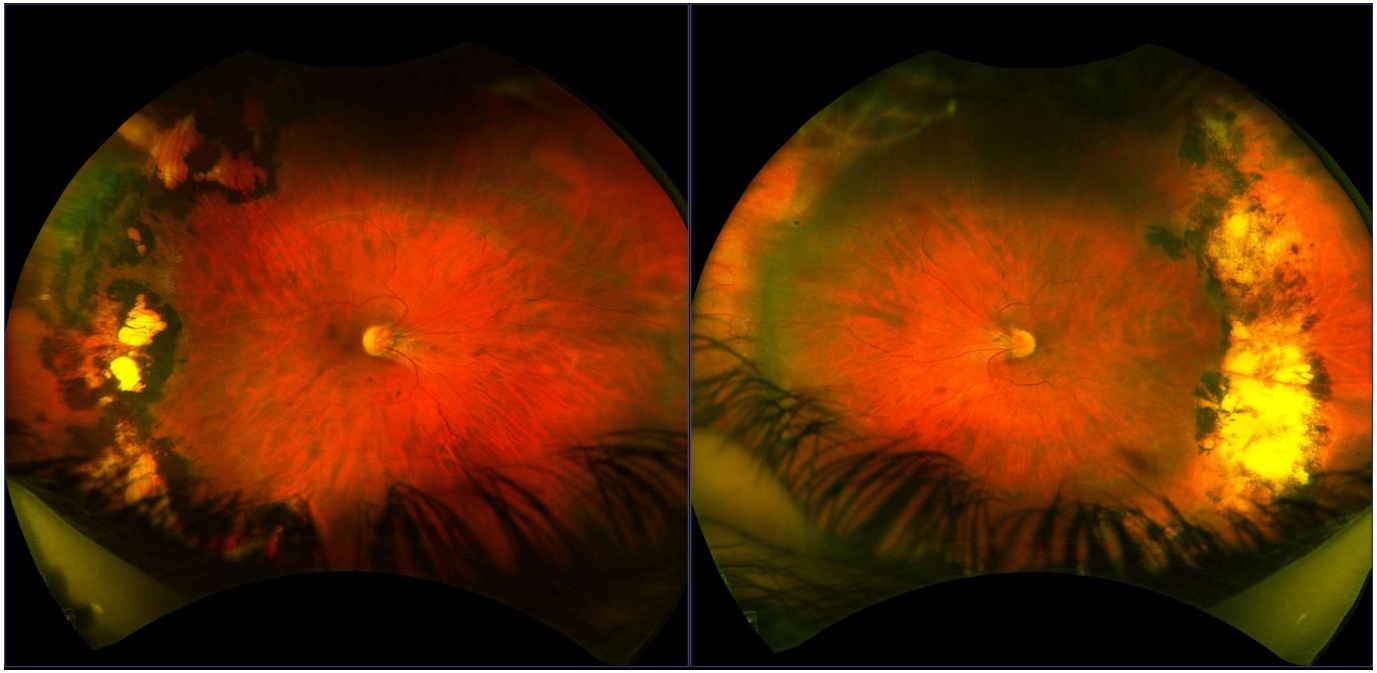
An initial series of patients with lattice degeneration was reported to the Academy in 1964 and a follow-up report given in 1973. A continuing prospective study of 276 consecutive untreated patients (423 eyes) is now reported with follow-up from 1 to 25 years (average, 10.8 years). Clinical retinal detachments (RDs) occurred in 3 (1.08%) of 276 patients and 0.7% of eyes. Tractional retinal tears were seen in eight (2.9%) patients and 1.9% of eyes; one of these led to a clinical RD. Clinical or progressive subclinical RD occurred in 3 (2%) of 150 eyes with atrophic holes. Subclinical RD was seen in 10 (6.7%) of 150 eyes with atrophic holes, involving 9 (7.5%) of 120 patients, and had a much less serious prognosis than clinical detachment. Prophylactic treatment of lattice with or without holes in phakic, nonfellow eyes should be discontinued.



Mr. S.M.aet 60 Mild myope (-3.00) OHT Father POAG High myope & RD
No RD Symptoms or signs, vision good no PVD (yet)
“What can I do to not progress to retinal detachment?”

What can I do to stop LD going to RD?

Olden days
Pt with ROP
-10.50/-1.00 x 32.2.5 -12.00/-0.75 x 45
RD LE and prophylactic cryopexy RE



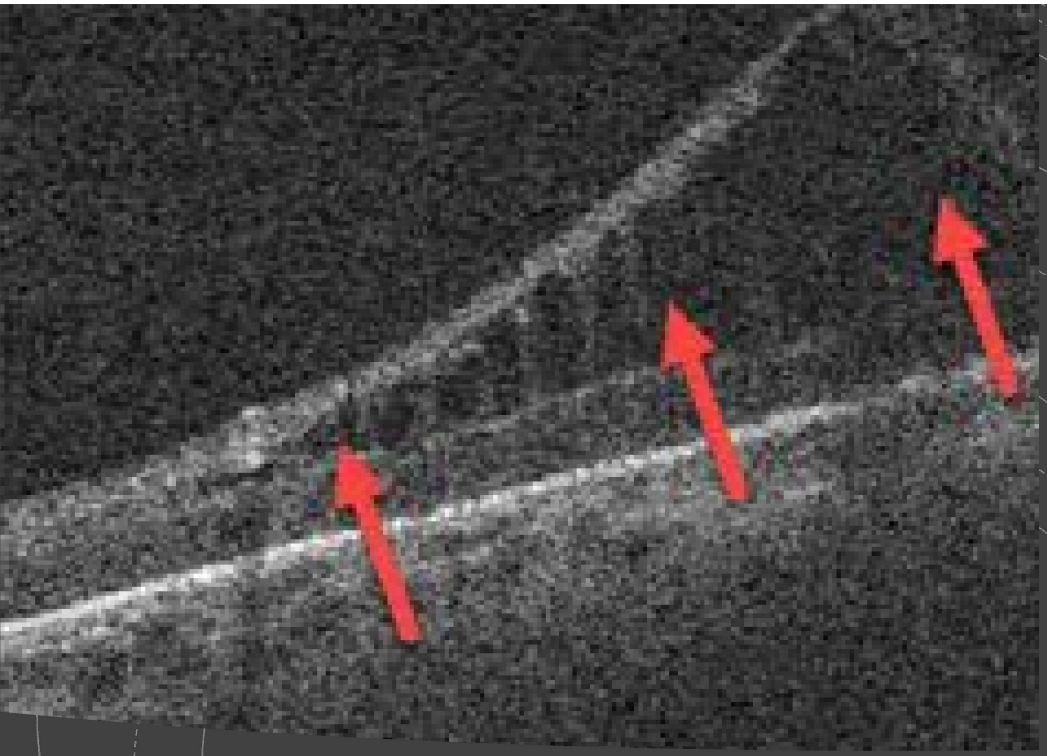
Surgeon 1
No laser unless LD posterior to vitreous base and elevated or horse shoe tear
Widespread prophylactic laser doesn't prevent rRD & can produce more complex ones?

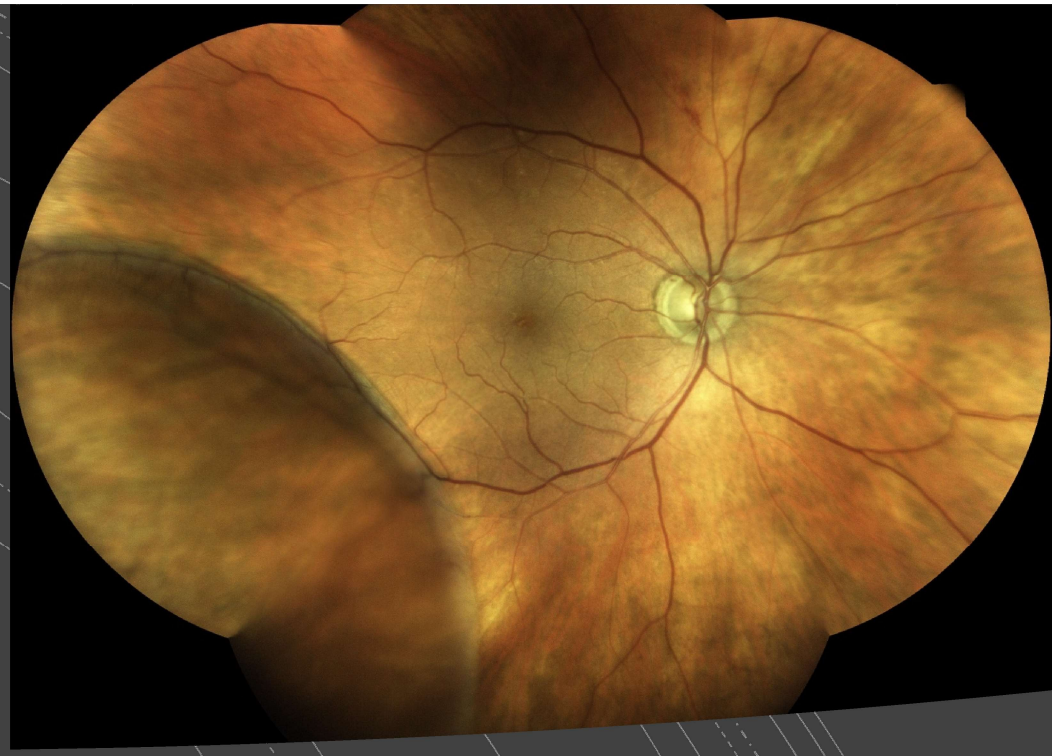
Surgeon 2
Leave lattice alone unless other eye has a rRD, then still no consensus

Warned S & S with PVD & return ASAP (within 48 hrs)
Any other ideas refer?
What if the patient is a great traveller?

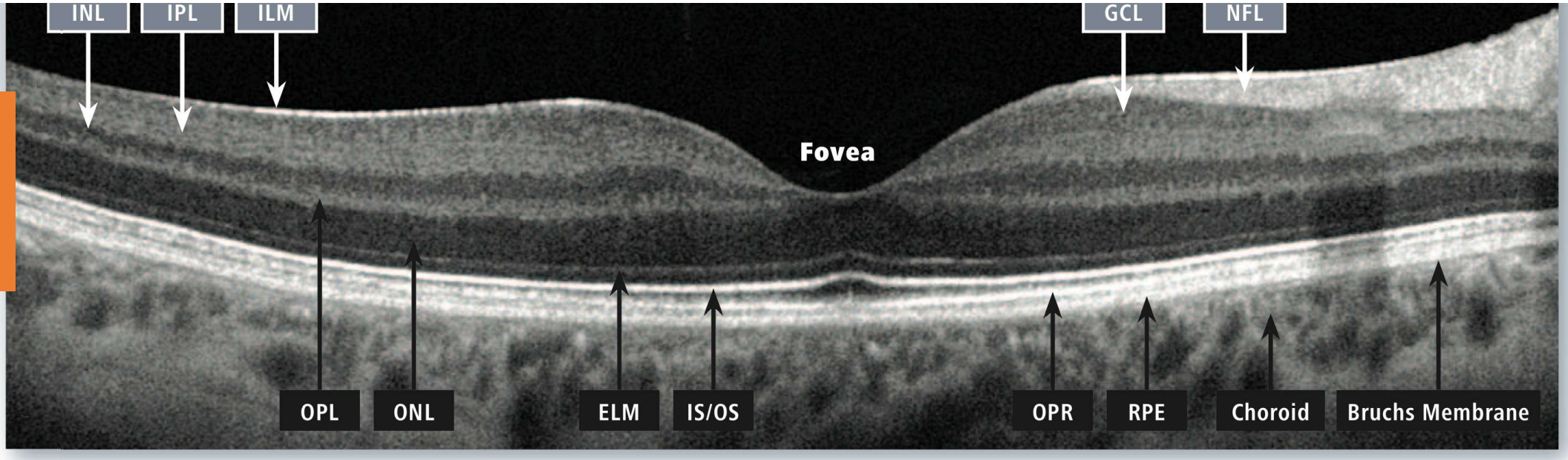
MCQ Which of these statements about lattice degeneration is false

- 1/ All lattice degenerations should be treated with retinal laser to prevent progression to rRD
- 2/ 60% of eyes with rRD have lattice degeneration
- 3/ Lattice degeneration is more common amongst high myopes
- 4/ Lattice degeneration has stronger adhesion to the vitreal face and are more prone to retinal tears with PVD





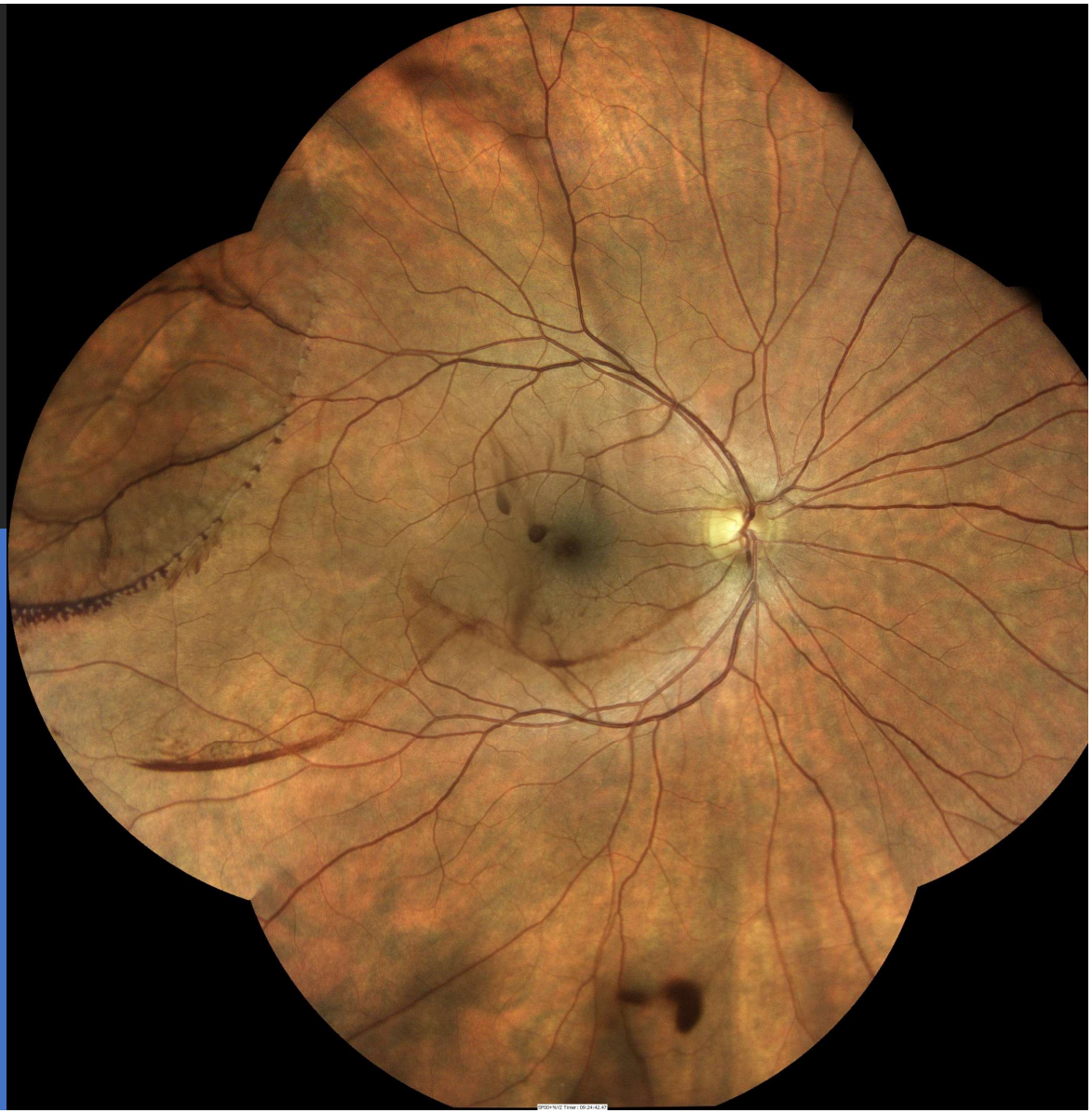
Retinoschisis behaving badly



Retinoschisis

Juvenile X linked rare poor vision RD?
acquired = degenerative, idiopathic splitting

- Splitting sensory retina at OPL
- Outer (choroidal layer) inner (vitreous layer)
- +ve scotoma
- 7% population > 40
- Hyperopes
- Generally outerplexiform
- Snowflakes on inner surface Beaten metal on outer surface
- ‘Wobbly’

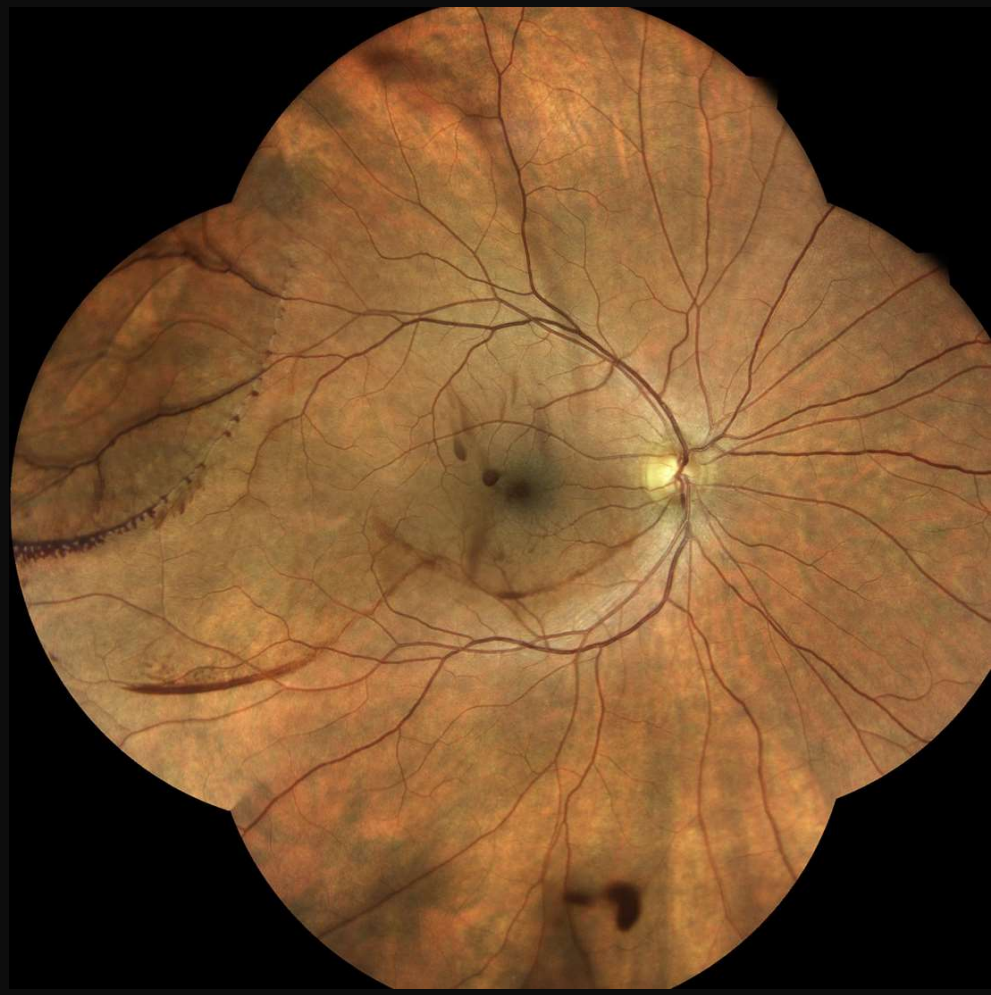


Mr. S.P. aet 46

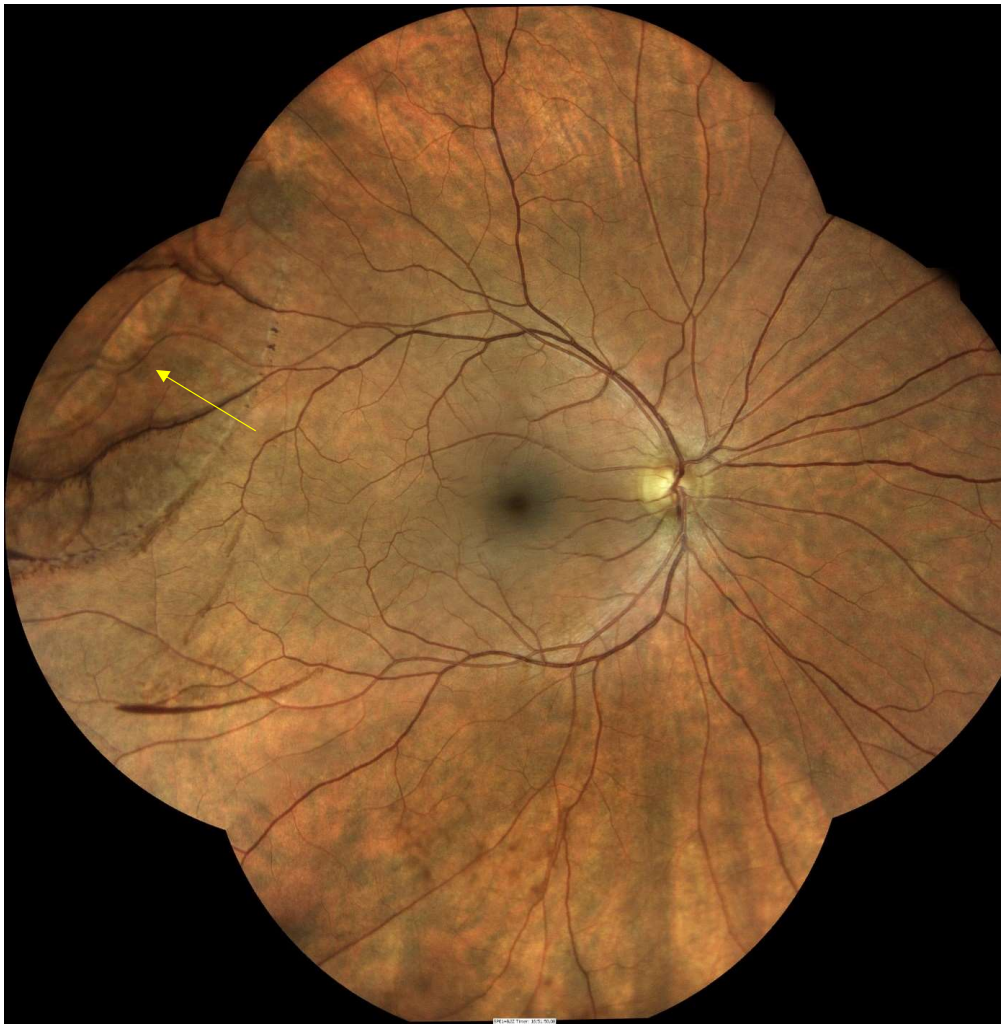
2-6-18
Black arc & 2 spots on awakening RE
no flashes after surfing
drinking heavily night before
Vis 6/6 OU
schafer's sign?
ST elevated lesion
horizontal tear
vitreous haem
VR surgeon
fast, limit head movement, off to Melbourne ASAP

VR ophthal report

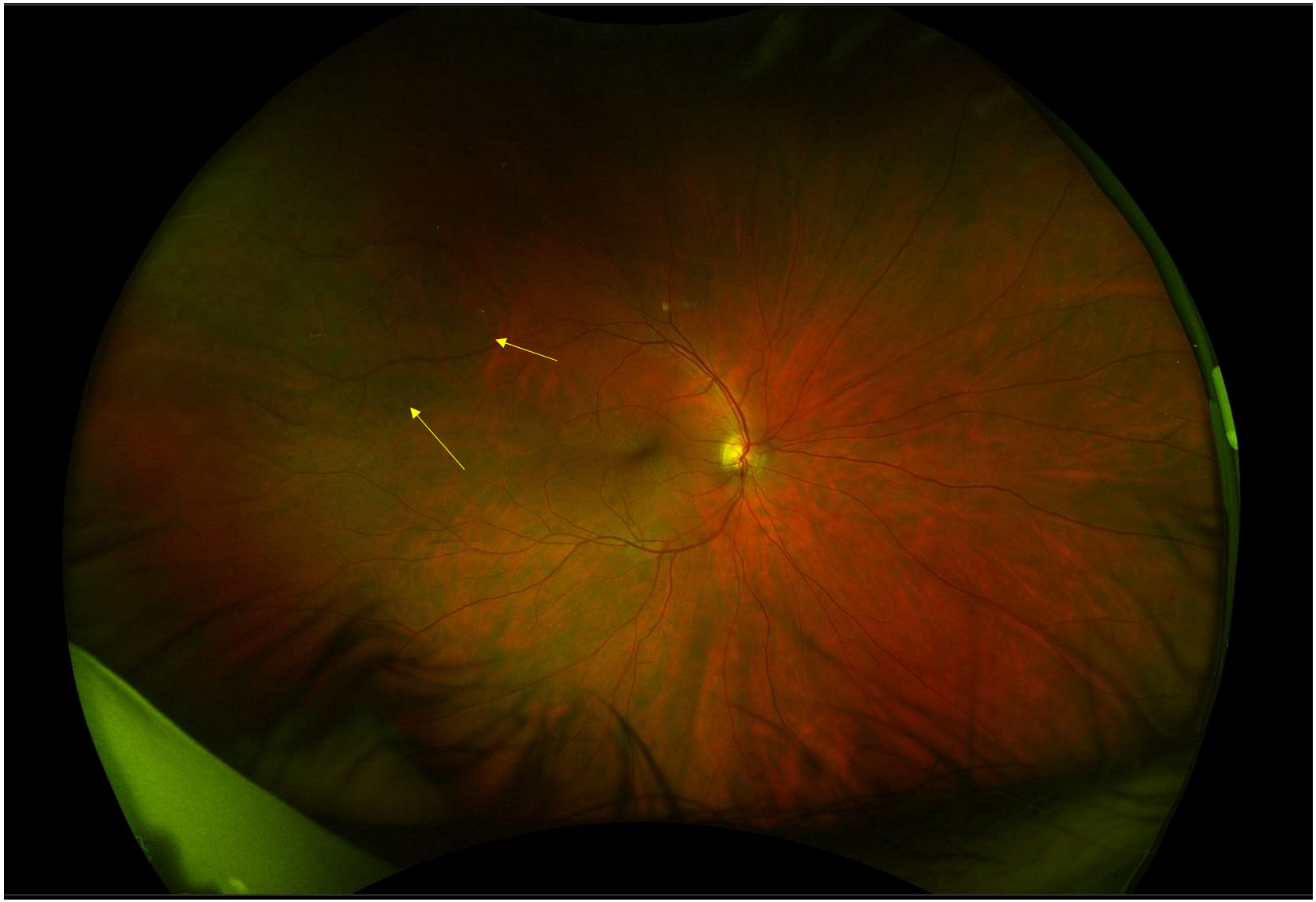
- Vitreous haem without PVD
- Vit haem obscuring macula
- ST chronic RS confirmed on OCT
- Inner retinal hole
- Blood along lower border of schisis cavity
- **Discussion**
- Spontaneous Vitreous haem = Valsalva
- Chance of schisis cavity extending is low
- Observe vit haem should resolve on own
- discharged



Mr. S.P.29-6-18
4 /52 later
Vitreous haem cleared
chronic inner leaf tear
no sx required
observe & RD symptoms & signs

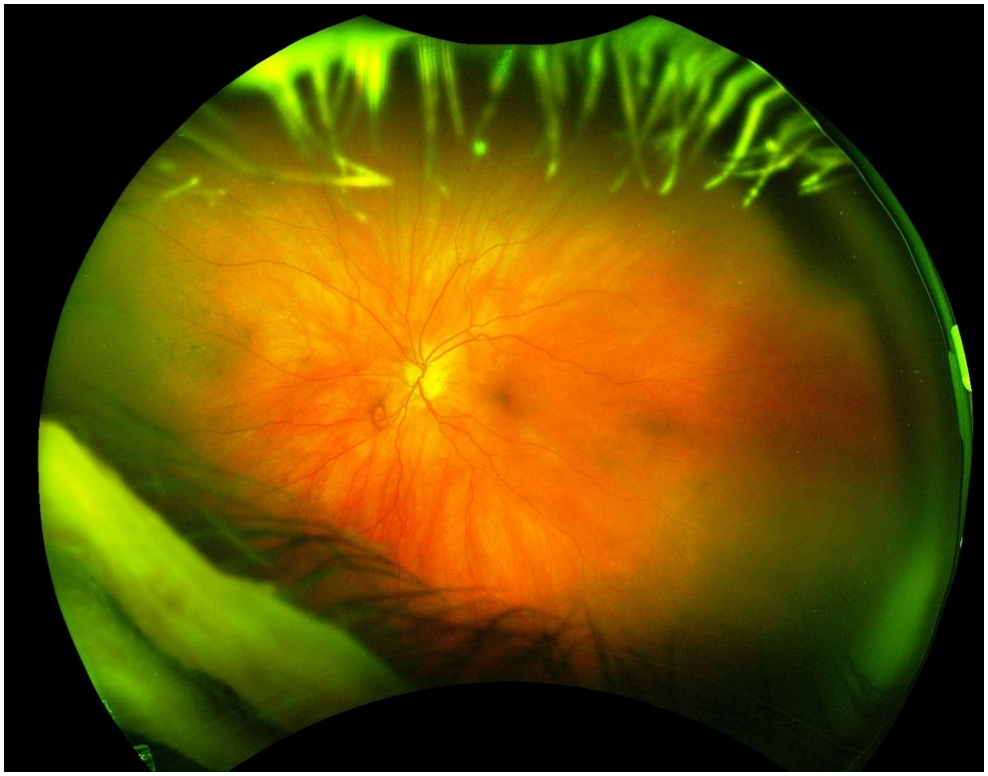


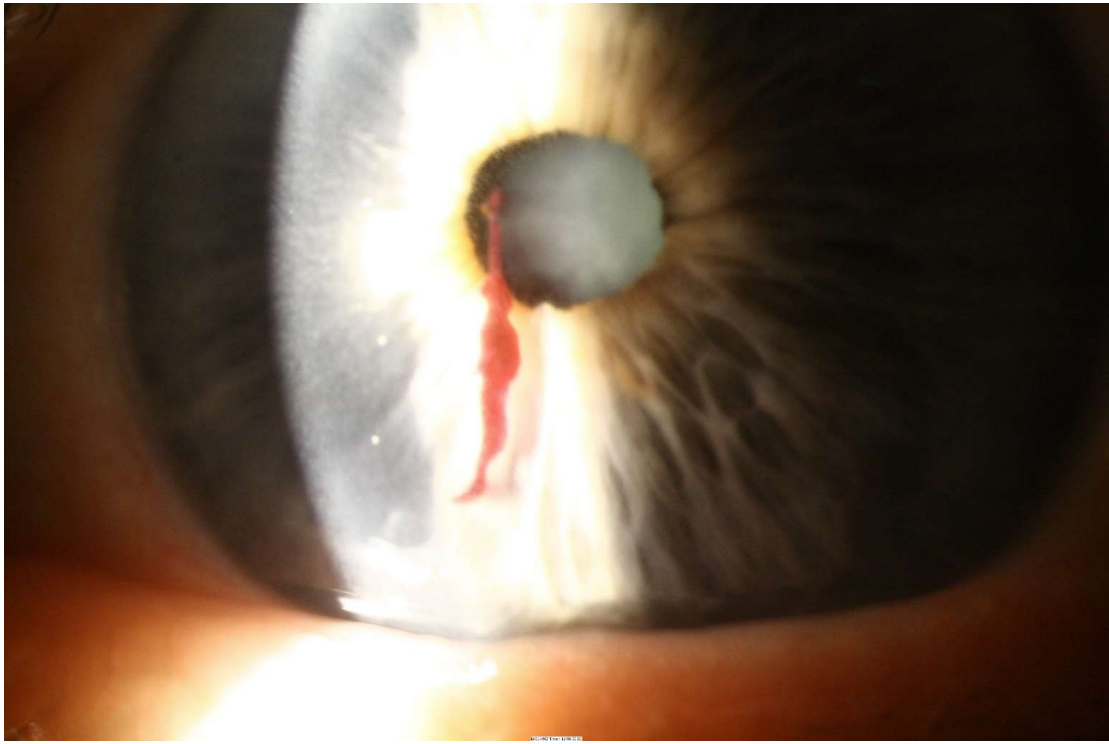
Mr. S.P.
25-2-20
20/12 later



A little diversion

Mrs. B.K. aet 81 NIDDM 13 years , blurred L lower vision amsler NAD 6/7.5+
ACLO changes 3+ hyphaema no flare PERRLA PIOP R 16 L 26 mmHg
action : Hba1c <7% refer to ophthal





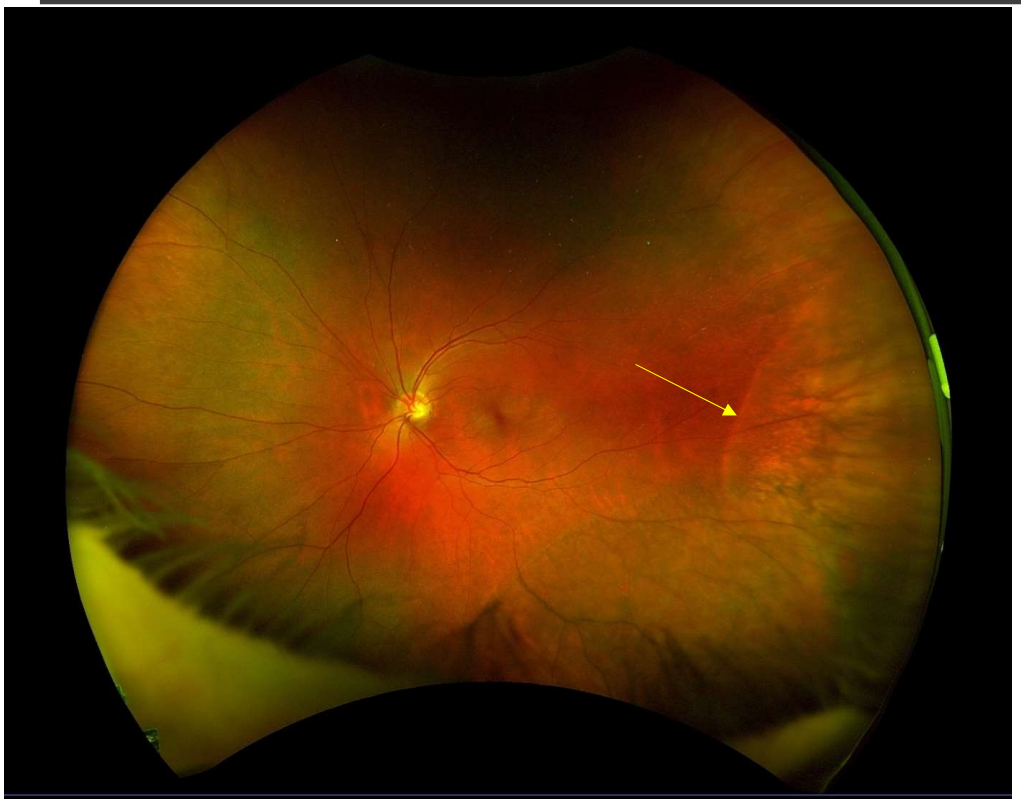
Mrs. B.K.

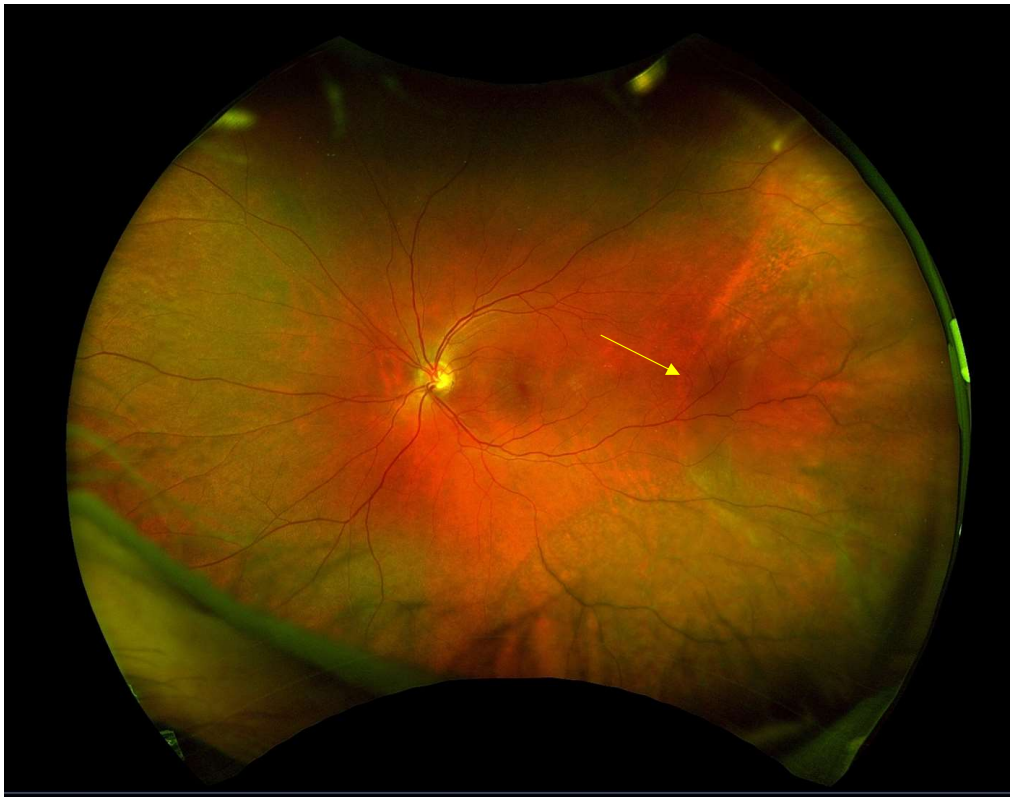
- Ophthal opinion 2 days later
- Completely resolved (sent image) VA 6/6 IOP 16 mmHg
- Differential Dx : Trauma, Valsalva, Rubeosis, Iris tumour,
- No PDR, no iris vasculature anomaly, no IN
- Action : not active, Trauma through sleep?

Ms G.H. aet 69

26-8-18 2 years later 13-08-20

RS has moved more posteriorly





Mrs. G.H.
asymptomatic

No obvious PVD either eye & has retinoschisis infero temporally OU…..There appears to be a full thickness elevation more temporally left eye confirmed with OCT & I suspect an area of outer leaf defect. An Inner leaf break was not obvious & these are difficult to detect……She appears to be mounting some RPE change at the border & this maybe sufficient to stabilise the situation & if there is progression she may require barrier retinopexy & she is aware that surgical intervention maybe required.

Complications of retinoschisis

- Posterior extension of schisis
- Inner leaf breaks = small, round like atrophic holes (Mr. S.P.)
- Outer leaf breaks = schisis detachment = schisis fluid accumulates in the subretinal space may not progress to rRD due to higher viscosity intraschisis fluid
- Rhegmatogenous retinal detachment where breaks in both inner then outer leaves allow liquefied vitreous into subretinal space up to 6% of eyes
  Barricade laser?
- Natural history stops 3 disc diameters from the macula

D. Reed, O. Gupta, S.J. Garg Retina Today Nov./Dec. 2014

REVIEW of OPTOMETRY

Diagnosis is on the Line

Pigmented and nonpigmented demarcation lines in both eyes hold the clues to this patient's condition

Mark T. Dunbar, O.D.

To distinguish between a RD and a retinoschisis

peripheral retinoschisis more commonly appears inferotemporally, followed by superotemporally.

Retinoschisis is very clear and transparent, allowing for the choroidal detail below the schisis to be easily seen
Chronic retinal detachments, a pigmented demarcation line can be seen at the junction between attached and detached retina.

Retinoschisis is not associated with changes in RPE unless an outer tear change

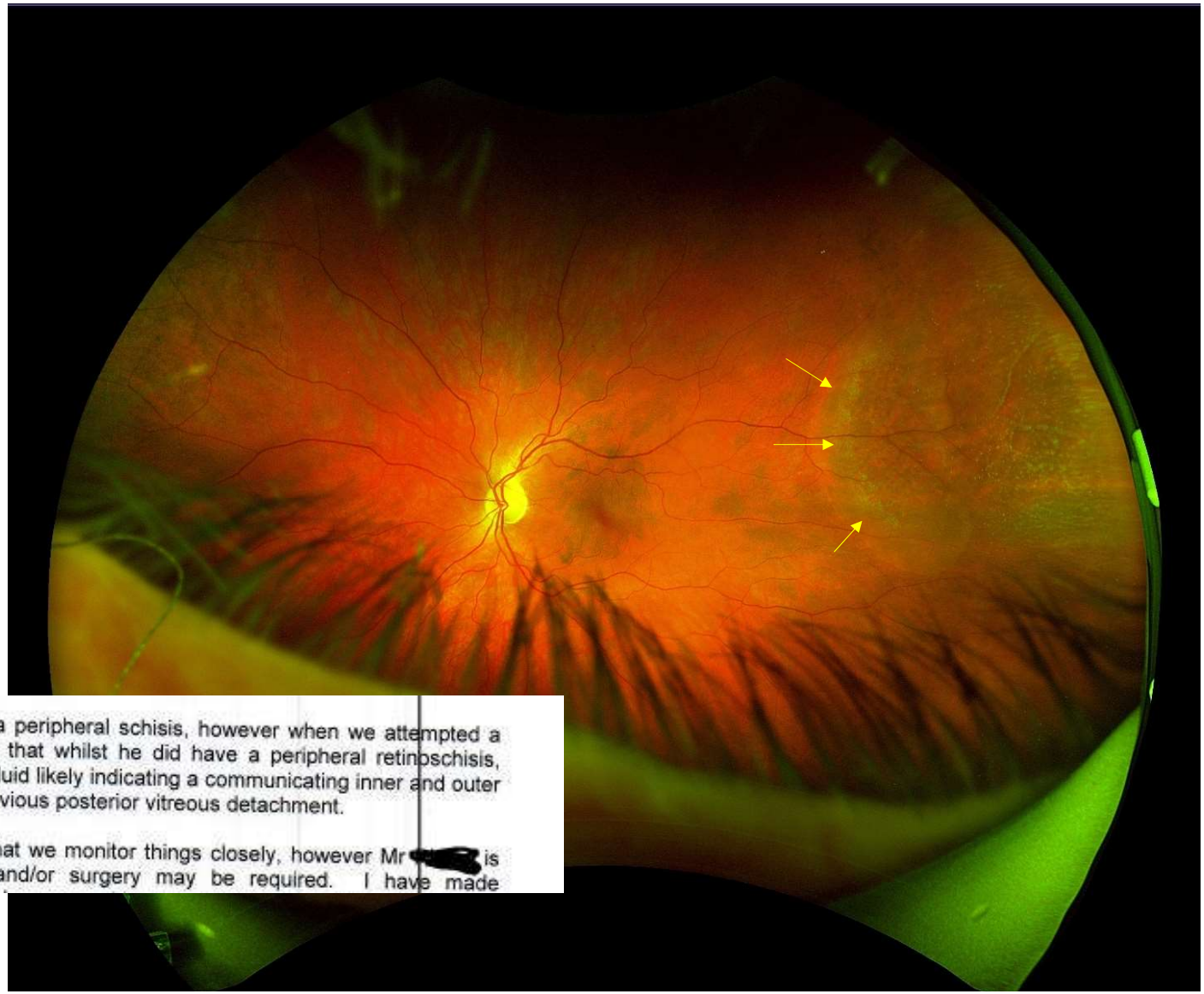
6% of retinoschisis has associated retinal detatchment = outer wall break to allow fluid into SRS

Outer wall holes may be single or multiple, and they may be small or large. They appear as retinal holes with smooth, rounded margins and rolled edges. These rolled edges are the hallmark of outer wall holes. Inner holes are rare and harder to diagnose due to the variations in the thickness of the inner retinal layer.

Bilateral…… Tx? Barrier laser? Vitrectomy & scleral buckling?

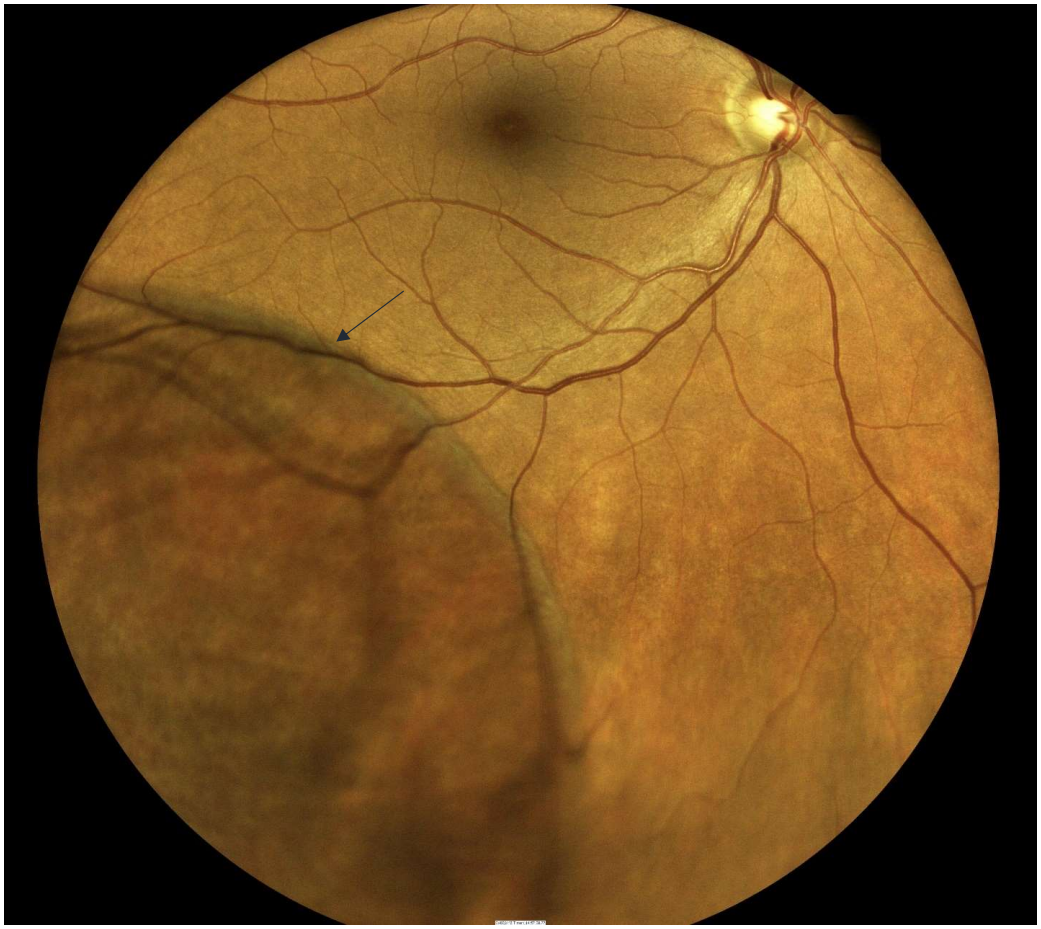
Mr. K.R. aet 65

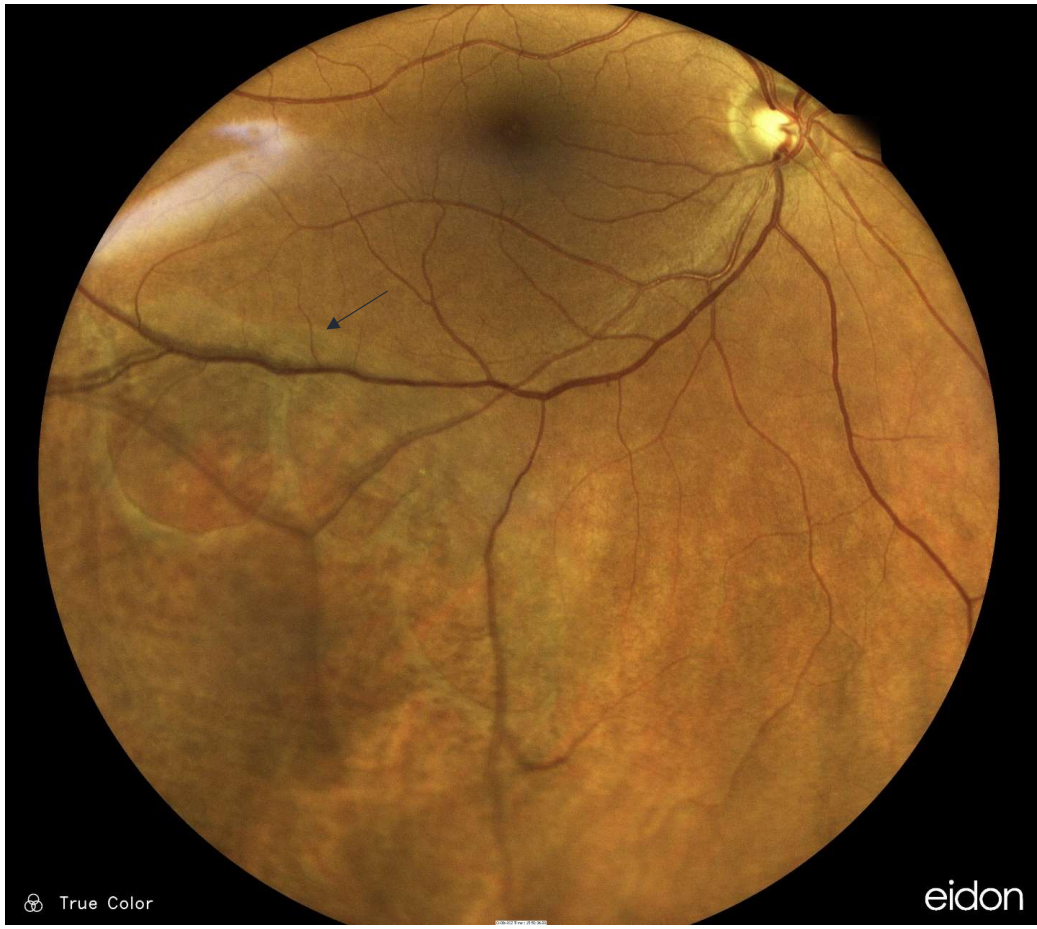
review new readers
Hyperopia R 6/7.5 L 6/6
asymptomatic



On examination I felt clinically he had a peripheral schisis, however when we attempted a confirmatory OCT scan, it was evident that whilst he did have a peripheral retinoschisis, there was a leading edge of sub-retinal fluid likely indicating a communicating inner and outer leaf break situation. I could detect no obvious posterior vitreous detachment.

I have suggested in the first instance that we monitor things closely, however Mr [redacted] is aware that some barrier retinopexy and/or surgery may be required. I have made



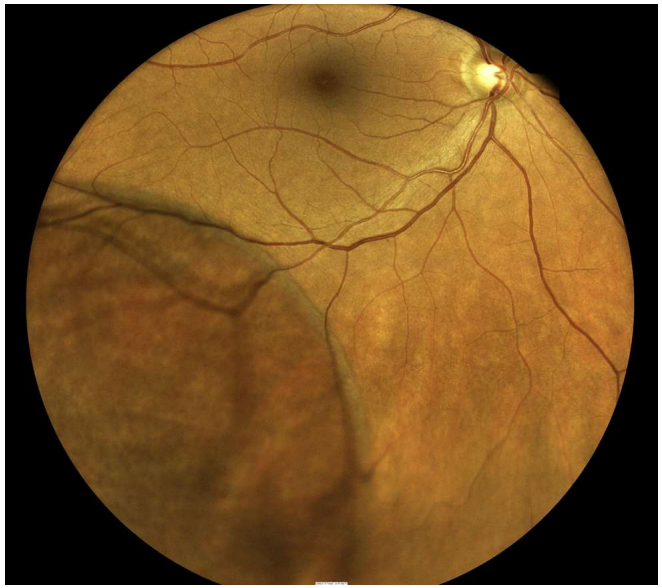


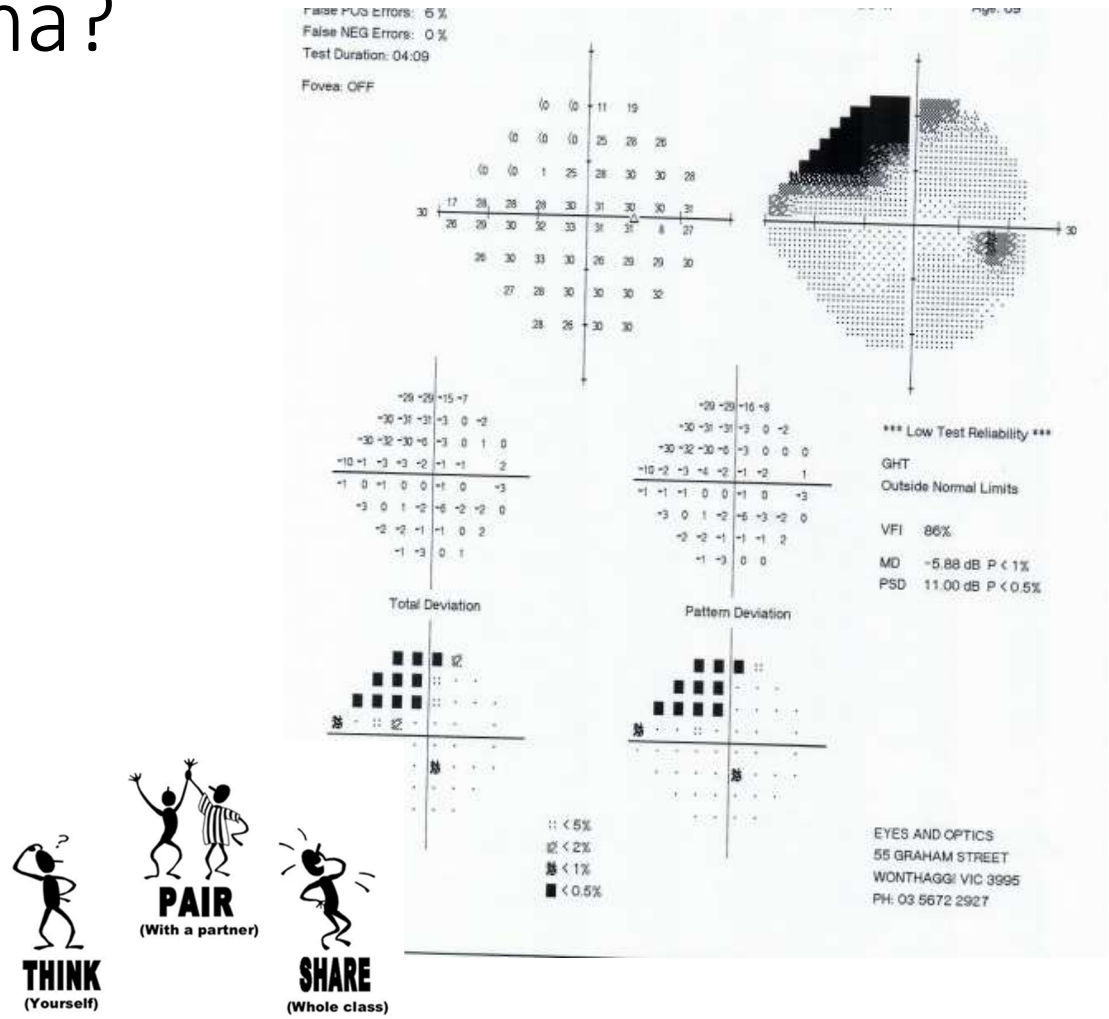
These images are 3 years apart 30-1-17 & 9-6-20
69 yo what's her Rx? What can you see?

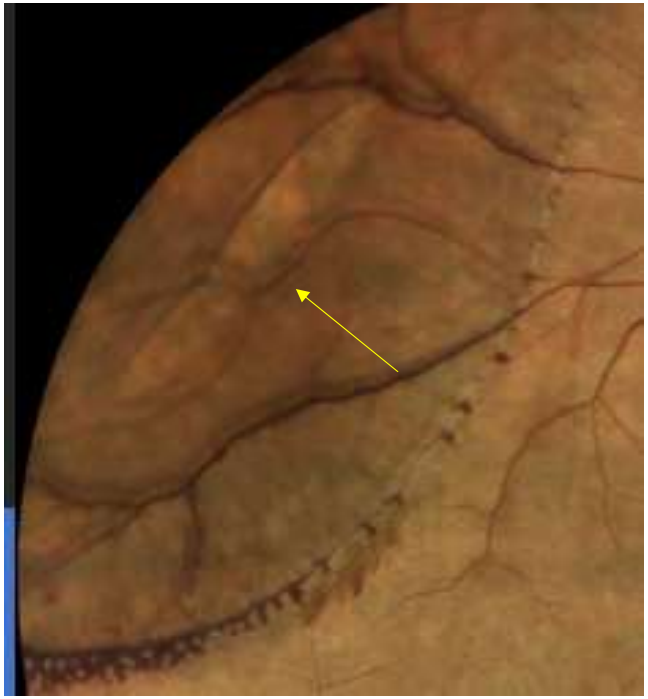
Round atrophic holes = inner leaf break?

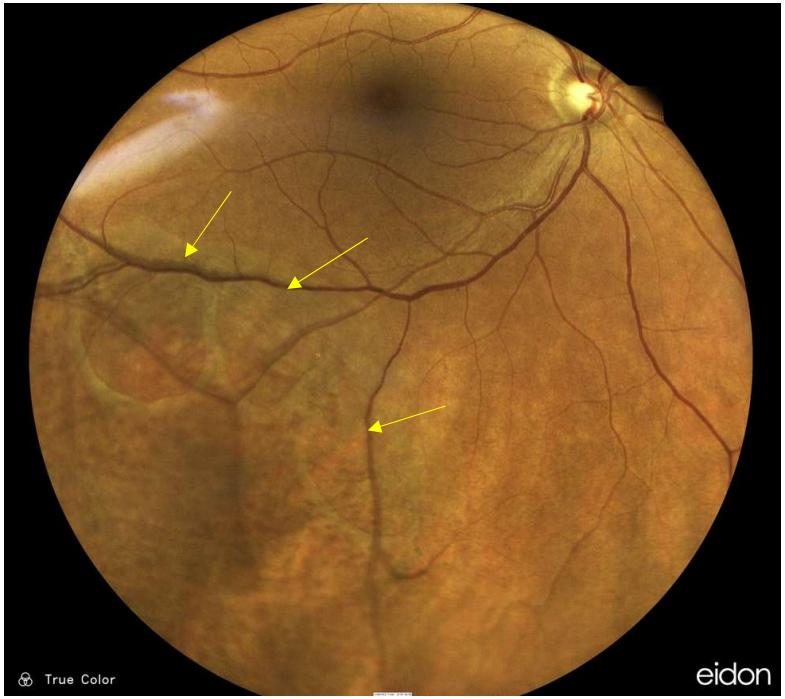
Where’s the scotoma?

- A infero temporal
- B supero temporal
- C Infero nasal
- D supero nasal ✓









Inner leaf breaks? intraschisis fluid flows into the vitreous and schisis flattens

Quiz Which is true regarding acquired retinoschisis

- 1 Inner leaf breaks have a pigmented edge
- 2 retinoschisis typically only occurs in one eye
- 3 Outer leaf breaks are mostly benign and do not need treatment
- 4 Retinoschisis are not uncommon amongst hyperopes & create positive scotomas
- 5 PVD and retinoschisis = rRD

Mrs. I.D. aet 57

Blepharoplasty 2016

Vitreous haem 2018

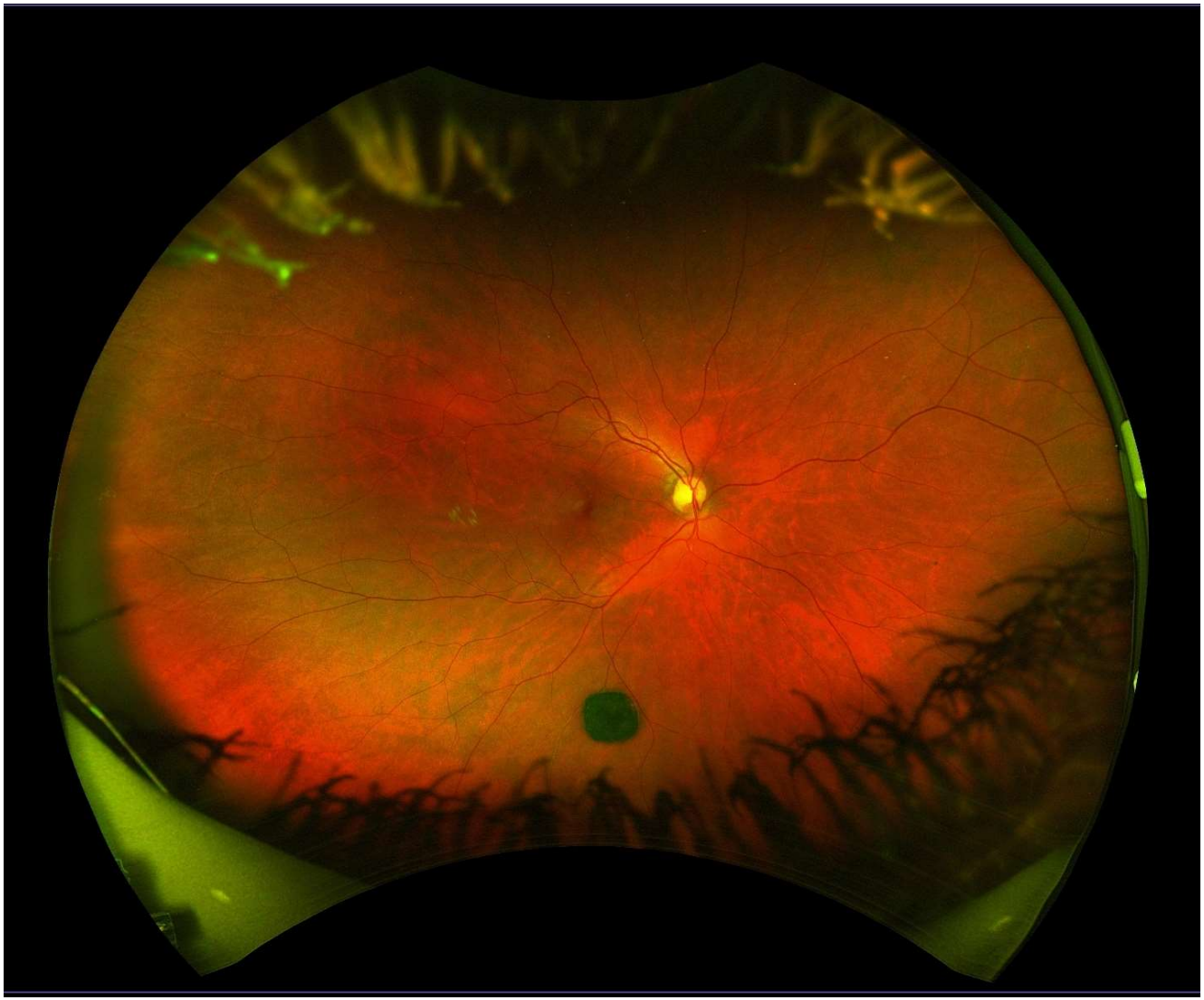
Routine eye examination

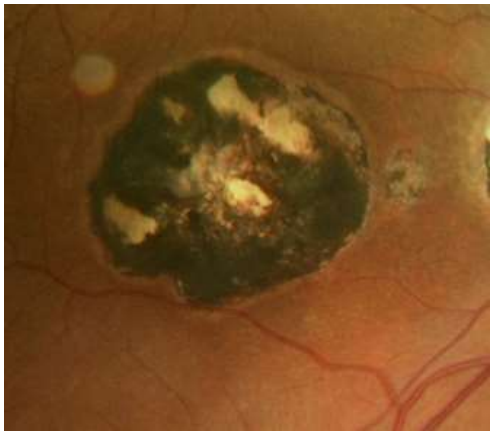
Even grey circular 2DD lesion

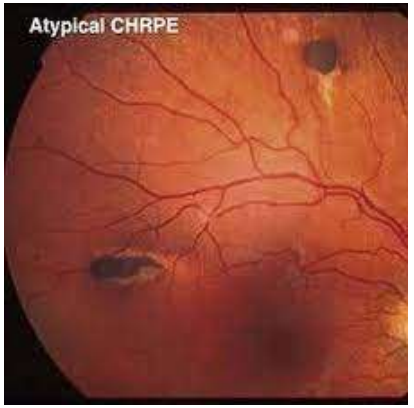
Flat?

No comment from either Ophthalmologist

CHRPE

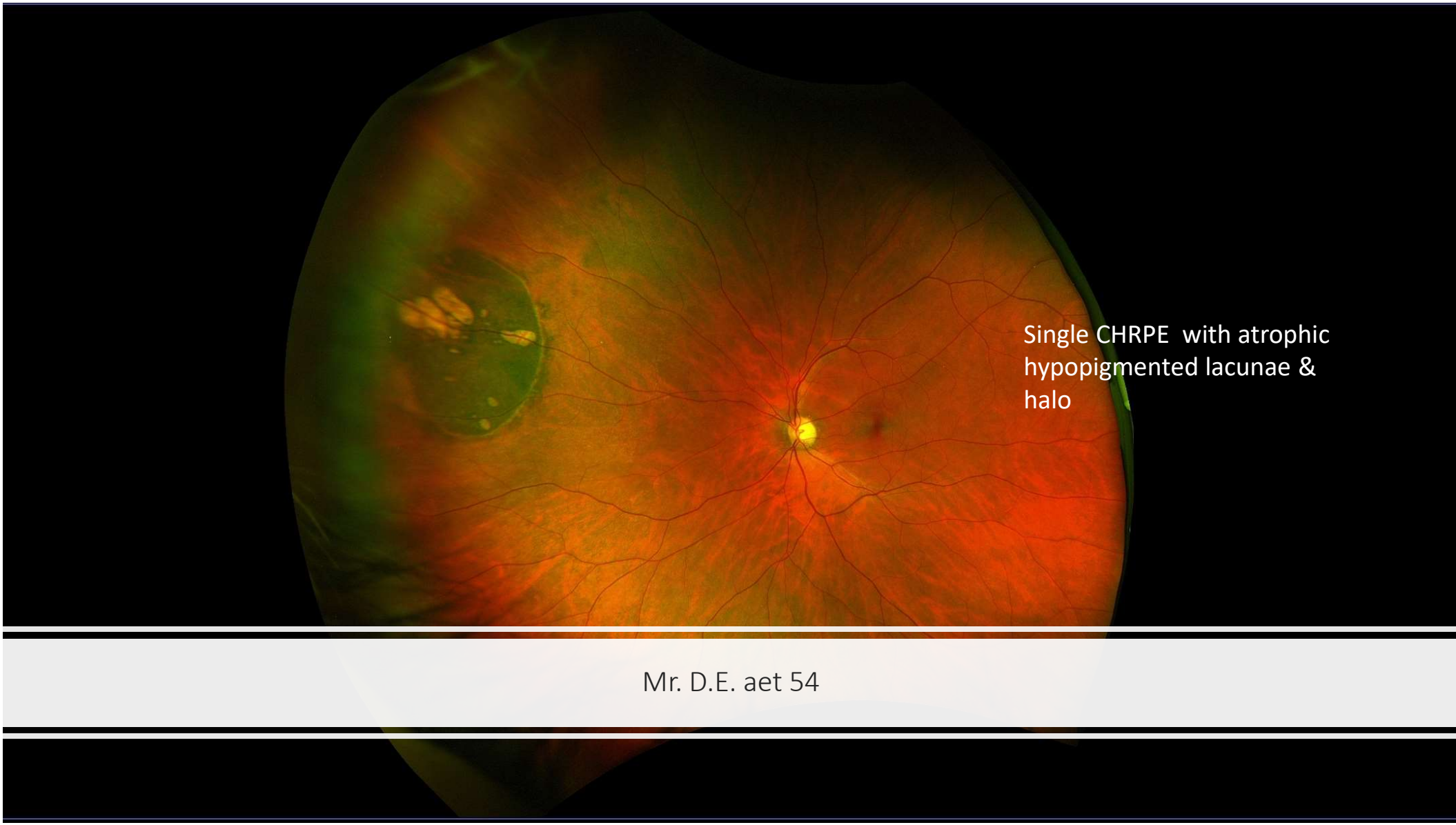






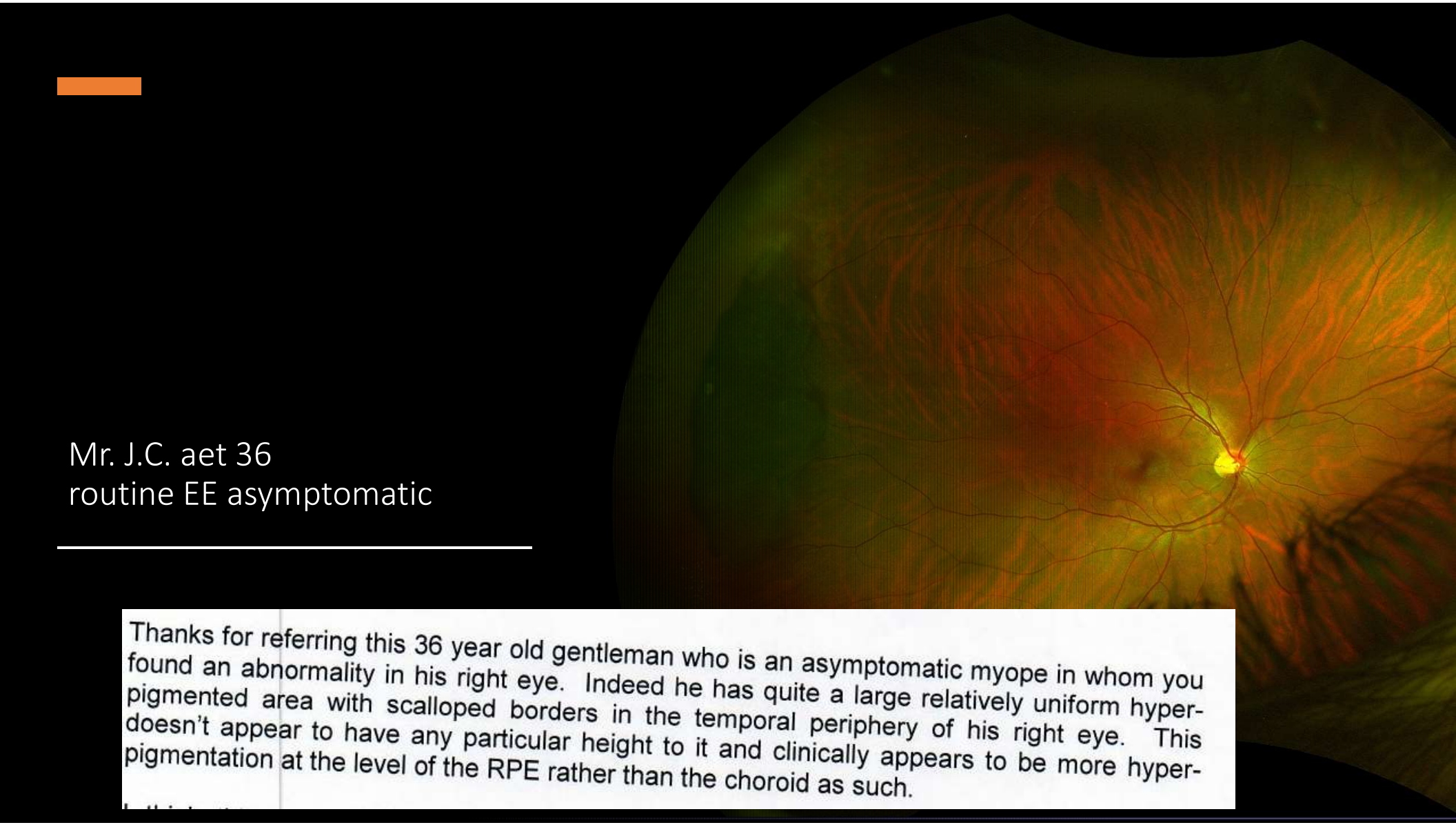
Single	Grouped	Atypical (familial adenomatous polyposis (FAP))
‘’regular & Round” shape	Regular, round, multiple	Bilateral 78%
	Bear track	Retinal invasion
		90% colorectal Ca
		Retinal vascular changes

Congenital hypertrophy of the retinal pigment epithelium (CHRPE)
1.2-4.4%
All can have depigmented haloes or lacunae
Hypo autofluoresence due to melanin
Can grow

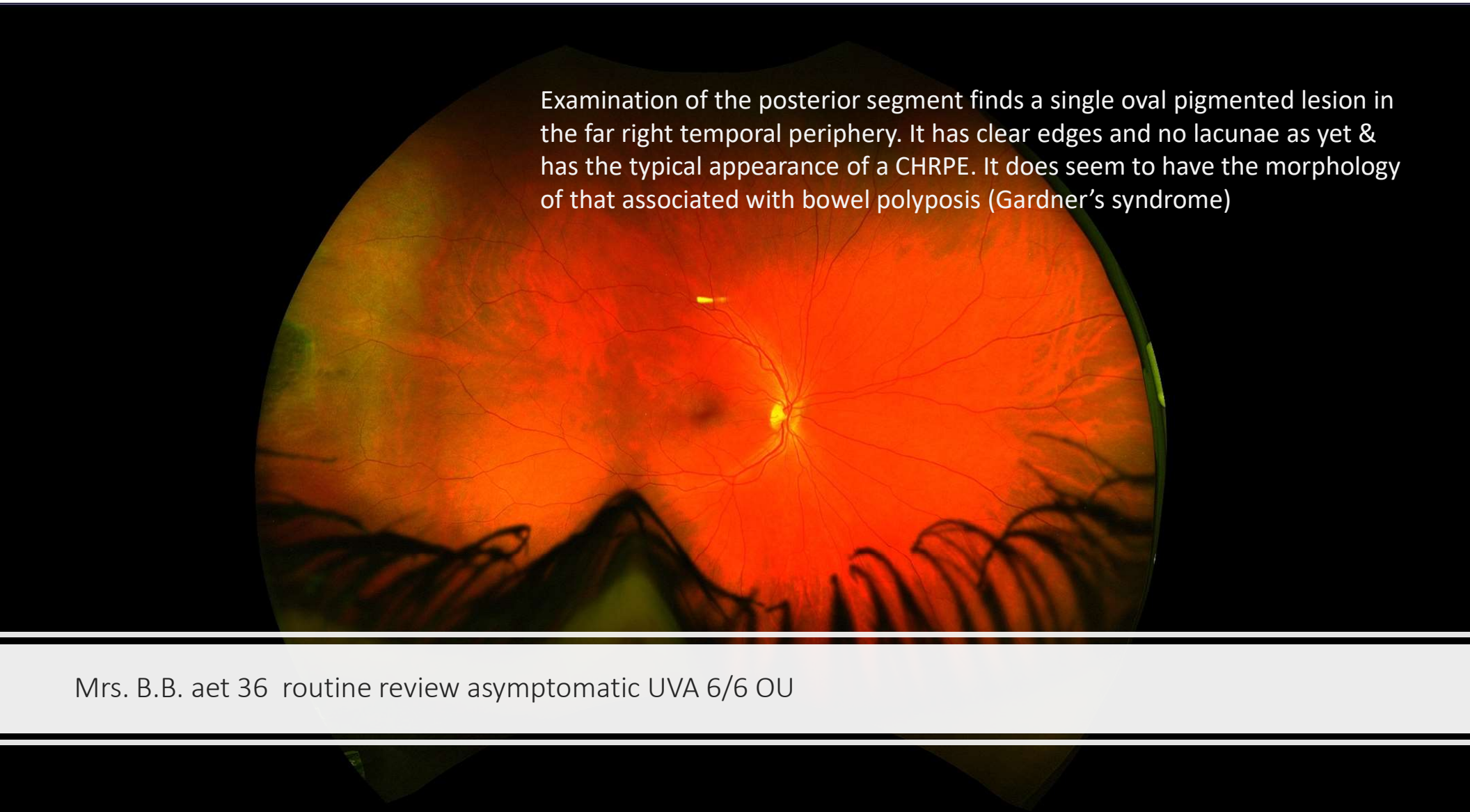


Mr. D.E. aet 54

Mr. J.C. aet 36
routine EE asymptomatic



Thanks for referring this 36 year old gentleman who is an asymptomatic myope in whom you found an abnormality in his right eye. Indeed he has quite a large relatively uniform hyper-pigmented area with scalloped borders in the temporal periphery of his right eye. This doesn't appear to have any particular height to it and clinically appears to be more hyper-pigmentation at the level of the RPE rather than the choroid as such.



Examination of the posterior segment finds a single oval pigmented lesion in the far right temporal periphery. It has clear edges and no lacunae as yet & has the typical appearance of a CHRPE. It does seem to have the morphology of that associated with bowel polyposis (Gardner's syndrome)

Mrs. B.B. aet 36 routine review asymptomatic UVA 6/6 OU

CHRPE vs melanoma

May 01, 2005
Differential diagnosis of ocular melanoma vs. choroidal nevus is crucial By Jennifer Byrne

	Melanoma	Choroidal Naevus	CHRPE
Optomap 100% Red Choroid only	Visible & dark	Visible & dark	Halo & lacunae obvious hyperpigmented
Optomap 100% green retina only	Dark & fuzzy edges	Not visible	Halo & lacunae obvious Less pigmented
3D	elevated	Flat, can have halo	Sl raised
vascularity	Own circulation (FA takes up more dye = metabolic activity)		
appearance	Raised, vascular? Subretinal fluid, orange	Drusen = chronocity	Surrounding halo & lacunae
associations	Dermal melanoma		Colon cancer (FAP)

AMERICAN ACADEMY OF OPHTHALMOLOGY®

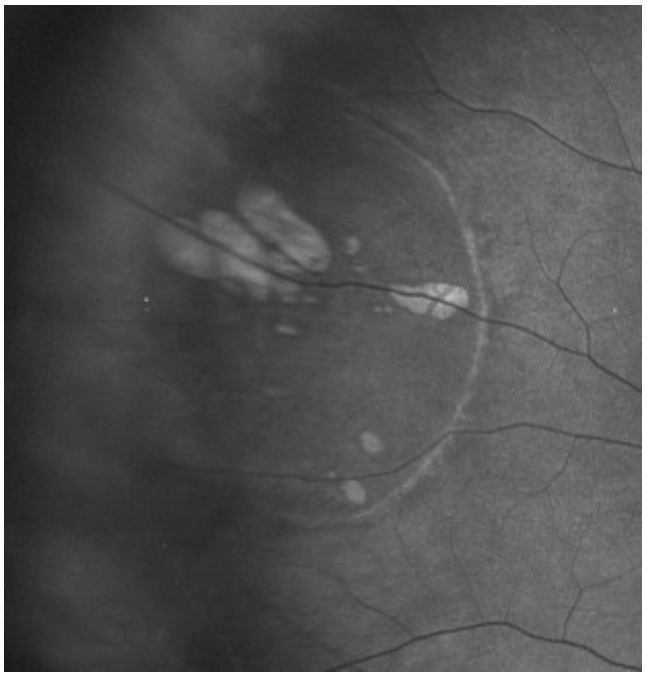
Distinguishing a Choroidal Nevus From a Choroidal Melanoma

Written By: Albert Cheung, Ingrid U. Scott, MD, MPH, Timothy G. Murray, MD, and Carol L. Shields, MD
Edited by Ingrid U. Scott, MD, MPH, and Sharon Fekrat, MD

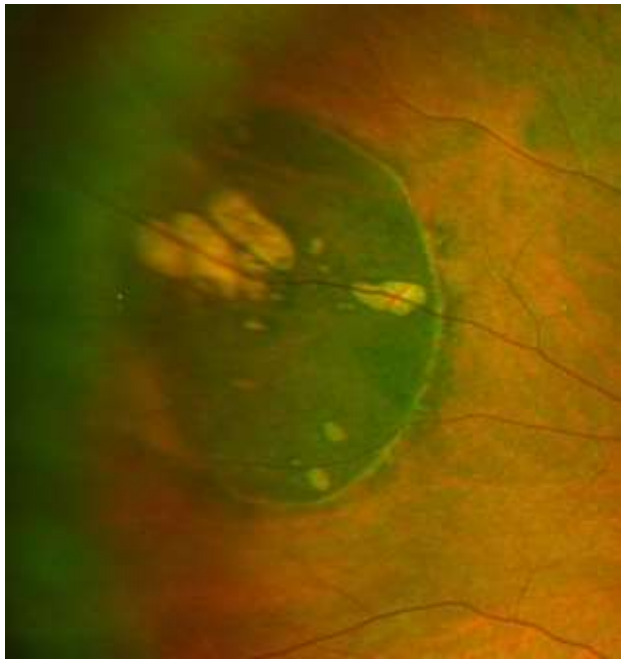
To Find Small Ocular Melanoma Using Helpful Hints Daily" (TFSOM-UHHD) has been proposed. This stands for thickness greater than 2 mm, subretinal fluid, symptoms, orange pigment present, margin within 3 mm of the optic disc, ultrasonographic hollowness (versus solid/flat), absence of halo and absence of drusen.

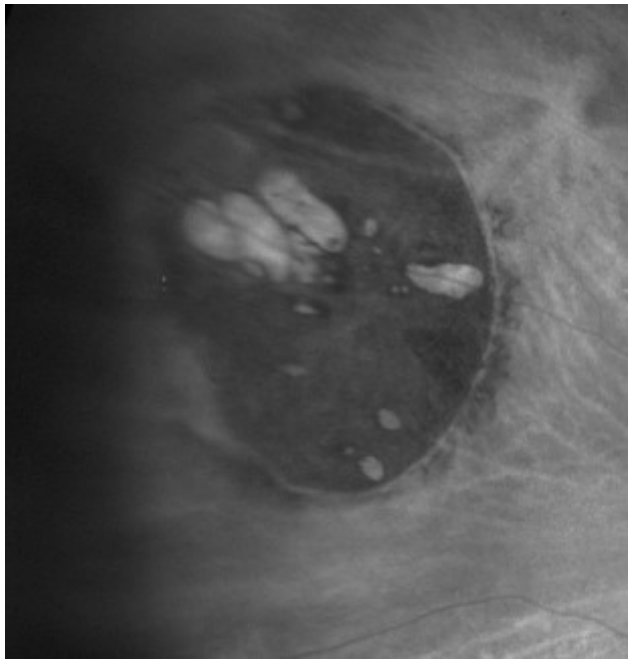
BMES Choroidal naevi 6.5% middle aged white Australians
Choroidal melanoma 6 per million

Optos CHRPE



100% green



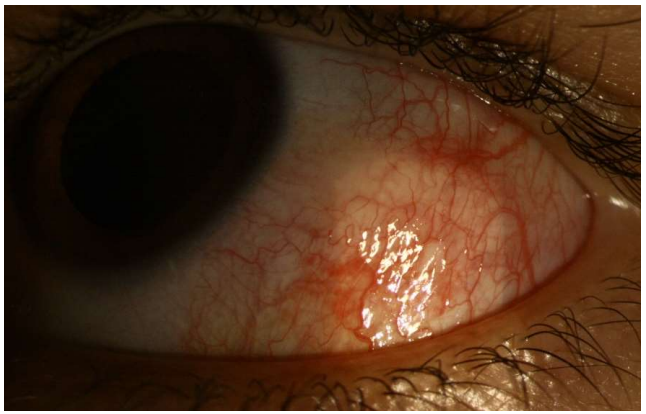


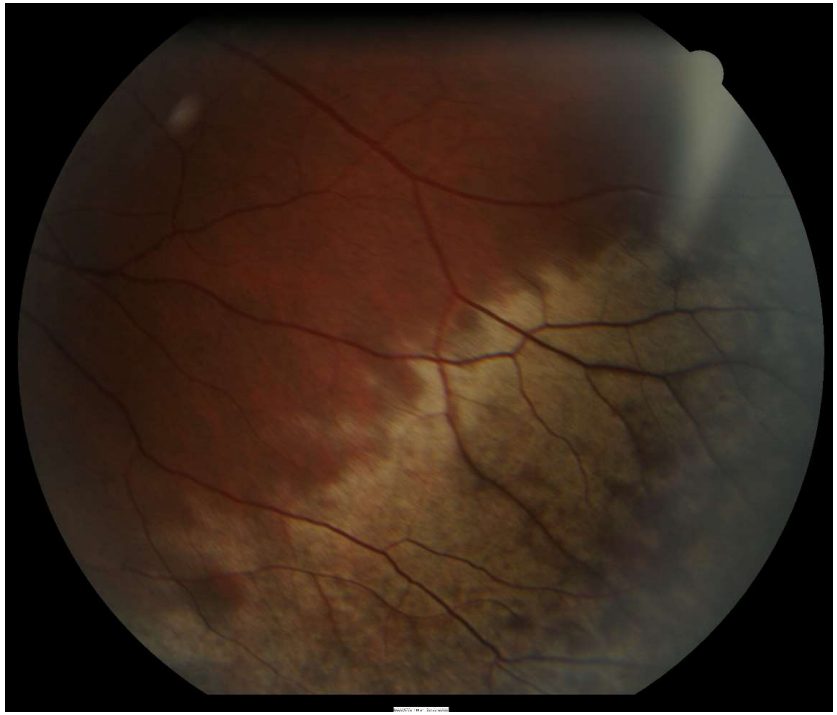
100% red

Quiz A solo flat, pigmented lesion is found in the temporal periphery of one eye. It has both hypopigmented lacunae and a halo. Appropriate course of action is

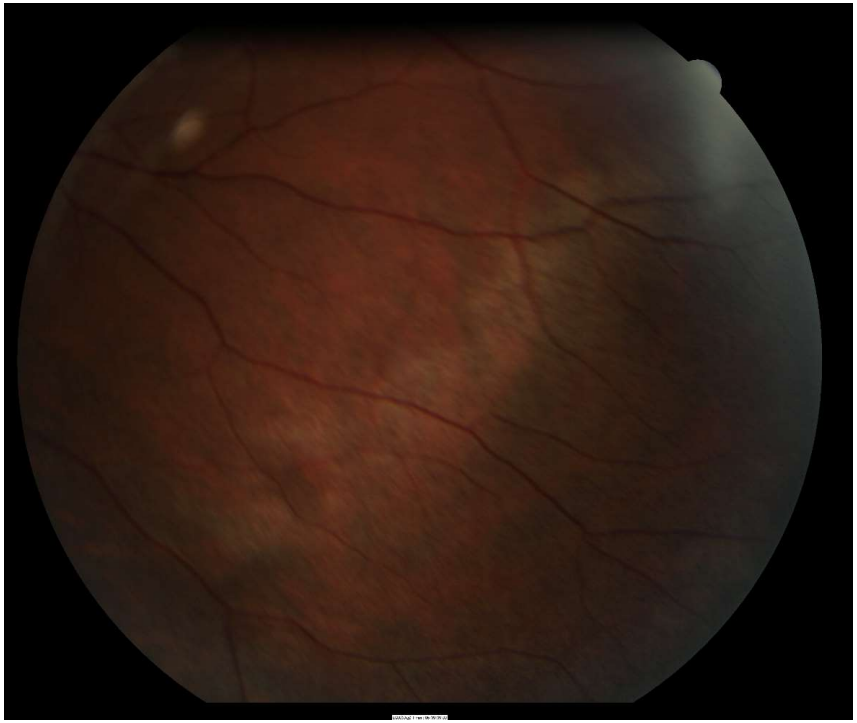
a/ Image the lesion and review in 6 months
b/ Assess for FAF hypoautofluoresence with fluorescence of only the lacunae & halo
c/ Refer to GP on suspicion of Gardner's syndrome
d/ Refer to retinal Ophthalmologist as they are difficult to tell between typical & atypical
e/ all of the above ✓

Miss E.G. aet 14
Walking through playground
Struck LE with errant tennis ball
Vision sl blurred, Sore red eye,ache



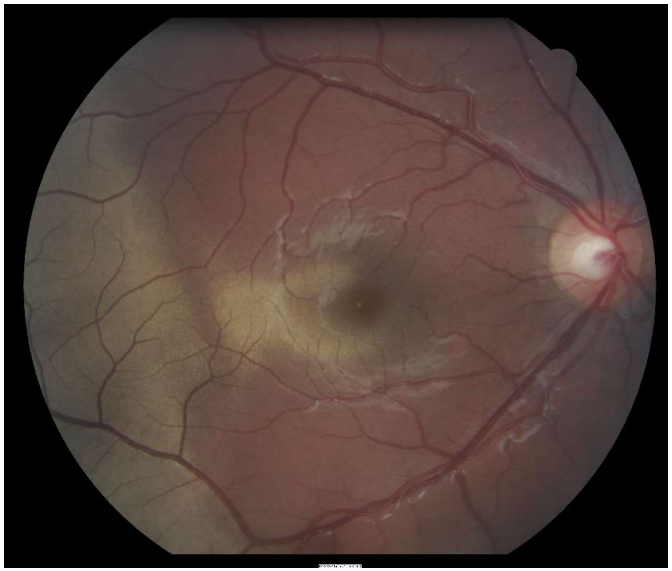


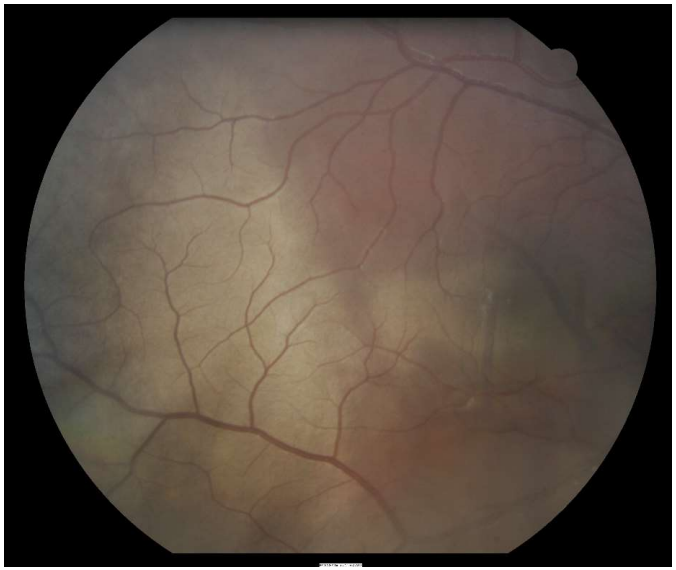
2
days
later



Commotio Retinae 'violent shaking retina'

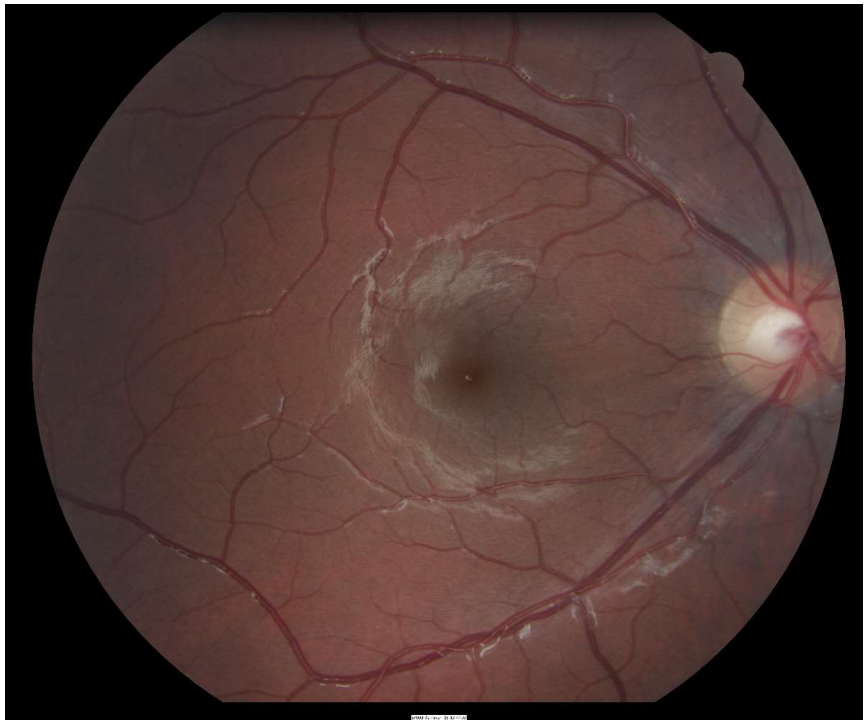
traumatic retinopathy secondary to direct or indirect trauma to the globe.
''Shockwave''
glistening grey-white opacification of the retina with or without intraretinal hemorrhages and RPE mottling.
blunt trauma has a compressive effect on the inner choroid, which produces outer retinal ischemia.
disruption of photoreceptor outer segments at IS/OS and begins to recover within 1 week
Tx nil, high dose steroids?
Patients with commotio retinae involving macula have poorer prognosis
6% of patients with macular involvement are permanently visually impaired with a VA of <6/9





Mr. B.P.
aet 14 ‘Pool toy

1 week
later

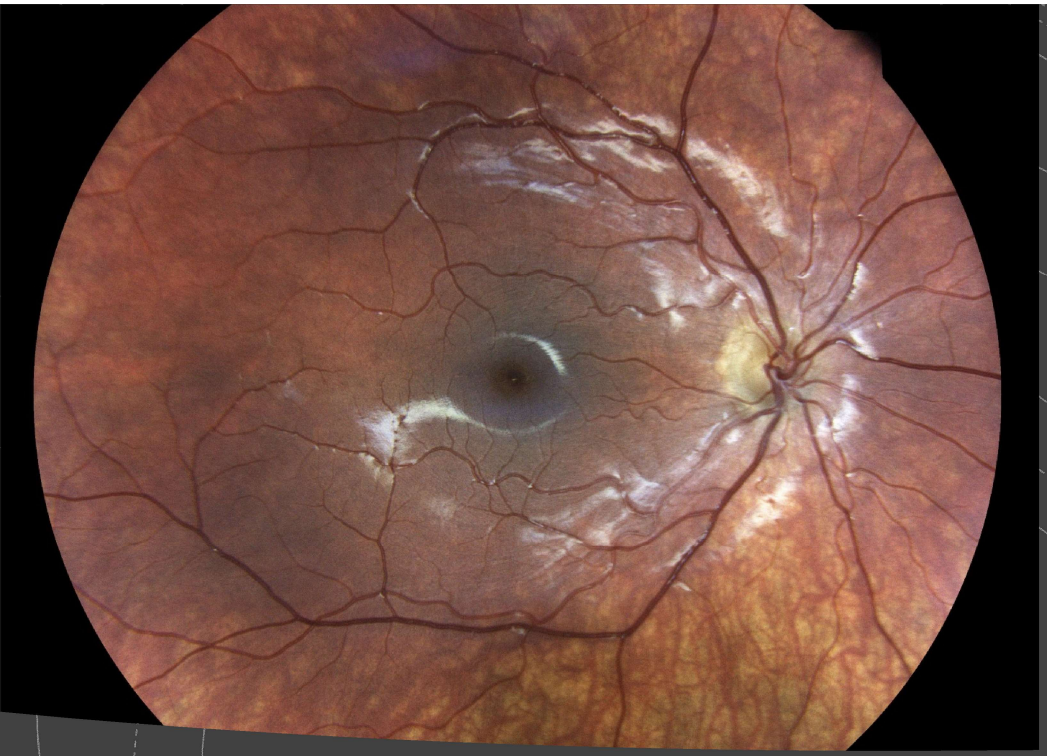


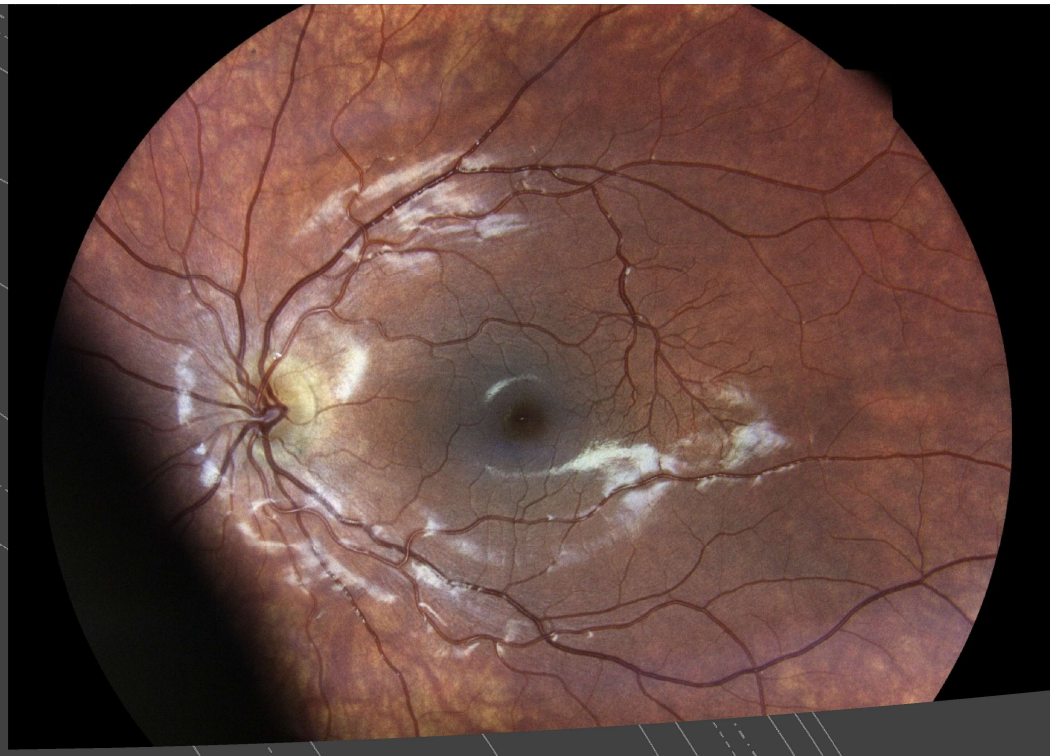
Quiz Which of the statements is false regarding Commotio retinae

a/ Angle recession is a possible sequalae to Commotio retinae
b/ No treatment is generally necessary following Commotio retinae. Observation and the retinal findings should start resolving within the week
c/ Anticoagulants PO should be initiated immediately to resolve the retinal ischaemia following Commotio retinae
d/ Traumatic Iritis often presents with a patient diagnosed with Commotio retinae

Next : Section 3

Congenital retinal macrovessel

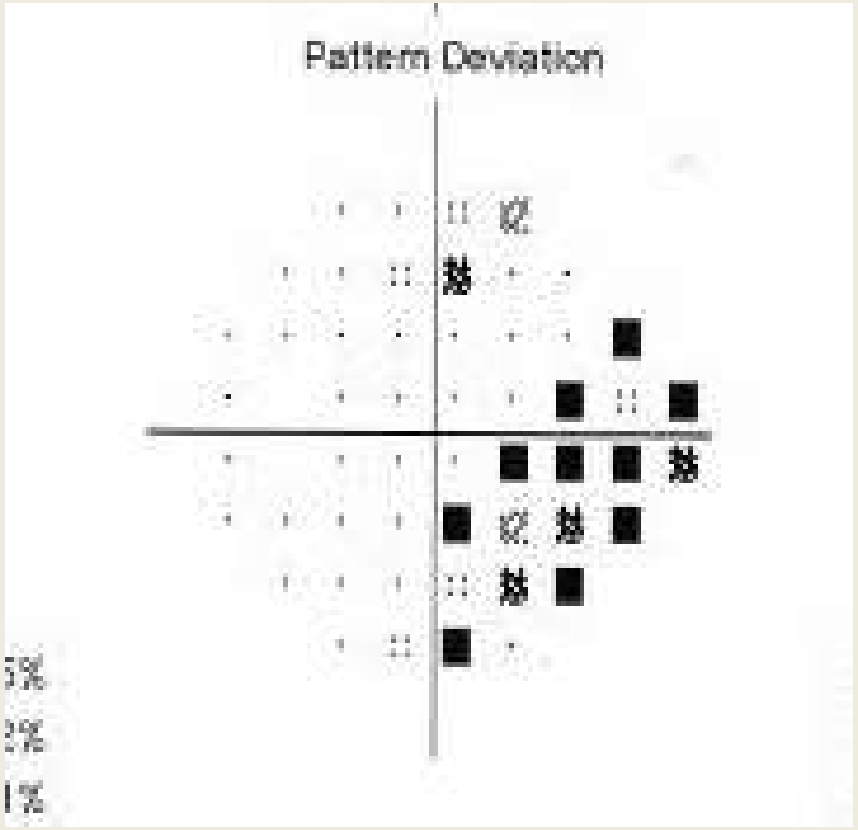


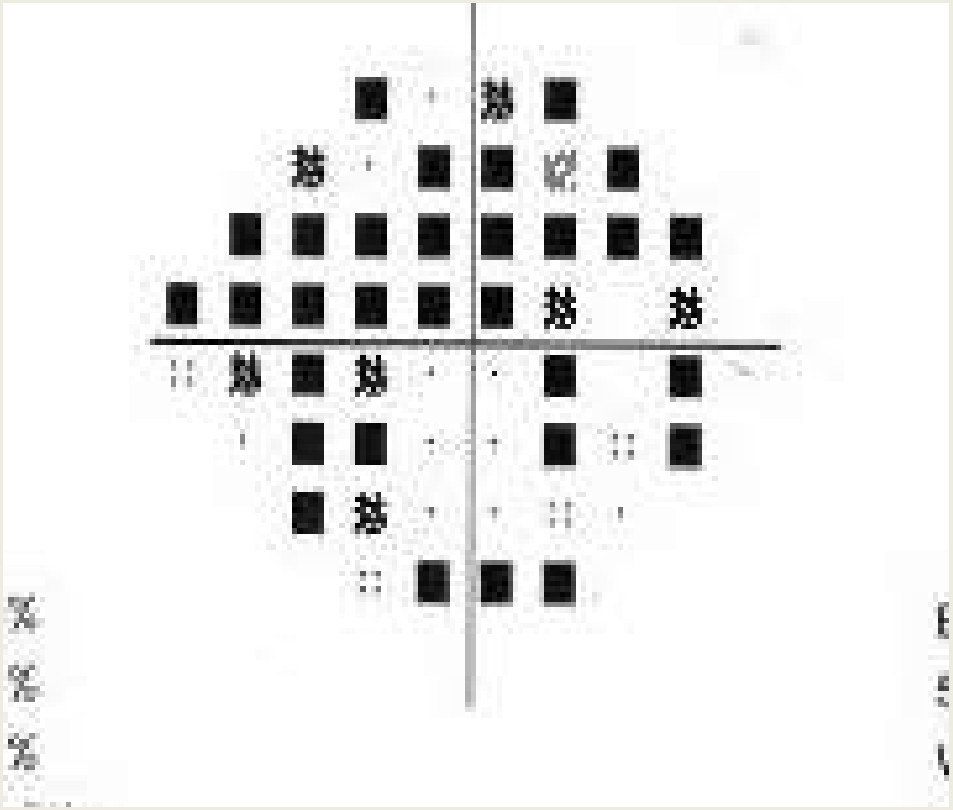


Miss ZS aet 14

- 11/8/20 reduced D vision N seems okay & eyes hurt
- -0.25/-1.25 x 180 6/24 -0.25/-0.25 x 35 6/24
- Pupils normal, CV not tested, External NAD
- Referred to neuroophthalmologist

Infero nasal step LE R supero nasal step?
BCVA 6/24 OU





REVIEW of OPTOMETRY

Is This Big Vessel a Big Problem?

Our patient presented with evidence of a congenital retinal macrovessel. How significant is this finding, and how should he be managed?

By Richard Zimbalist, OD

- 1869 and were later defined as a large aberrant artery or vein that crosses the horizontal raphe, with minimal to no effect on vision or color perception
- 1 in 200000
- Venous more common than arteriolar
- No CV effect & may affect vision

CASE REPORT

Year : 2016 | Volume : 2 | Issue : 3 | Page : 146-148

Congenital retinal macrovessel with macular edema: An unusual presentation

Geetika Khurana, Poninder Kumar

Department of Ophthalmology, Army College of Medical Sciences, Base Hospital, New Delhi, India

Congenital retinal macrovessel (CRM) is a rare developmental condition in which a large vein, artery, or occasionally an artery and a vein together, cross the macular region. CRMs do not affect vision unless there are associated foveolar cysts, foveal ectopia, pigmentary changes at fovea, macular hemorrhage, exudates, serous macular detachment, or the macrovessel crosses the fovea

CRM are usually benign, however, you must rule out Wyburn-Mason syndrome in the presence of neurologic symptoms.
Wyburn-Mason syndrome is characterized by the subsequent finding of an Arteriovenous malformation of the midbrain in the presence of an ipsilateral AVM of the retina.
Wyburn-Mason syndrome is a systemic condition that can cause hamartomas of the brain with severe neurologic deficit