Oh yeah, I have Ankylosaurus Spondywhatsis?

Emily M Thompson, OD, FAAO

AFOS Annual Meeting

Nov 1, 2021

- I have no financial disclosures
- None of the photos are of the actual patient

Initial Presentation: Day 1 Apr 30

- 36 y/o Caucasian male aviator
- CC: Sore & bruised feeling OS, also noticed OS pupil won't dilate
- Onset 10 days ago
- Vision worse when he leans forward & looks down
- Had been to ER before coming to Optometry, was given Tobradex QID OS
- Oh yeah, this happened a few years ago OD. Possible history of trauma – hit in face with football

- DVA sc:
  - OD: 20/15 OS: 20/20
- IOP NCT:
  - OD: 10 OS: 08
- Pupils:
  - OS miotic but reactive equally in dim & bright light
  - (-) APD
- Slit lamp:
  - Conj: tr-1 chemosis OS
  - Cornea: tr diffuse edema OS
  - A/C: 2+ cells, tr flare OS
- DFE: (-) post seg inflammation OD, OS

Initial Presentation: Day 1 Apr 30

- Treatment Plan
  - Stop Tobradex
  - Begin Durezol q 2 hrs OS
  - Declined cycloplegic
  - Made note of 2nd iritis within a few years, previous episode seemed to be related to trauma
  - RTC 1 day

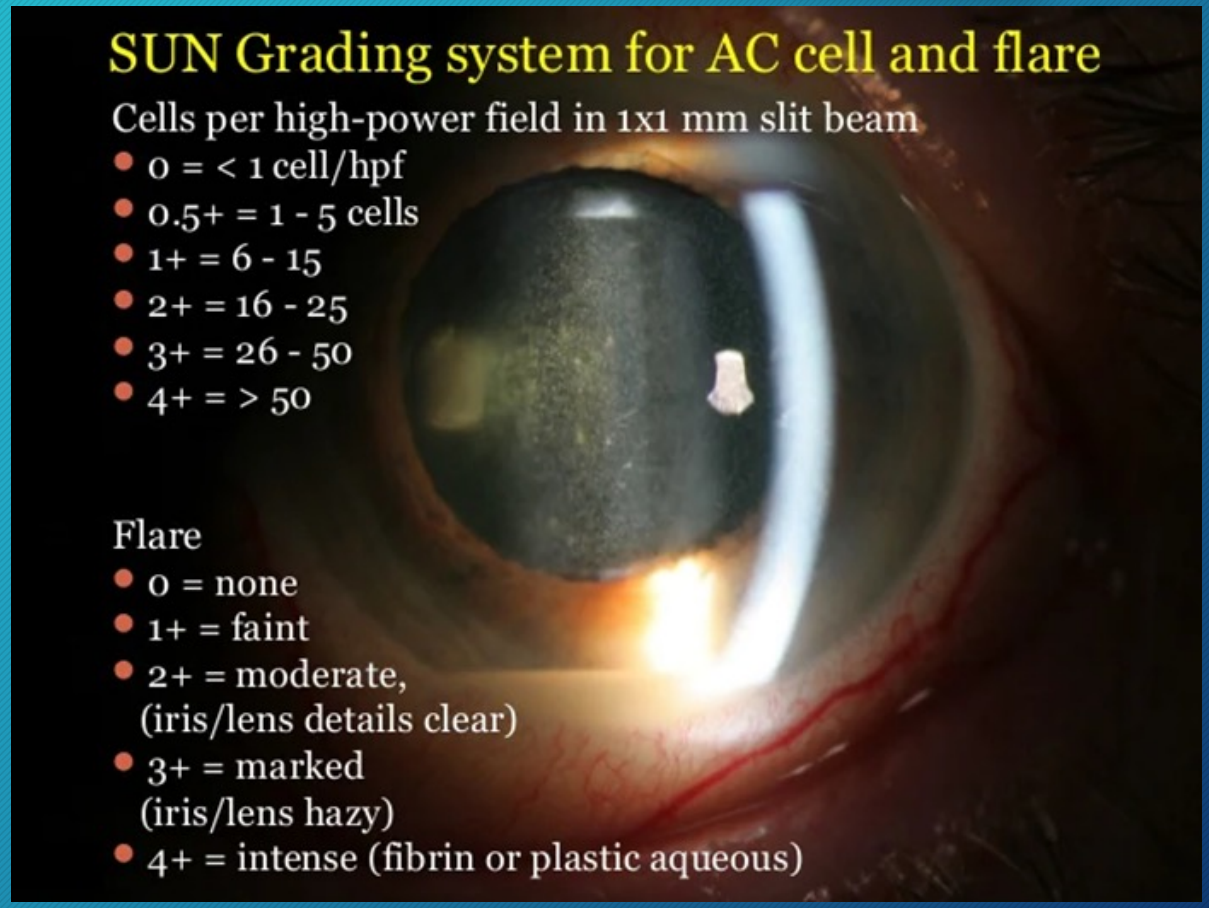
Follow Up #1 May 1

- CC:
  - Using Durezol q 2 hrs OS.
  - Eye still feels irritated and vision is slightly foggy
  - No achy or sore sensation

- DVA sc:
  - OD: 20/20 OS: 20/15-1
- IOP NCT:
  - OD: 09 OS: 09
- Pupils:
  - OS miotic but reactive equally in dim & bright light
  - (-) APD
- Slit lamp:
  - Cornea: 1+ edema esp inf OS
  - A/C: Tr cells, 0.5 flare OS

Follow Up #1 May 1

- Treatment Plan
  - Improved comfort
  - Reduced inflammation
  - Cont Durezol q 2 hrs OS
  - Declined cycloplegic
  - RTC 2 days



Follow Up #2 May 3

- CC:
  - Using Durezol q 2 hrs OS
  - Vision not as foggy
  - Eye sometimes feels achy or scratchy
- DVA sc:
  - OD: 20/20 OS: 20/15
- IOP NCT:
  - OD: 12 OS: 09
- Pupils:
  - OD=OS
  - (-) APD
- Slit lamp:
  - Cornea: 1+ edema esp inf OS
  - A/C: Tr cells, 0.5 flare OS

Follow Up #2 May 3

- Treatment Plan
  - Begin Durezol taper to QID OS
  - Add Muro 128 gtts QID OS to speed corneal edema resolution
  - RTC 5 days
  - Edu will likely be on steroid gtts for several weeks

Follow Up #3 May 8

- CC:
  - Durezol QID OS
  - Muro 128 gtts QID OS
  - Vision still a little foggy
- DVA sc:
  - OD: 20/15-2 OS: 20/15-2
- IOP NCT:
  - OD: 11 OS: 12
- Pupils:
  - OD = OS
  - (-) APD
- Slit lamp:
  - Cornea: tr edema esp endothelial with some PEE superficially OS
  - A/C: D & Q (-) cells (-) flare

Follow Up #3 May 8

- Treatment Plan
  - Cont Durezol taper to BID OS
  - Muro 128 gtts BID OS
  - RTC 1 week

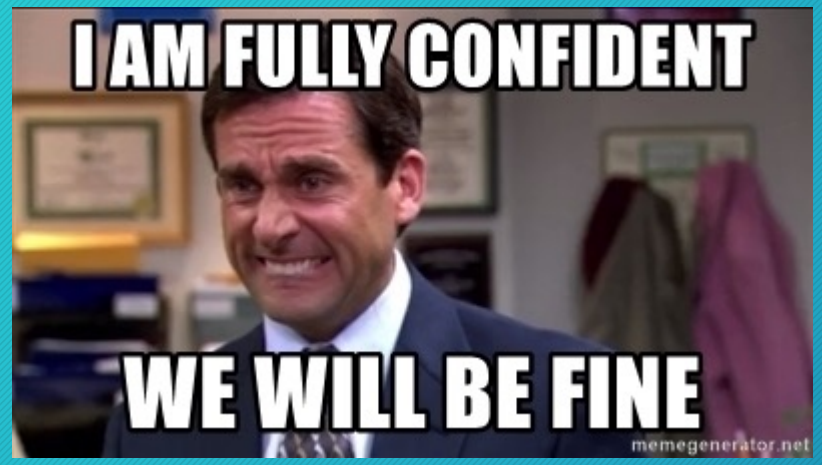
Follow Up #4 May 14

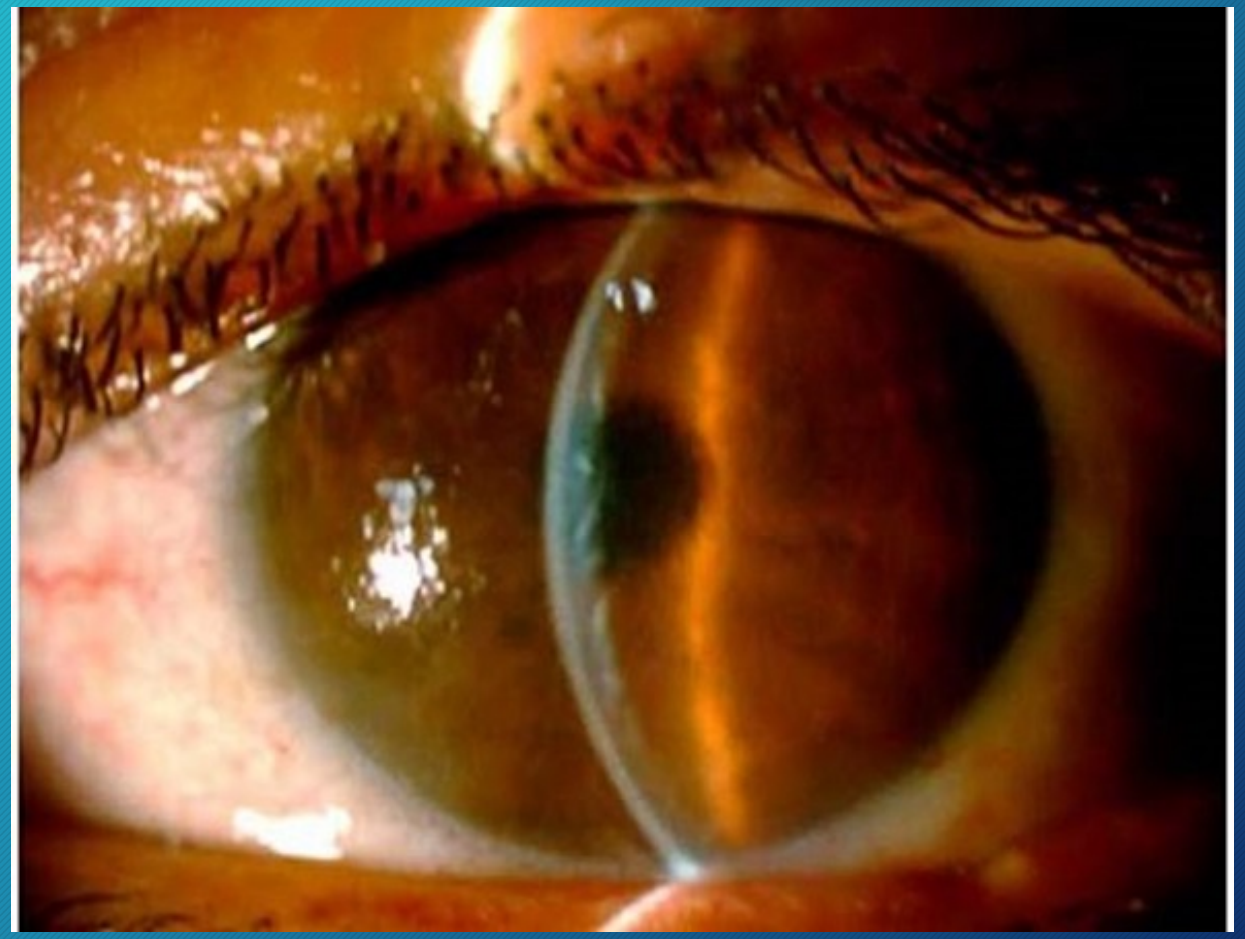
- CC:
  - Durezol BID OS
  - Muro 128 gtts QID OS
  - Vision still a little foggy
  - Wife pointed out yesterday that pupil OS is smaller again

- DVA sc:
  - OD: 20/15-1 OS: 20/20
- IOP NCT:
  - OD: 10 OS: 10
- Pupils:
  - OD = OS
  - (-) APD
- Slit lamp:
  - Cornea: Rough endothelium inferior sector w/tr pinball NaFL staining
  - A/C: 1 single cell (-) flare

Follow Up #4 May 14

- Treatment Plan
  - Cont Durezol taper to once daily OS
  - Muro 128 gtts BID OS
  - RTC 5-7 days



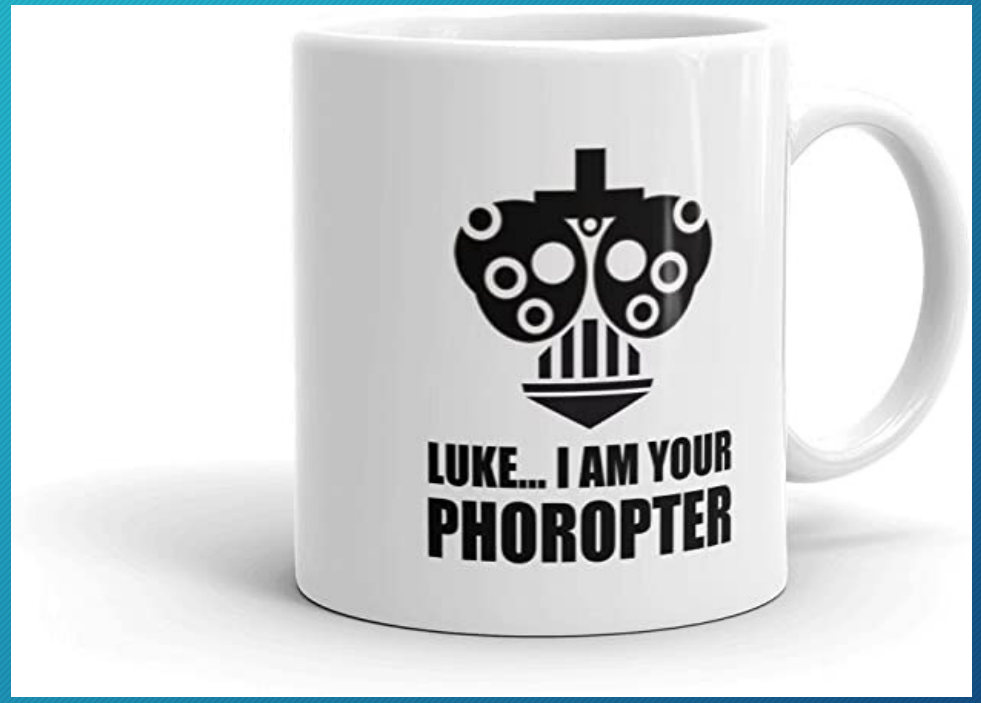


Follow Up #5 May 17

- CC:
  - Durezol QD OS
  - Muro 128 gtts BID OS
  - Feels like left eye is “focusing harder” since iritis started
- Manifest:
  - OD: +0.25-0.50*085….20/15
  - OS: PL-1.00*080……20/15
- DVA sc:
  - OD: 20/15 OS: 20/20
- IOP NCT:
  - OD: 09 OS: 07
- Pupils:
  - OD = OS
  - (-) APD
- Slit lamp:
  - Cornea: Tr Rough endothelium, no NaFL staining
  - A/C: (-) cell (-) flare

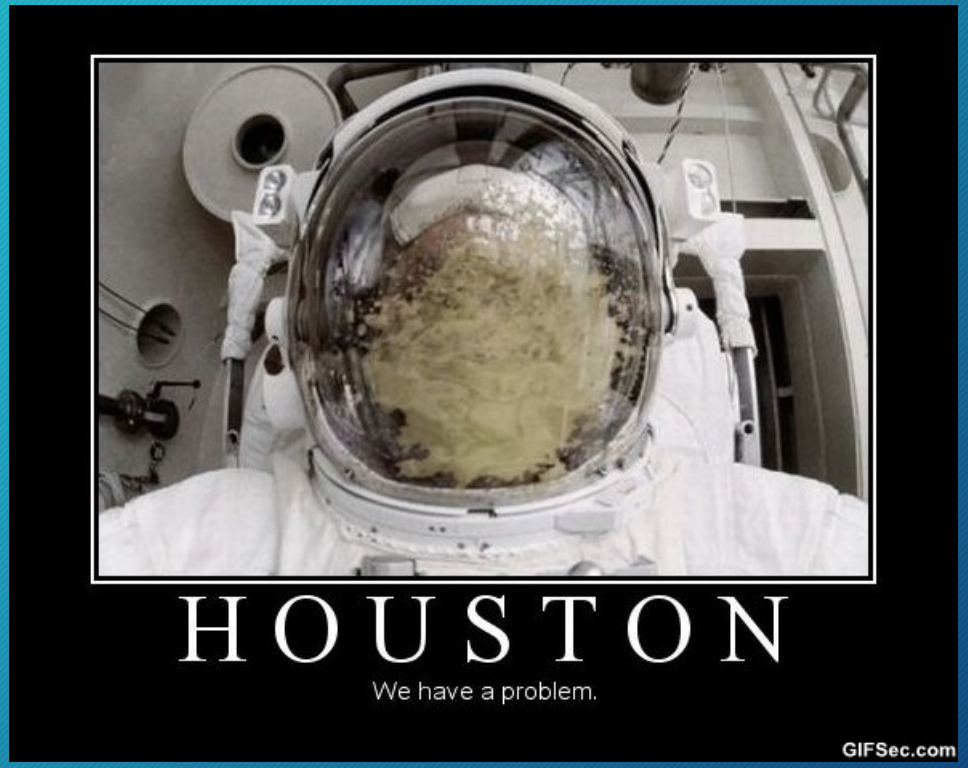
Follow Up #5 May 17

- Treatment Plan
  - Stop Durezol
  - Muro 128 gtts BID OS
  - RTC 1 week, consider repeat MR and specs at that time if pt still bothered by vision



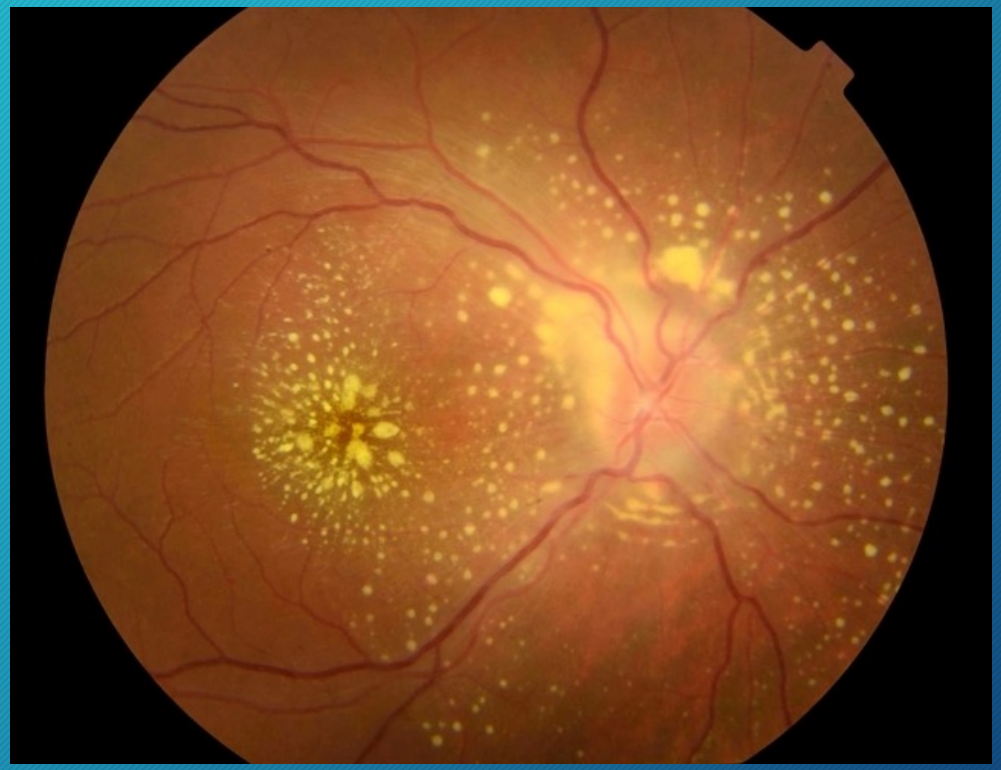
T-Con May 21

- Pt walked into clinic saying he had a flare up of the iritis over the weekend and went to ER
- Referred patient to off base ophthalmology at 1245 same day
- That ophthalmologist referred him to retinal specialist for possible panuveitis….He has an appointment the next day with him



Retinal Specialist Reports

- May 23
- Pt was diagnosed with posterior uveitis
- Started oral and topical steroids
- Recommended auto-immune workup



Retinal Specialist Reports

- June 4
- Pt was found to be HLA B27+
- Planned to be on oral steroids for 6 weeks minimum
- Rheumatology consult ordered to rule out ankylosing spondylitis

- Typical ankylosing spondylitis workup:
  - HLA B27
  - SI joint films
  - Rheumatology consult

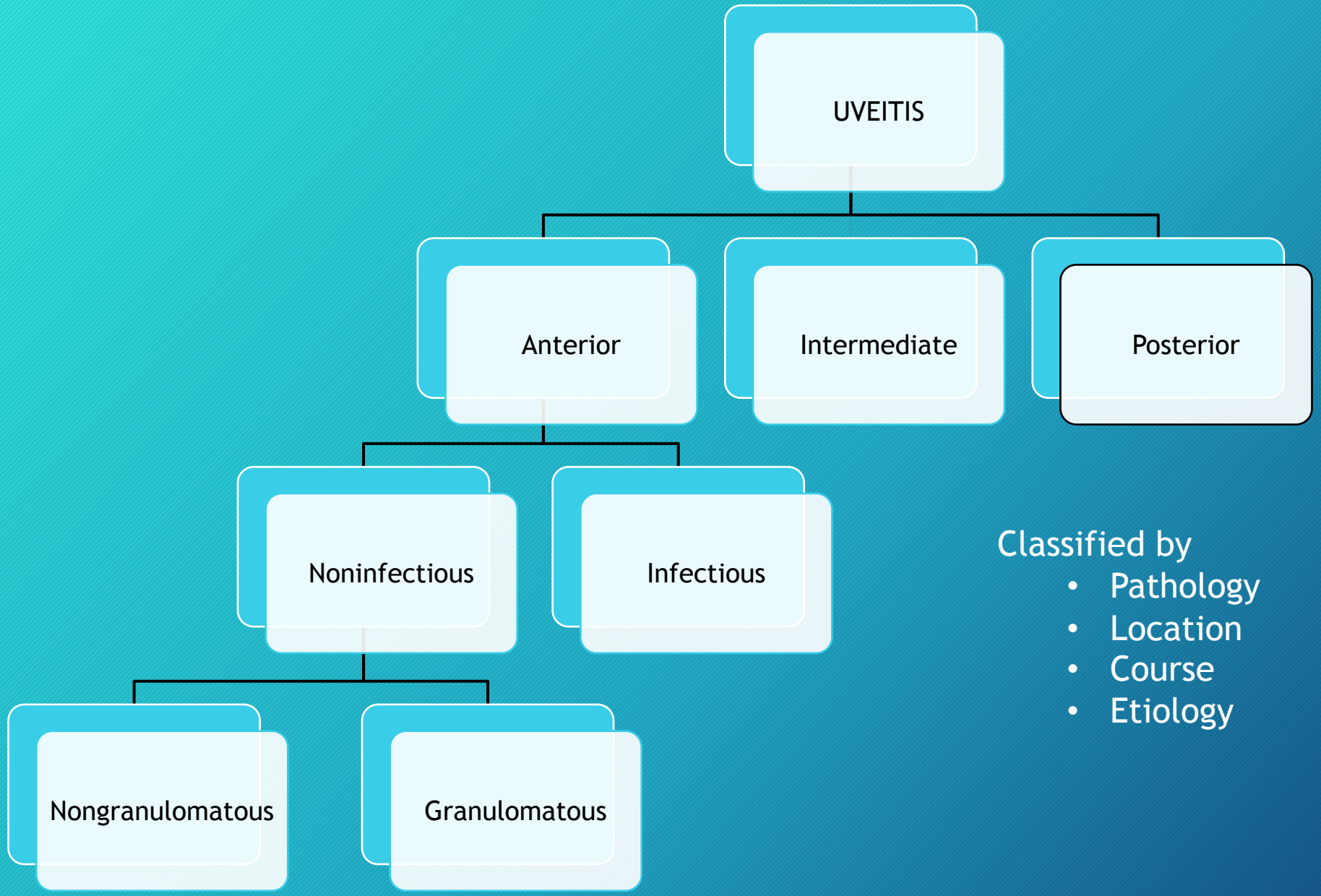
Retinal Specialist Reports

- Sept 17
- Reported he felt flare up coming on, started steroids again
- Developed macular edema OS at some point that was not resolving
- Now has panuveitis with extensive debris inferiorly
- Nongranulomatous
- HLA B27 (+) HLA B51(-)

Retinal Specialist Reports

- Jan 31
- Last one, promise
- Tapered off both oral and topical steroids
- VA OD, OS 20/20
- Toxo and quantiferon negative
- F/U in 1 year

- Rheumatologist started him on Humira April 9 the following year

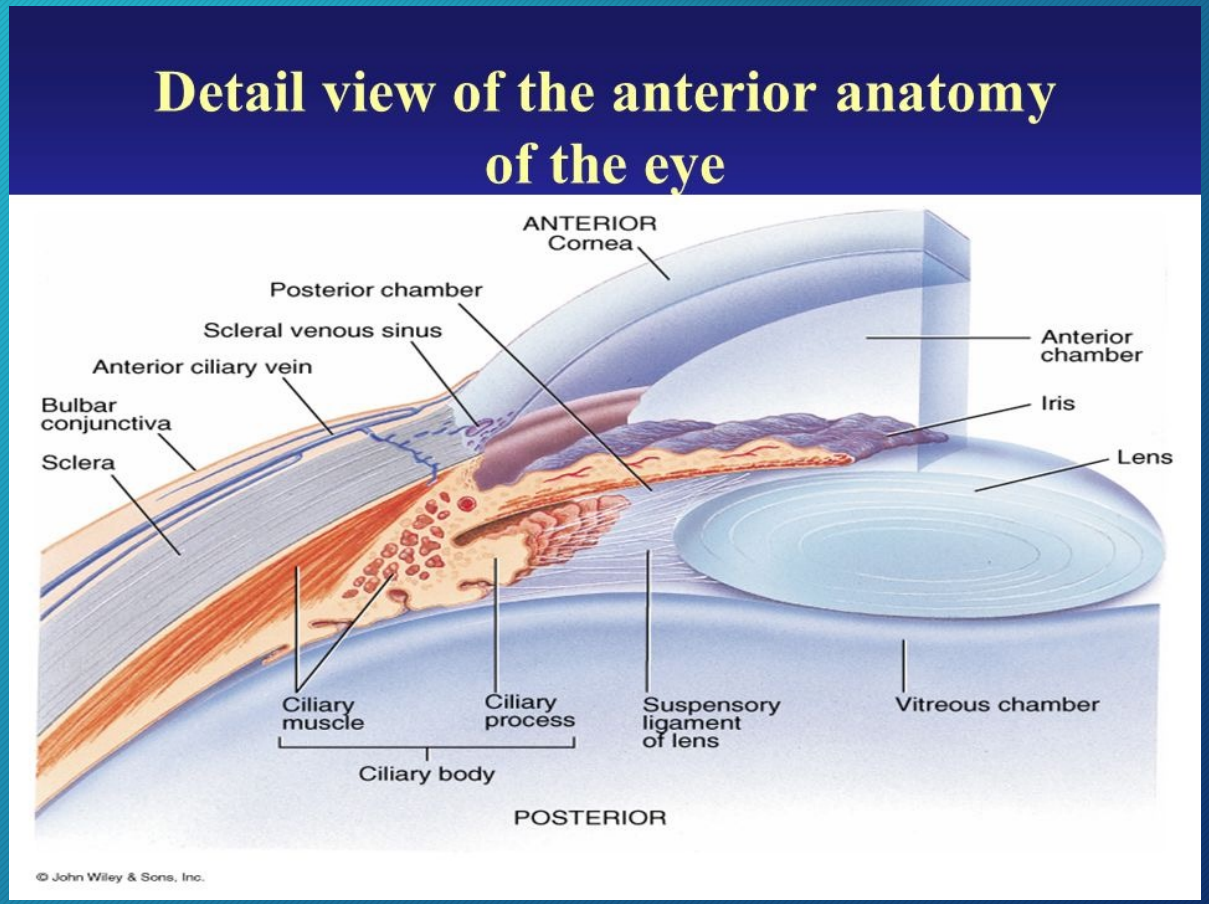


Classified by

- Pathology
- Location
- Course
- Etiology

Anterior Uveitis: Iritis, Iridocyclitis

- Inflammation of iris and ciliary body
- Breakdown of blood-aqueous barrier = leaking of WBC into anterior chamber



Signs & Symptoms

- Pain, redness, photophobia, tearing, reduced vision
- Photophobia, usually dramatic
- Cells
- Flare
- Ciliary flush
- Keratic precipitates
  - Fine: nongranulomatous
  - Mutton fat: granulomatous
- Iris nodules
- Increased or decreased IOP
- PAS
- Posterior synechiae
- Hypopeon (esp suggestive of HLA B27 associated or Behcet's)

- Most commonly idiopathic or autoimmune

Cells & Flare

Standardized Grading Scales for Uveitis[2]

SUN Grading Scheme for Anterior Chamber Cells

Grade	Cells in Field
0	< 1
0.5+	1 – 5
1+	6 – 15
2+	16 – 25
3+	26 – 50
4+	50+

(using 1mm slit beam)

SUN Grading Scheme for Anterior Chamber Flare

Grade	Description
0	None
1+	Faint
2+	Moderate (iris/lens details clear)
3+	Marked (iris/lens details hazy)
4+	Intense (fibrin/plastic aqueous)

The Many Moods of Uveitis (reviewofoptometry.com)

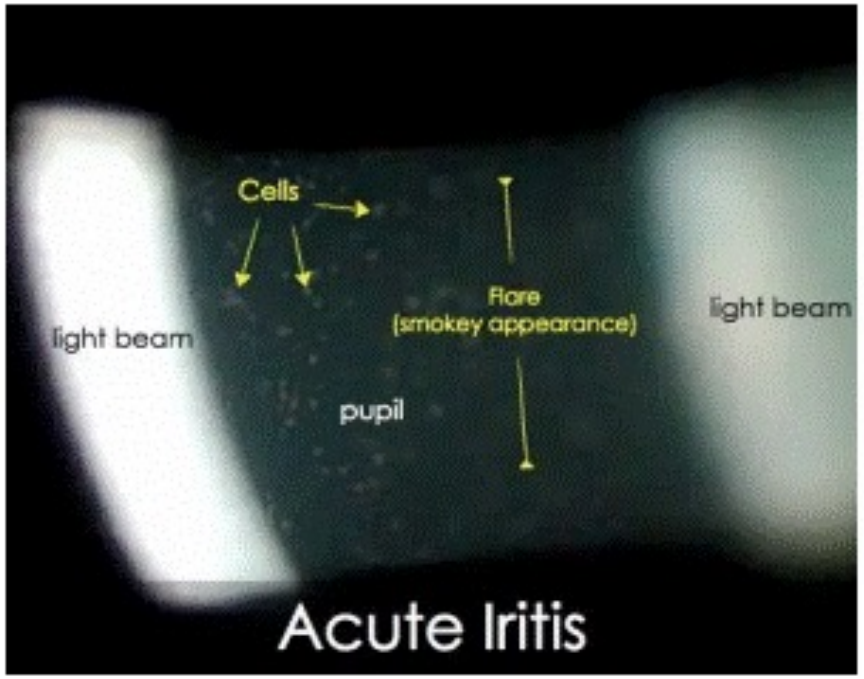
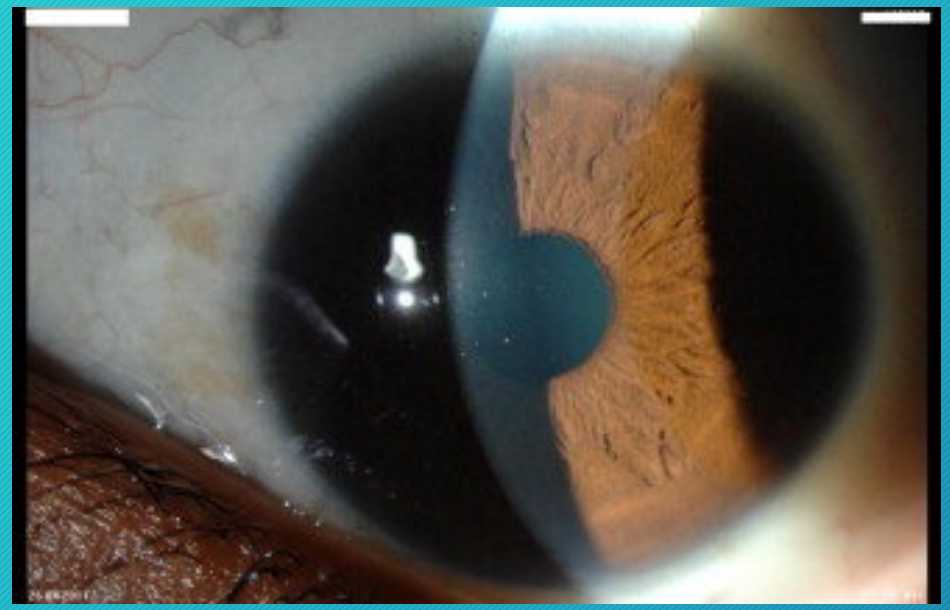


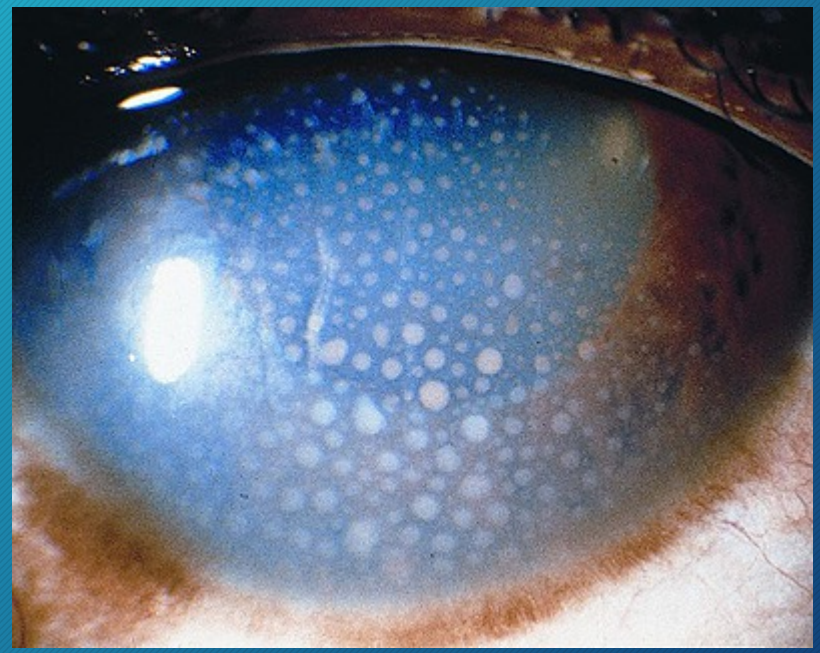
Image from "Anterior Uveitis – Pearls and Pitfalls, 2017"

Keratic Precipitates

- Nongranulomatous
  - Lymphocytes
  - Plasma cell infiltrates



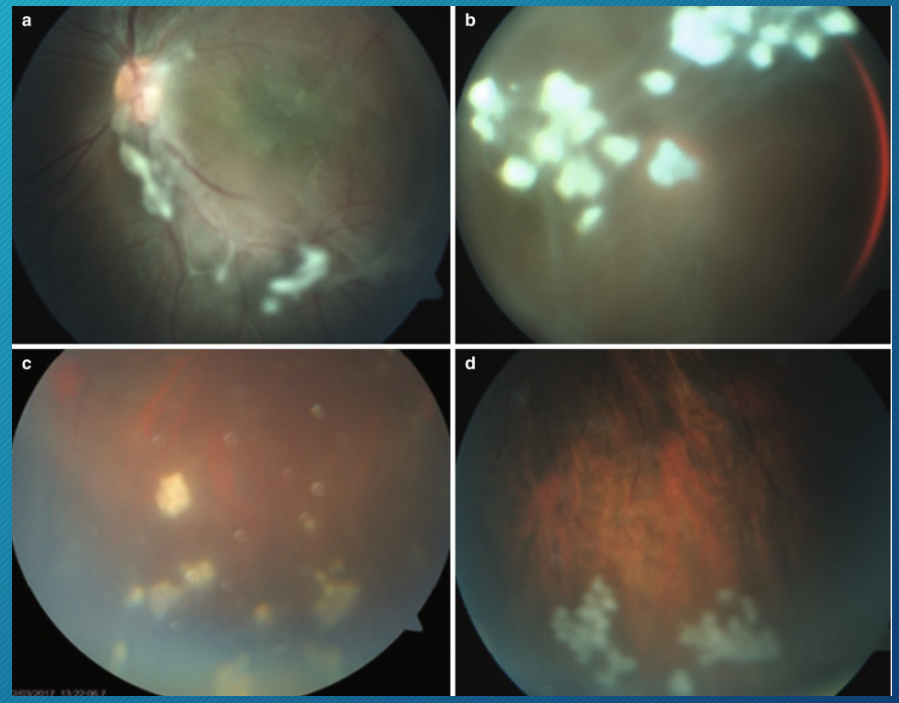
- Granulomatous "mutton fat"
  - Epithelioid infiltrates
  - Giant cell infiltrates



Intermediate Uveitis / Pars Planitis

- Affects vitreous, pars plana, ciliary body
- Usually children & young adults
- Typically bilateral
- Decreased VA, floaters, usually no pain, redness or photophobia
- Associated with MS, sarcoidosis

- Snowballs, snow banking, vitreous cells



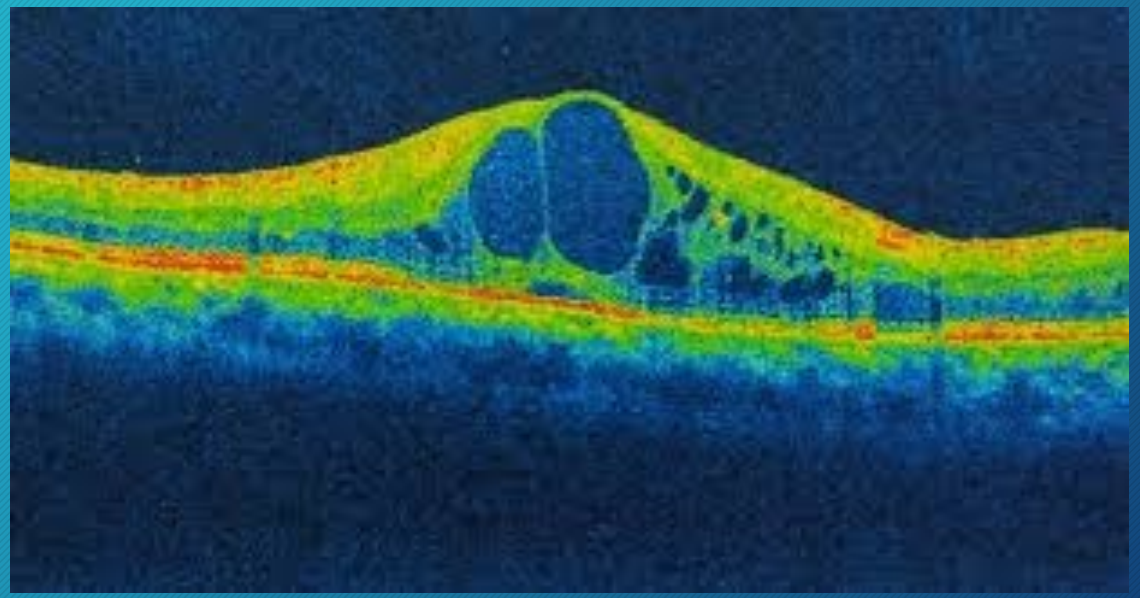
Posterior Uveitis

- Cystoid Macular Edema
- Retinal detachment
- Vasculitis
- Optic neuritis
- Neovascularization
- Hypotony
- Phthisis

- Usually no pain, redness, or photophobia unless anterior uveitis also present

Panuveitis

- Inflammation of entire uveal tract
- “A pattern of severe, diffuse inflammation of both anterior and posterior segments” according to Wills Eye Manual



Panuveitis Causes: Most to least common

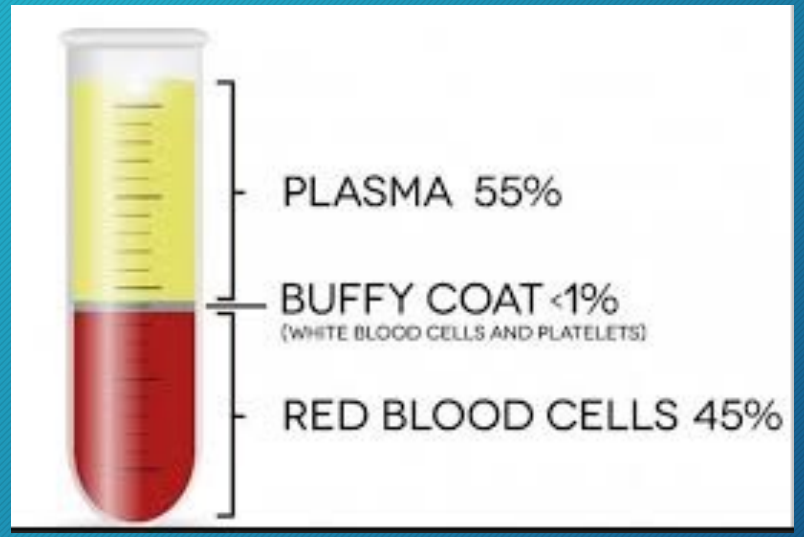
- Sarcoidosis
  - Candle-wax drippings
- Birdshot retinochoroidopathy
- Behcet disease
  - Recurrent oral & genital ulcerations, hypopeon
- Vogt-Koyanagi-Harada VKH syndrome
  - Asian, Afro-Caribbean, Japanese
  - Bilateral
  - Exudative retinal detachment
- Sympathetic ophthalmitis
  - Rare, bilateral, following penetrating trauma
- Tuberculosis choroiditis
  - Uncommon
- Acquired syphilis
  - Rare
  - Large yellow placoid lesions in post pole

Visual Prognosis

- Depends on:
  - Etiology
  - Ability to control inflammation
  - Sequelae

Recommended Tests: Nongranulomatous

- Negative past iritis history
  - CBC
  - ESR erythrocyte sedimentation rate
  - Rapid plasma regain or VDRL
  - FTA-ABS or MHA-TP (syphilis)
  - HLA B27



Recommended Tests: Granulomatous

- ANA
- Rheumatoid Factor
- Angiotensin Converting Enzyme
- Purified Protein Derivative
- Herpes titers
- ELISA
- HIV antibody
- Chest radiograph
- Chest CT
- Sacroiliac radiograph
- Knee radiograph
- Gallium scan
- Urinalysis
- Urethral cultures

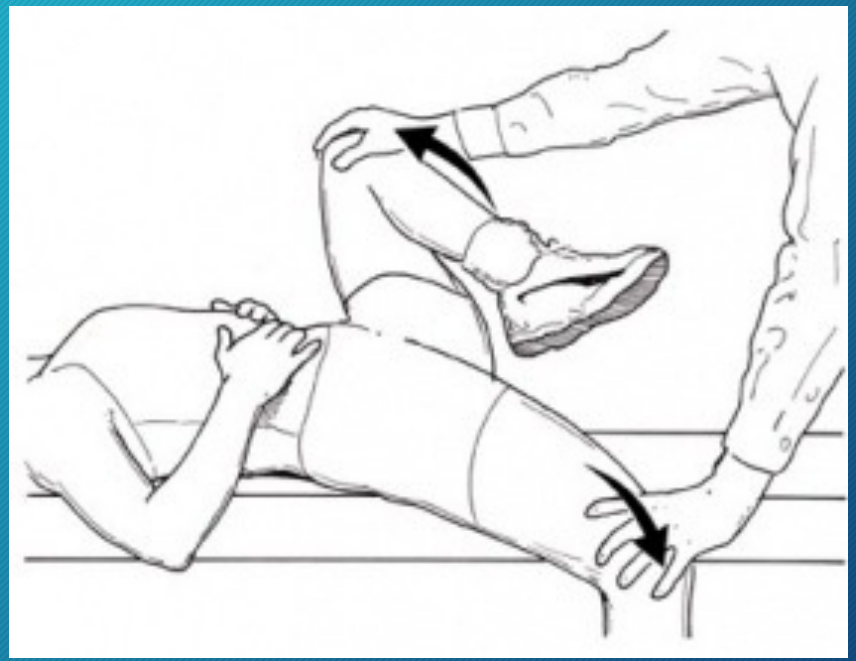
- Special Diagnostics
  - HLA typing
  - ANCA
  - Raji cell & C1q binding assays
  - Complement proteins
  - Soluble interleukin-2 receptor

- Rheumatology consult!

Ankylosing Spondylitis

- = new bone formation in spine
- Arthritis affecting spine and hips
  - Particularly sacroiliac joint
- Can limit breathing if affecting ribs
- Various methods to test joint pain by PCM
- https://spondylitis.org/

- Gaenslen Test



Ankylosing Spondylitis

- Typically Caucasian male in 30s
- Diagnostic testing can include:
  - HLA B27
  - C Reactive protein
  - X-Ray, MRI
  - Urinalysis
- Positive X-ray/MRI AND one of following to diagnose:
  - Limited chest expansion for demographic
  - Limited range of motion of lower back
  - Back pain x3 months, improves w/exercise, worsens w/rest
- Treatments
  - Exercise
  - Physiotherapy
  - Medications
    - NSAIDS, steroids, biologics
- Prognosis generally good

Uveitis Treatments

- Topical steroids
- Topical cycloplegic
- May need to use IOP lowering drops
- Oral steroids
- Ranitidine (Zyrtec) with oral steroids
- Sub-tenon steroid injection or implantable sustained release steroid devices

- NSAIDS
- Immunosuppressive chemotherapy
  - Antimetabolites (methotrexate)
  - Inhibitors of leukocyte signaling (cyclosporine)
  - Alkylating agents (chlorambucil)
  - Biologics (Enbrel, Humira)
  - Others (dapsone, colchicine)

HLA B27 on Chromosome 6

- Protein on surface of WBC that's a marker for certain autoimmune conditions

PAIR:

- Psoriatic arthritis
- Ankylosing spondylitis
- Inflammatory bowel disease
- Reiter syndrome aka Reactive arthritis
  - Can't see, can't pee, can't climb a tree

Resources

- Ophthalmology: Clinical Signs and Differential Diagnosis
  - Kanski, 1999
- The Massachusetts Eye and Ear Infirmary
  - Friedman & Kaiser
- The Wills Eye Manual
- Google image search
- How to diagnose and manage uveitis – EyeGuru
- https://spondylitis.org/

H35.9999 Unspecified Retinal Goomba

Michael V. Hall OD

PRIMARY EYE CARE RESIDENT, WOMACK ARMY MEDICAL CENTER/NSUOCO

Introduction

Case Overview

Learning Points

Update on current status

The views expressed in this presentation are those of the author and do not reflect any official policy or position of the Department of the Army, Department of Defense or the US Government.

No financial disclosures

CC: Newly Diagnosed with Diabetes

30 yo Hispanic Male

Happy with current Rx: OD -3.25-1.75x177 20/20
OS -3.25-2.50x176 20/20

No visual complaints

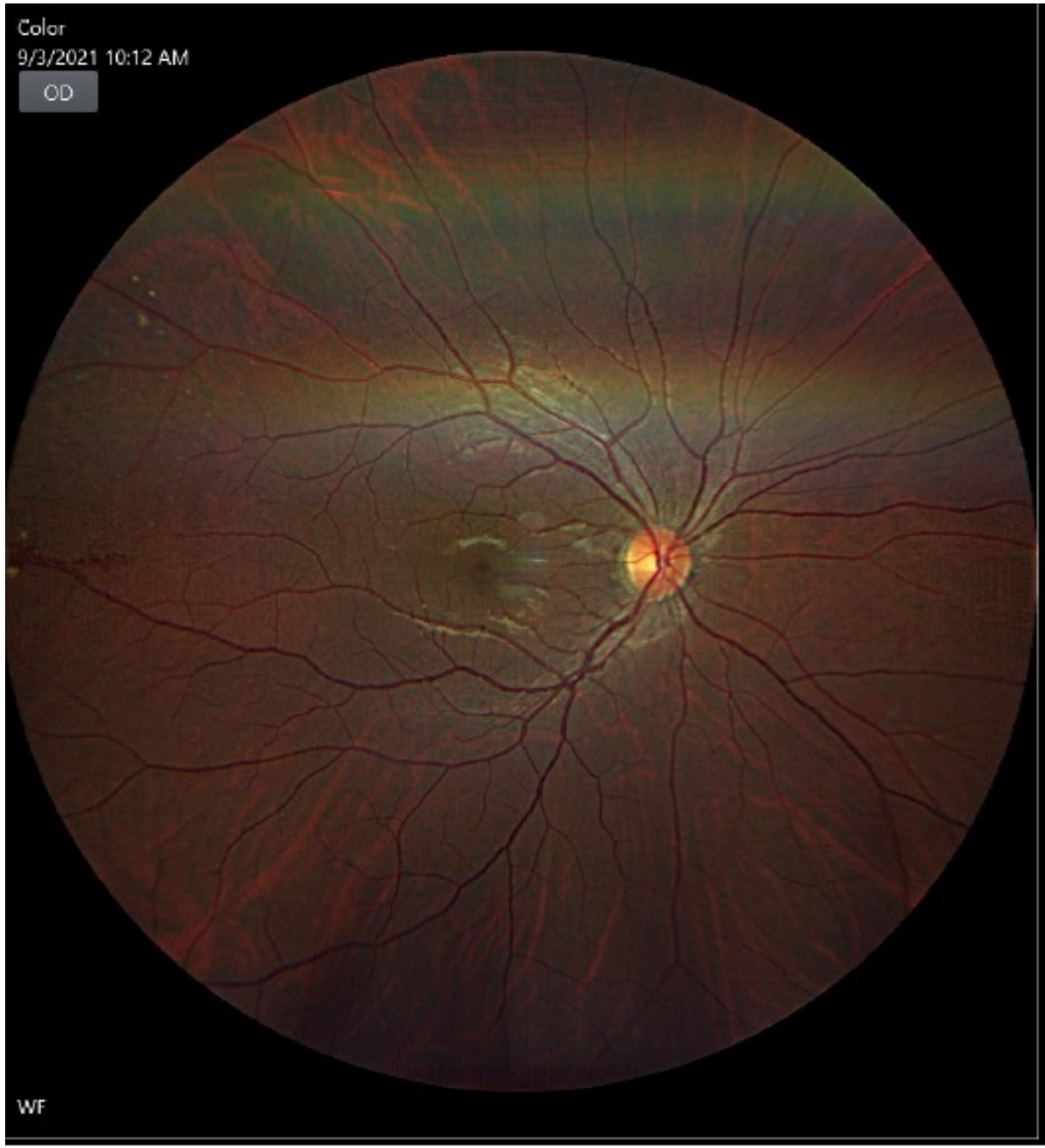
1st diagnosed with Type II Diabetes Aug 2021, no current treatment other than lifestyle changes

Hemoglobin A1c	Site/Specimen	21 Jul 2021 0813	Units	Ref Range
Hemoglobin A1c	BLOOD	6.7	%	
Estimated Average Glucose	BLOOD	146	mg/dL	

Lipid Panel	Site/Specimen	21 Jul 2021 0813	Units	Ref Range
Cholesterol	SERUM	220	mg/dL	
Triglyceride	SERUM	116	mg/dL	(<150)
HDL Cholesterol	SERUM	57	mg/dL	
LDL Cholesterol Direct	SERUM	153	mg/dL	

Entrance and Anterior Segment

- Pupils: PERRL (-) APD
- EOM: Smooth and Full Both Eyes
- IOP: 11 Right Eye, 12 Left Eye @ 0940
- Anterior Segment: No Abnormalities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OD
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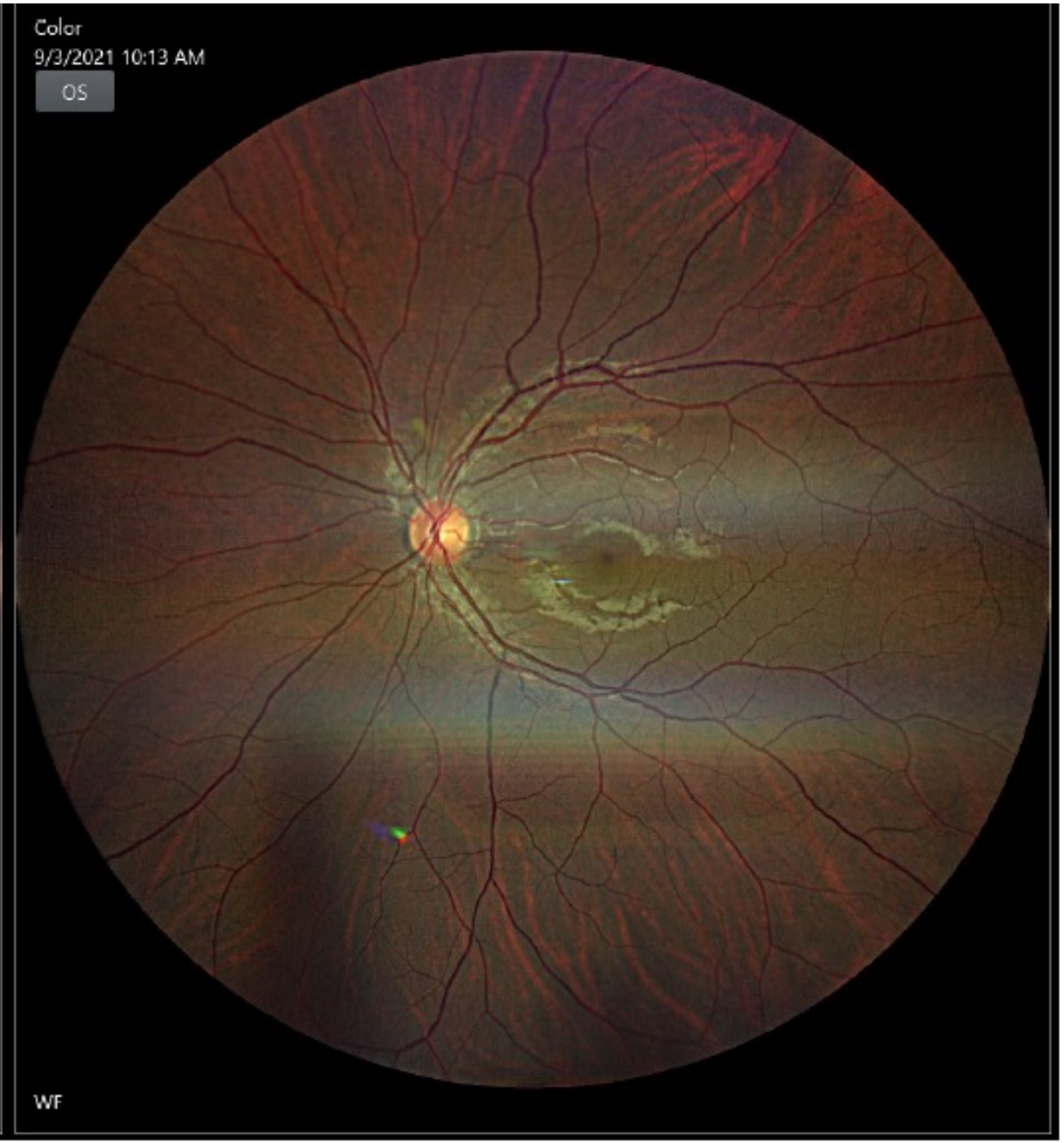
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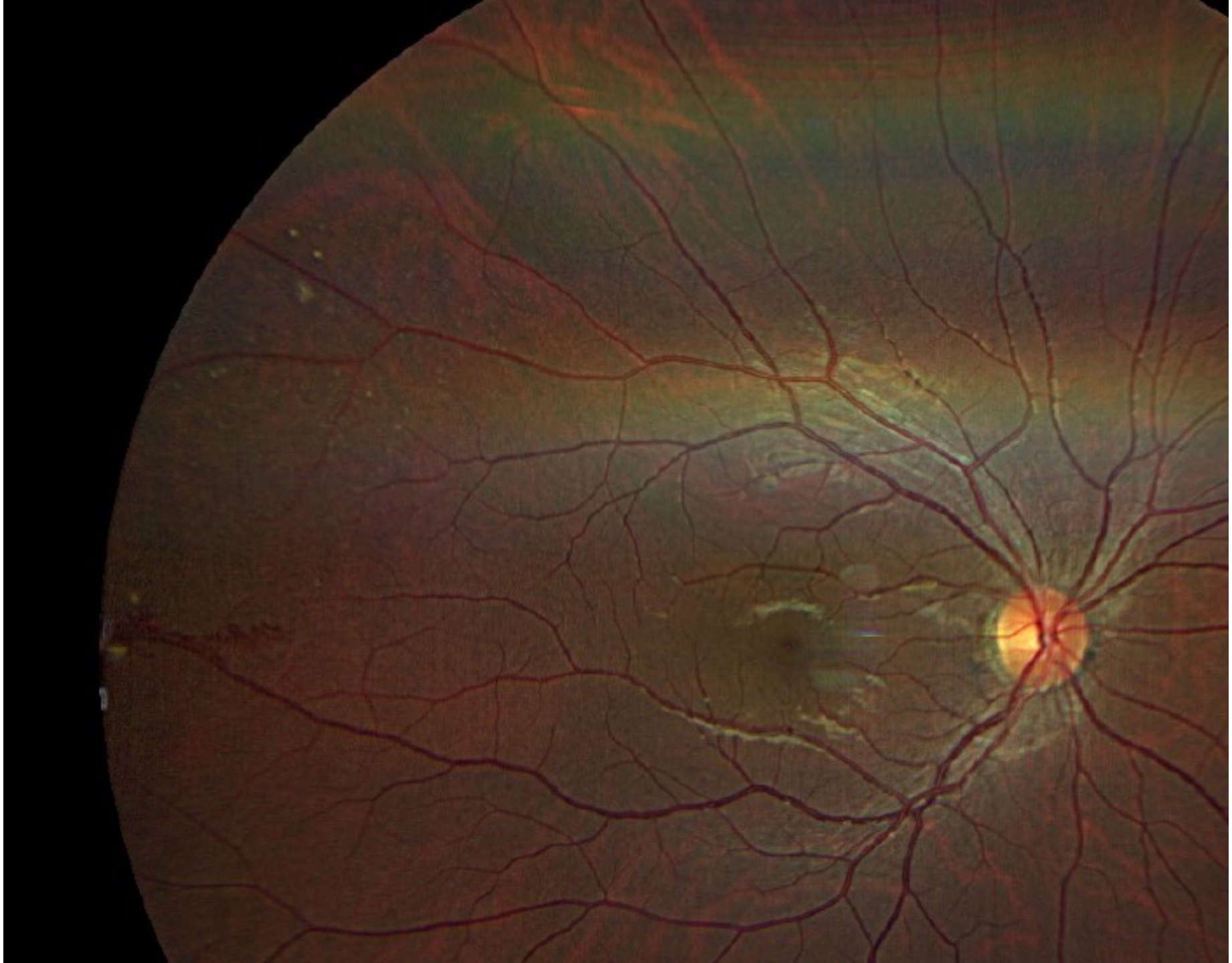


What to do?

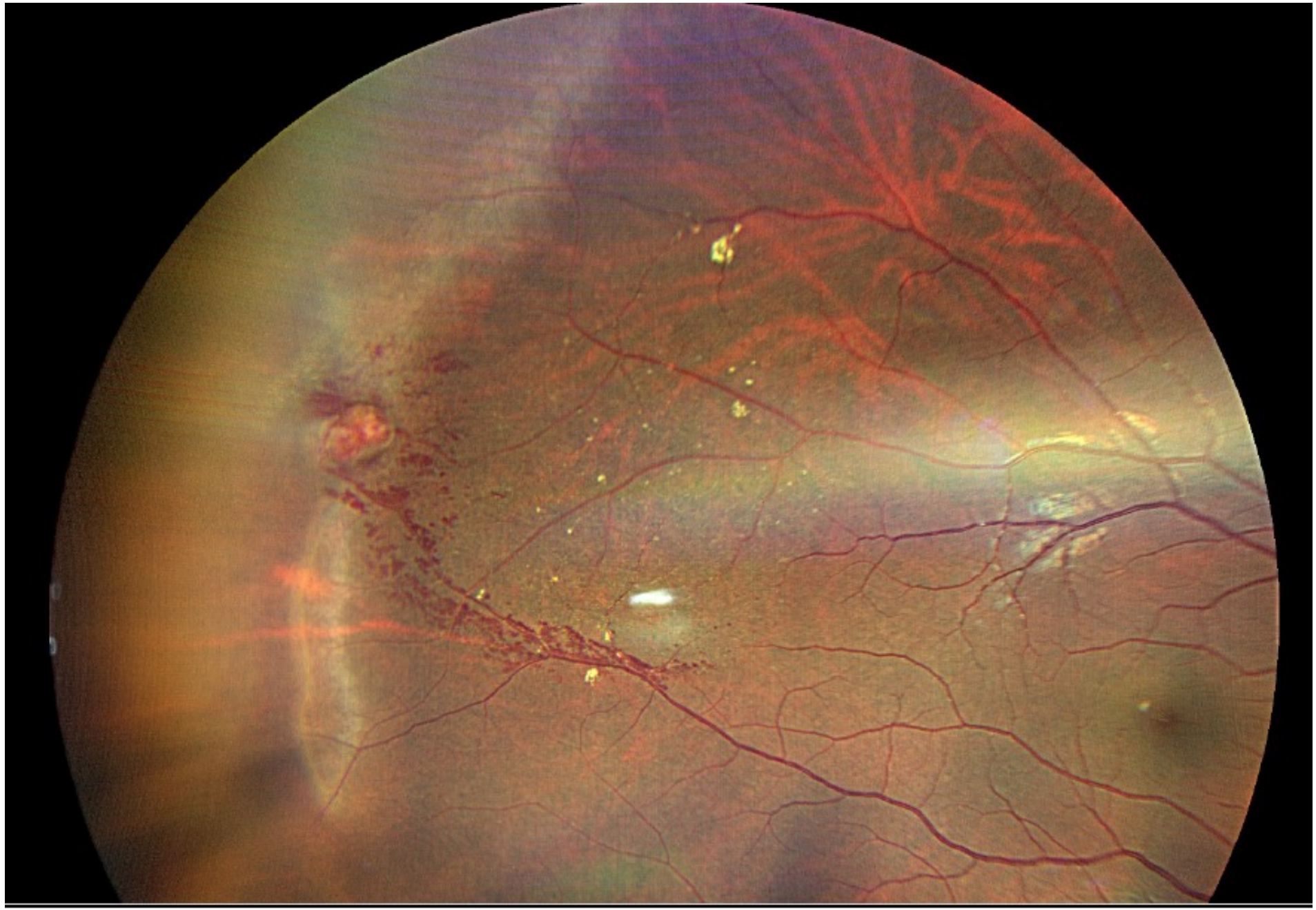
- Area of temporal retinal hemorrhage right eye only
  - Diabetic Retinopathy?
  - Distal Vein Occlusion?
  - Some other systemic etiology?

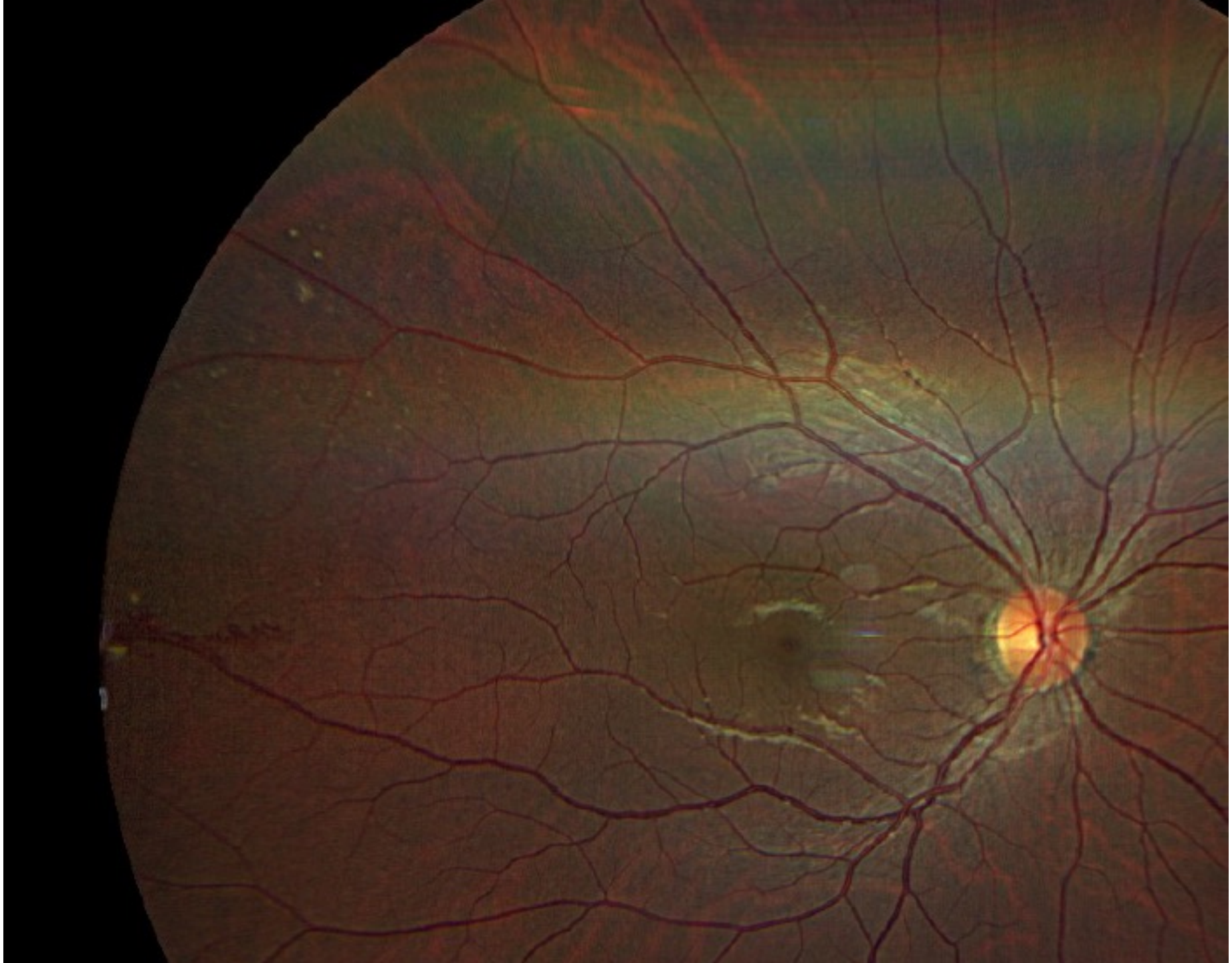
  Service Member is deploying in 2 months

  Plan?

1 Month Later

- Pupils: PERRL (-) APD
- EOM: Smooth and Full Both Eyes
- IOP: 12 Right Eye, 13 Left Eye @ 0945
- Anterior Segment: No Abnormalities



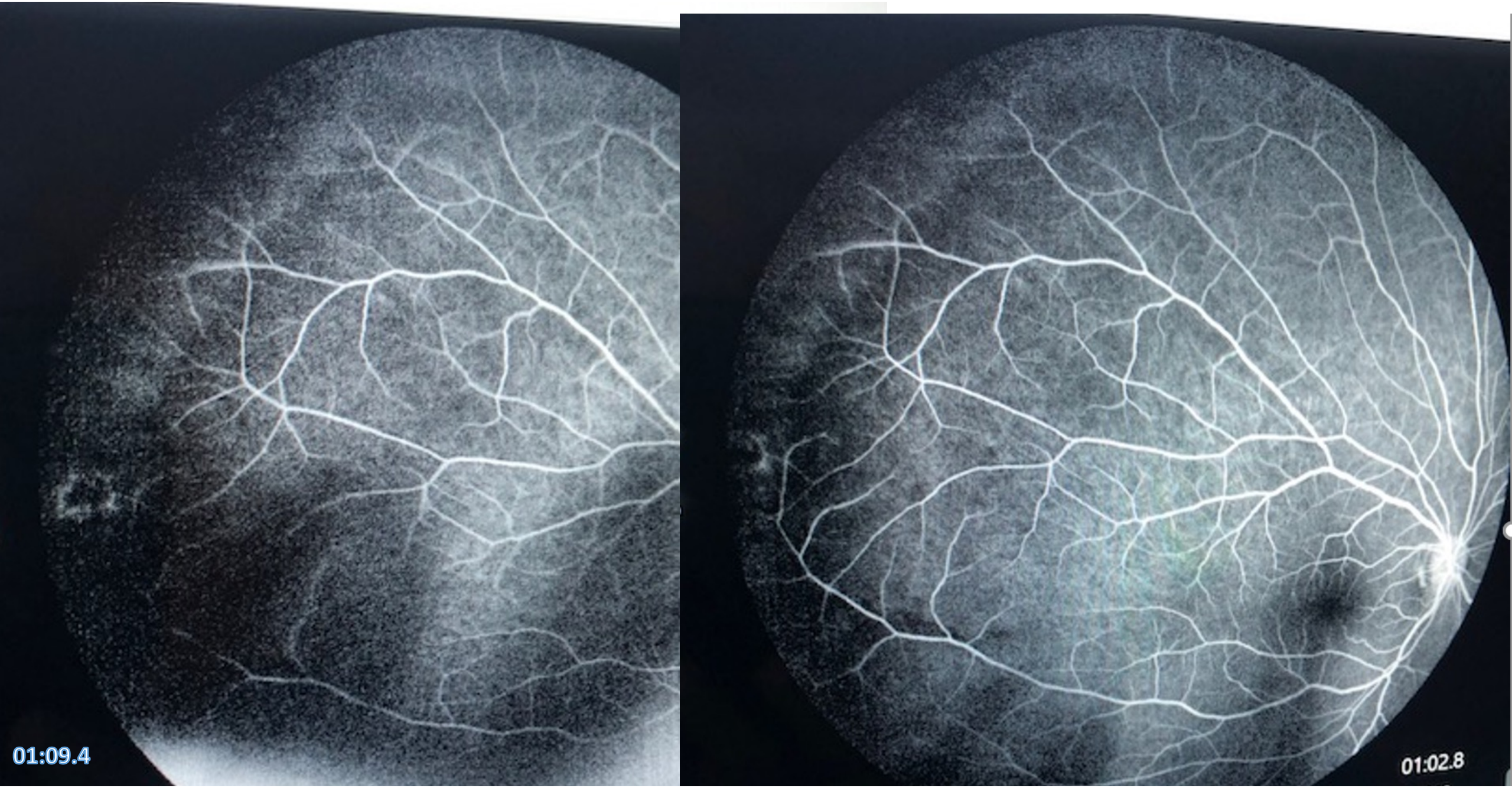


Unspecified Retinal Goomba

- Hemorrhaging following retinal vein
- Scattered exudate
- Amelanotic, lobular goomba, elevated?
- White without pressure, hazy retina temporal to lesion

- Further Testing? Referral?

Refer to Retina Specialist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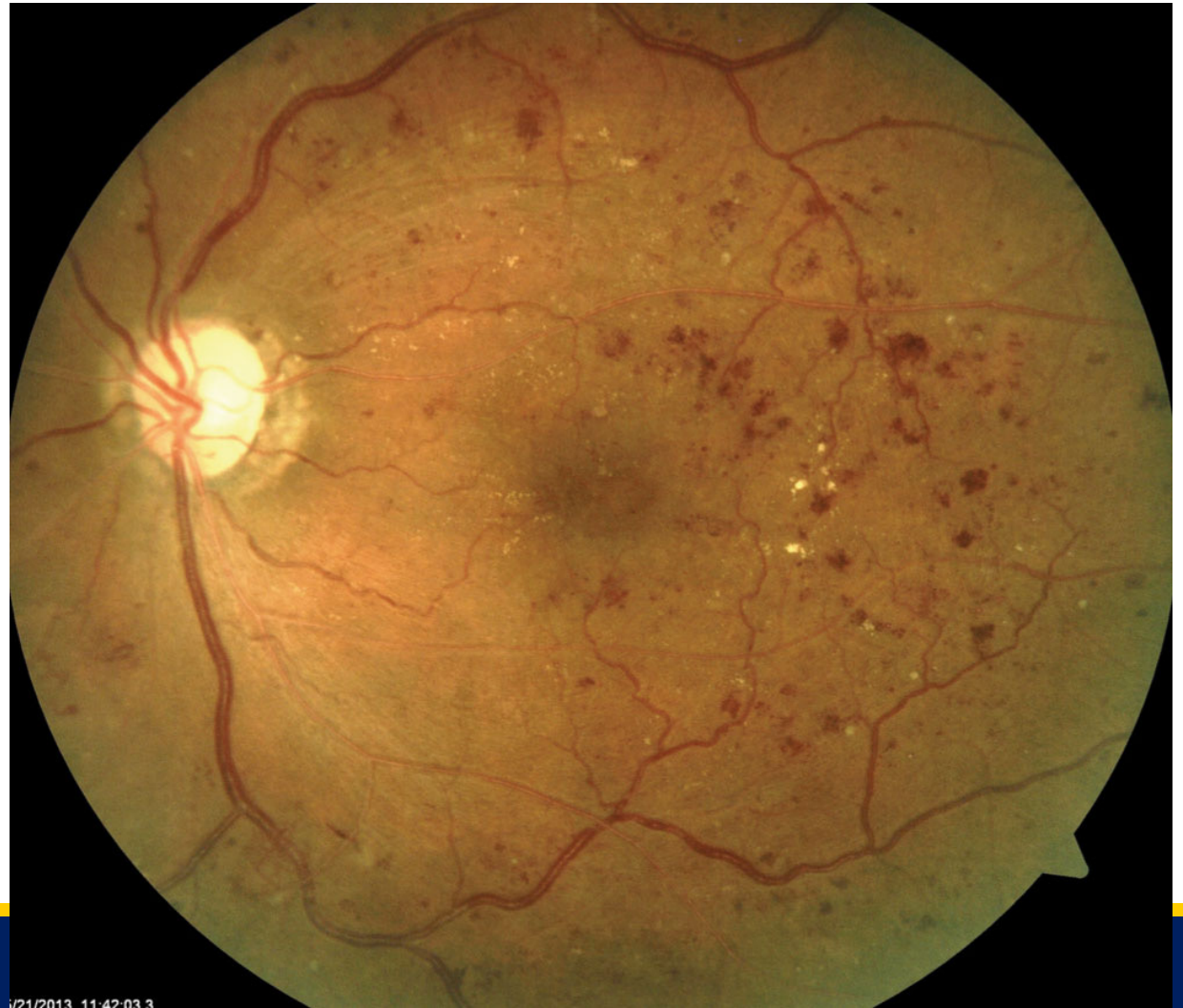
Differential Diagnosis

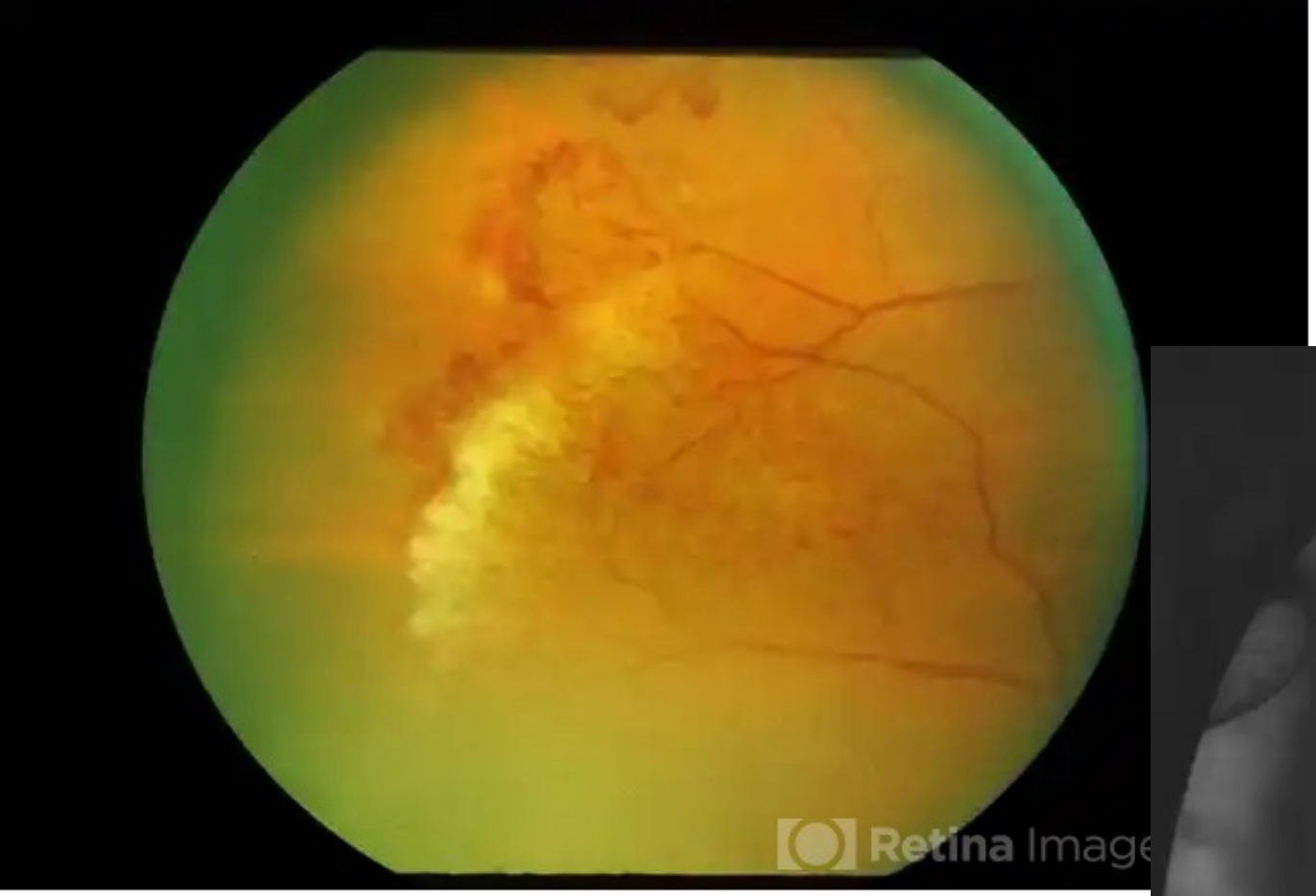
Diabetic Retinopathy

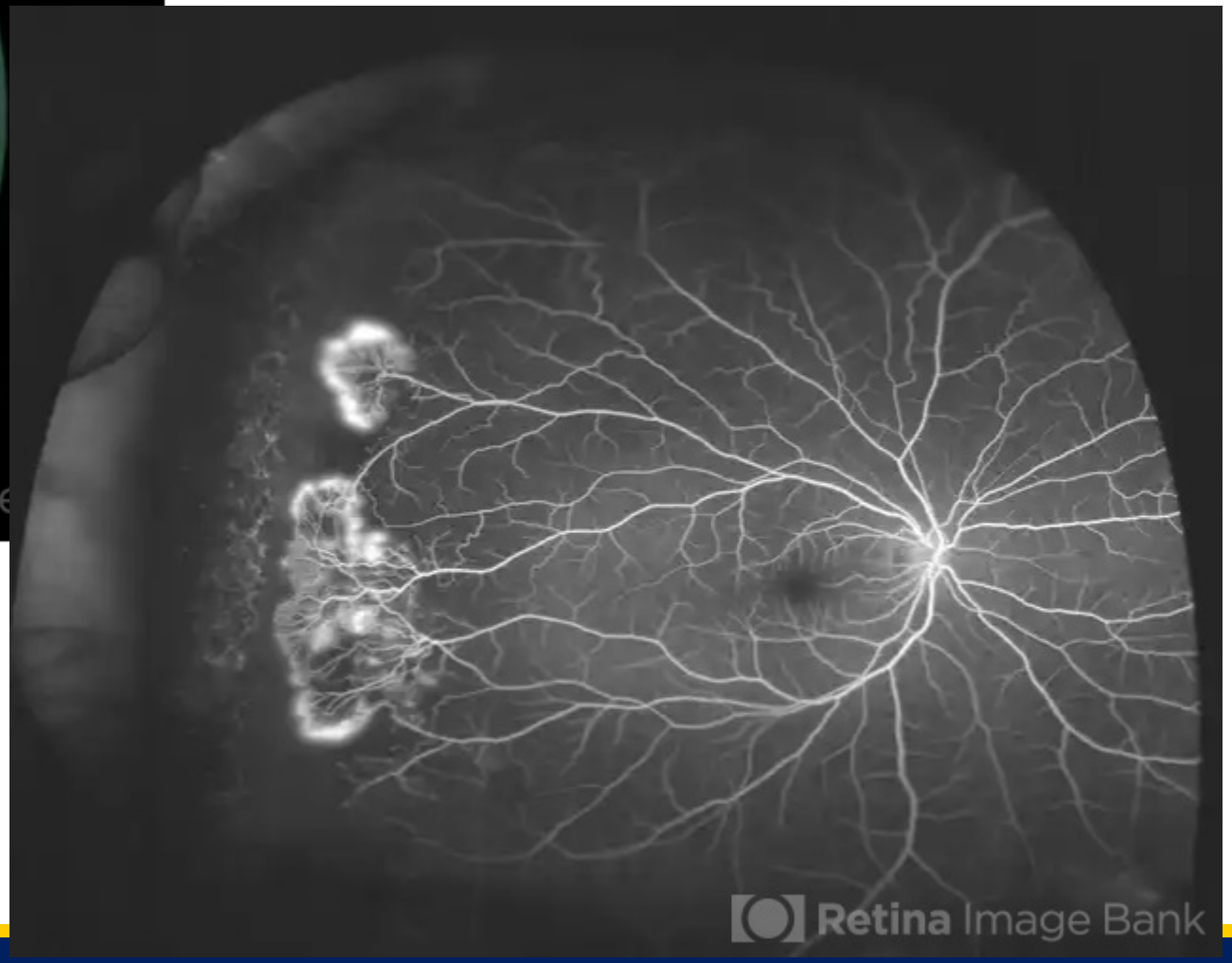


Proliferative Sickle Cell Retinopathy

Sickle Cell Screen	Site / Specimen	10 Sep 2021 1252
Hemoglobin S	BLOOD	NEGATIVE <i>

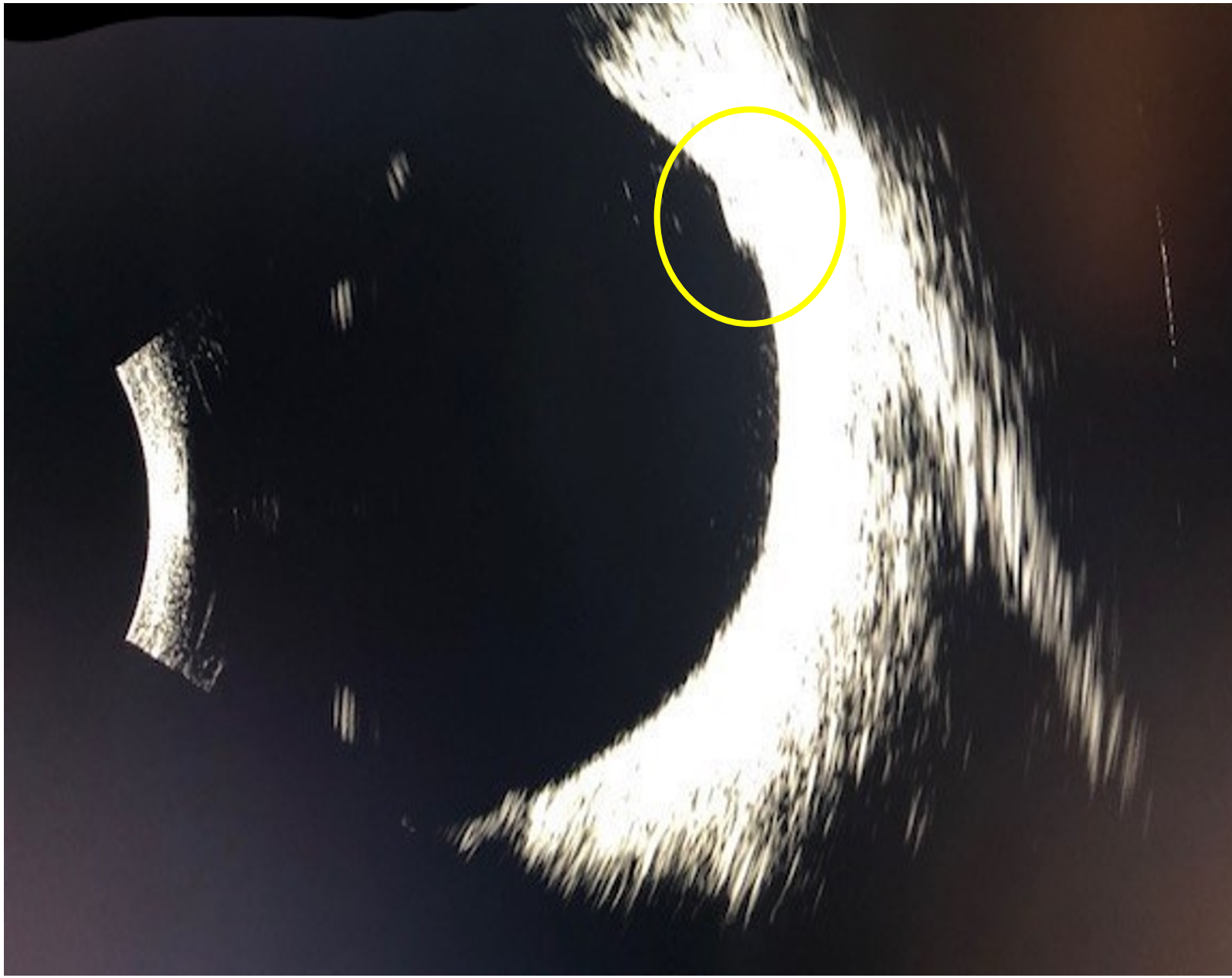
- Peripheral arteriolar occlusion leading to non-perfusion…
- Peripheral AV Anastomoses
- Pre-retinal sea fan neo posterior to non-perfusion

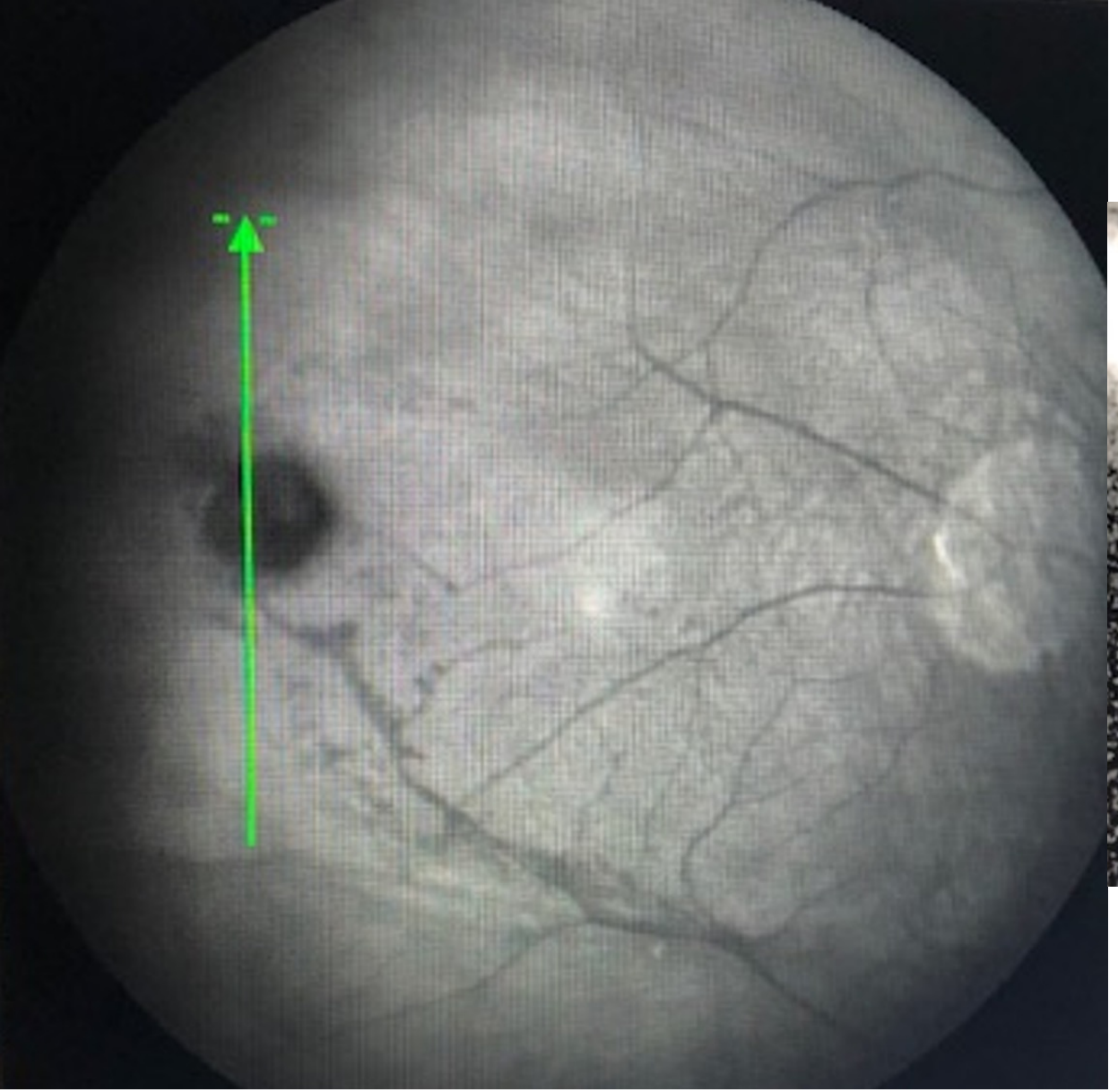

Retina Image

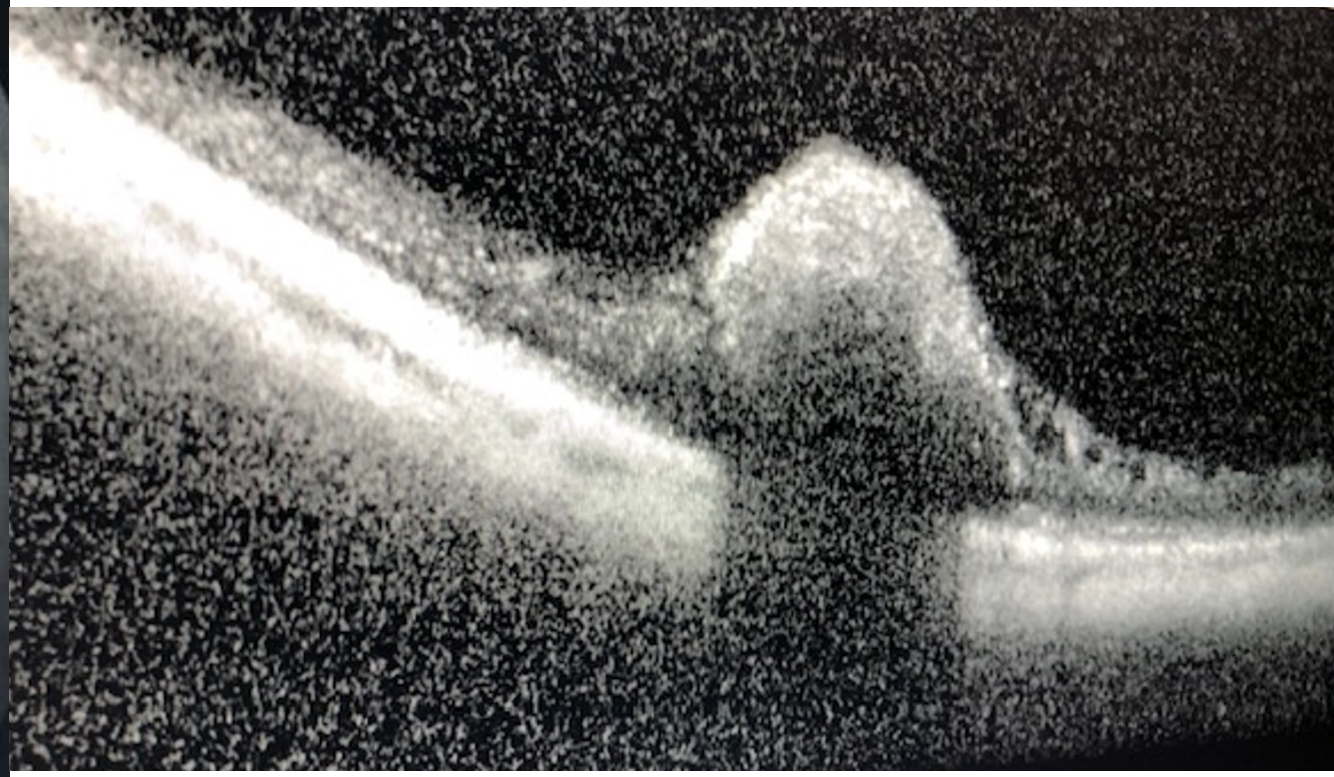

Retina Image Bank

Amelanotic Choroidal Melanoma

- Thickness greater than 2mm
- Fluid present in subretinal space
- Symptoms-flashes, floaters, decreased vision
- Orange pigment overlying the lesion
- Ultrasound hollowness

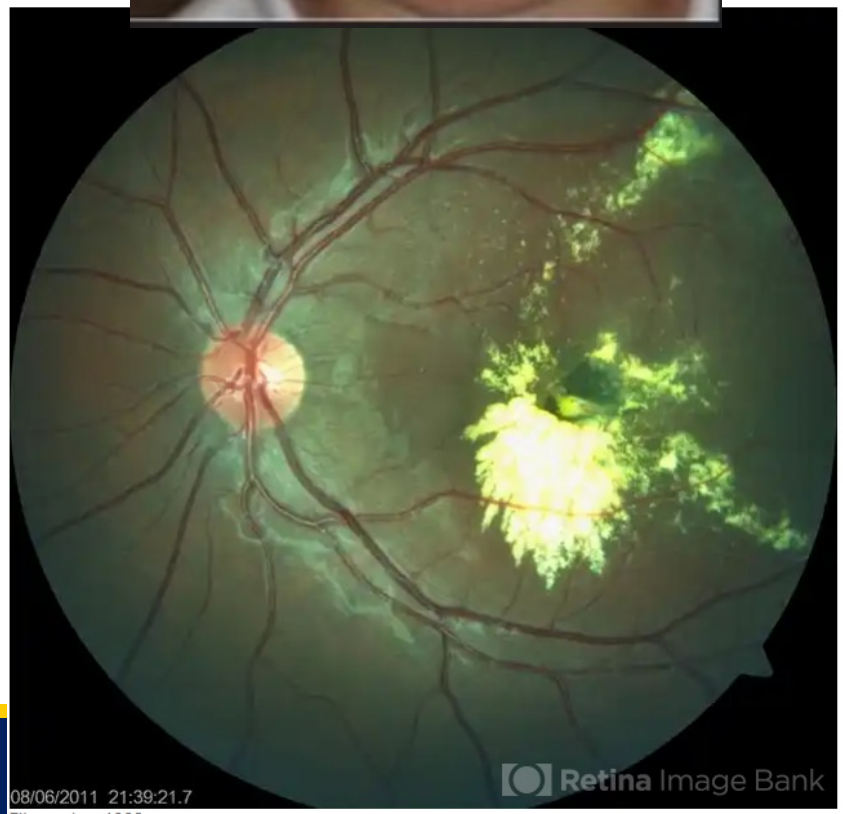






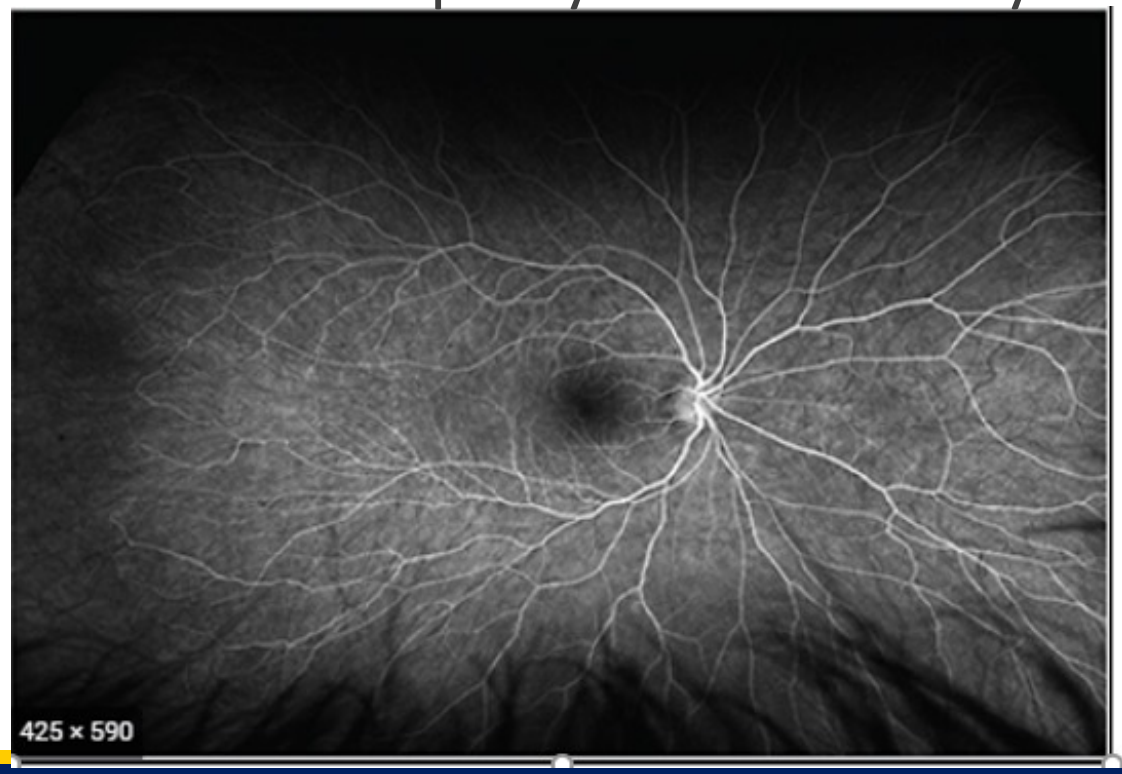
Coats Disease

- Male (85%) and usually one eye involved (95%)
- Leukocoria
- Typically progressive, 6-8 yo
- Primarily aneurysms and telangiectasia of vessels
- Temporal retina with various degrees of exudation
- OFTEN confused with retinoblastoma (calcific findings on CT or Ultrasound exclude Coats)



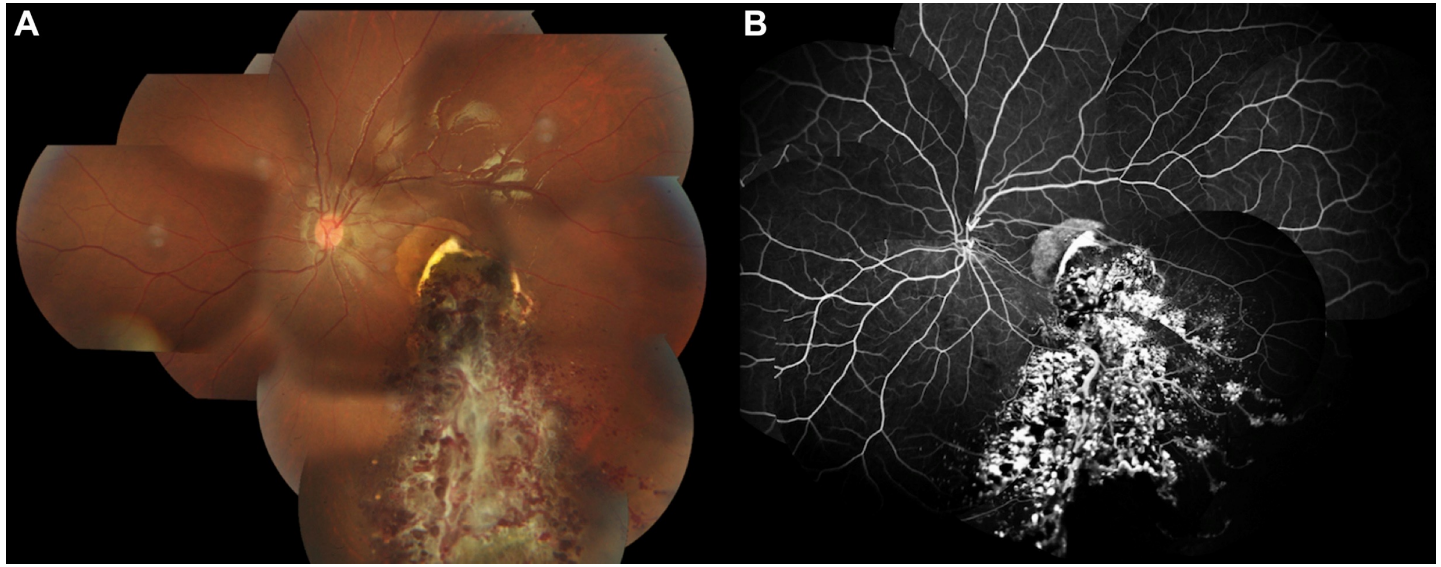
Familial Exudative Vitreoretinopathy (FEVR)

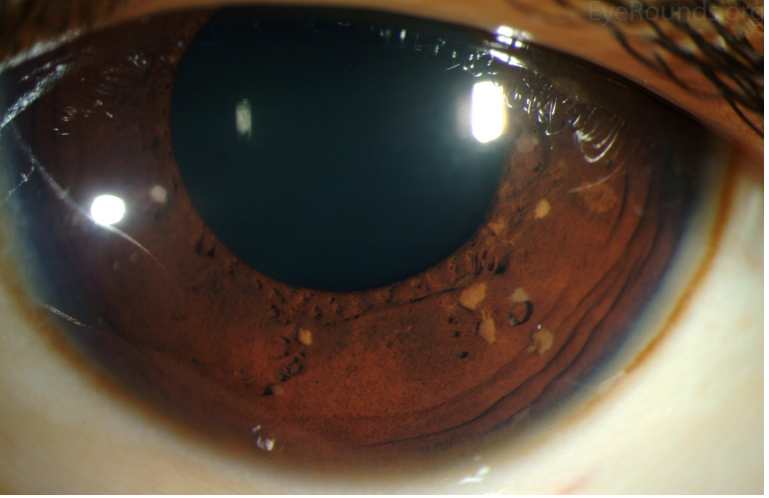
- Bilateral failure of the temporal retina to vascularize
- Peripheral Exudation with traction
- Like Retinopathy of Prematurity but normal birthweight and no O^2 tx



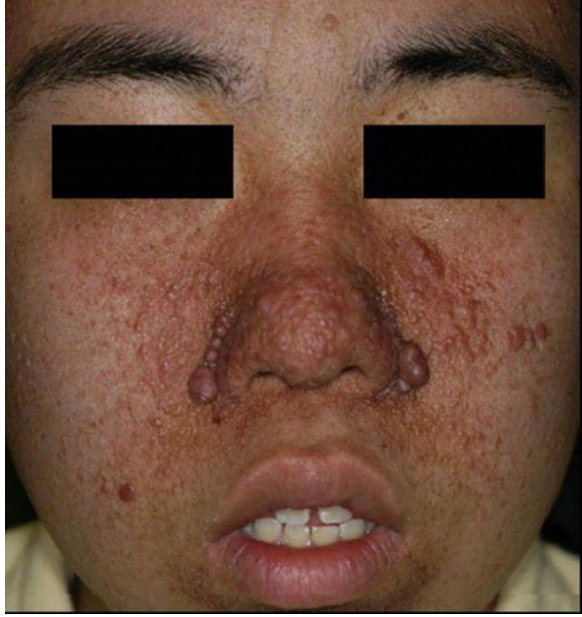
Retinal Cavernous Hemangioma

- Cluster of grapes appearance
- Usually unilateral
- Usually asymptomatic unless involving macula
- Strong autosomal dominant inheritance

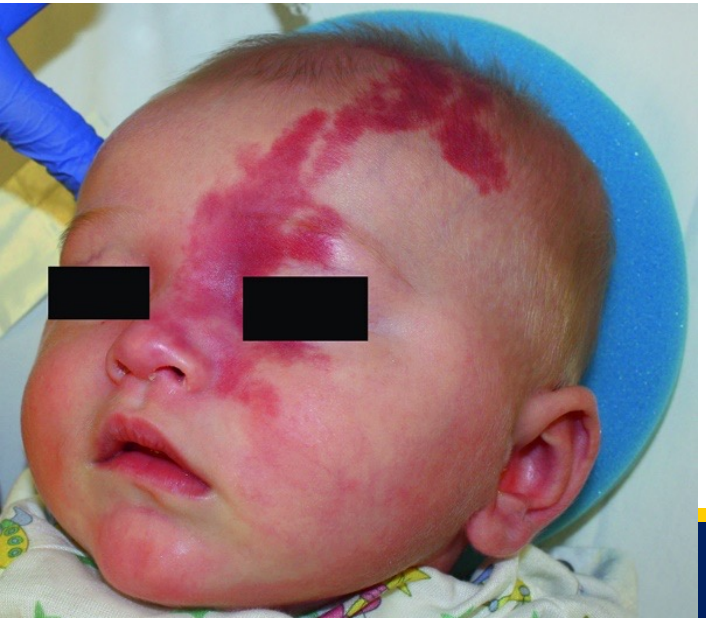




Phakomatoses

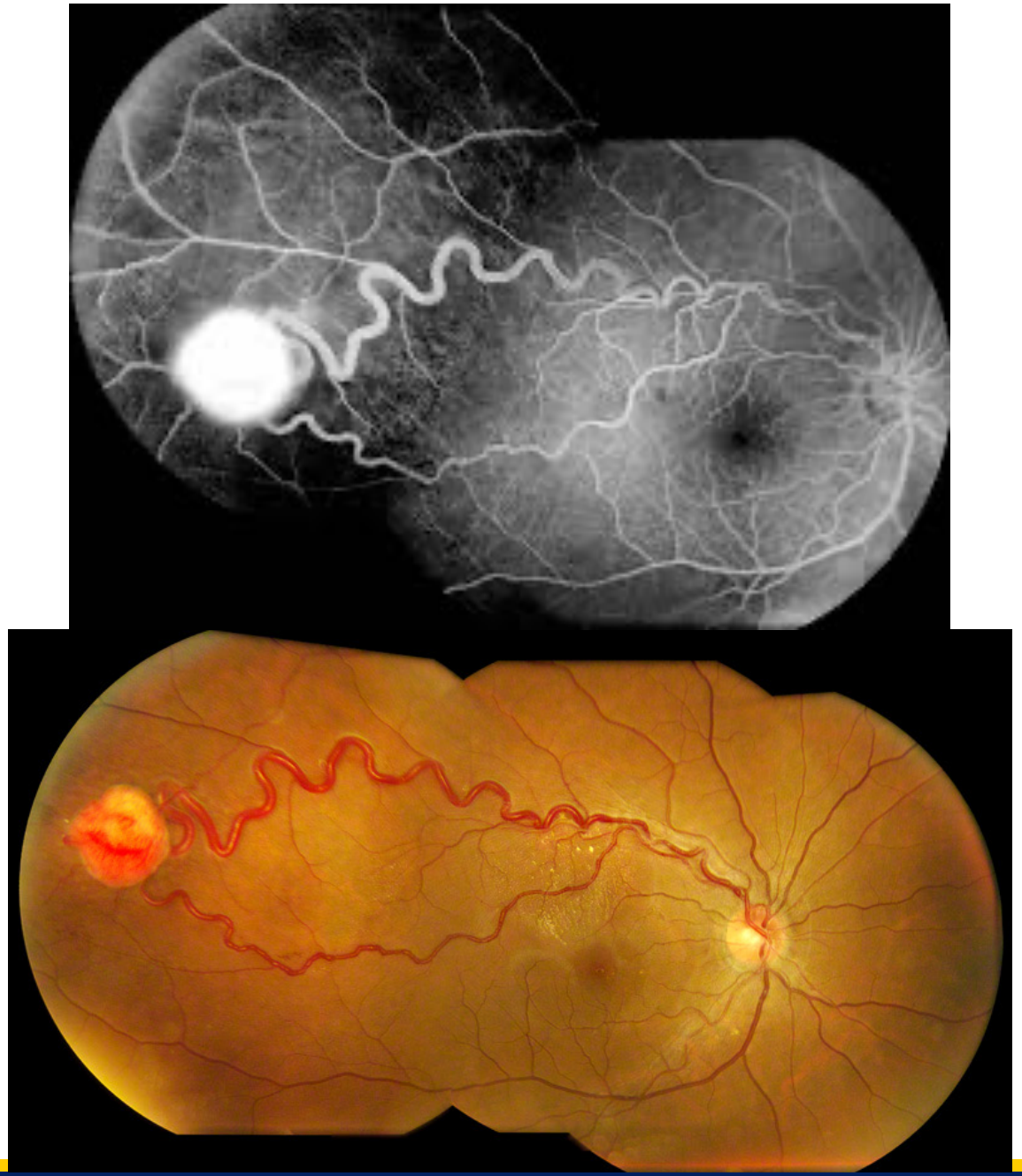


- Neurofibromatosis type 1
- Neurofibromatosis type 2
- Tuberous Sclerosis
- Sturge Weber Syndrome
- Von Hippel-Lindau



Capillary Hemangioma (Von Hippel-Lindau)

- Characterized by “hemangioblastoma” of the retina and CNS
  - Cerebellum, Medulla, Pons, and Spinal Cord in 20% of patients
  - “Visceral” manifestations are common (renal cell carcinoma, cysts of kidney, pancreas, liver)



Von Hippel-Lindau (VHL) continued

- 2^{nd}-3^{rd} Decade and can occur anywhere in retina
  - Roughly 70% of VHL patients have retinal capillary hemangioma
- Starts no larger than Diabetic microaneurysm located in ST mid periphery
- Feeder vessels and capillary network incompetent
- "Steal Phenomenon"
- Grows/proliferation of fibro vascular material

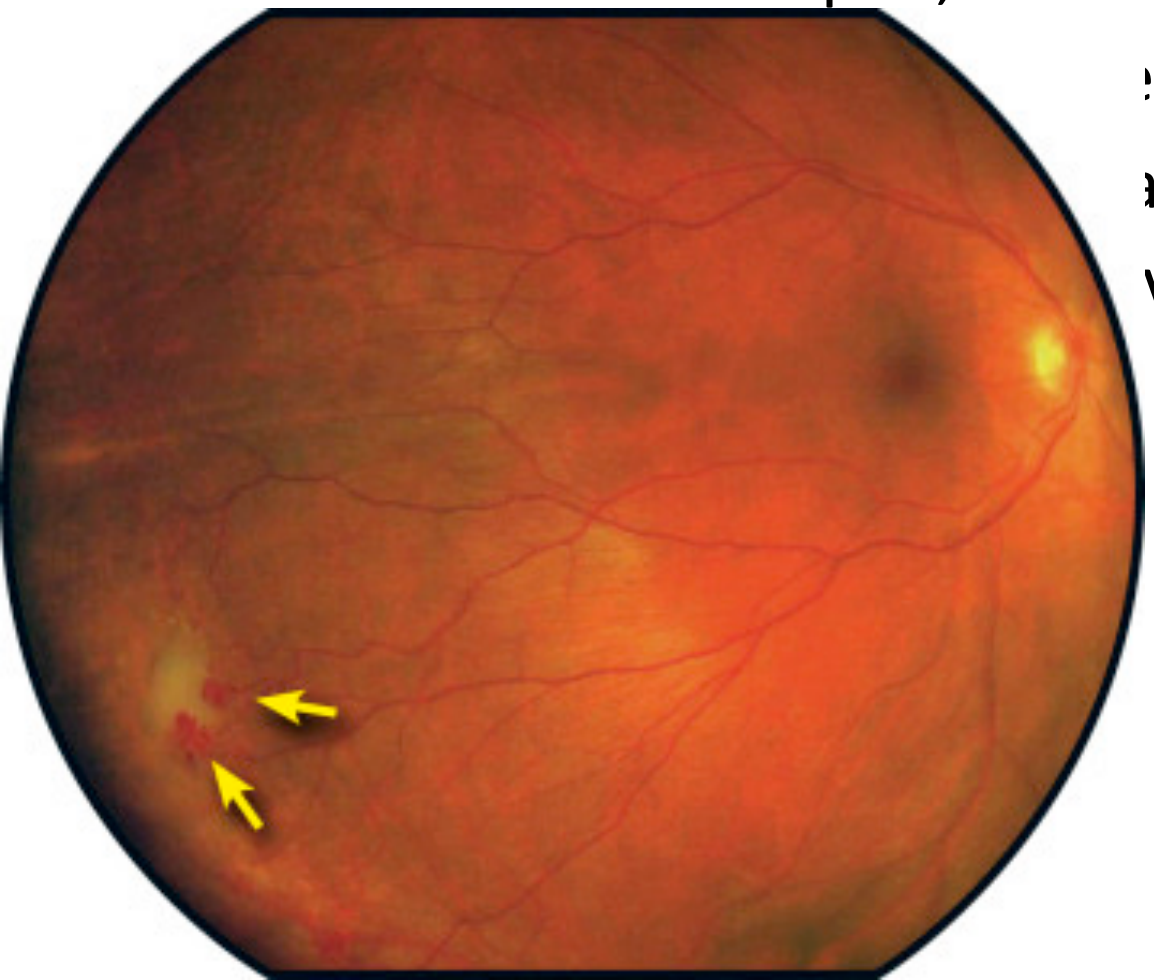
TABLE 1. CRITERIA FOR THE DIAGNOSIS OF VON HIPPEL-LINDAU SYNDROME	
If family history is:	**Feature**
Positive	for any one of the following: • retinal hemangioblastoma • brain hemangioblastoma • visceral lesion[a]
Negative	for any one of the following: • two or more retinal hemangioblastomas • two or more brain hemangioblastomas • single retinal or brain hemangioblastoma with a visceral lesion[a]
[a]Visceral lesions include renal cysts, renal carcinoma, pheochromocytoma, pancreatic cysts, islet cell tumors, epididymal cystadenoma, and endolymphatic sac tumor.	

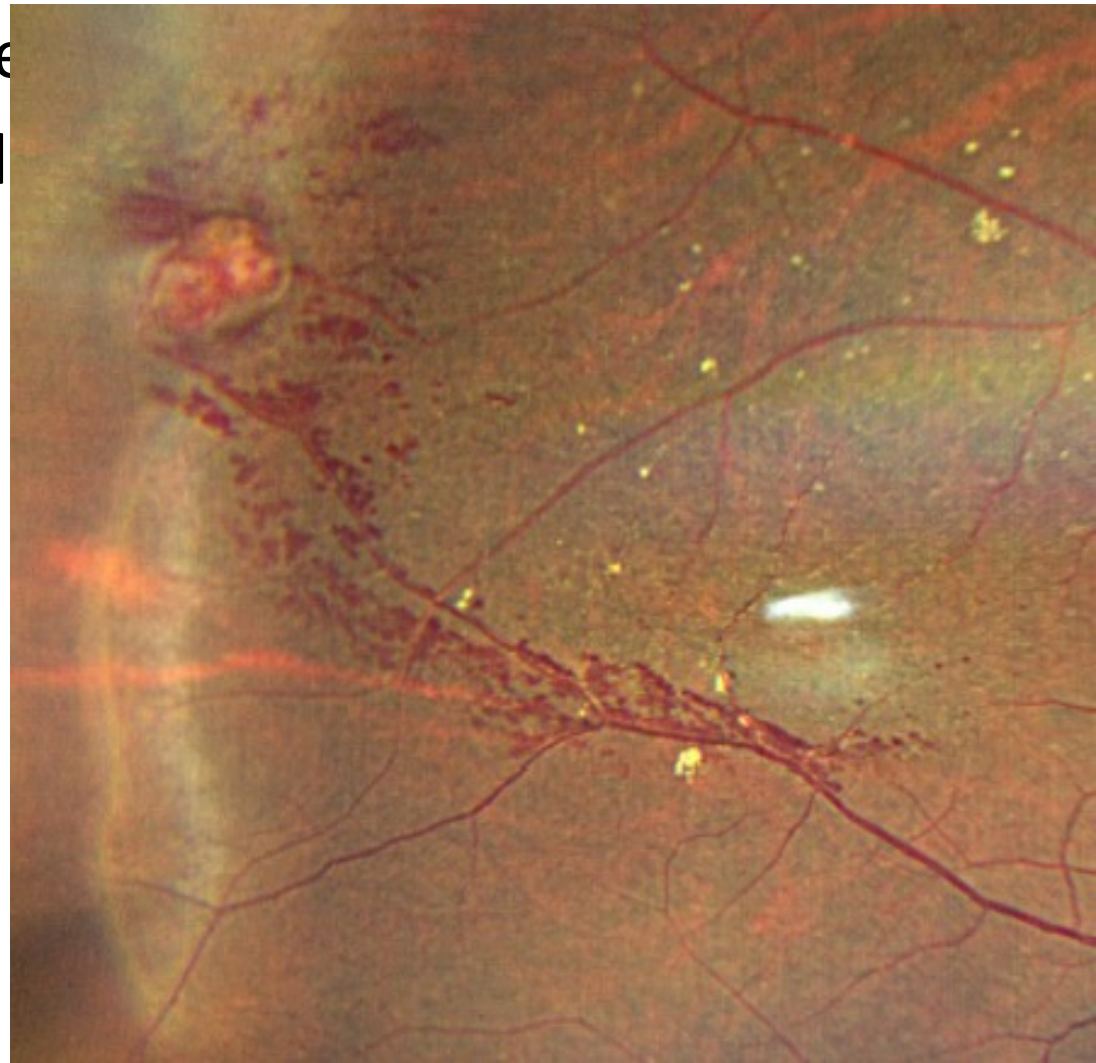
Treatment/Prognosis

- Depends on f/u ability (watch vs treat)
- Progressive Subretinal Exudation leading to total RD
- Small lesions easy/large notoriously difficult
- Photocoagulation for <1DD size
- Trans-Scleral Cryo is viable
- Photodynamic therapy with Verteporfin seems to be preferred due to precision
  - Can combo with anti-VEGF

Vasoproliferative Tumor

- Elevated dome-shaped, Echo Dense, IT re
  - ding and d
  - aging
  - VR





More Information from Specialists


4 M C
8 2 O
2 5 C
3 4 O
0 7 C

Conclusions

Not textbook presentation

Update on current status

Utilize technology

Medicine is a team sport

Wide list of differentials

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A RASH, A RED EYE, AND AN ADVERSE REACTION

No Financial Disclosures

CASE HISTORY

Chief Complaint

- A 63-year-old Caucasian male was referred to the eye clinic from the urgent care clinic complaining of a one-month history of ocular redness, foreign body sensation, light sensitivity, and blurred vision in left eye

History of Present Illness

- Ocular symptoms started after he developed a rash on his cheek that spread to his eyelid.
- Left eye was swollen shut for about one week and had resolved two weeks ago.
- He saw an urgent care provider and was prescribed erythromycin ointment QID OS with no improvement.
- He also reports
  - hives all over his body that had started 7 weeks prior and lasted about three weeks
  - a fever that had since resolved
  - Relatively new shortness of breath
  - Joint and back pain when he first broke out with hives that had somewhat improved
- COVID-19 testing was negative in the ED before reporting to the eye clinic

OCULAR HISTORY

Past ocular history

- Pseudophakia (PCIOL in 2008)
- Hyperopic astigmatism OD, simple astigmatism OS, Presbyopia

Ocular Medications

- Erythromycin QID OS

MEDICAL HISTORY

Medical History

- Hypertension
- Hyperlipidemia
- Depression
- Low back pain
- Hearing loss
- Anxiety
- Erectile dysfunction
- Microcystic colitis
- Benign prostatic hypertrophy s/p prostatectomy

Medications

- Diltiazem 180 mg qdaily po
- Losartan 100 mg qdaily po
- Cholestyramine oral powder daily
- Mirtazapine 30 mg QHS
- Duloxetine 60 mg EC BID po
- Aripiprazole 5 mg QHS po
- Gabapentin 300 mg TID po
- Methocarbamol 750 mg QID prn po
- Mesalamine 1200 mg BID po
- Prazosin 2 mg QHS po
- B12 injection 100 mcg IM monthly

SOCIAL HISTORY

- Alcohol use
- Drug use
  - Marijuana
  - Heavy cocaine use that had decreased recently since moving away from triggers
- Smoker
  - 10 cigarettes a day x 35 years
- Divorced
- Recently relocated from Florida
- Admits to high-risk sexual encounters
- Denies any history of sexually transmitted diseases

OCULAR EXAMINATION – ENTRANCE TESTING

Acuity

- OD: 20/25-2 PH NI
- OS: 20/20-2 PH NI

Entrance Testing

- Pupils: ERRL OU, No APD
- Confrontation Fields: Full OU
- Extraocular Motilities: full and smooth OU
- Ocular alignment: ortho by Hirschberg

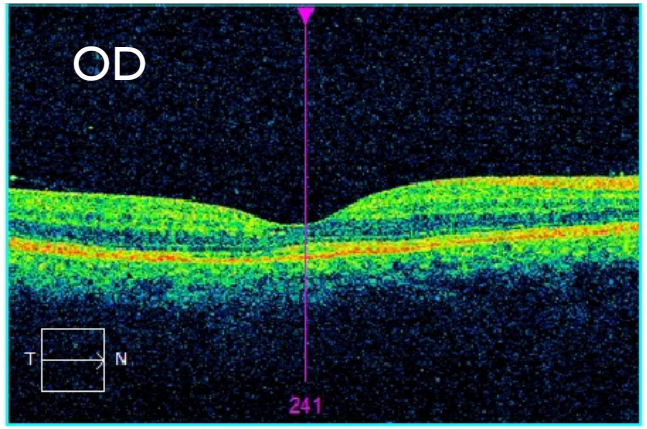
OCULAR EXAMINATION – ANTERIOR SEGMENT

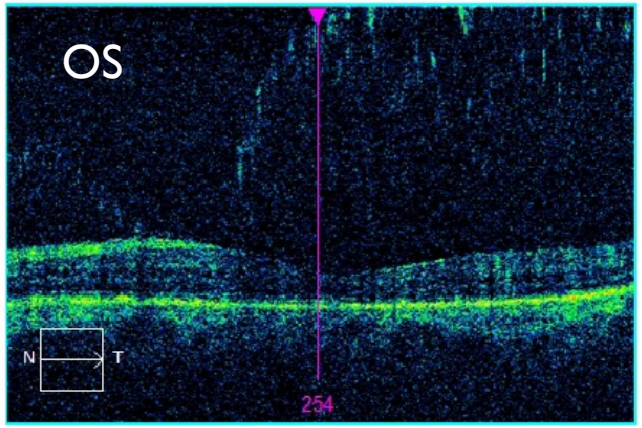
OD		OS
Normal	**Lids and Lashes**	Normal
Fine keratic precipitates	**Cornea**	Fine keratic precipitates
White and quiet	**Conjunctiva**	**2+ perilimbal injection**
Gr1 cells, trace flare	**Anterior Chamber**	**Gr2-3+ cells, gr1+ flare**
Normal, no nodules	**Iris**	Normal, no nodules
3/3 n/t	**Van Herrick**	3/3 n/t
19 mmHg	**IOP @ 1327 by Goldmann**	22 mgHg

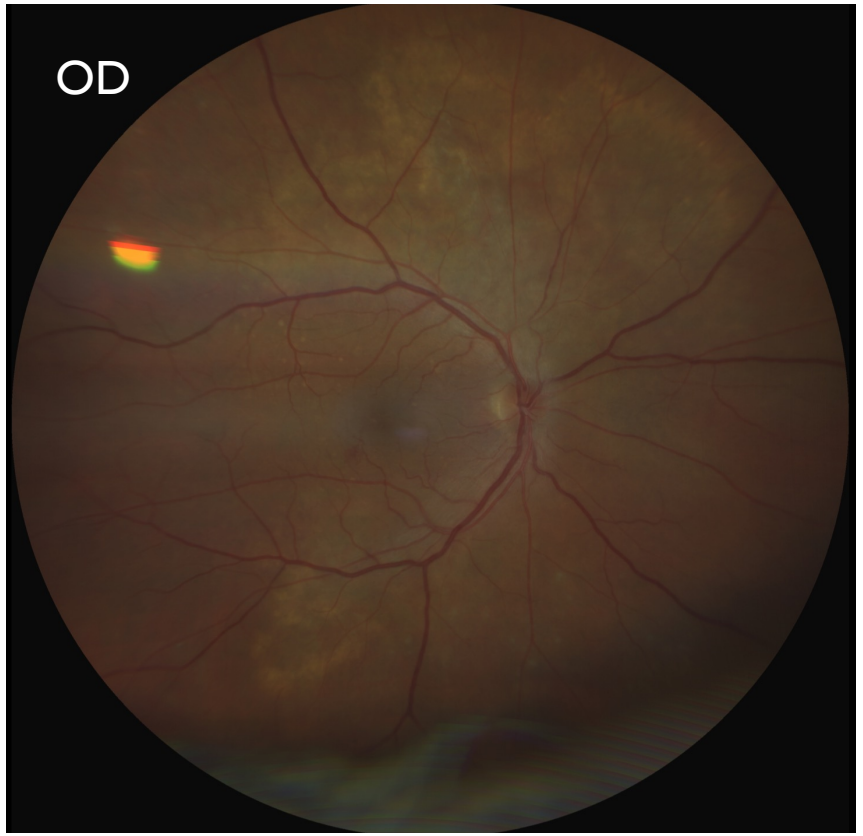
OCULAR EXAMINATION: POSTERIOR SEGMENT

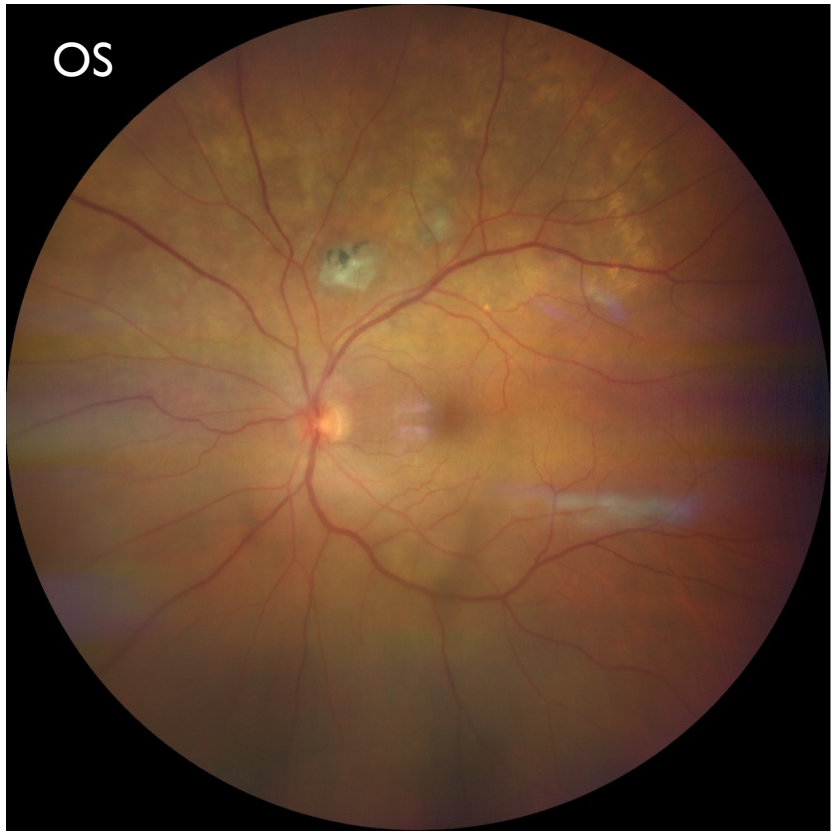
OD		OS
PCIOL clear and centered	**Lens**	PCIOL clear and centered
Syneresis	**Vitreous**	Syneresis, **tr-1 cells/haze**
0.15v/0.15h	**C/D**	0.25v/0.25h
NRRI, pink, no pallor or edema	**Disc**	NRRI, pink, no pallor or edema
No pathology	**Macula**	No pathology
Blot heme inferior, drusen scattered throughout arcades	**Fundus**	**Indistinct white lesion with pigmented borders superior temporal to optic nerve**
No pathology	**Vessels**	No pathology
Flat and intact 360 degrees	**Periphery**	Flat and intact 360 degrees

OCULAR EXAMINATION – ANCILLARY TESTING









Working diagnosis	Bilateral nongranulomatous panuveitis of unknown etiology
Treatment	Difluprednate QID OU Cyclopentolate 0.5% TID OU Order serology Referral to retina and uveitis specialists

WORKING DIAGNOSIS

DIFFERENTIAL DIAGNOSIS

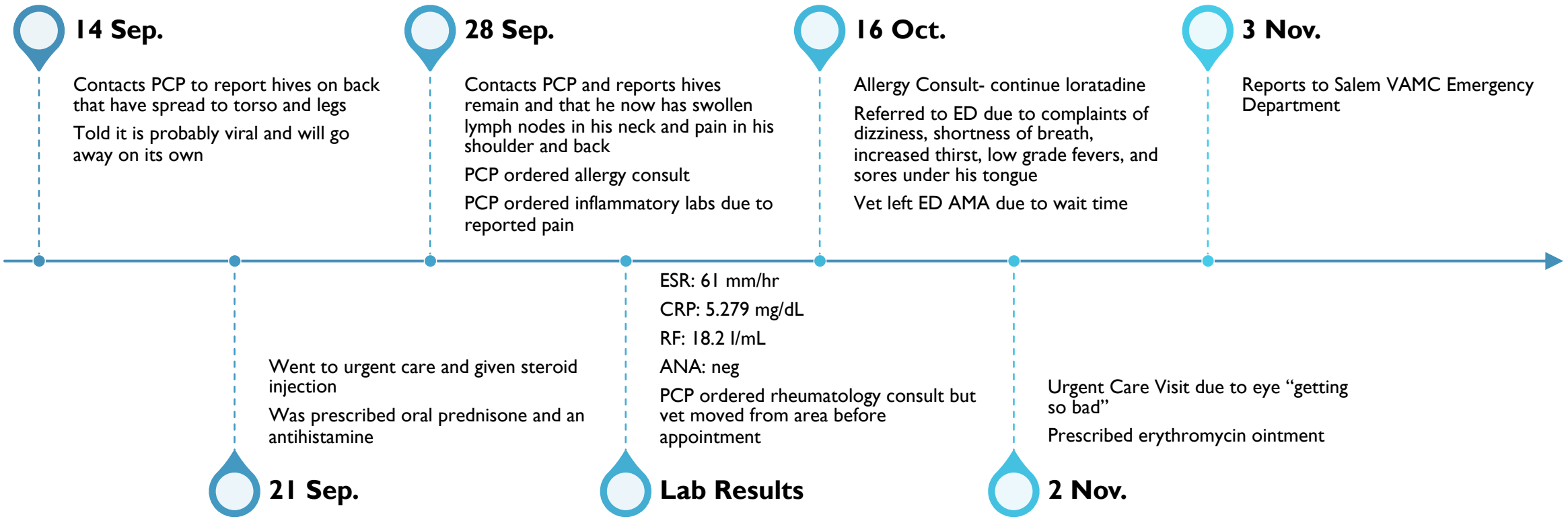
Infectious

- Syphilis
- Tuberculosis
- Lyme's Disease
- Toxoplasmosis
- Bartonella

Inflammatory

- HLA-B27 associated uveitis
- Sarcoidosis
- Herpes Simplex
- Behcet's Disease
- Lupus

REVIEW OF RECORDS



LAB RESULTS

Lab Test	Result
HIV	Negative
Lyme AB	<0.90
Bartonella IgG & IgM	Negative
Toxoplasmosis IgG	<7.20
QuantiFERON gold	Negative
HLA-B27	Negative
ACE	62 U/L
RPR Screen	**Reactive**
RPR Titer	**1:64**
FTA-ABS	**Reactive**
***abnormal results are in bold**	

Consulted with Infectious Disease and next day admission with lumbar puncture was recommended

LUMBAR PUNCTURE AND CSF ANALYSIS

Test	Result
VDRL, CSF	**Reactive 1:1**
Protein	**59.1 mg/dL**
Glucose	56 mg/dL
Turbidity	Clear
Color	Colorless
RBC	0 cells/uL
Nucleated cells	**32 cells/uL**
Lymphocyte %	**98%**
Monocyte %	**2%**
Supernatant appearance	Colorless
*abnormal results are in bold	

Diagnosis: NEUROSYPHILIS WITH OCULAR SYPHILIS

TREATMENT AND MANAGEMENT COURSE

Treatment

- **Treatment**: 4 million units of IV penicillin q4 hours x 14 days
- At 4 months, treatment was successful with a 4-fold decrease in RPR titer (1:4 from 1:64)
- Repeat lumbar puncture:
  - CSF VDRL: negative
  - Glucose: 61
  - Clear and colorless
  - Cell count not performed
- RPR will be repeated out to 2 years

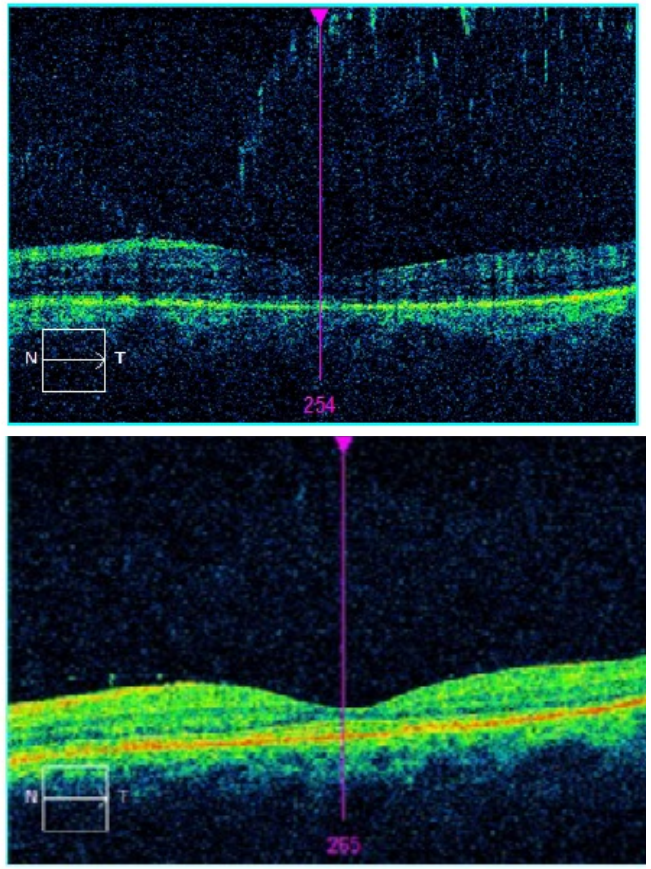
Management

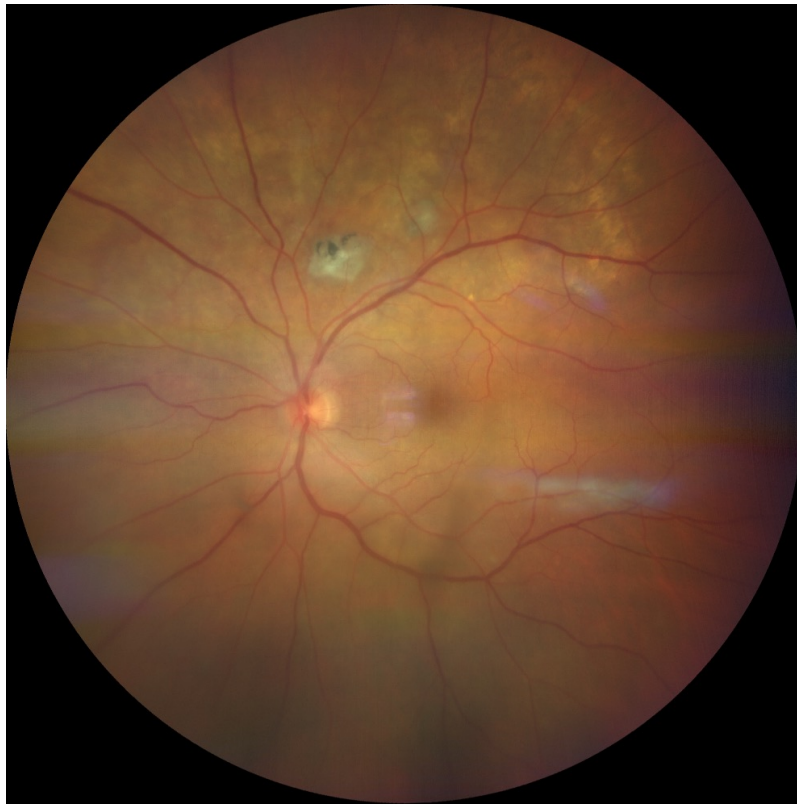
- Developed acute renal insufficiency from interstitial nephritis 2/2 PCN. Switched to ceftriaxone.
- Developed rash from ceftriaxone and was switched back to penicillin.
- Developed secondary membranous nephropathy confirmed by biopsy due to Syphilis leading to nephrotic syndrome. Treated with oral steroids, furosemide, losartan, and chlorthalidone. He remains in CKD stage 3
- Found to have C. Diff. Treated with oral vancomycin.
- Echocardiogram showed mildly dilated aortic root and mildly enlarged ascending aorta.

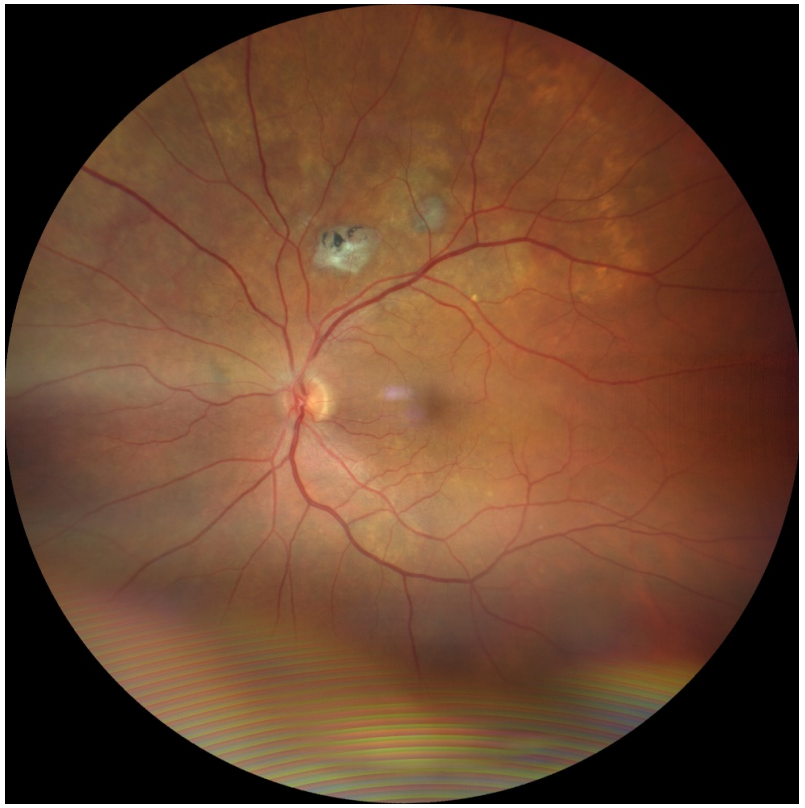
OCULAR OUTCOME

Day 2	Day 15	7 weeks	2 months	4 months
• Subjective improvement in vision and comfort. • Tr cell OD; 1+ cell OS • Stable vitritis and retinal findings OS • **IOP: 16/36** • **Timolol started bid OU**	• No cell OD; trace cells OS • Rare vitreous cells • Stable retinal findings • IOP controlled with timolol	• 20/30 OD, 20/25 OS • No cells OD, 1-2 cells OS • **Vitritis resolved** • **Retinal findings appear inactive** • IOP controlled with timolol	• Uveitis specialist stopped cyclopentolate and timolol • Decrease Durezol to once daily x 1 week then discontinue	• Uveitis specialist note indicates that the eyes remain quiet with no recurrence of inflammation off treatment.

IMAGING DAY ONE VS 7 WEEKS – LEFT EYE







DISCUSSION

- Organism: Treponema Pallidum
  - corkscrew shaped spirochete
- Mode of Transmission:
  - Direct contact with chancre
- Neurosyphilis occurs in 5-10% of untreated cases
  - 1/3 are asymptomatic
  - 70% spontaneously revert

Disease Stage	Findings	Timing
Primary Syphilis	Painless chancre on the site of inoculation (genitalia, lips, anus, oropharynx, conjunctiva), non-tender regional lymphadenopathy, uveitis.	May present 1 week - 3 months after initial inoculation. Chancres will usually heal on their own in 1 to 3 weeks
Secondary Syphilis	Fever, rash (many variations but the classic rash is described as a maculopapular rash that involves the upper trunk, palms, and soles), alopecia, pharyngitis, CNS involvement, uveitis, scleritis, renal dysfunction, and hepatitis.	Weeks to months after initial chancre (though may still have the primary chancre in cases with HIV)
Early Latent	Asymptomatic though positive serological testing	First year after initial infection
Late Latent	Asymptomatic though positive serological testing	More than 1 year after initial infection or initial infection date is unknown.
Tertiary Syphilis	Gummatous disease, cardiovascular lesions (aortitis), Argyll-Robertson pupils, optic atrophy, vasculitis, uveitis, scleritis.	1-30 years after initial infection
Neurosyphilis	Early: meningitis, uveitis, stroke, hearing loss Later: Tabes dorsalis, Argyll-Robertson Pupils, general paresis	May occur during any time throughout the infectious process. Late neurosyphilis usually develops 10 to 25 years after initial infection.

DISCUSSION

Syphilis Serologic Testing		
Treponemal testing results (FTA-ABS, MHA-TP, EIA)	Nontreponemal testing results (VDRL,RPR)	Interpretation
Nonreactive	Nonreactive	No syphilis infection.
Reactive	Reactive	Confirmed active syphilis if no prior infection. Recurrent infection if nontreponemal tests return four-fold greater than post-treatment titers.
Reactive	Nonreactive	Latent syphilis or previously treated syphilis infection.
Nonreactive	Reactive	Likely false-positive nontreponemal testing.

- Treatment for Neurosyphilis
  - 10–14-day course of systemic antibiotics
    - Preferred: 18 to 24 units per day of IV Penicillin G
    - Alternative: 2g daily of ceftriaxone
  - Repeat lumbar puncture 6 months post treatment. Continue to repeat every 6 months until cell count is normal and CSF-VDRL is nonreactive.
  - Re-treat if CSF WBC count does not decrease by 6 months or CSF-VDRL does not decrease by 4-fold or become nonreactive by 1 year post treatment.

SUMMARY

- 63-year-old Caucasian male presented with blurred vision, redness, and irritation associated with persistent rash, sores, joint/back pain that had not resolved after seeing multiple health care providers.
- Serologic testing returned positive for syphilis, and he was diagnosed with ocular syphilis. Lumbar puncture was performed confirming neurosyphilis. Staging points to secondary syphilis with ocular and neurosyphilis.
- A 14-day treatment of IV Penicillin G was started. The veteran developed acute renal insufficiency as a result of the treatment and was switched to ceftriaxone. Unfortunately, he developed a rash and was switched back to penicillin to finish his treatment course. He was also treated for C. Diff infection.
- He developed membranous nephropathy secondary to syphilis that was treated with furosemide and steroids. He currently has CKD stage 3b.
- He was also found to have a dilated aortic root, which is likely coincidental and not a result of aortitis from syphilis as this typically does not develop until 10-30 years after initial infection during tertiary syphilis.
- Treatment was successful with 4-fold decrease in RPR titer and resolution of ocular symptoms.

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ANY
QUESTIONS
?


Thank you for your attention
Please clap and don't ask difficult questions
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