CLINICAL CASES

CASE #2 PRESENTATION AND HISTORY

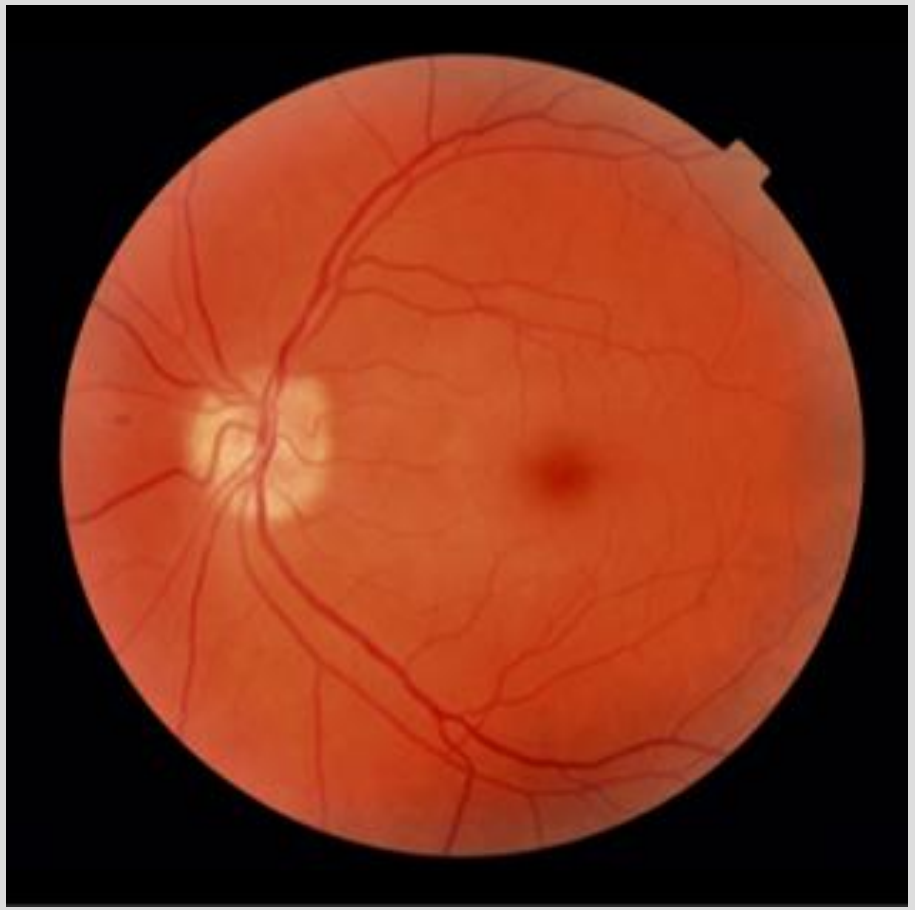
- Presentation: 43 yo white male with no complaints and here for diabetic routine eye exam

- Ocular History: Herpes Zoster Ophthalmicus monitored at CEI
- Medical Conditions: diabetes type 2 x 5 years, hypercholesterolemia
- Medications: metformin, levimir, novalog, lipitor
- Family History: diabetes, cataract, glaucoma
- Current diabetic findings:
  - Last HbA1c: 10.3 (2 months ago)
  - Last blood sugar: 139 (this morning)
  - Blood Pressure: 145/90

CASE #2 EXAM FINDINGS

- BCVA: 20/20 OD, 20/25+2 OS
- Pupils: PERRLA OD/OS
- Full/smooth EOMs, (-) pain
- Full to confrontations VF
- Cover Test: ortho
- Anterior segment: Herpes Zoster dendritic epithelial lesions with staining
- Posterior Segment:
    - ONH edema OU with disc heme OD
    - Two dot hemes nasal to macula OD
    - Single blot heme OS

CASE #2 FUNDUS PHOTOS

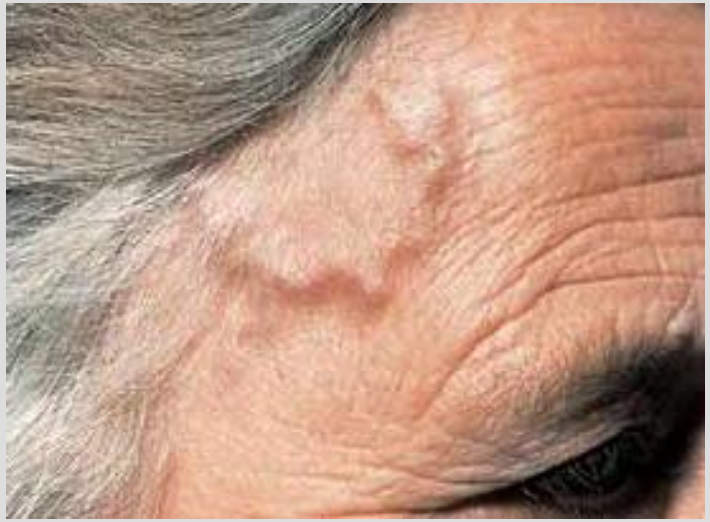


CASE #2 DIFFERENTIAL DIAGNOSES

- Papilledema related to increased intracranial pressure
- Pseudopapilladema
- Papillitis
- Hypertensive optic neuropathy
- Central retinal vein occlusion
- Ischemic optic neuropathy
- Diabetic papillopathy

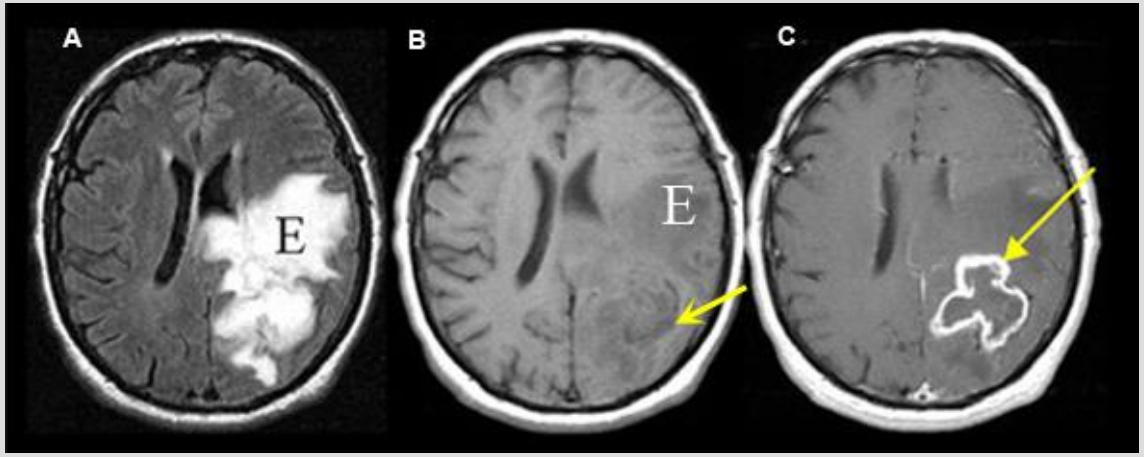
CASE #2 FURTHER QUESTIONS

- (-) jaw/temporal pain
- (-) pain or restriction with eye movement
- (-) headaches

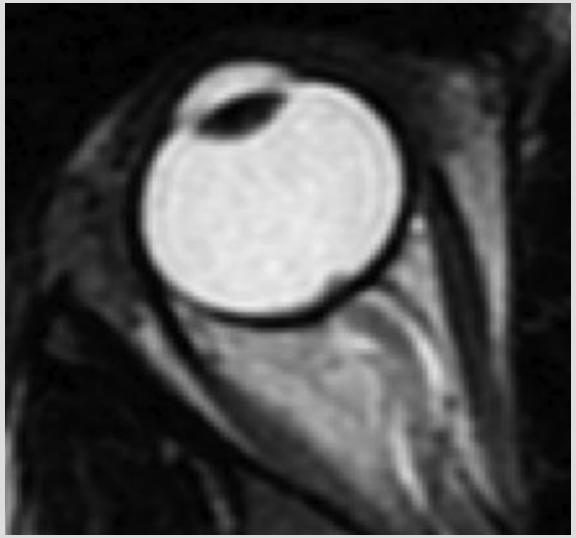


CASE #2 FURTHER TESTING

- Brain MRI w/ and w/o contrast
  - Results came back with no abnormalities
- Lumbar puncture following clean MRI



Brain Tumor



Idiopathic Intracranial Hypertension

PAPILLEDEMA

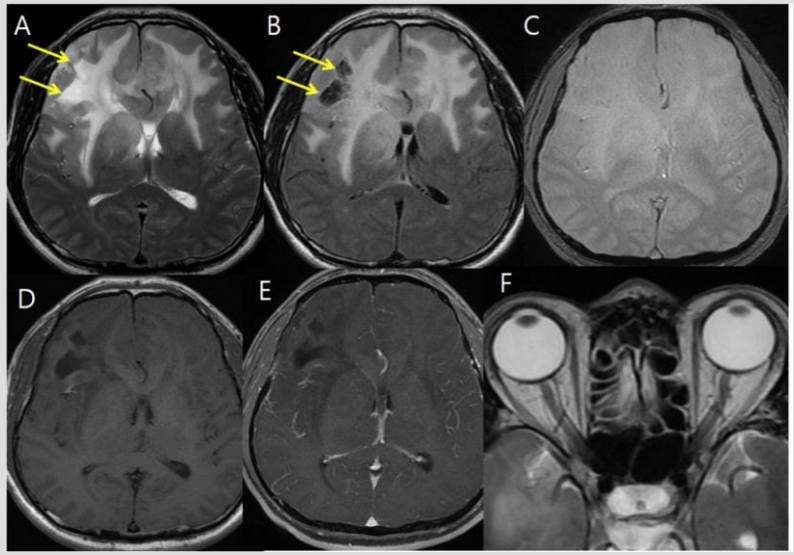
- Symptoms:
  - Transient, usually bilateral vision loss
  - Headache
  - Double vision
  - Nausea/vomiting
  - Decrease in VA (rare)
- Signs:
  - Bilaterally swollen discs with blurred disc margins
  - Retinal hemorrhages
  - Dilated, tortuous retinal veins

PAPILLEDEMA

- Appropriate Work-Up:
  - Detailed medical history
  - Pupil and color vision assessment
  - Dilated fundus examination
  - Emergency MRI with gadolinium and MRV preferred. CT if not available
  - Lumbar puncture with cerebral spinal fluid analysis and opening pressure measurement if MRI/CT normal

RULING OUT DDX

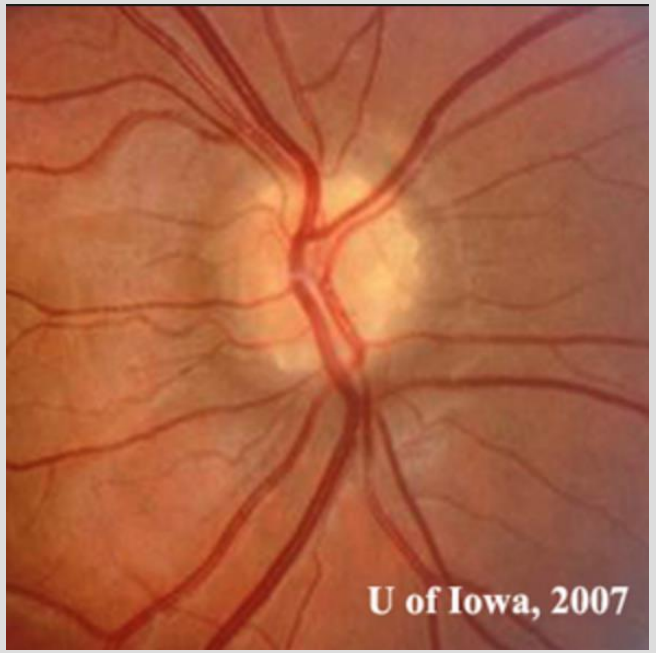
- Papilledema related to increase intracranial pressure (Tumor)
  - No abnormal findings on MRI w/ and w/o contrast
  - No Headaches

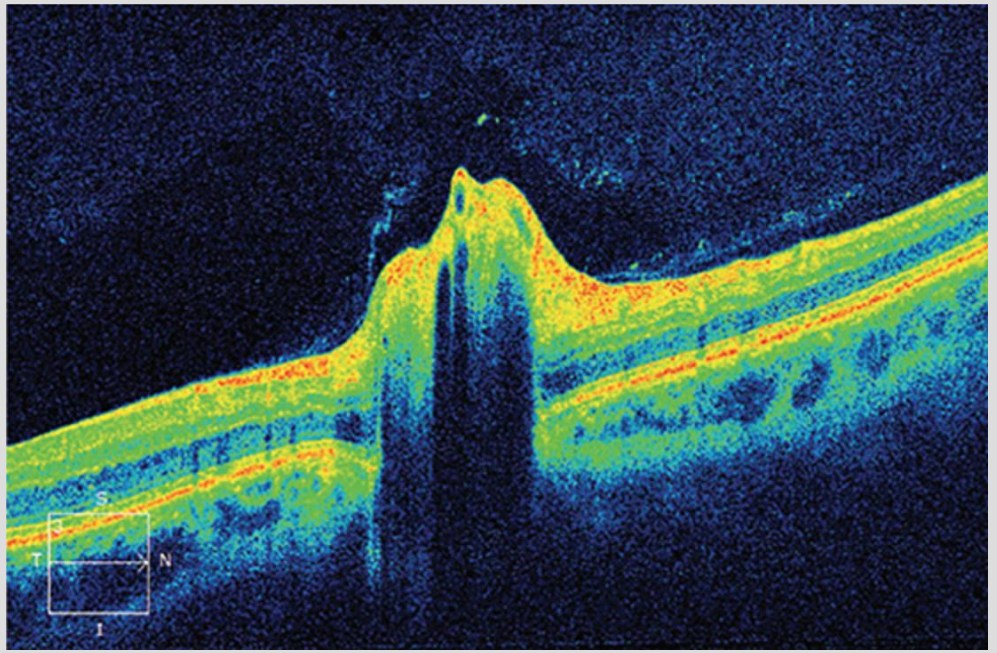


file:///Users/tylerdowdall/Downloads/ECR2017_C-0782.pdf Pg 30

RULING OUT DDX

- Psuedopapilledema (Optic Nerve Head Drusen)
  - Disc hemorrhages make this unlikely





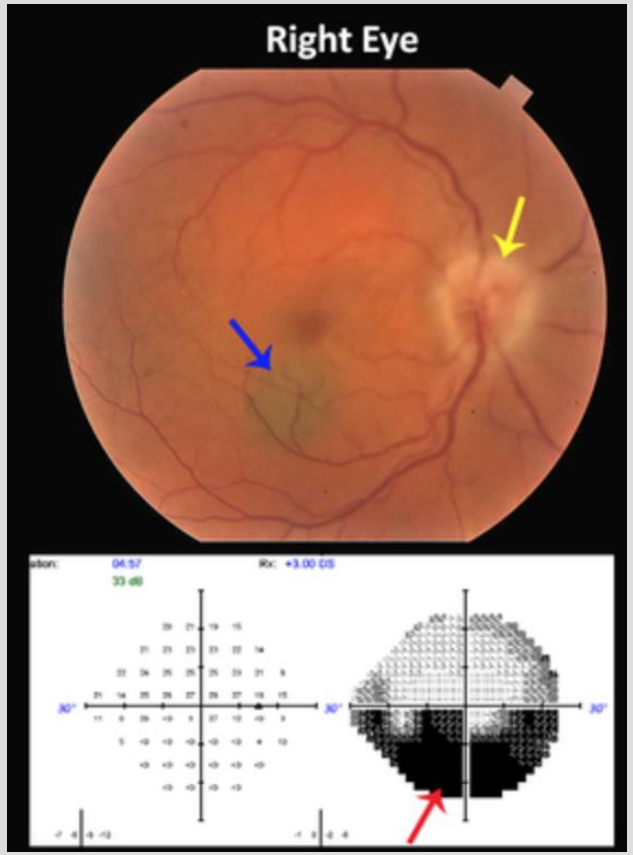
https://www.ophthalmologymanagement.com/issues/2015/december-2015/the-papilledema-dilemma

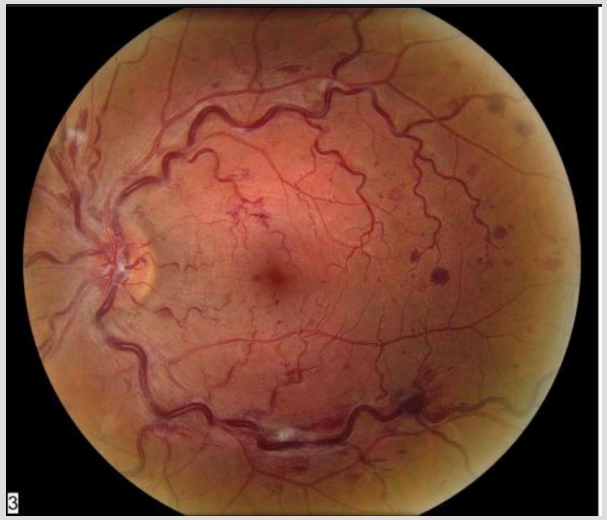
RULING OUT DDX

- Papillitis
  - No APD present
  - No decrease in visual acuity
- Hypertensive Optic Neuropathy
  - Blood pressure typically extremely high (patients was only 145/90 = stage 1 hypertension)
  - No cotton wool spots or crossing changes

RULING OUT DDX

- Central Retinal Vein Occlusion
  - No peripheral hemorrhages
  - No tortuous veins
  - No vision loss
- Ischemic Optic Neuropathy
  - No sudden vision loss





FOLLOW UP

- Patient seen for Herpes Zoster impacting OS at CEI 1 week following exam
  - OD: 1+ disc edema, OS: drusen, (-) edema
- Seen at CEI 1.5 months since initial visit
  - Normal ONH appearance
  - Patient indicates diabetes much better under control now
- Diagnosis: likely **Diabetic Papillopathy** (spontaneous resolution)

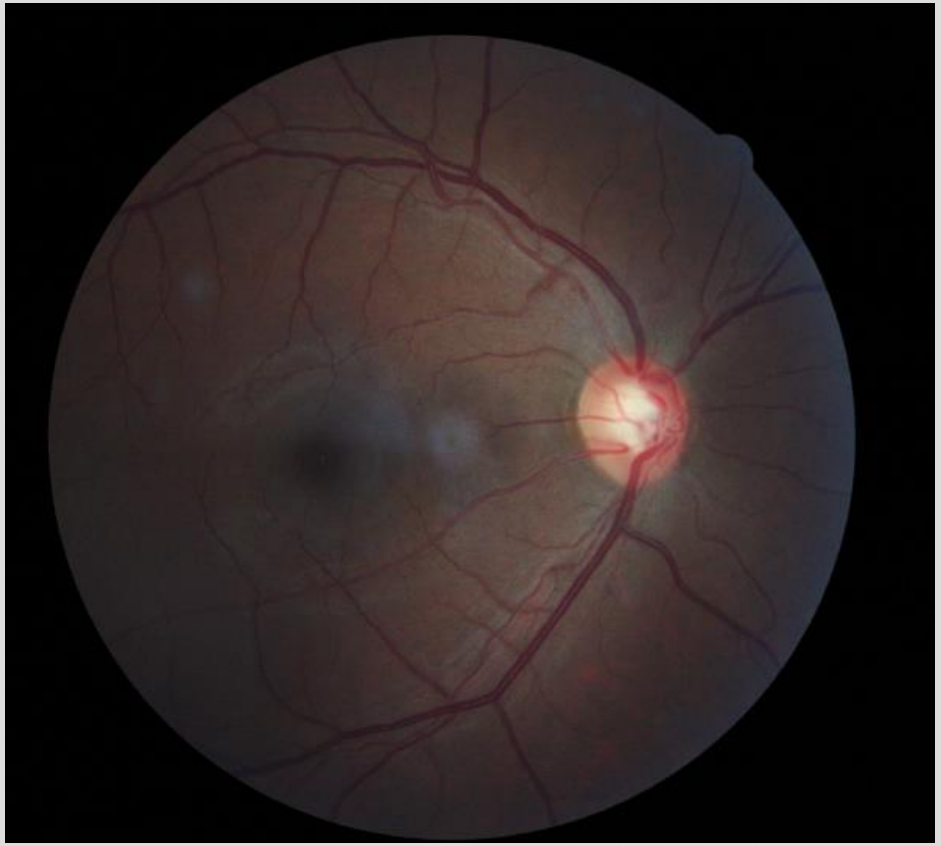
CASE #4 PRESENTATION AND HISTORY

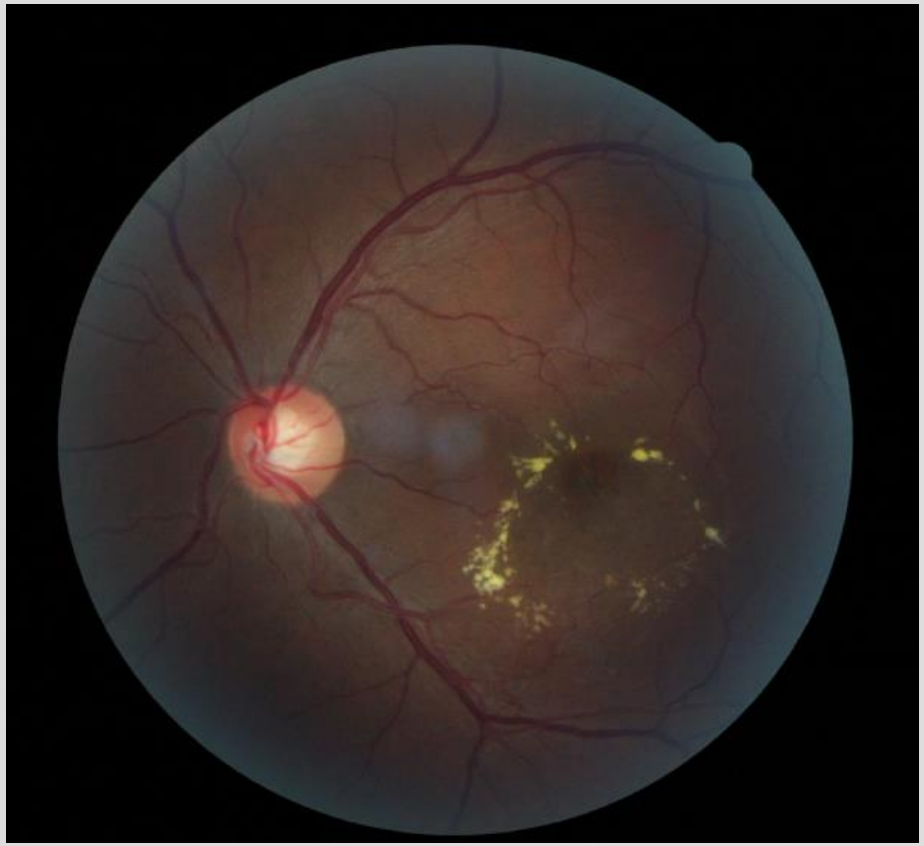
- 44 yo black male presented to the clinic with OS vision distortion. Described OS images "coming to a point" for several months.
- Medical conditions: hypertension
- Medications: unknown hypertension medication
- Family history: diabetes, hypertension, kidney disease
- Last eye exam: 5 years ago

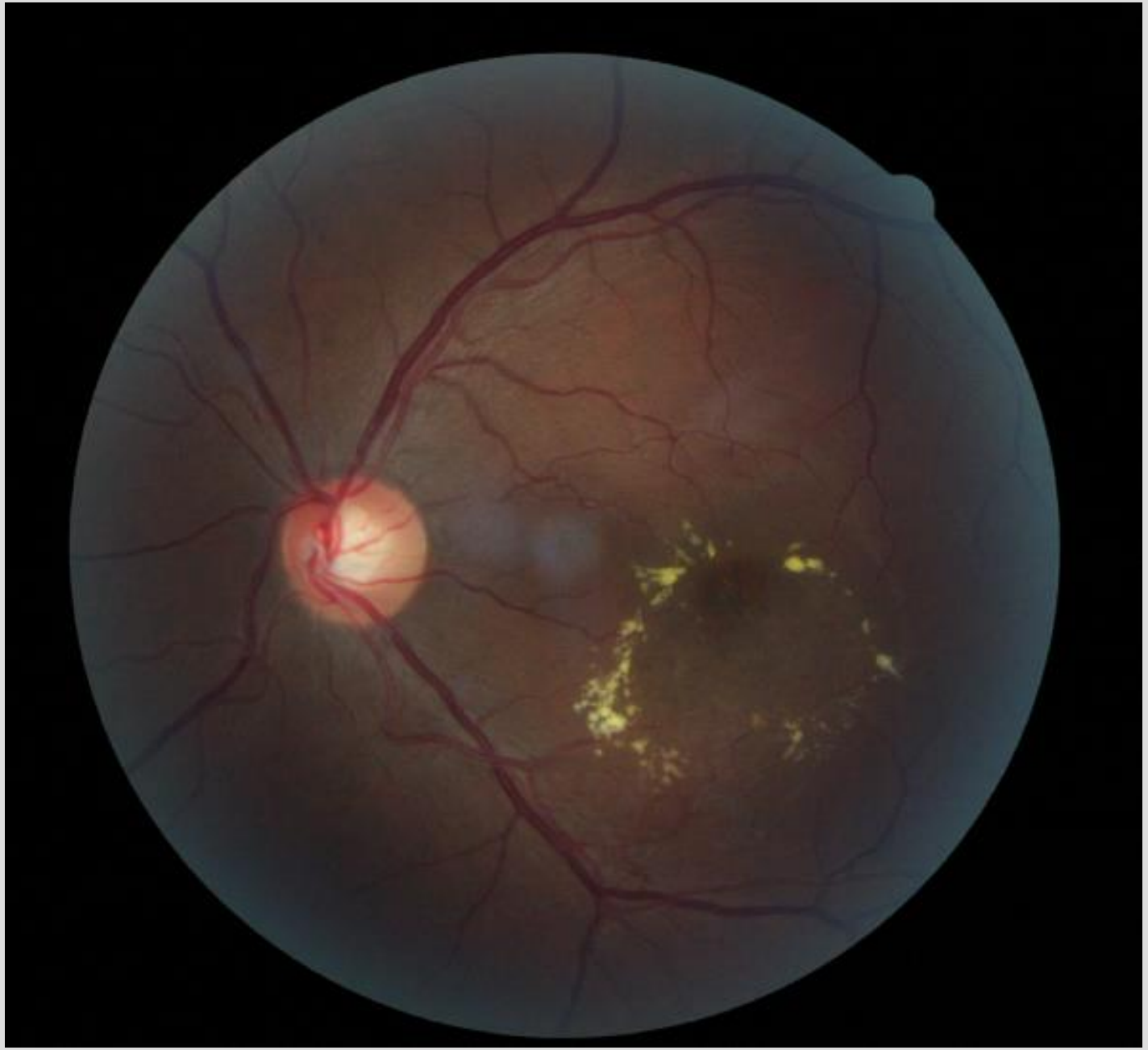
CASE #4 EXAM FINDINGS

- BCVA: 20/20 OD, 20/40 OS
- Full/smooth EOMs, (-) pain
- Full to confrontations VF
- Cover Test: ortho
- Anterior segment: G3 MGD with toothpaste-like MG discharge
- Posterior Segment:
  - OD - WNL
  - OS - macular edema with hard exudates in starburst pattern surrounding macula
- IOP OD/OS: 21/16

CASE #4 FUNDUS PHOTOS







CASE #4 FURTHER TESTING

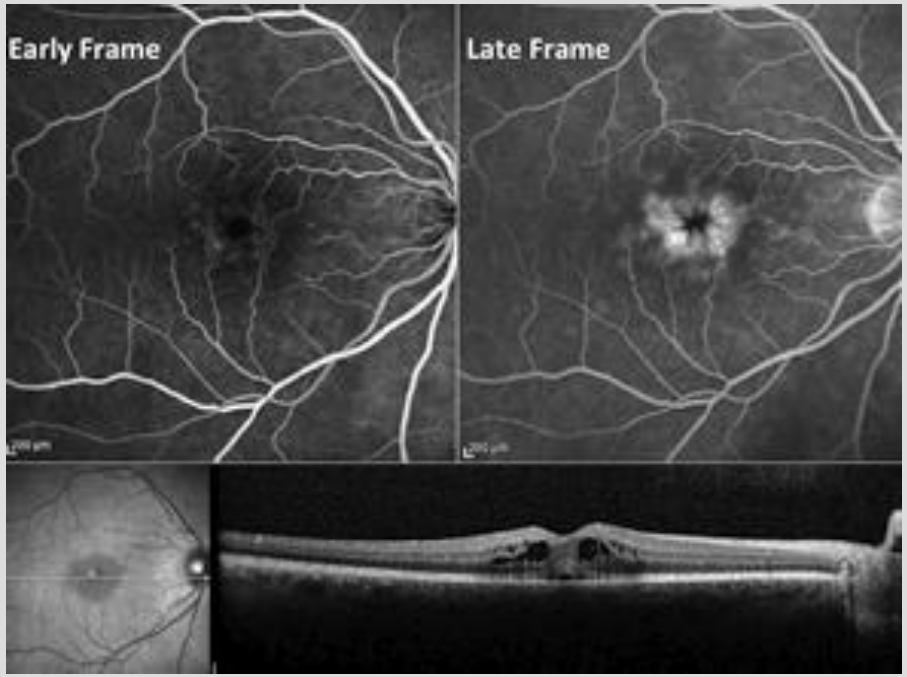
- OCT of the macula:
  - OD: flat, well defined macular cup
  - OS: itraretinal fluid in macula, intact EZ-line, exudates in OPL

CASE #4 DIFFERENTIAL DIAGNOSES

- Post-operative
- Diabetic retinopathy
- CRVO or BRVO
- Uveitis
- Retinitis pigmentosa
- Retinal vasculitis
- Retinal telangiectasias
- ARMD
- Epiretinal membrane

CYSTOID MACULAR EDEMA

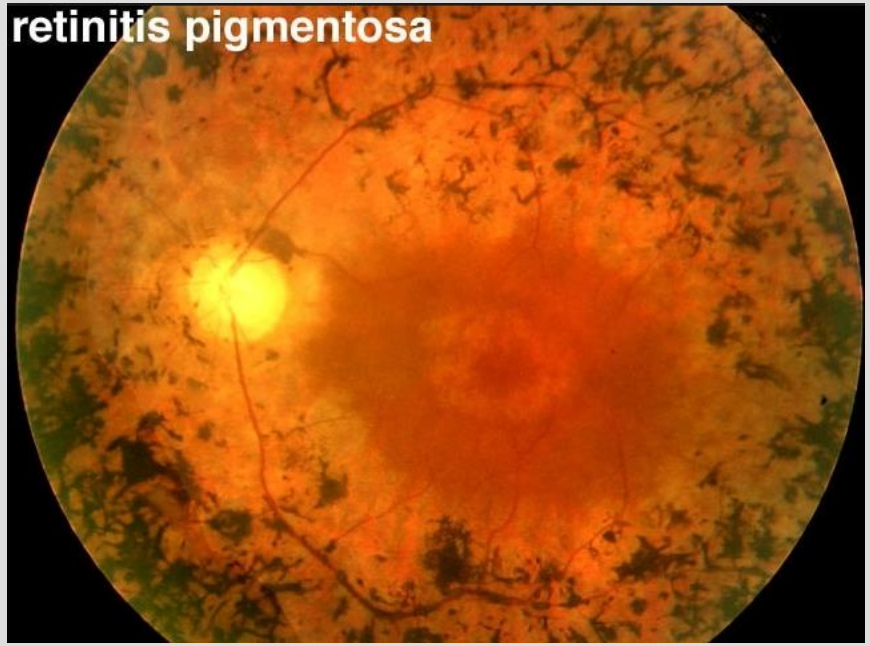
- Symptoms: Decreased vision
- Signs: irregularity and blunting of foveal light reflex, thickening with and without intraretinal cysts in region of fovea
- Work-up
  - History
  - Dilated eye exam
  - OCT of the macula
  - IVFA



https://www.reviewofophthalmology.com/article/pseudophakic-cystoid-macular-edema

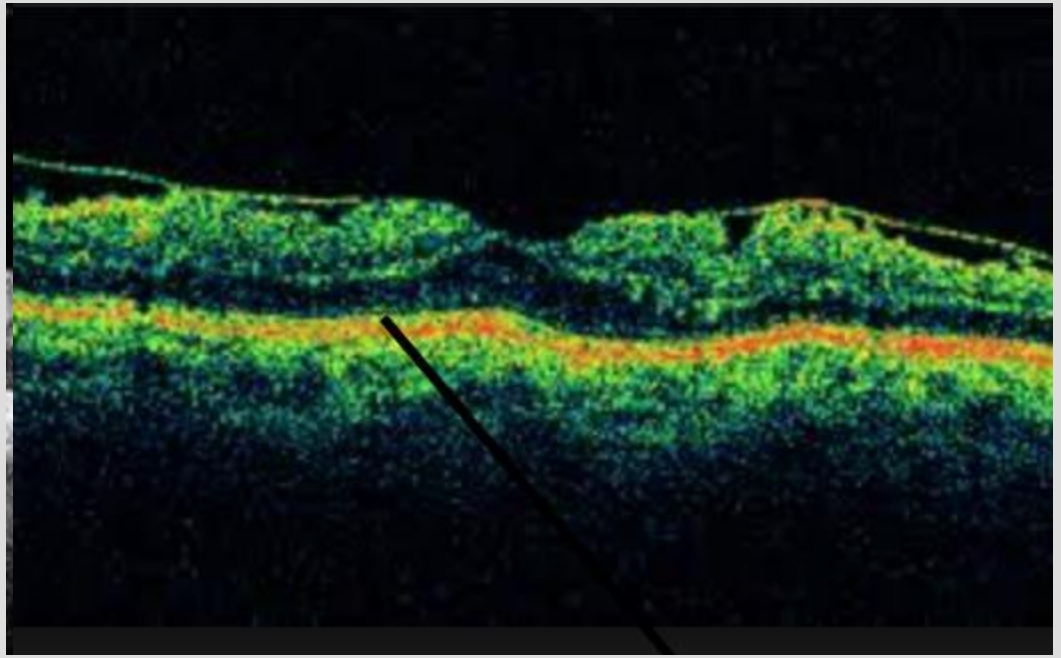
RULING OUT DIFFERENTIAL DIAGNOSES

- Post-operative
  - No past ocular surgeries
- Diabetic Retinopathy
  - No history of diabetes according to patient
- Uveitis
  - (-) cells/flare in anterior chamber/vitreous
- Retinitis Pigmentosa
  - No nyctalopia or visible bone spicules



RULING OUT DIFFERENTIAL DIAGNOSES

- Retinal vasculitis
  - No visible retinal sheathing around vessels
- Retinal telangiectasias
- ARMD
- Epiretinal Membrane



TREATMENT

- Topical NSAIDs for surgery-related CME
- Acetozolamide 500mg po qd for post-operative, RP, and uveitis
- Topical steroids
- Subtenon steroid
- Intravitreal steroid
- Intravitreal anti-VEGF
- Systemic steroids

MACULAR EDEMA FOLLOWING BRVO

- Branch Retinal Occlusion Study (BVOS) - 1984
  - Grid laser shown to improve VA in patients with macular edema
- Standard of Care Versus Corticosteroid for Retinal Vein Occlusion Study (SCORE) – 2009
  - Triamainolone injections performed equally as well as grid laser but with more complications
- Ranibizumab for Macular Edema Secondary to Branch Retinal Vein Occlusion (BRAVO) – 2011
  - Intraocular injections of ranibizumab (anti-VEGF) can effectively treat macular edema secondary to BRVO

MANAGEMENT

- Patient referred to retina ophthalmology
- IVFA results: delayed transit to inferotemporal arcade with moderate diffuse macular edema. No hyperfluorescence consistent with NVD or NVE.
- Diagnosis: **Branch retinal vein occlusion with retinal neovascularization OS**
- Treatment Initiated: Intravitreal anti-VEGF (Eylea) therapy monthly for four months