The Best Way to Manage the Case: Who Said it Best?
2 Hours TQ Outline

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RETINA CONSULTANTS OF MIAMI

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- PREVIOUS AD Board
  - Astellas
- PREVIOUS Speaker
  - Astella, Zeiss, Optos

1

Best way to manage this case

2

57yo OTHERWISE HEALTHY HISPANIC MALE

- CC: blurred vision for few month but worse last week
  - Feels OD is just **NOT right**
  - **Referred by PCP to evaluate cataracts**
- BCVA 20/20 OD, OS
- IOP 23, 24 mmHG
- CF, Pupils, EOM: unremarkable
- **SLE: TR NS**
- FHX: Dad has glaucoma
- PMHX: just saw pcp
  - all annual exams UNREMARKABLE

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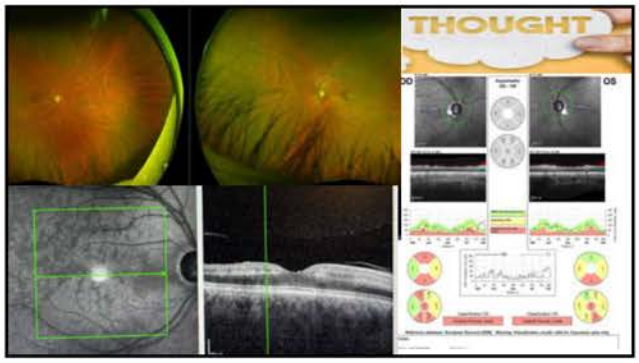

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• YES… he had **GLAUCOMA**
• **Treated w**
• Latanoprost
• Alphagan
• but he ALSO had _____?
• MANAGEMENT?

5


EMERGENCY ENTRANCE
TODAY
PAMM may be a sign of a secondary underlying condition
-ER→ workup to rule out cardiovascular conditions & possible stroke
- Similar to RAO; requires MRI/MRA, Carotid Dopplers and echocardiogram, labs, etc

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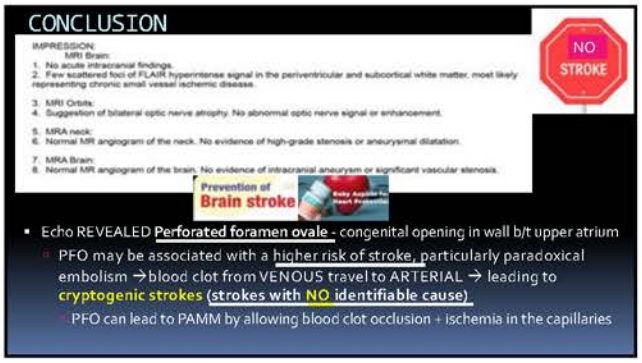
CONCLUSION
IMPRESSION:
MRI Brain:
1. No acute intracranial findings.
2. Few scattered foci of FLAIR hyperintense signal in the periventricular and subcortical white matter, most likely representing chronic small vessel ischemic disease.
3. MRI Orbits:
4. Suggestion of bilateral optic nerve atrophy. No abnormal optic nerve signal or enhancement.
5. MRA neck:
6. Normal MR angiogram of the neck. No evidence of high-grade stenosis or aneurysmal dilatation.
7. MRA Brain:
8. Normal MR angiogram of the brain. No evidence of intracranial aneurysm or significant vascular stenosis.
NO STROKE
Prevention of Brain stroke
▪ Echo REVEALED Perforated foramen ovale - congenital opening in wall b/t upper atrium
▫ PFO may be associated with a higher risk of stroke, particularly paradoxical embolism →blood clot from VENOUS travel to ARTERIAL → leading to cryptogenic strokes (strokes with NO identifiable cause)
▫ PFO can lead to PAMM by allowing blood clot occlusion + ischemia in the capillaries

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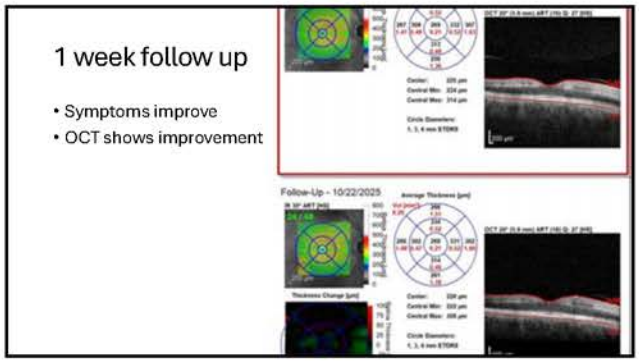
1 week follow up
• Symptoms improve
• OCT shows improvement
Follow-Up - 10/22/2025

8


Get Your Head
Out Of My Gutter

9


63WM distortion OU X 2-3M and Flashes OD
• POHx: Hx od ICSC with multiple flare up
• Hx on steroid injection Right arm
20/30
20/20

10


FAF shows→guttering
But also…

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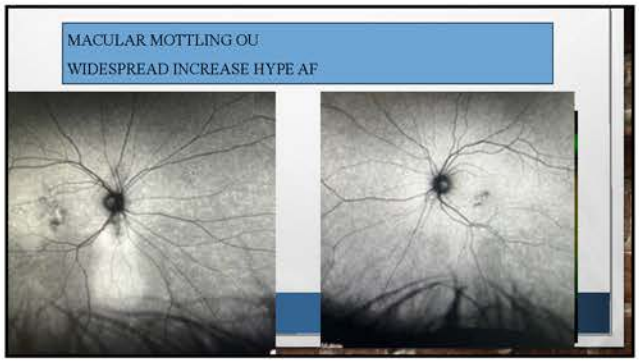
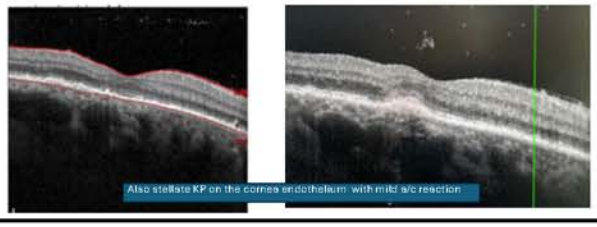

MACULAR MOTTLING OU
WIDESPREAD INCREASE HYPE AF

12

- Thick pachy on OCT→ ICSC
- BUT what else do you see?



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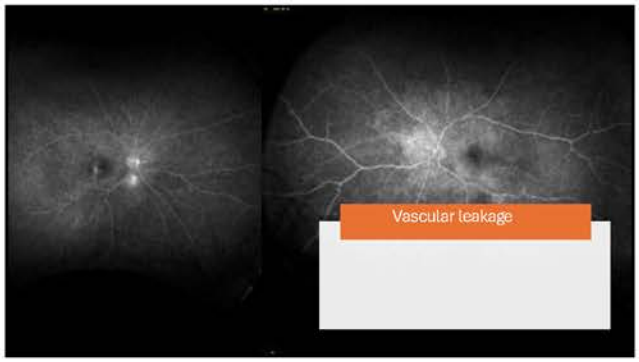

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Is this ICSC alone?

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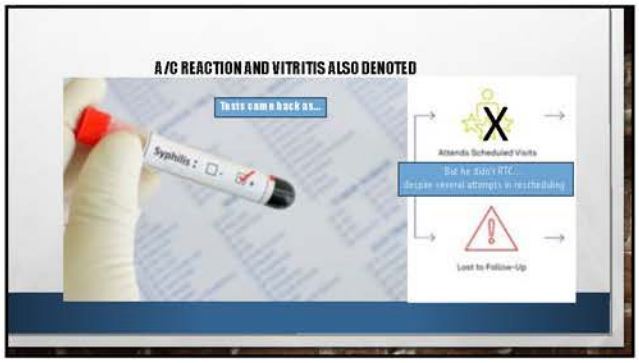

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WHY OUR CASE WAS NOT AN OLD ICSC

- **OTHER SYMPTOMS**
  - VEIL / HAZE OVER VISION
  - FLASHES / FLOATERS X 2 WEEKS
- **FAF** DID NOT REVEAL GUTTERING (IT'S WAS ALSO WIDESPREAD CHANGES)
- **OCT**: PATCHY PIL LOSS WITH SUBRETINAL DEPOSITS
- CAREFUL ASSESSMENT ALSO REVEALED **A/C & VITREOUS CELLS**

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DIFFERENTIAL FOR ICSC ARE VAST…
ICSC IS IDIOPATHIC

SOME PATIENT'S DX WITH ICSC MAY HAVE OTHER CAUSES OF SUBRETINAL FLUID; INCLUDING BUT NOT LIMITED TO:

TUMORS
WET AMD/ PCV
INFECTIOUS/ INFLAMMATORY ENTITIES
OTHER MACULOPATHIES
CONGENITAL OPTIC NEUROPATHIES (PIT)
MORE…

Look for: abnormalities on OCT, associated findings, elevation, is the pt "right" clinical presentation

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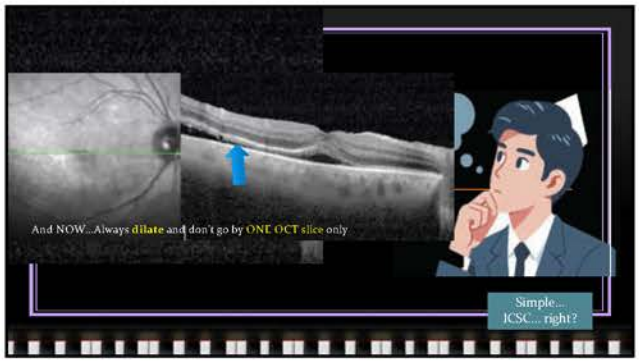

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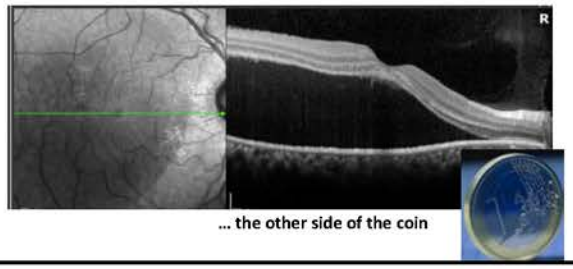
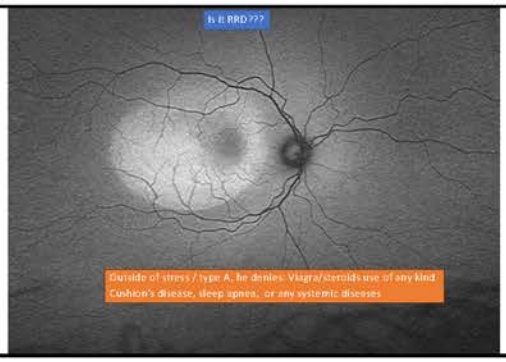
42 AM Decreased vision over 6 weeks
20/200 refer for mac off RD



... the other side of the coin

21



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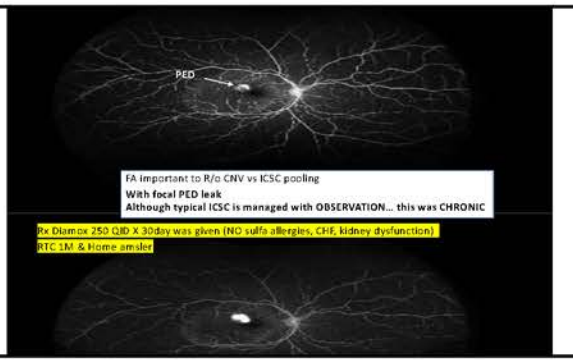

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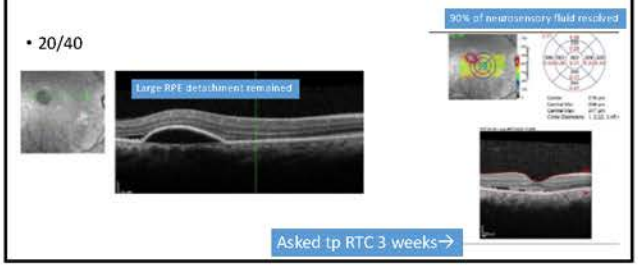
At 1M

- 20/40



Asked tp RTC 3 weeks→

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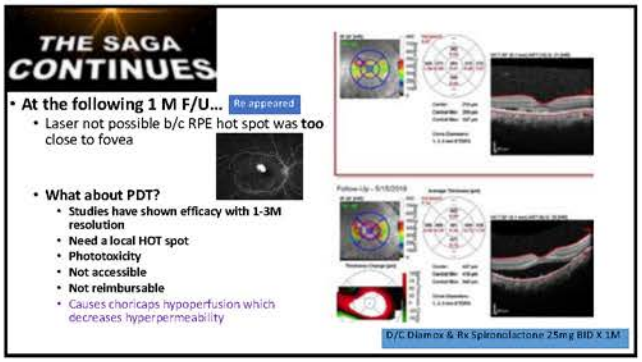
THE SAGA CONTINUES
• At the following 1 M F/U... Re appeared
• Laser not possible b/c RPE hot spot was too close to fovea
• What about PDT?
• Studies have shown efficacy with 1-3M resolution
• Need a local HOT spot
• Phototoxicity
• Not accessible
• Not reimbursable
• Causes choricaps hypoperfusion which decreases hyperpermeability
D/C Diamox & Rx Spironolactone 25mg BID X 1M

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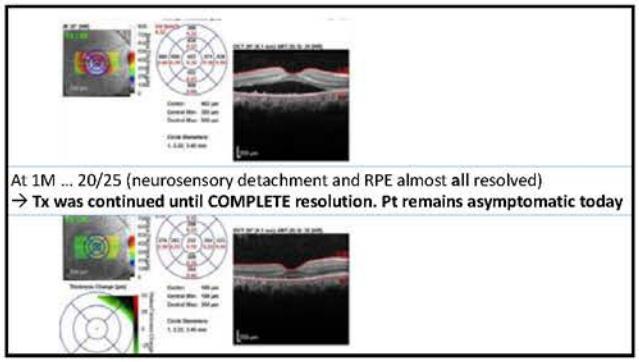
At 1M ... 20/25 (neurosensory detachment and RPE almost all resolved)
→ Tx was continued until COMPLETE resolution. Pt remains asymptomatic today

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ACTIVE
INACTIVE

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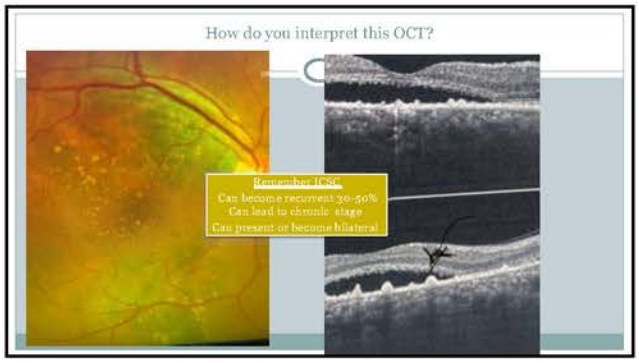
How do you interpret this OCT?
Remember CSCR
Can become recurrent 30-50%
Can lead to chronic stage
Can present or become bilateral

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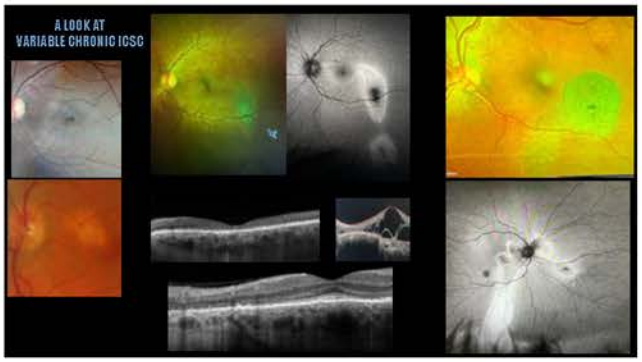
A LOOK AT
VARIABLE CHRONIC ICSC

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Clinical Pearls

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DO YOU SEE ANY SUBTLE DIFFERENCES?

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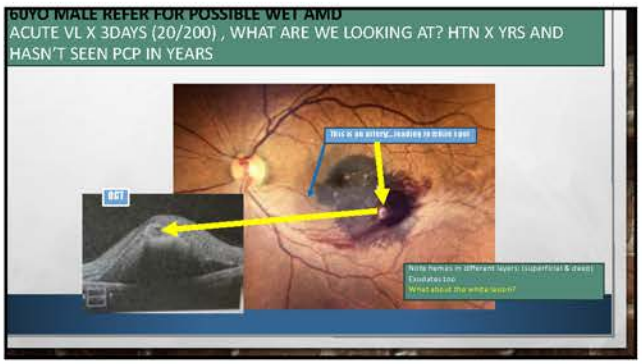
60YO MALE REFER FOR POSSIBLE WET AMD
ACUTE VL X 3DAYS (20/200) , WHAT ARE WE LOOKING AT? HTN X YRS AND HASN'T SEEN PCP IN YEARS
OCT

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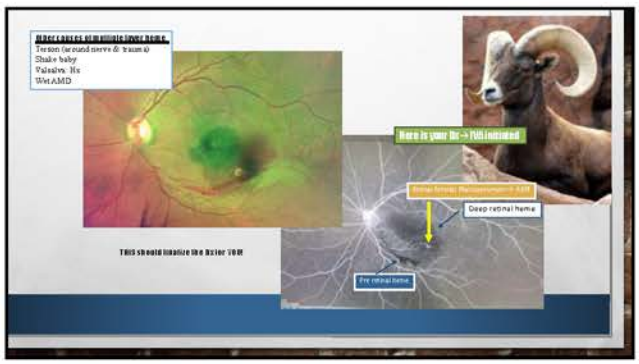
Torsion (around nerve & trauma)
Snake bite
Valsalva: Hx
Wet AMD
Here is your Dx → PDR initiated
Deep retinal heme
Pre retinal heme

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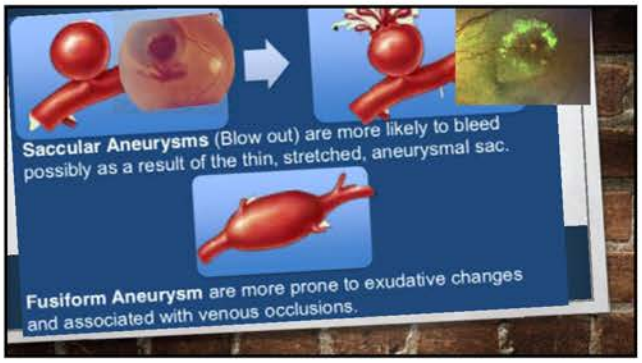
Saccular Aneurysms (Blow out) are more likely to bleed possibly as a result of the thin, stretched, aneurysmal sac.
Fusiform Aneurysm are more prone to exudative changes and associated with venous occlusions.

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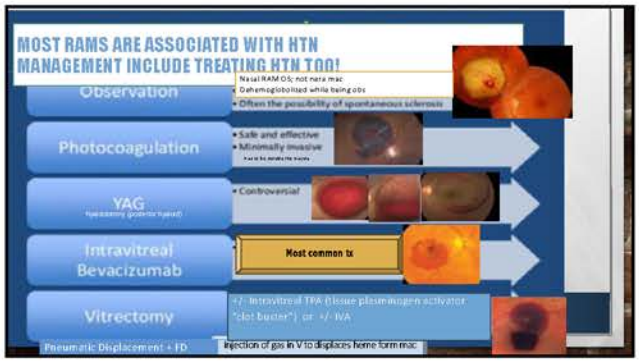
MOST RAMS ARE ASSOCIATED WITH HTN
MANAGEMENT INCLUDE TREATING HTN TOO!
Observation
Nasal RAM OS; not neta mac
Photocoagulation
Safe and effective
Minimally invasive
YAG
Controversial
Intravitreal Bevacizumab
Most common tx
Vitrectomy
Pneumatic Displacement + FD
Injection of gas in V to displaces heme form mac

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ALWAYS CONSIDER RAM WITH MULTIPLE LAYER HEME PRESENTATION
Pre retinal heme
Subretinal heme

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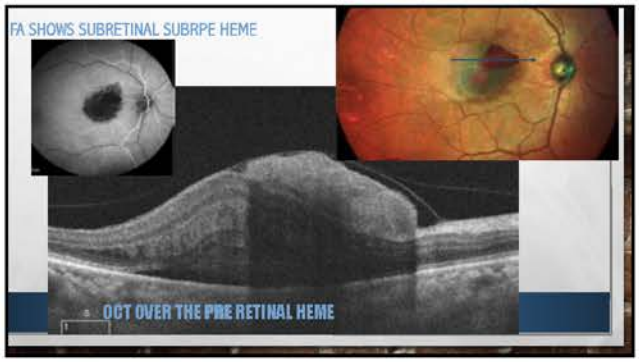
FA SHOWS SUBRETINAL SUBRPE HEME
OCT OVER THE PRE RETINAL HEME

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Clinical Pearls

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CASE #2
Other side of the
coin...

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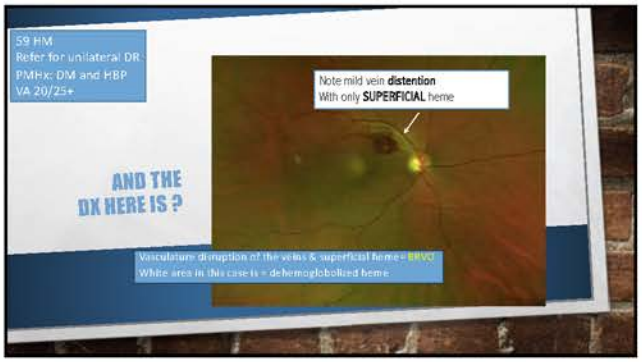
59 HM
Refer for unilateral DR
PMHx: DM and HBP
VA 20/25+
Note mild vein distention
With only SUPERFICIAL heme
AND THE
DX HERE IS ?
Vasculature disruption of the veins & superficial heme = BRVO
White area in this case is = dehemoglobolized heme

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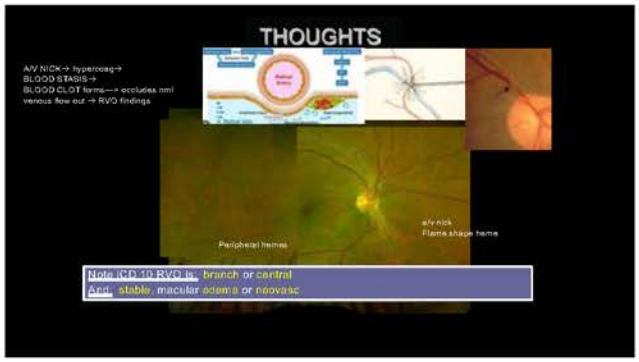
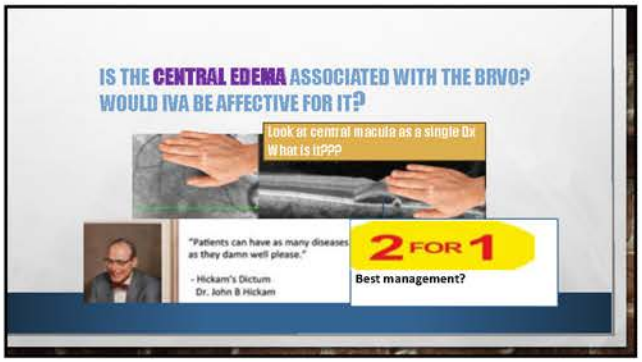

THOUGHTS
A/V NICK→ hypercoag→
BLOOD STASIS→
BLOOD CLOT forms→ occludes nml
venous flow out → RVO findings
Peripheral hemes
a/v nick
Flame shape heme
Note ICD-10 RVO is: branch or central
And: stable, macular edema or neovasc

42


IS THE CENTRAL EDEMA ASSOCIATED WITH THE BRVO?
WOULD IVA BE AFFECTIVE FOR IT?
Look at central macula as a single Dx
What is it???
"Patients can have as many diseases as they damn well please."
- Hickam's Dictum
Dr. John B Hickam
2 FOR 1
Best management?

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YOU HAVE SOME NERVE

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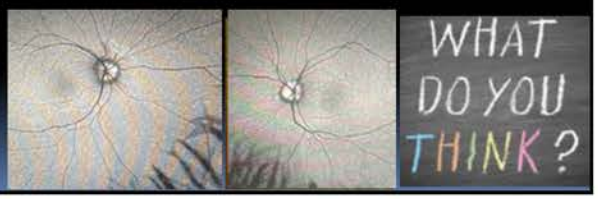
16 YO Female referred for swollen disc

20/20 OD, OS (-) APD

- Normal weight and No: diplopia, tinnitus, TVOs



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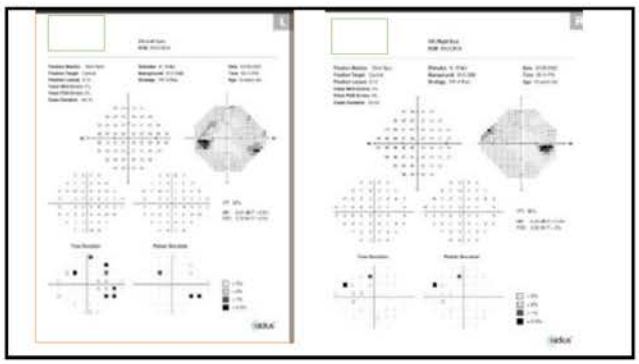

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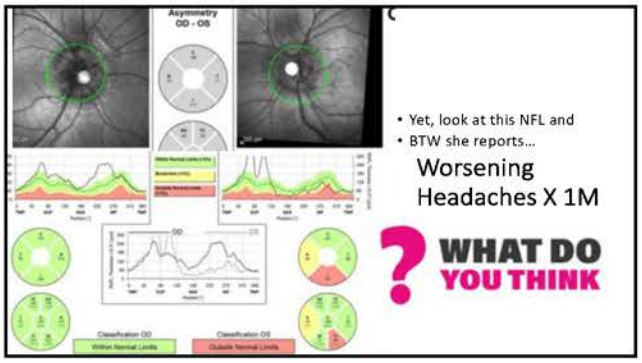

- Yet, look at this NFL and
- BTW she reports…

Worsening Headaches X 1M

WHAT DO YOU THINK

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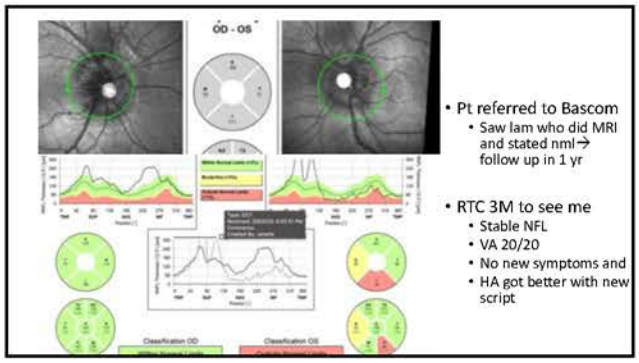

- Pt referred to Bascom
  - Saw Iam who did MRI and stated nml→ follow up in 1 yr
- RTC 3M to see me
  - Stable NFL
  - VA 20/20
  - No new symptoms and
  - HA got better with new script

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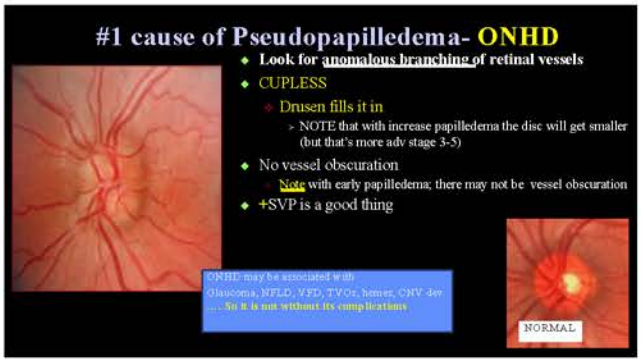
#1 cause of Pseudopapilledema- ONHD
Look for anomalous branching of retinal vessels
CUPLESS
Drusen fills it in
NOTE that with increase papilledema the disc will get smaller (but that's more adv stage 3-5)
No vessel obscuration
Note with early papilledema; there may not be vessel obscuration
+SVP is a good thing
ONHD may be associated with Glaucoma, NFLD, VFD, TVOs, homer, CNV -dev
... So it is not without its complications
NORMAL

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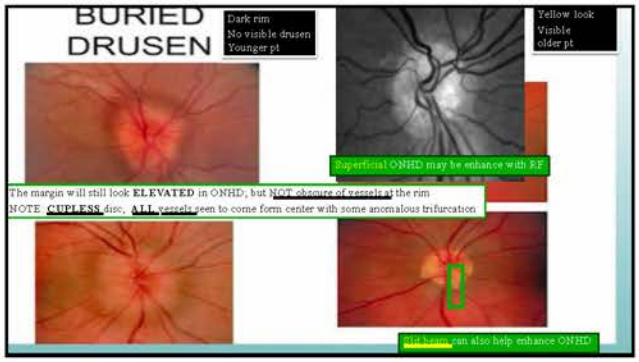
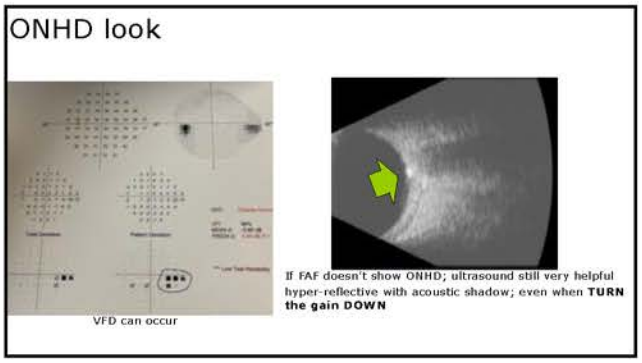

BURIED DRUSEN
Dark rim
No visible drusen
Younger pt
Yellow look
Visible
older pt
Superficial ONHD may be enhance with RF
The margin will still look ELEVATED in ONHD; but NOT obscure of vessels at the rim
NOTE CUPLESS disc. ALL vessels seen to come form center with some anomalous trifurcation
Tilt/torsion can also help enhance ONHD

50


ONHD look
VFD can occur
If FAF doesn't show ONHD; ultrasound still very helpful hyper-reflective with acoustic shadow; even when TURN the gain DOWN

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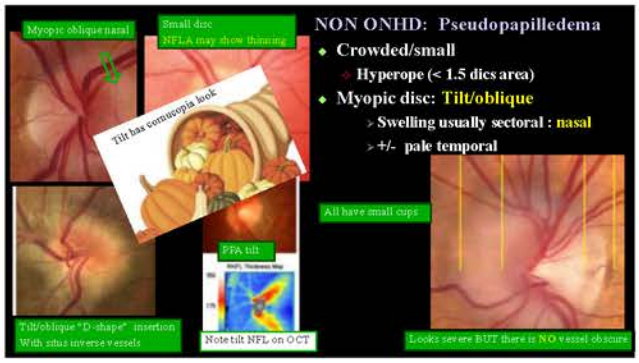
Myopic oblique nasal
Small disc
NFLA may show thinning
Tilt has cornucopia look
NON ONHD: Pseudopapilledema
Crowded/small
Hyperope (< 1.5 dics area)
Myopic disc: Tilt/oblique
Swelling usually sectoral : nasal
+/- pale temporal
All have small cups
PPA tilt
Tilt/oblique "D-shape" insertion
With situs inverse vessels
Note tilt NFL on OCT
Looks severe BUT there is NO vessel obscure

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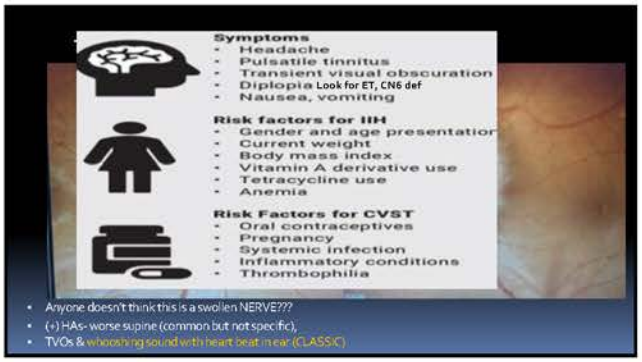
Symptoms
Headache
Pulsatile tinnitus
Transient visual obscuration
Diplopia Look for ET, CN6 def
Nausea, vomiting
Risk factors for IIH
Gender and age presentation
Current weight
Body mass index
Vitamin A derivative use
Tetracycline use
Anemia
Risk Factors for CVST
Oral contraceptives
Pregnancy
Systemic infection
Inflammatory conditions
Thrombophilia
Anyone doesn't think this is a swollen NERVE???
(+) HAs- worse supine (common but not specific),
TVOs & whooshing sound with heart beat in ear (CLASSIC)

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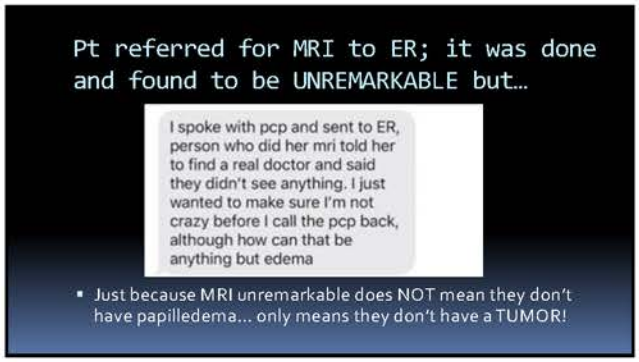
Pt referred for MRI to ER; it was done and found to be UNREMARKABLE but…
I spoke with pcp and sent to ER, person who did her mri told her to find a real doctor and said they didn't see anything. I just wanted to make sure I'm not crazy before I call the pcp back, although how can that be anything but edema
Just because MRI unremarkable does NOT mean they don't have papilledema… only means they don't have a TUMOR!

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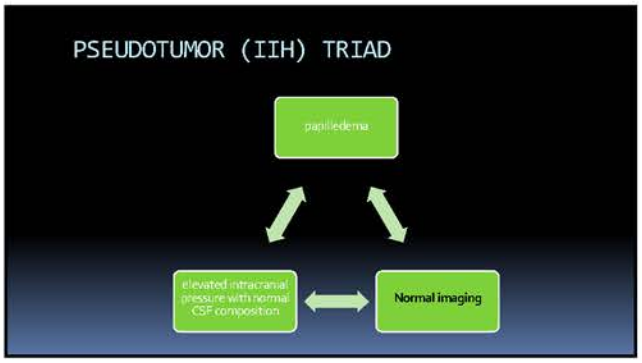
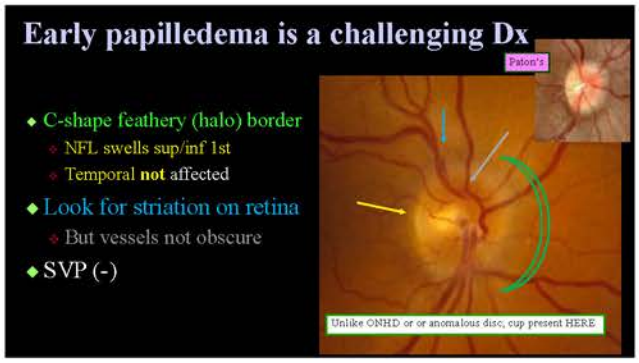

PSEUDOTUMOR (IIH) TRIAD
papilledema
elevated intracranial pressure with normal CSF composition
Normal imaging

55


Early papilledema is a challenging Dx
C-shape feathery (halo) border
NFL swells sup/inf 1st
Temporal not affected
Look for striation on retina
But vessels not obscure
SVP (-)
Paton's
Unlike ONHD or or anomalous disc, cup present HERE

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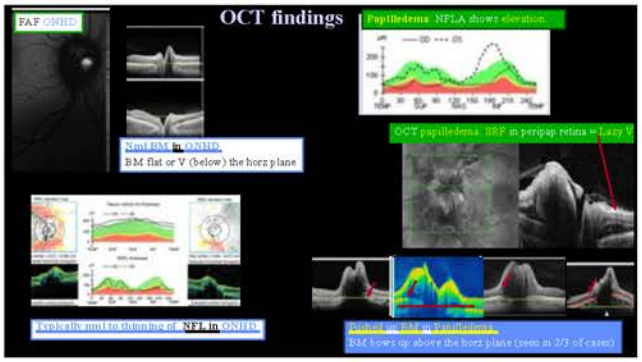
OCT findings
FAF ONHD
Papilledema: NFLA shows elevation
OCT papilledema: SRF in peripap retina = Lazy V
Typically: mod to thinning of NFL in ONHD
BM bows up above the horz plane (seen in 2/3 of cases)

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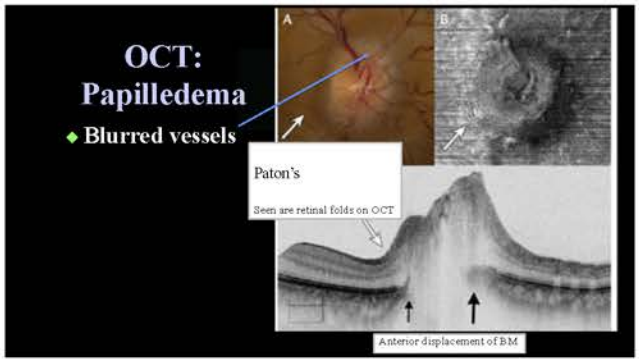
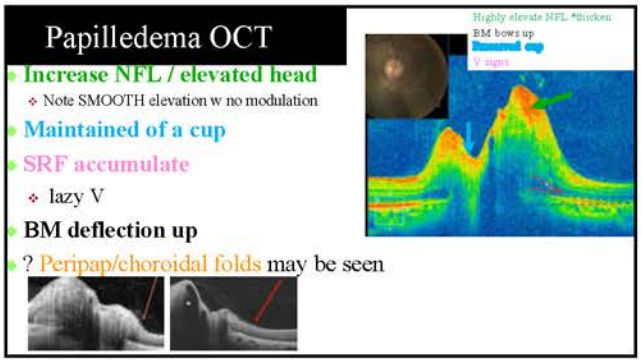
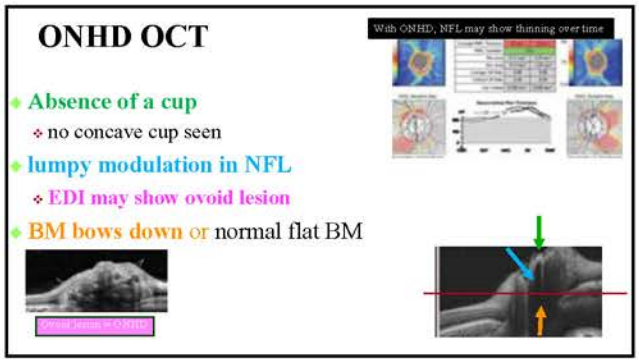

OCT:
Papilledema
Blurred vessels
Paton's
Seen are retinal folds on OCT
Anterior displacement of BM

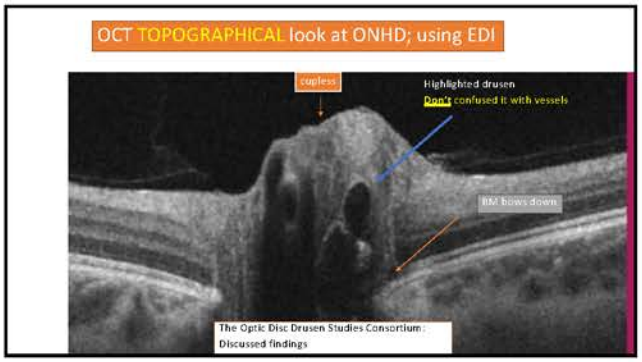
58


Papilledema OCT
Increase NFL / elevated head
Note SMOOTH elevation w no modulation
Maintained of a cup
SRF accumulate
lazy V
BM deflection up
? Peripap/choroidal folds may be seen
Highly elevate NFL *thicken
BM bows up
V sign

59


ONHD OCT
With ONHD, NFL may show thinning over time
Absence of a cup
no concave cup seen
lumpy modulation in NFL
EDI may show ovoid lesion
BM bows down or normal flat BM

60


OCT TOPOGRAPHICAL look at ONHD; using EDI
cupless
Highlighted drusen
Don't confused it with vessels
BM bows down
The Optic Disc Drusen Studies Consortium:
Discussed findings

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QUIZ
TIME!

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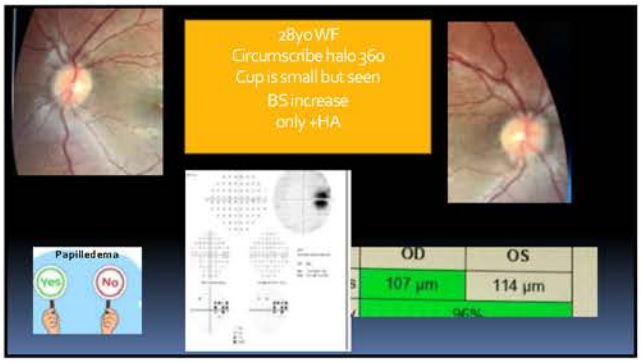
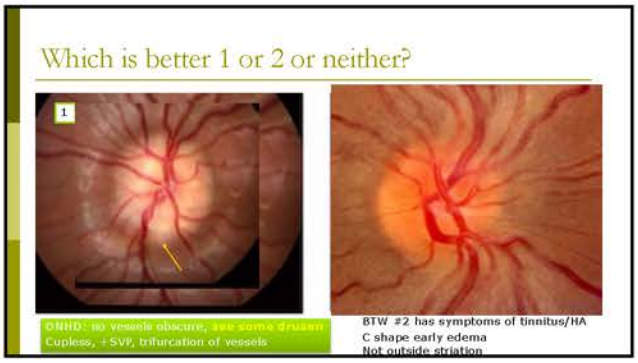
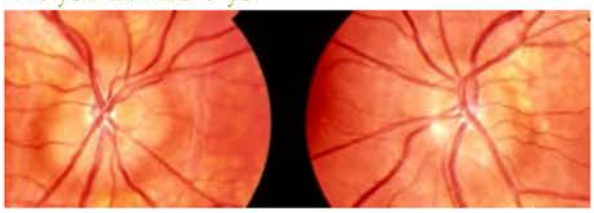

28yoWF
Circumscribe halo 360
Cup is small but seen
BS increase
only +HA
Papilledema
Yes
No
OD
OS
107 µm
114 µm

64


Which is better 1 or 2 or neither?
1
ONHD: no vessels obscure, see some drusen
Cupless, + SVP, trifurcation of vessels
BTW #2 has symptoms of tinnitus/HA
C shape early edema
Not outside striation

65

Are you worried: 9 yo

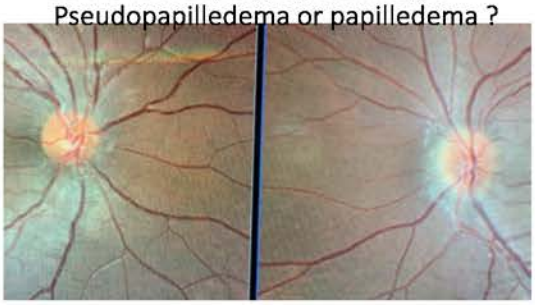


- BTW (+) SVP
- Cupless, no vessels obscure, asymptomatic

66

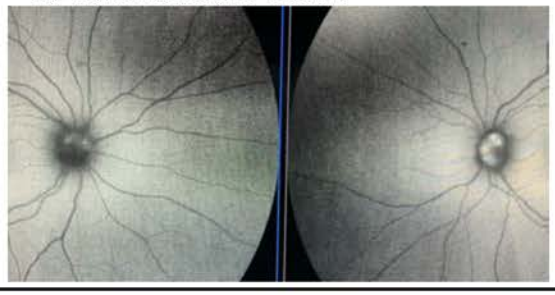
23 YO with HA/slightly overweight

Pseudopapilledema or papilledema ?



67

FAF confirms ONHD OS>OD



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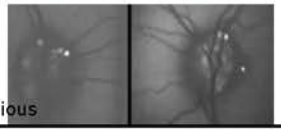
Papilledema or ONHD?



- And now…
- This was obvious

69

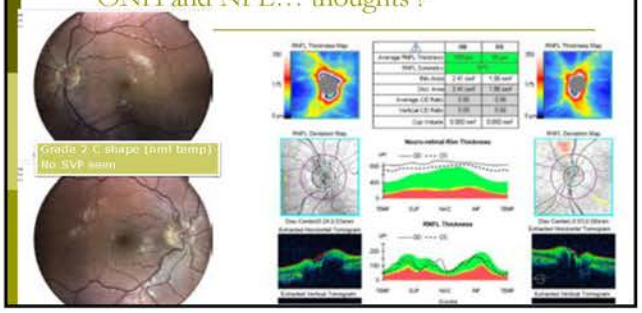
70

33 yo female

- FLD referral
- Medical history
  - Back surgery 1.5 years ago
  - Occasional headaches; they were worse before
  - Hx of tinnitus no longer
  - No TVO no diplopia
    - CT: EP
  - Lost 60 lbs in a year

71

ONH and NFL… thoughts ?



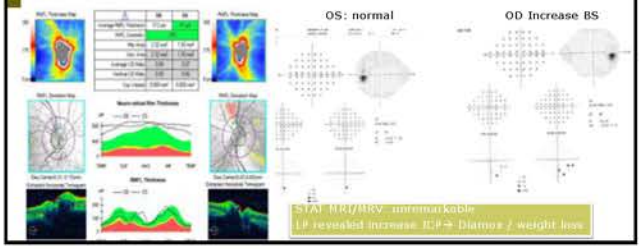
72

More info

- Pt has neurologist who is managing and has ordered MRI and **MRA**
  - **I had pt come back in 1 week to assure DX and management w neurologist**

73

RTC 1 week: **No MRI** done due to insurance issue
BS denoted on VF
there was an increase NFL for OD
- Now what?



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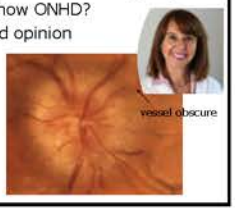
Clinical Pearls
…when faced with pseudo vs papilledema

Papilledema is rarely asympt (tinnitus, HA, tvo, diplopia, dizzy, neck/back pain)
Clinical picture of papilledema (female, 20-40yo, bilateral, 20/20)
Pseudo DFE: +SVP, (-)patons/vessel obscures, vessel branching, cupless
Testing: VF, OCT, FAF/ bscan show ONHD?
… You can always get a second opinion



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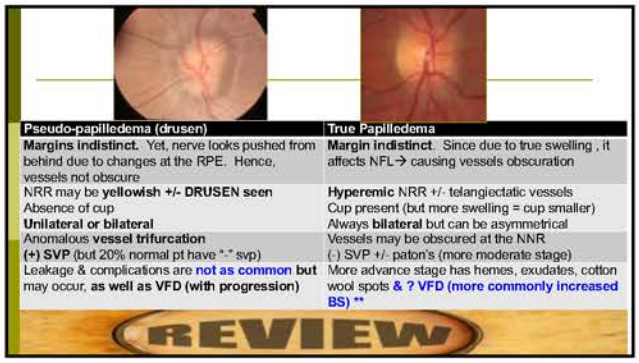

Pseudo-papilledema (drusen)	True Papilledema
Margins indistinct. Yet, nerve looks pushed from behind due to changes at the RPE. Hence, vessels not obscure	**Margin indistinct**. Since due to true swelling , it affects NFL→ causing vessels obscuration
NRR may be **yellowish +/- DRUSEN seen**	**Hyperemic** NRR +/- telangiectatic vessels
Absence of cup	Cup present (but more swelling = cup smaller)
Unilateral or bilateral	Always **bilateral** but can be asymmetrical
Anomalous **vessel trifurcation**	Vessels may be obscured at the NNR
(+) SVP (but 20% normal pt have "-" svp)	(-) SVP +/- paton's (more moderate stage)
Leakage & complications are **not as common but** may occur, **as well as VFD (with progression)**	More advance stage has hemes, exudates, cotton wool spots **& ? VFD (more commonly increased BS) ****

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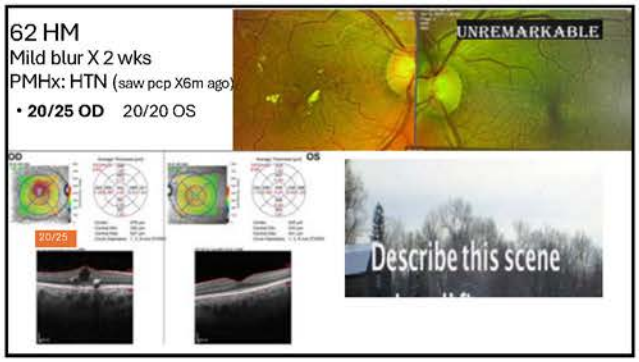
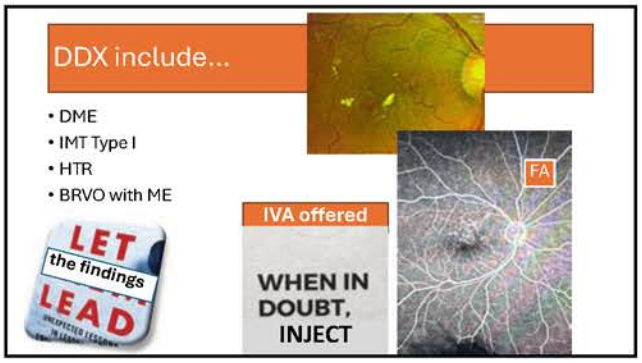
TEL ME ABOUT IT

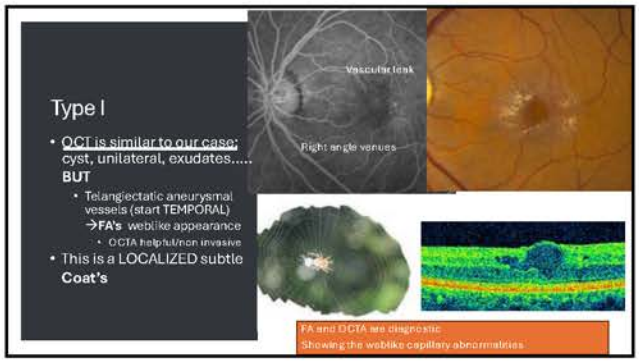
78


62 HM
Mild blur X 2 wks
PMHx: HTN (saw pcp X6m ago)
• 20/25 OD 20/20 OS
UNREMARKABLE
OD
OS
20/25
Describe this scene

79


DDX include...
• DME
• IMT Type I
• HTR
• BRVO with ME
LET the findings LEAD
IVA offered
WHEN IN DOUBT, INJECT
FA

80


Type I
• OCT is similar to our case: cyst, unilateral, exudates.....
BUT
• Telangiectatic aneurysmal vessels (start TEMPORAL)
→FA's webllke appearance
• OCTA helpful/non invasive
• This is a LOCALIZED subtle Coat's
Vascular leak
Right angle venules
FA and OCTA are diagnostic
Showing the webllke capillary abnormalities

81

Is it just a scar?

58 Haitian female

- **CC**: Decreased vision OS x several months
- **PMHx**:
  - DM X 5-7 yrs
  - HTN X 5-7 yrs
- **Meds**:
  - Insulin
  - CAI

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Examination

- **BVA**: **20/25** OD **20/50** OS
- **Pupils**: equal, round & reactive OU, (-) APD
- **SLE**:
  - (-) NVI OU
  - Mild NS OU

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85

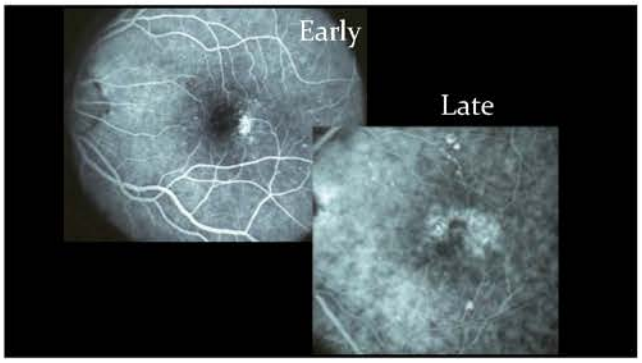
So what do you think?

A. Dystrophy
B. Bilateral traumatic maculopathies
C. Idiopathic macular telangiectasia
D. Age-related macular degeneration

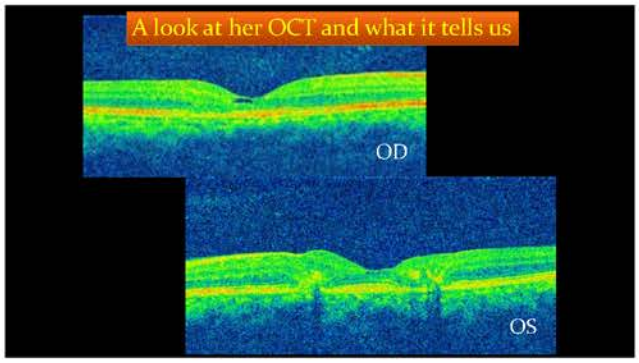
86

What test can help confirm the Dx?

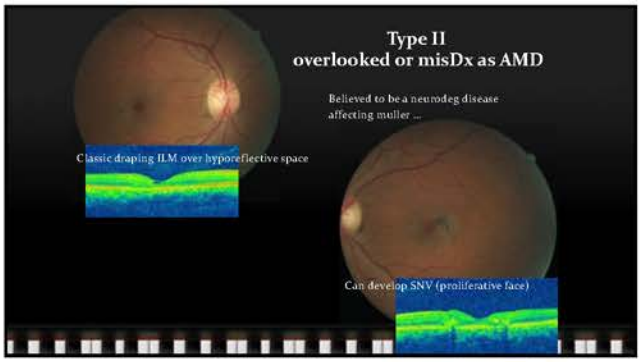
87



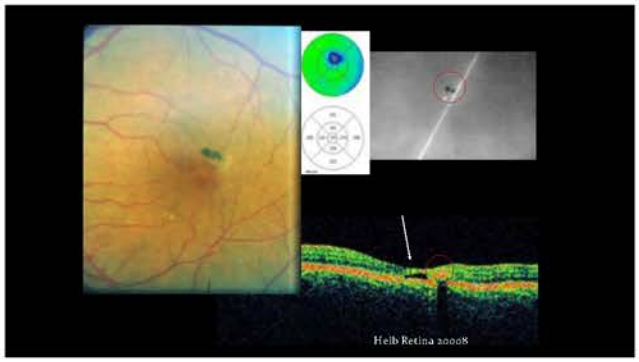
88



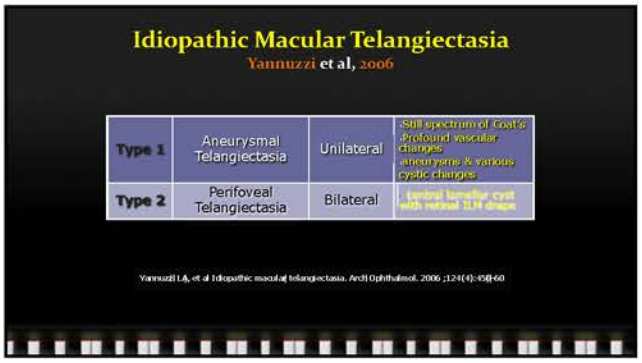
89


Type II
overlooked or misDx as AMD
Believed to be a neurodeg disease affecting muller ...
Classic draping ILM over hyporeflective space
Can develop SNV (proliferative face)

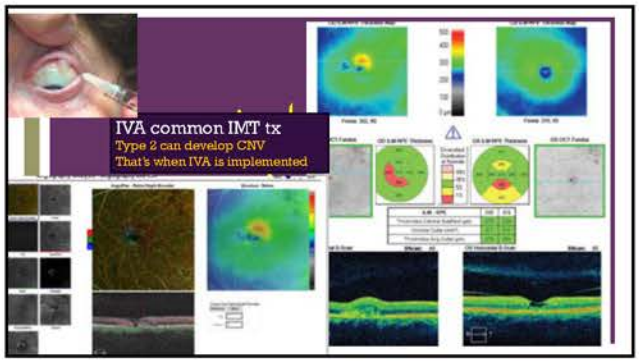
90


Helb Retina 2008

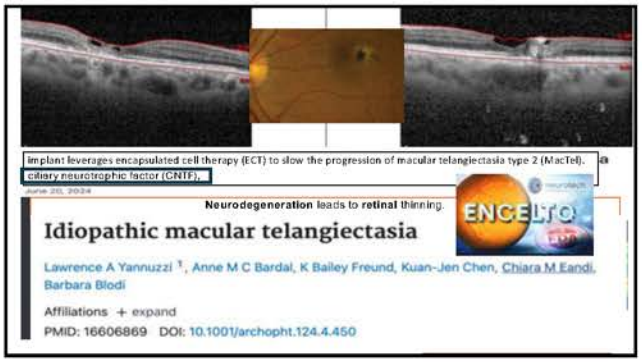
91


Idiopathic Macular Telangiectasia
Yannuzzi et al, 2006
Type 1
Aneurysmal Telangiectasia
Unilateral
Still spectrum of Coat's
Profound vascular changes
aneurysms & various cystic changes
Type 2
Perifoveal Telangiectasia
Bilateral
Yannuzzi LA, et al Idiopathic macular telangiectasia. Arch Ophthalmol. 2006 ;124(4):450-460

92


IVA common IMT tx
Type 2 can develop CNV
That's when IVA is implemented

94


Implant leverages encapsulated cell therapy (ECT) to slow the progression of macular telangiectasia type 2 (MacTel).
ciliary neurotrophic factor (CNTF).
Neurodegeneration leads to retinal thinning.
ENCELTO
Idiopathic macular telangiectasia
Lawrence A Yannuzzi [1], Anne M C Bardal, K Bailey Freund, Kuan-Jen Chen, Chiara M Eandi, Barbara Blodi
Affiliations + expand
PMID: 16606869 DOI: 10.1001/archopht.124.4.450

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Clinical Pearls

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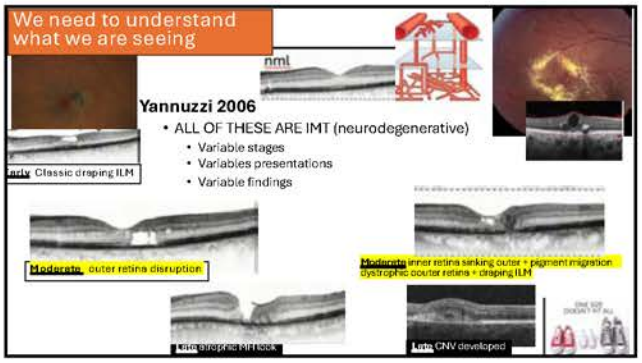
We need to understand what we are seeing
nml
Yannuzzi 2006
• ALL OF THESE ARE IMT (neurodegenerative)
• Variable stages
• Variables presentations
• Variable findings
Early Classic draping ILM
Moderate outer retina disruption
Moderate inner retina sinking outer + pigment migration dystrophic outer retina + draping ILM
Late CNV developed

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QUIZ

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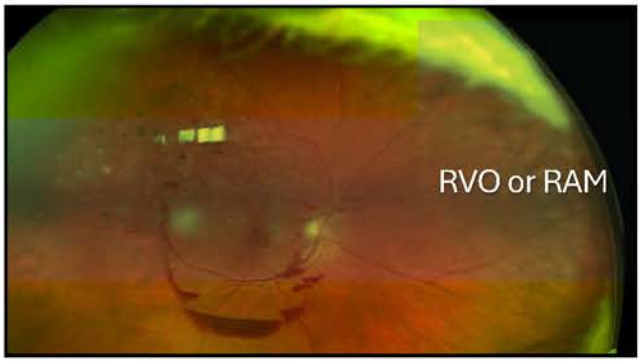
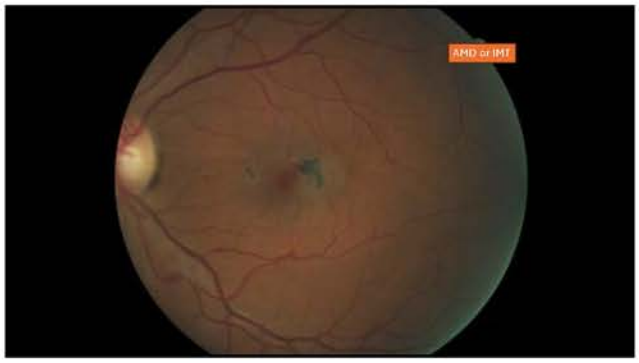


99

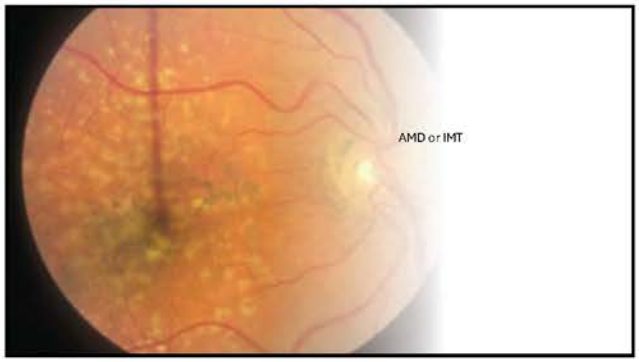
100

101



102

103



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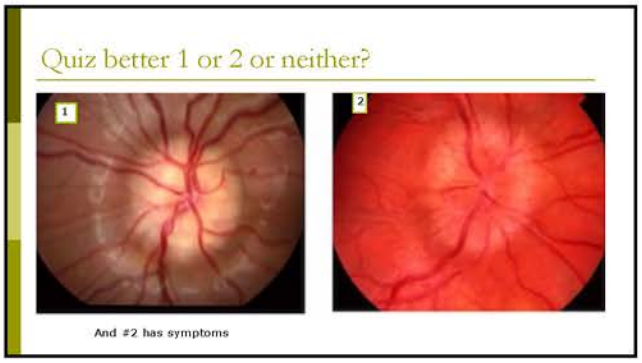

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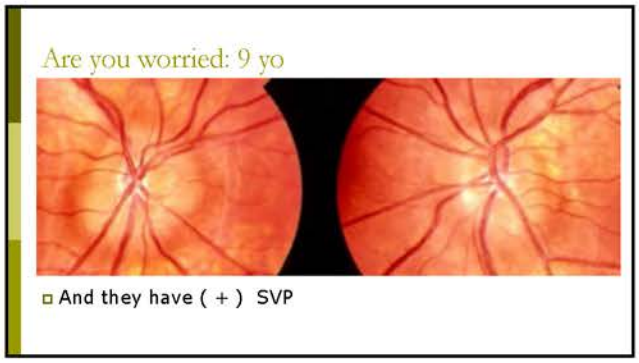

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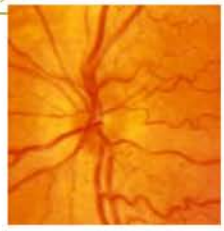
Are you worried: 28 normal weight

Hx of headaches



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