VCU Health
VCU Medical Center

Giant Insights: An Eye-Catching Case

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A 60-year-old male presented to his Ophthalmologist for evaluation due to intermittent blurred vision and increased floaters for 4-6 weeks.

He was referred to the Emergency Department after the Ophthalmology exam demonstrated hyperemic discs with peripapillary hemorrhages.

He endorses occasional headache, so Rheumatology is consulted!

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Past Medical History

- Chronic Joint Pain intermittently on opiates + bilateral rotator cuff s/p repair
- DM2 on insulin
- Hyperlipidemia
- Hypertension
- Depression

Summary of Pertinent Review of Systems:

General: Denies fevers or weight loss. Positive for night sweats.

HEENT: Blurred vision and floaters. Denies diplopia, eye pain or redness. Worsening sinus congestion. Some jaw pain and cramping when eating.

Neuro: Headaches for 4-6 weeks, described as lasting 5-15min, episodic, severe, and associated with certain positions such as standing up too quickly or bending over. + pre-syncope with prolonged standing.

MSK: Chronic pain and weakness in the bilateral shoulders.

Skin: Rash of one week's duration described as pruritic, raised papules which spontaneously resolved prior to presentation.

Vitals	• Afebrile, BP 132/83, HR 90, saturating 98% on room air
General	• Comfortable lying in bed; well-appearing
HEENT	• Palpable temporal artery pulses without localized tenderness • + tenderness over frontal sinuses (R>L) with mild nasal turbinate swelling • PERRL; + reduced sensation to light touch over left face
Cardiovascular	• Normal rate, regular rhythm • No bruits auscultated over carotid arteries, subclavian arteries, or abdominal aorta • Radial and DP pulses 2+ and symmetric
Respiratory	• CTA bilaterally without wheezes, rhonchi or rales
Skin/MSK	• No rashes • No joint or muscle pain, no synovitis
Neuro	• Alert, appropriate; diminished sensation to light touch over LUE and LLE; Muscle strength 4+/5 left proximal UE and left proximal LE and 5/5 elsewhere; patellar reflexes 2+ and symmetric bilaterally

CBC with Differential	
WBC	5.0 (4.8-10.8 10e3/uL)
Hgb/HCT	13.3 (14-18 g/dL)
Hematocrit	41.2 (42-52%)
Platelets	385 (130-400 10e3/uL)

Inflammatory Markers	
ESR	78 (0-20 mm/hr)
CRP	0.51 (0-0.3 mg/dL)

Renal Panel	
Na	136 (136-145 mmol/L)
K	4.1 (3.5-5.1 mmol/L)
Creatinine	0.9 (0.7-1.3 mg/dL)
Calcium	8.7 (8.5-10.1 mg/dL)
Phosphate	2.1 (2.5-4.9 mg/dL)
Magnesium	1.8 (1.7-2.2 mg/dL)

Miscellaneous Tests	
Urine Drug Screen	Negative
Urinalysis	Unremarkable
TSH	0.413 (0.5-5.0 mIU/L)
Hemoglobin A1C	7.6% (<6.5%)

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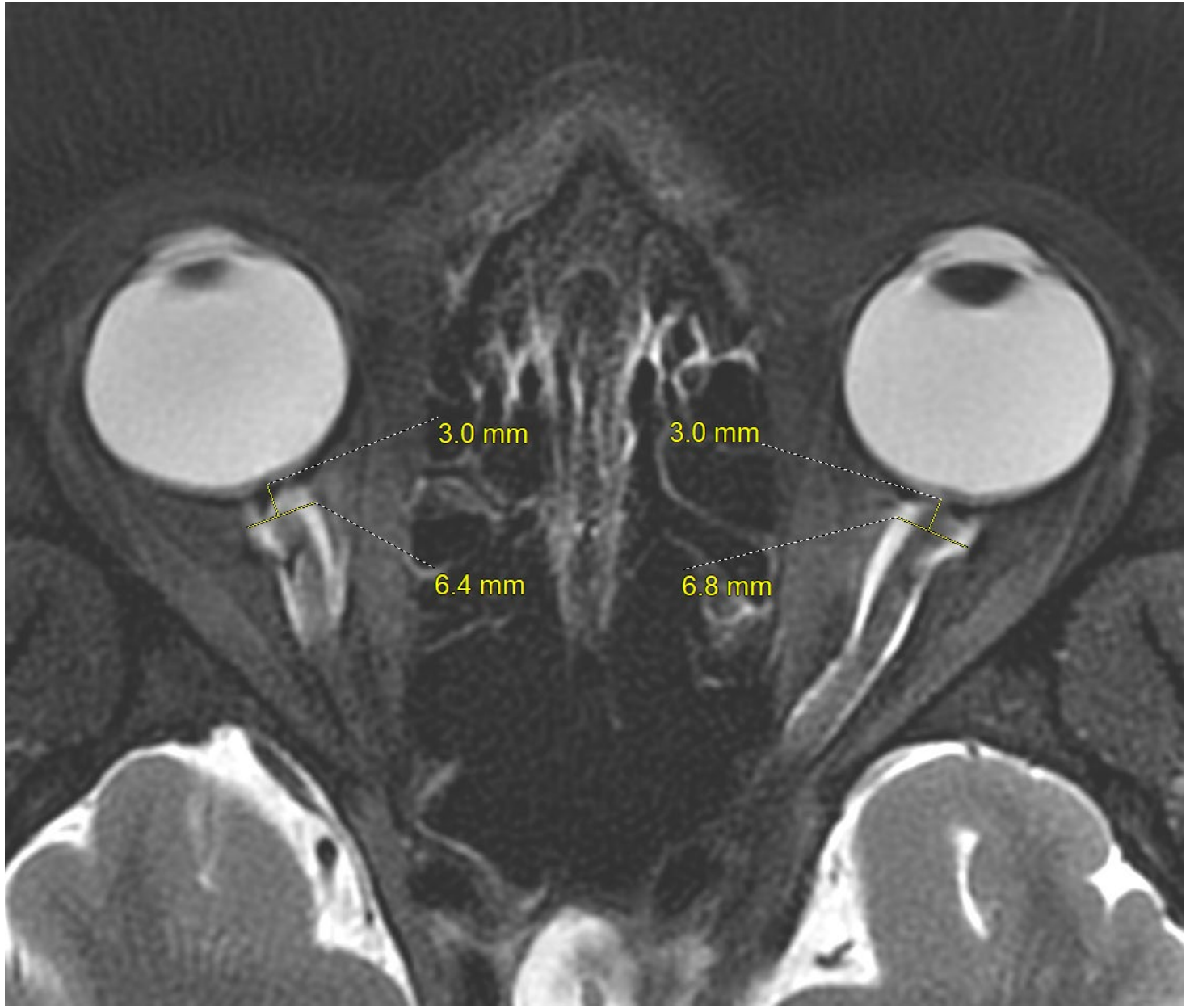
What's on your differential?

Imaging?



Imaging/Diagnostics:

- Temporal Artery Duplex US negative/normal

- MRI Brain/Orbit with mild prominence of the CSF spaces surrounding the bilateral optic nerves without evidence for additional intra-orbital abnormality or other intracranial findings to potentially account for this appearance (shown)
  - Normal: <5mm measured 3mm posterior to globe

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Additional Labs?

Biopsy?

Serology	
ANA	Negative
ANCA	C-ANCA positive 1:20
MPO	Negative <1.0
PR3	Negative <1.0
SSA/SSB	Negative <1.0

CSF	
Protein	54 mg/dL (15-45)
Glucose	126 mg/dL (40-70)
WBC	1.9 (H) [49% Lymphocytes, 50% Macrophages)

Infectious	
HBsAg, HBcAb, HBsAb	Negative
Hepatitis C Ab	Negative
HIV	Negative
CMV DNA PCR and Quant	Negative
Varicella Zoster Virus DNA	Negative
HSV 1/HSV 2 DNA PCR CSF	Negative
Lyme Disease PCR CSF	Negative
VDRL CSF	Negative
Oligoclonal bands CSF	Negative

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What's on your differential?

What's our diagnosis?

What test, if any, would clinch your suspicions?

SPOILER ALERT!

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This patient had a 1:128 Titre Positive RPR, consistent with Neurosyphilis!

How can Neurosyphilis manifest?

What are the CSF findings?

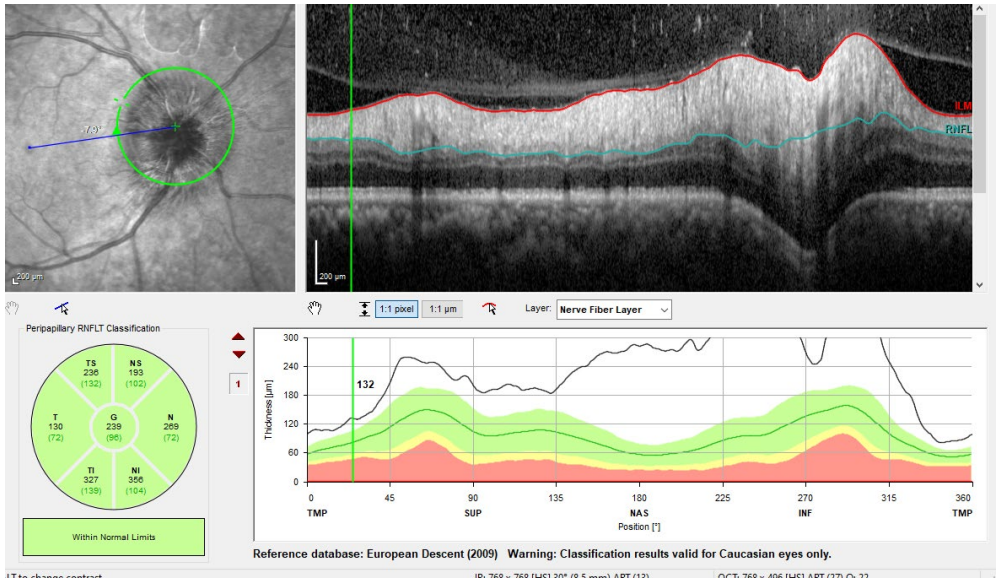
How does Syphilis affect the eyes?

How does Syphilis affect the optic nerves?

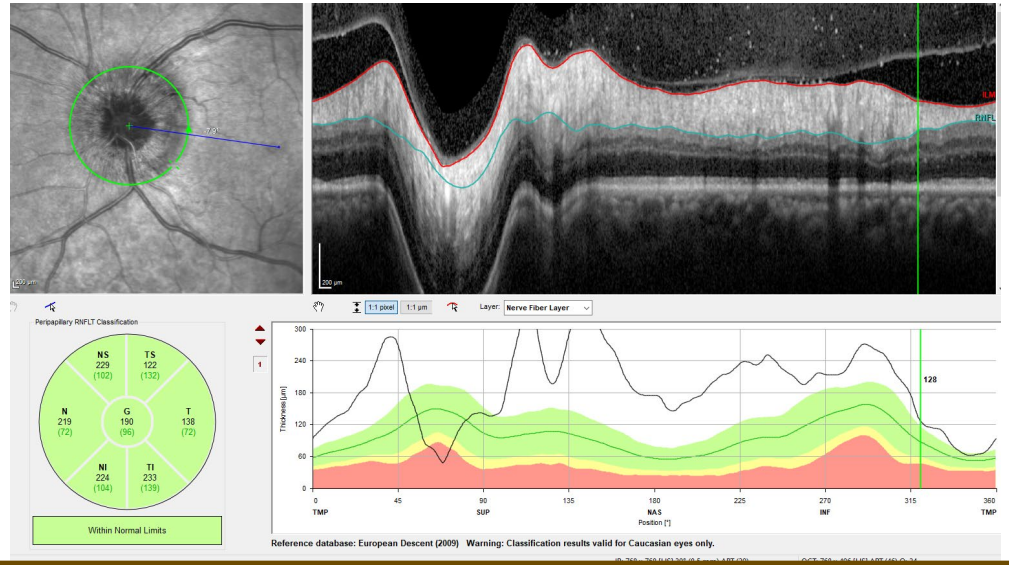
How do we treat him?

Before IV

RIGHT



LEFT



Optical coherence tomography demonstrates bilateral severe, diffuse nerve fiber layer edema OD>OS (right eye greater than left eye) with average retinal nerve fiber thickness 230 microns OD and 190 microns OS.

Learning Points

CSF VDRL can be negative in cases of neurosyphilis. RPR remains a worthwhile screening test!

Syphilis can cause bilateral optic nerve edema and peripapillary hemorrhages which can be confused with arteritic anterior ischemic optic neuropathy and giant cell arteritis.

Don’t forget Syphilis as the great mimic!