Ocular Overview for the Primary Care Physician

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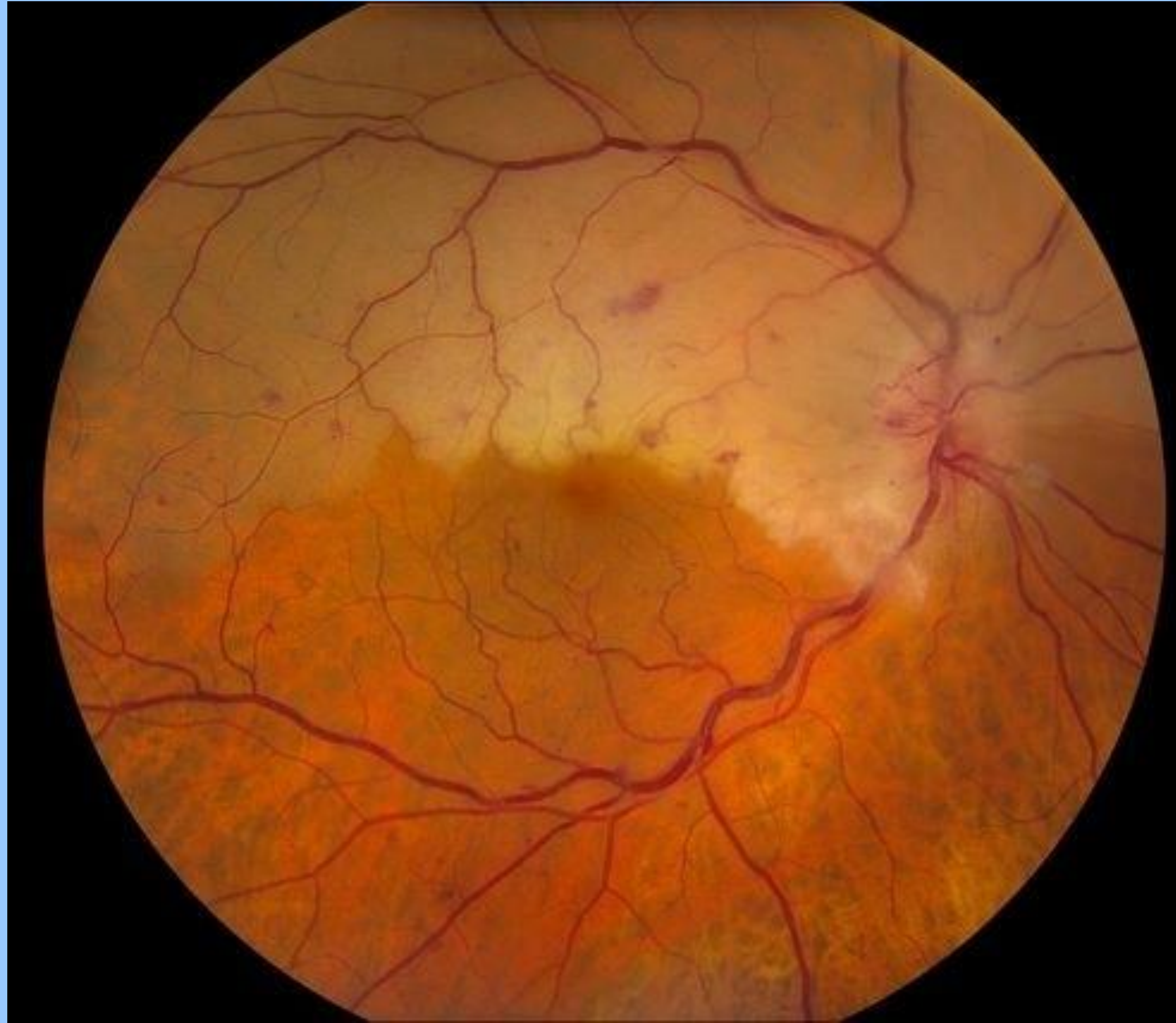


Ocular Overview for the Primary Care Physician

J. Alexander Jones, O.D.

In the past 12 months I or my spouse have not had any relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or the provider(s) of any commercial service(s) discussed in the educational presentation.

Retinal arterial ischemia

- Central retinal artery obstruction (CRAO)
- Branch retinal artery obstruction (BRAO)
- Ophthalmic artery obstruction (OAO)
- Transient monocular visual loss (TMVL)

Typical current management

- Emergent referral to the retinal specialist
  - Anterior chamber tap
  - Ocular massage
  - Carbogen treatment
  - Hyperbaric oxygen treatment
  - L-Arginine infusion
- Referral to general medical doctor for outpatient evaluation
- Outpatient laboratory studies and carotid ultrasound

American Heart Association and National Stroke Association consensus statement

Stroke is defined as “brain, spinal cord, or retinal cell death attributable to ischemia, based on neuropathological, neuroimaging, and/or clinical evidence of permanent injury.”

Retinal artery ischemic syndromes are actually strokes and stroke precursors

- There is a common perception that RAOs only have implications for vision
- The retina and optic nerve are central nervous system tissue, with similar mechanisms of injury and similar response to ischemia
- Acute retinal artery ischemia is an ocular <u>and systemic</u> emergency

Systemic risks related to retinal artery obstructions

- Increased risk of subsequent retinal infarction
- Risk of associated vasculitis (giant cell arteritis)
- Increased risk of cerebral stroke in multiple studies of CRAO
  - 1/3 of patients have carotid artery stenosis of at least 50%
  - 24% have major cerebral stroke within 3 years, most of which occur within a few weeks following the CRAO
- Increased risk of myocardial infarction

American Society for Vascular Surgery

When indicated, carotid endarterectomy should be performed within 14 days of the ischemic event.

American Academy of Ophthalmology Preferred Practice Pattern for Retinal and Ophthalmic artery occlusions

- There are no proven treatments for the ocular manifestations of CRAO, BRAO, or OAO.
- Acute symptomatic CRAO or OAO should prompt an immediate referral to the nearest stroke center for prompt assessment. The evidence is limited for a similar referral pattern for BRAO.
- OAO or RAO should have a systemic evaluation for vascular occlusive disease – vasculitis or hypercoagulable workup in younger patients and an embolic workup for older patients.
- Follow-up examinations should be scheduled to watch for anterior and/or posterior neovascularization.

Management of retinal artery ischemia

- Acute OAO, CRAO, BRAO and TMVL – refer for emergent evaluation at the nearest stroke center ER
- Chronic ischemia (presenting more than 2 weeks after the event) – refer for outpatient evaluation
- Follow-up examinations by primary eyecare doctor to watch for iris and retinal neovascularization

Important to have a pathway for emergent (same day) evaluation of patients with sudden visual loss

- This includes both transient and permanent visual deficits
- Limited (disease specific) evaluation, not a complete exam.
- Identify eye care specialists (continuity of care)
- Identify stroke centers

Transient Monocular Vision Loss (TMVL) - Patient History

- Time course (how long did it last, sudden or gradual onset and resolution, etc)
- Character (blurry, hazy, black, missing, photopsia, scintillations, what area of vision involved, shape, etc – have them draw a picture if necessary)
- Precipitating causes (position, activity, temperature, trauma, etc.)
- Associated factors (headache, neurological symptoms, etc)
- Previous eye problems (RD, optic neuritis, RVO, etc.)
- Vasculopathic risk factors (HTN, DM, hypercholesterolemia, MI, stroke, atrial fibrillation)

Transient vision loss – monocular or binocular?

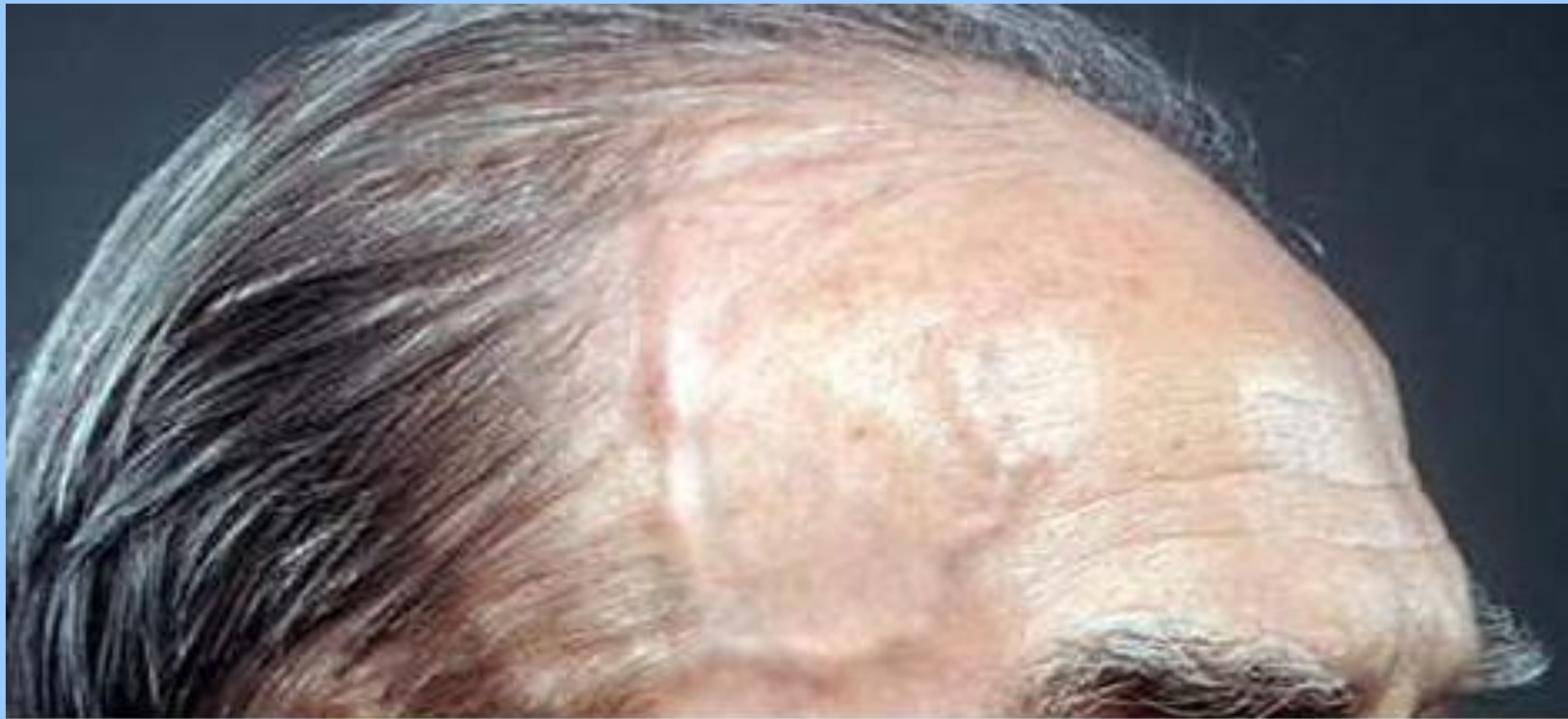
- Important distinction to make (Pupil Reactions)
- Can be difficult to elicit for transient visual loss
- Ask patient how they can tell it is just one eye
- Binocular clues
  - visible even with both eyes closed
  - patient is unable to read
  - vision loss off to one side
  - scintillating scotoma, etc.
- If unsure, evaluate it as monocular

Urgent medical evaluation of retinal artery ischemia

- Blood tests (CBC, chemistry, HgA1C, PT, PTT, and lipid panel, with ESR and CRP for patients over age 50)
- EKG, with consideration of prolonged cardiac monitoring
- MRI with DWI (diffusion weighted imaging) within 24 hours to look for evidence of cerebral ischemia
- Imaging of blood vessels (carotid Doppler, MRA or CTA)
- Echocardiography if no cause for emboli found with the above testing
- Consider hospitalizing patient if they present within 72 hours of the event and have positive cerebral ischemia, carotid artery stenosis, abnormal cardiac evaluation, or recurrent TIAs.

Giant Cell Arteritis (GCA)

- Over 50
- Temporal artery (palpation, chewing, combing hair)
- ESR along with TA biopsy
- High dose (60mg) Prednisone daily
  - Balance pros/cons
- Taper based on results of biopsy, ESR improvements, visual symptoms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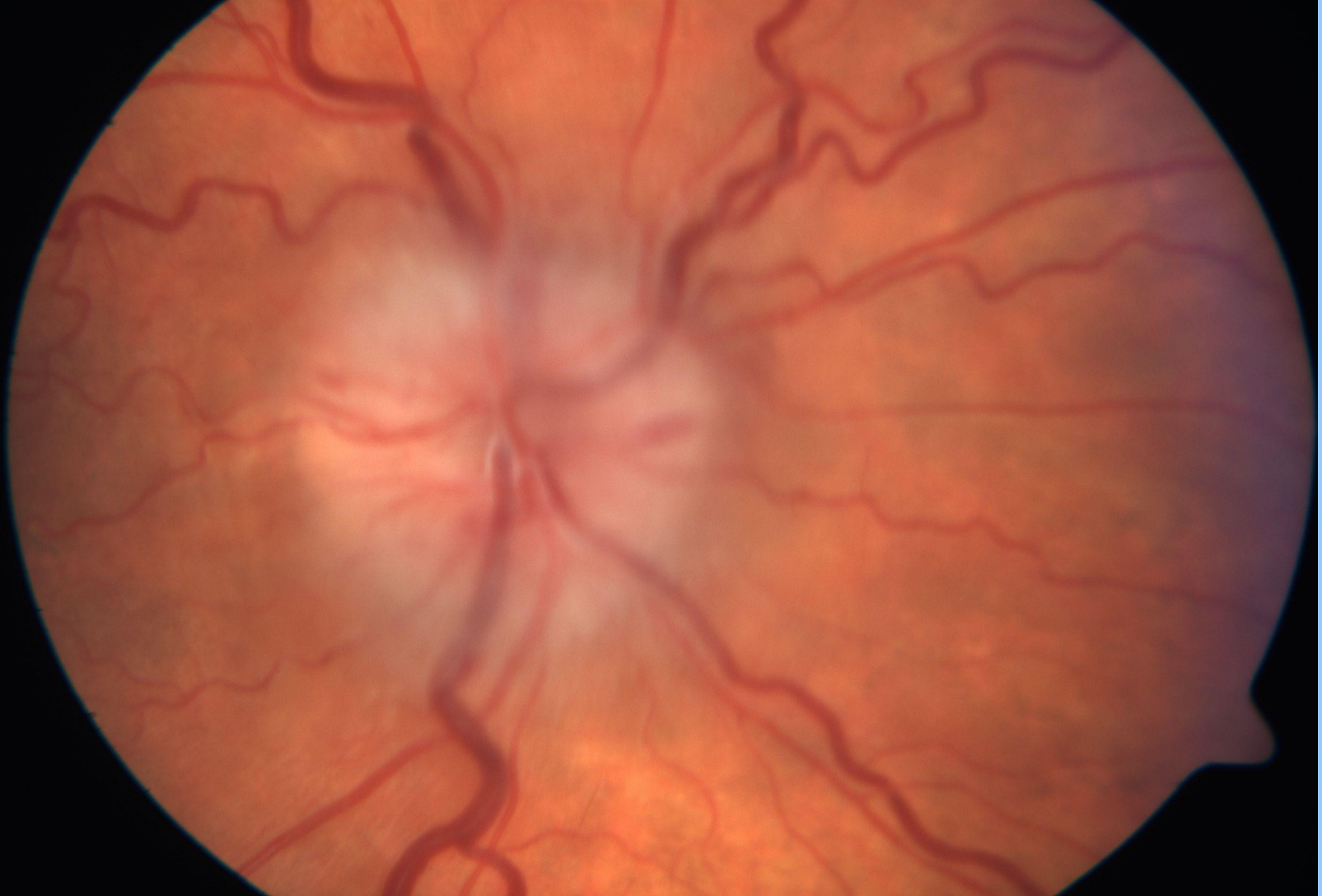
GCA

- Anterior Ischemic Optic Neuropathy (AION)
- Can start in one eye and shortly after affect both!
- SEE PICTURE (possible on O-scope???)



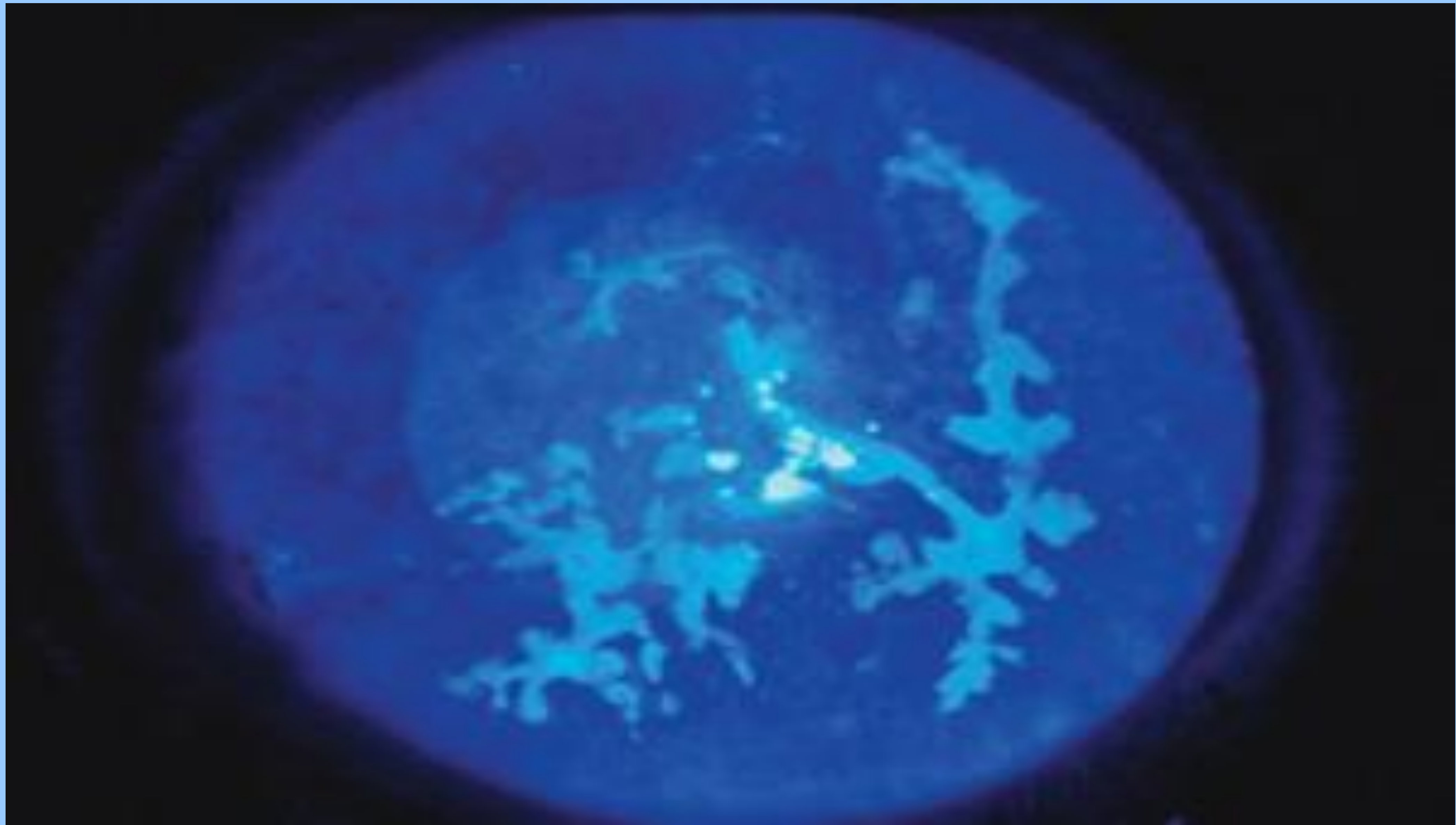
Herpes Zoster Ophthalmicus

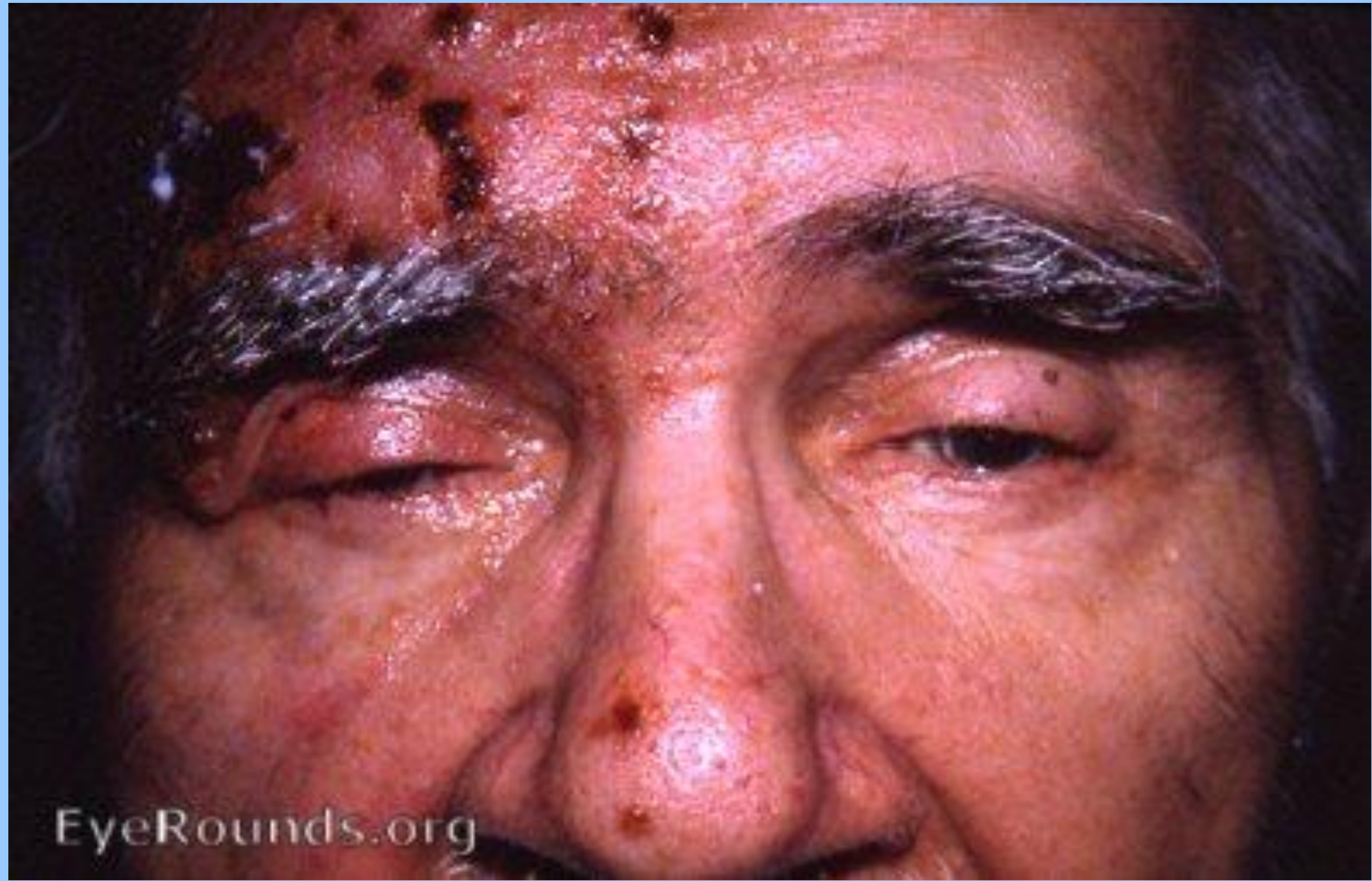
- Shingles around eyes/eyelids

- Assess for Hutchinson's Sign (side of Nose)

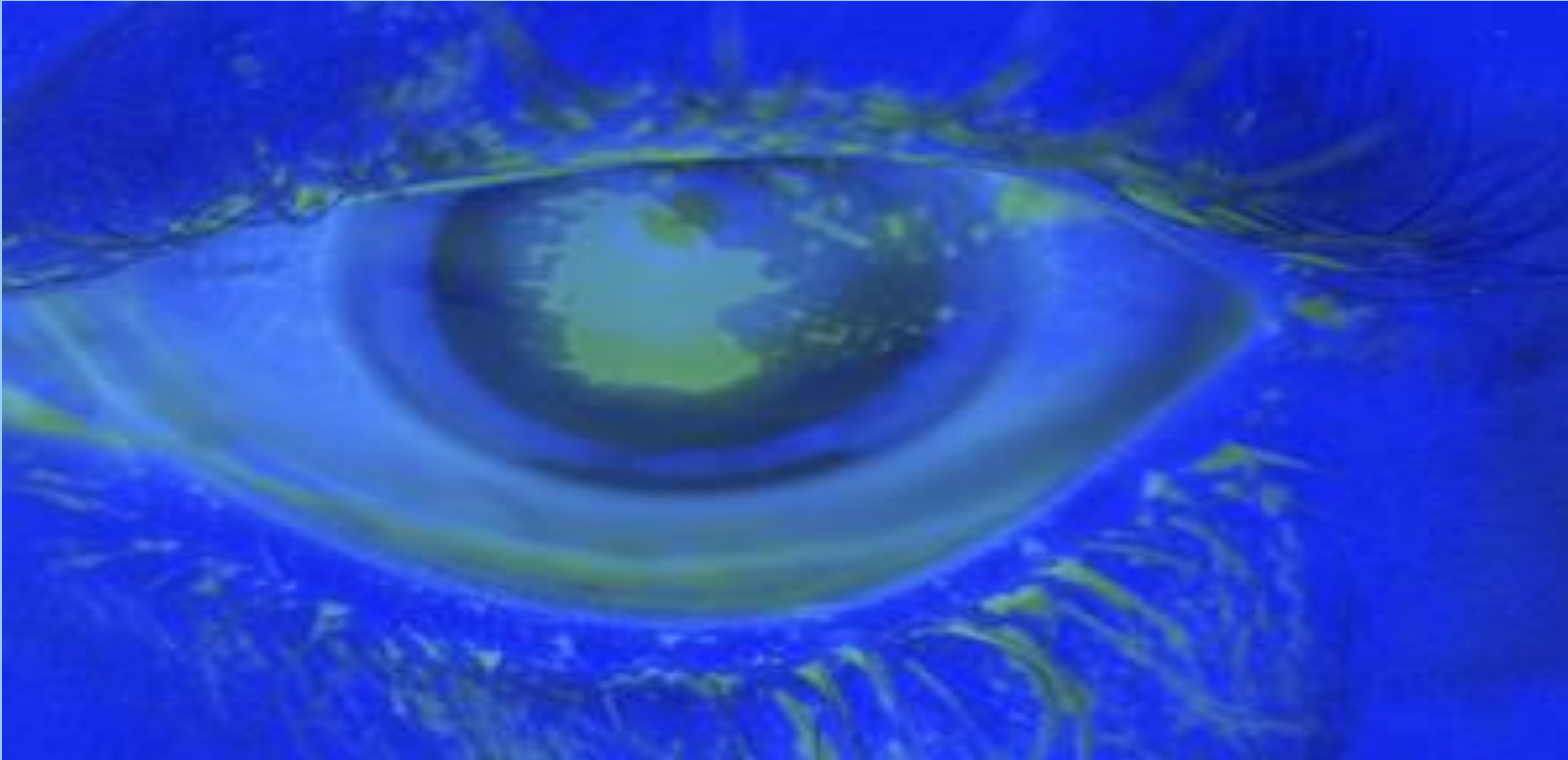
- Start on Acyclovir/Valtrex

- Corneal involvement/Intraocular inflammation
  - Although rare, corneal involvement can lead to scarring




EyeRounds.org

Corneal Abrasions/Injuries



Corneal Abrasions/Injuries

- Adults & Children Age 3+
  - Ofloxacin 0.3% dosed q2hrs (great coverage + availability)

- Children Under 3
  - Polytrim Drops or Erythromycin Ung

Subconjunctival Hemorrhage

- “Bruise” of the Conjunctiva
- Painless (slightly scratchy)
- Vision unaffected
- “My spouse told me my eye looked terrible”
- Only time will heal
- Check BP
- Check meds for aspirin, any blood thinners
- Causes: Cough, Vomiting, Heavy lifting

Relate Systemic Disease and the Eyes

- Diabetes- Diabetic Retinopathy
- Hypertension- Hypertensive Retinopathy and Glaucoma
- Autoimmune Disease- Dry Eyes
- Red “Pink” Eyes

- Understanding the Eye Doctors reports and our roles to support your care and preferred treatment.

Diabetic Retinopathy

- Most common correspondence with Eye Doctor

- What’s in reports? We know you need them, we will support your referral

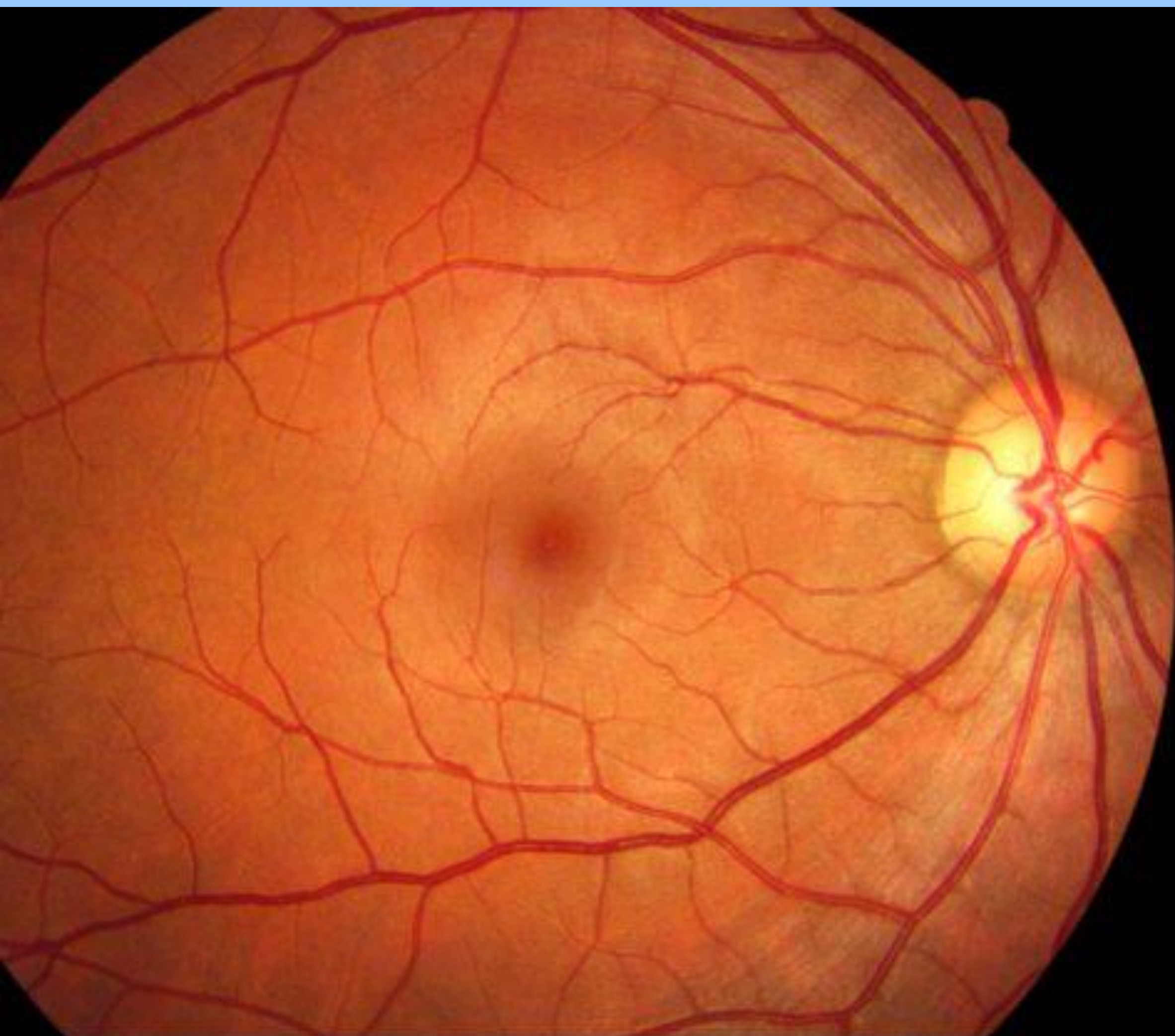
- Best approach for your patients is for them to work hand in hand with you on A1C and consistent BS monitoring/control

Diabetic Retinopathy

- End Retinal Capillaries become leaky

- Retinal Photography and OCT imaging for patient care and education

- Slow hypoxic damage to retina (organ) know there is slow hypoxic damage happening to kidney and heart.

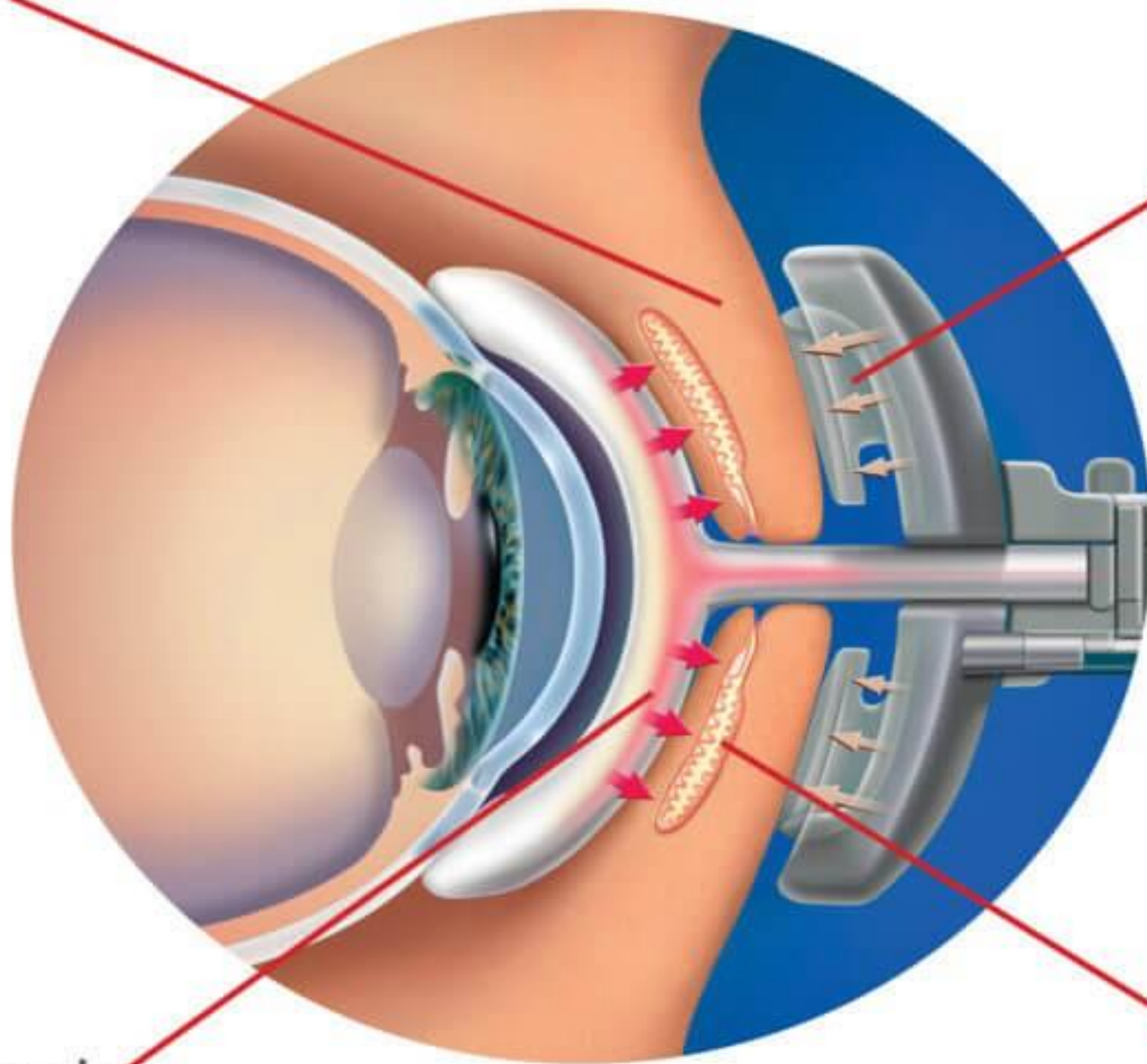


Diabetic Retina

Dry Eye Syndrome

- Most common ocular condition
- Autoimmune Disorders
  - Sjogrens, RA, Lupus, MS, Graves
- Derm Issues
  - Rosacea, Seborrheic Dermatitis
    - May see Doxycycline/Minocycline on med list
- More treatment options than ever!
  - Holistic approach- LipiFlow

LipiFlow

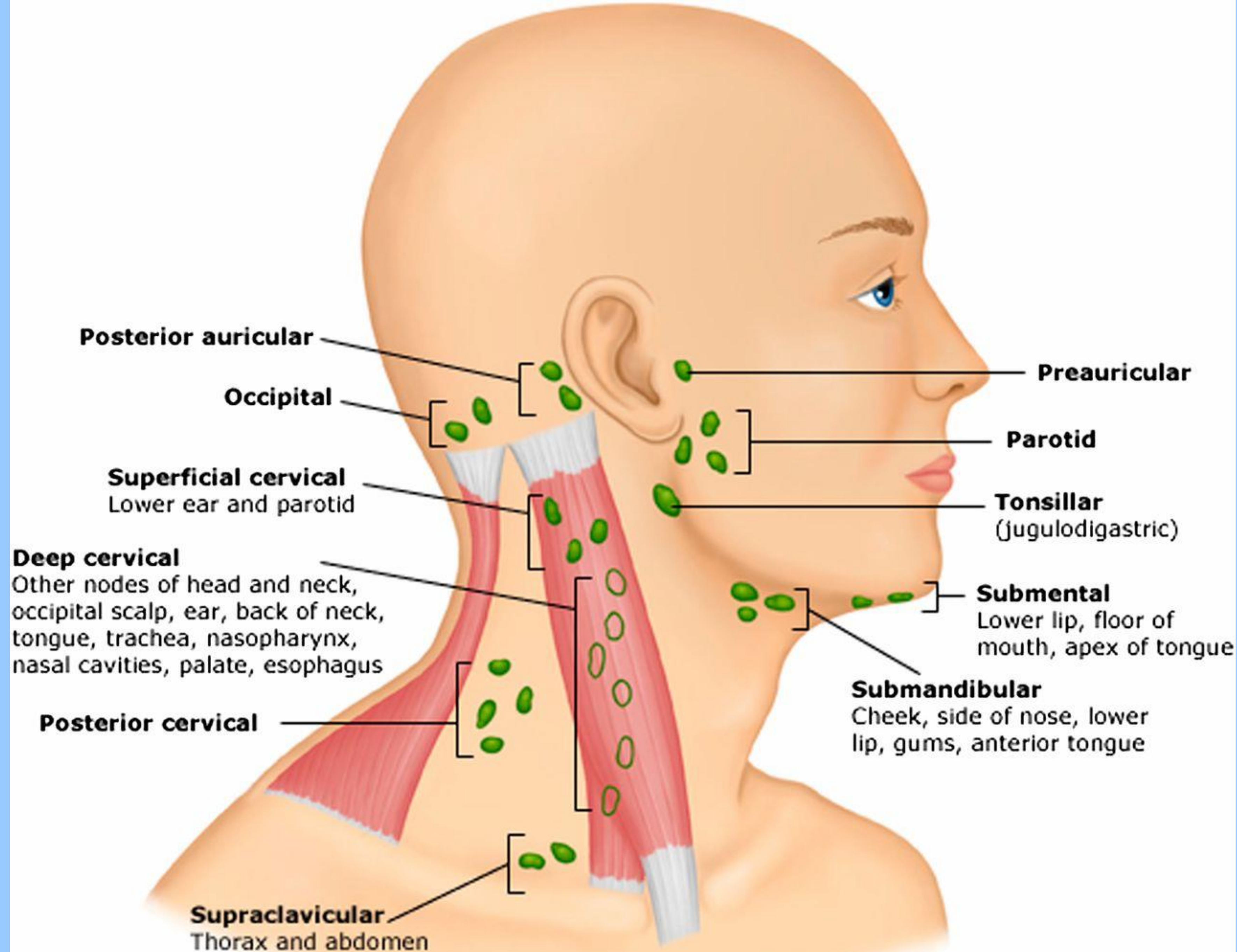

Eyelid
Pressure
Removes blockage from eyelid glands
Heat
Liquifies contants in eyelid glands
Eyelid gland
(Meibomian gland)

“Pink” Eye

- Dry Eye (Chronic) vs. Conjunctivitis (Acute)

- Viral (Adults more common)
  - Associated with URI, Flu, Common Cold
  - Palpate Pre-Auricular Nodes (good sign of viral)
  - No quick fix but treat symptoms + good hand washing

- Bacterial (Children more common)
  - Pustulent, Eyelids matted shut



Posterior auricular
Occipital
Superficial cervical
Lower ear and parotid
Deep cervical
Other nodes of head and neck, occipital scalp, ear, back of neck, tongue, trachea, nasopharynx, nasal cavities, palate, esophagus
Posterior cervical
Supraclavicular
Thorax and abdomen
Preauricular
Parotid
Tonsillar
(jugulodigastric)
Submental
Lower lip, floor of mouth, apex of tongue
Submandibular
Cheek, side of nose, lower lip, gums, anterior tongue

Glaucoma

- Consider HTN management
  - Eye doctor may request different dosing times on HTN meds
- Role of Sleep Apnea risk (Hypoxic)
- Beta-Blocker therapy
  - Look for Shortness of Breath
  - Atypical/Too low pulse

Compiling Diagnosis

- Med Lists
- Severity and Acuteness
- Referrals will foster goodwill
    - Work with/fax referring doctors to support great patient care

Mystery Case

- 44 year old female
- Extreme, Intermittent Double vision
- Recent headaches
- Non-specific, Mild, Dry Cough
- Referred by Urgent Care with vitals

Mystery Case

- On ocular exam
  - 20/20 Vision without glasses
  - No double vision in office
  - Optic nerve and Retina look perfectly healthy
  - Visual Field testing perfect

???????????????

Mystery Case

- Discussed need for close follow-up and recommended scheduling an upcoming appointment with PCP (faxed exam)
- If worst HA of your life or any other neurological signs, go to ED/Stroke Center or call ambulance immediately
- Patient calls me next day.......

Mystery Case

- Worst HA of life and went to local major ED
- Multiple CTs and MRI
- Team of neurologists/doctors visiting and reviewing scans

Mystery Case

- Diagnosis- Von Hippel- Lindau Syndrome
  - Phakomatosis with hemangioblastomas
    - Can occur in retina but NOT in this patient
  - Multiple lesions seen on MRI and affecting convergence centers in the brain.

Thank You!

- Questions on cases or anything seen in your office to discuss?

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