

Vascular Disorders and Vision

Kelsey Moody Mileski, OD, FAAO

1. All of the following are branches of the internal carotid artery except:
 - a. Anterior cerebral artery
 - b. Ophthalmic artery
 - c. Middle cerebral artery
 - d. Posterior communicating artery*

2. The occipital lobe is supplied by what major artery?
 - a. Anterior cerebral artery
 - b. Middle cerebral artery
 - c. Posterior cerebral artery*
 - d. Inferior cerebellar artery

3. Which blood vessel connects the anterior and posterior circulatory systems of the brain?
 - a. Anterior cerebral artery
 - b. Posterior communicating artery*
 - c. Posterior cerebral artery
 - d. Posterior inferior cerebellar artery

4. What is the most common type of stroke?
 - a. Ischemic*
 - b. Hemorrhagic
 - c. Cryptogenic
 - d. Idiopathic

5. What is the most common cause of hemorrhagic stroke?
 - a. Hypertension*
 - b. Aneurysm
 - c. AVM
 - d. Carotid artery disease

6. Which of the following is **not** included in the acronym BEFAST:
- Eyes
 - Tingling*
 - Facial drooping
 - Balance
7. What percentage of patients have a stroke after a TIA?
- 5%
 - 15%*
 - 50%
 - 100%
8. A 76 year old male presents to the ER for evaluation of visual loss, weakness in his right arm and leg and change to his speech. On neuro-imaging he has ischemic changes in the right occipital lobe, left parietal and temporal lobes and right frontal lobe. Where is the likely source?
- Heart*
 - Carotid arteries
 - Basilar artery
 - Vertebral arteries
9. What is the name of the condition that affects the lateral medulla and can cause a Horner's syndrome, nystagmus, INO and a skew deviation?
- Foster Kennedy syndrome
 - Tolosa-Hunt syndrome
 - Wallenberg syndrome*
 - Weber syndrome
10. All of the following are symptoms of occipital lobe stroke **except**:
- Macular-sparing visual field loss
 - Visual hallucinations
 - Prosopagnosia
 - Diplopia*
11. What is the most common cause of artery occlusions?
- Carotid artery disease*

- b. Atrial fibrillation
- c. Autoimmune disorders
- d. Hypertension

12. Ocular ischemic syndrome involves which portion of the eye?

- a. Anterior segment
- b. Posterior segment
- c. Orbit
- d. All of the above*

13. What is the ocular finding in patients with carotid dissection?

- a. Cranial nerve III palsy
- b. Dorsal midbrain syndrome
- c. Horner's syndrome*
- d. NA-AION

14. An 81-year old female presents with sudden vision loss OS. Her systemic health is notable for elevated cholesterol. On examination, her vision is 20/25 OD and bare LP OS. She has a large left RAPD. IOP is normal at 12 mmHg in both eyes. Dilated examination is normal OD and only notable for pseudophakia. On dilated examination OS, she has pallid disc edema with surrounding CWS. She also has a cherry red spot concerning for both an ischemic optic neuropathy and CRAO. What condition are you concerned for?

- a. Hemorrhagic stroke
- b. Giant cell arteritis*
- c. Syphilis
- d. Multiple sclerosis

15. A 48 year old female presents with sudden vision loss OS. Her systemic health is notable for obesity and borderline diabetes. She started semaglutide 2 months prior and has noticed an improvement in her blood sugar control and energy. On examination her vision is 20/20 OD and 20/40 OS. She has a dense inferior altitudinal defect OS. On dilated examination, her right optic nerve is normal but she has optic disc edema with petechial hemorrhages OS. What condition are you concerned for?

- a. NA-AION*
- b. AION
- c. Optic neuritis
- d. Papilledema

16. A 78- year old male presents with transient visual loss OD for 4 hours yesterday. His vision has returned to normal but he is noticing some flashes temporally OD since the event. His vision is 20/20 OD and OS and there is no RAPD. 24-2 HVF is performed and is normal. His dilated examination is unremarkable. What is the most appropriate next step in caring for this patient?
- Follow-up with repeat dilated examination in 1 month
 - Send to ER for urgent stroke work-up*
 - Outpatient MRI of the brain and orbits W/W/O contrast
 - Outpatient carotid ultrasound
17. A 67 year old male presents with sudden vision loss OD temporally of 2 day duration. His vision is 20/20 OD and OS and there is no RAPD. A 24-2 HVF is performed and demonstrates a right homonymous hemianopic defect, sparing the macula OD and OS. His dilated examination is normal. Where does the issue localize and what is the appropriate next step?
- Right occipital lobe- send to ER for stroke work-up
 - Right occipital lobe- outpatient MRI
 - Left occipital lobe- send to ER for stroke work-up*
 - Left occipital lobe- outpatient MRI
18. All of the following are true regarding the posterior communicating artery except:
- Impacts extraocular motility fibers first*
 - Can cause a hemorrhagic stroke
 - Most common site of aneurysms
 - Travels medially to cranial nerve III
19. Visual neglect is often seen in what type of stroke?
- Right sided*
 - Left sided
 - Frontal
 - Temporal
20. Which of the following are signs of brainstem stroke?
- Nystagmus
 - INO
 - Skew deviation
 - Horner's syndrome
 - All of the above*