

Glaucoma: Going Beyond IOP Quiz

1. The contemporary definition of glaucoma includes all of the following except _____.
 - a. Intraocular pressure (IOP)
 - b. Excavation of the optic disc (cupping)
 - c. Retinal ganglion cell death
 - d. Visual field defects

2. The number 1 risk factor for the development of glaucoma is _____.
 - a. Being of sub-Saharan African descent
 - b. Increasing age
 - c. Female gender
 - d. Increased IOP

3. Regarding gender, which carries a higher risk for the development of glaucoma?
 - a. Male gender
 - b. Female gender
 - c. The gender risk is equal
 - d. It is not possible to tell based on current science

4. By 2040, the global prevalence of glaucoma is expected to be just over _____.
 - a. 30 million
 - b. 50 million
 - c. 70 million
 - d. 110 million

5. Among the most common reasons for blindness from glaucoma are all of the following except _____.
 - a. No diagnosis made
 - b. Early disease state at initial presentation
 - c. Ineffective treatment
 - d. Non-compliance

6. With respect to normal-tension glaucoma and non-IOP risk factors, MRI studies have shown up to _____ of patients have micro-infarcts in their cerebra.
 - a. 20%
 - b. 50%
 - c. 80%
 - d. This has not yet been studied

7. According to the Collaborative Normal-tension Glaucoma Treatment Study (CNTGTS), _____ of the study population experienced glaucoma progression despite a 30% IOP reduction.
- 20%
 - 5%
 - 75%
 - 80%
8. The recently published LiGHT Study showed that selective laser trabeculoplasty (SLT) is _____ as topical IOP lowering medications.
- Not as effective
 - As effective
 - 2 times as effective
 - 4 times as effective
9. With respect to IOP lowering in glaucoma, which of the following statements is currently true?
- Vitamin B3 (nicotinamide) therapy should come before IOP lowering in some cases.
 - Vitamin B9 (folic acid) therapy should come before IOP lowering in some cases.
 - Nothing to date has proven that it should come before IOP lowering.
 - Neuroprotection by oral supplementation has been shown to be more effective than IOP lowering therapy for normal-tension glaucoma.
10. Which of the following is true with respect to the relationship of episcleral venous pressure (EVP) to IOP?
- As EVP decreases, IOP decreases
 - As EVP decreases, IOP increases
 - There is no relationship between EVP and IOP
 - As EVP increases, IOP decreases
11. EVP acts as a(n) _____ to IOP.
- Pressure barrier
 - Facilitator of outflow
 - Facilitator of production
 - EVP has no relationship with IOP
12. OCT angiography (OCT-A) studies have shown that glaucomatous nerves tend to have _____ with respect to non-glaucomatous optic nerves.
- Engorged vasculature
 - Leaking vasculature
 - Attenuated vasculature
 - No vasculature difference

13. The “contrast” by which OCT-A technology is able to map out the microvasculature of the optic nerve head is _____.
a. The movement of blood vessels during the cardiac cycle
b. Fluorescein
c. Indocyanine green
d. OCT-A is not yet able to map out the vasculature of the optic nerve head
14. OCT-A abnormalities in glaucoma patients will likely play a role in collaboration with primary care doctors to ensure optimal control of _____.
a. Homocysteine levels
b. Leukocyte levels
c. Serum liver enzymes
d. Blood pressure
15. In several studies, oral supplementation with vitamin B3 (nicotinamide) has been shown to potentially protect retinal ganglion cells primarily by _____.
a. Lowering IOP
b. Lowering (episcleral venous pressure (EVP)
c. Improving mitochondrial function
d. Increasing diastolic blood flow velocity
16. Oral supplementation with vitamin B3 (nicotinamide) has been purported through several studies to be helpful in the arena of glaucoma primarily by _____.
a. Improving visual function
b. Increasing retinal nerve fiber layer (RNFL) thickness
c. Lowering IOP
d. Lowering homocysteine levels
17. Homocysteine levels have been shown to be _____ in patients with normotensive glaucoma with respect to patients without glaucoma.
a. Lower
b. Higher
c. Equal
d. It has not yet been determined
18. Regarding glaucoma as a neurological disease, which of the following is true?
a. No cerebral damage has been demonstrated in glaucoma
b. Damage in the lateral geniculate nucleus has been demonstrated in glaucoma
c. There have been no studies investigating cerebral damage in glaucoma
d. Widespread damage to the frontal cortex has been demonstrated in glaucoma

19. Regarding Vitamin B9 (folic acid), which of the following is true?
- a. Oral supplementation should, in some cases, come before lowering IOP
 - b. Oral supplementation is now standard of care with respect to glaucoma treatment
 - c. Oral supplementation counteracts IOP lowering medications
 - d. It has NOT been demonstrated that oral supplementation should come before lowering IOP.
20. Vitamin B9 (folic acid) may be beneficial in normotensive glaucoma by _____.
- a. Improving homocysteine metabolism, thus lowering homocysteine levels
 - b. Lowering nitric oxide levels
 - c. Decreasing blood flow velocity
 - d. Decreasing high density lipoprotein levels