

What You Should Know About Alzheimer's Disease and the Eye

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Alzheimer's disease is the most common cause of dementia in older persons. 6-10% of all Americans over the age of 65 have dementia. In two thirds of these, the cause is Alzheimer's disease. Alzheimer's disease is a pathological diagnosis that can only be made with certainty at autopsy. Pathologic study reveals that patients have neuritic plaques, neurofibrillary tangles, and neuronal cell loss especially in the hippocampus, amygdala, and the locus ceruleus (certain parts of the brain).

Patients with Alzheimer's disease frequently have visual difficulties that are subsumed under the general rubric visual agnosia. Visual agnosia comprises reading difficulty, inability to pick out individual objects in a group, inability to recognize faces, getting lost in a familiar environment, problems with low spatial frequency contrast sensitivity, and visual spatial disorientation.

Certain ancillary tests are valuable in detecting Alzheimer's disease. Patients with Alzheimer's disease have reduced numbers of axons in the optic nerve. This is reflected in optical coherence tomograph scans, which show superior retinal nerve fiber layer thinning. Visual field testing often shows inferior field loss.

The cortical abnormalities of Alzheimer's disease cause many of the visual problems and these are frequently out of proportion to abnormalities detectable on the eye examination. It is common for patients to have severe complaints and yet to have normal eye examination with 20/20 visual acuity on a Snellen chart.

It is helpful to review the patient's general medical history and to elicit difficulties at home as observed by family members and caregivers. Patients are not a little displeased by the prescription of multiple pairs of glasses with no improvement in symptoms. Making a diagnosis of Alzheimer's disease, or factoring a known diagnosis into an ophthalmological picture can help doctor and patient avoid this expensive error.

Final Comments

Alzheimer's disease is common in ophthalmic patient populations over the age of 65. There are clues that can help in integrating a patient's complaints with a relatively normal eye exam to provide an explanation for difficulties and arrive at a prognosis for the patient and caregivers.

After you read this document, if you have further questions, please visit my website at www.retinareference.com. Another excellent resource for medical

literature is Pubmed, on the National Library of Medicine website, accessible at www.pubmed.com.

References

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Updated 7/12/2018