AD plaques in retina

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Objective: To demonstrate AD plaques in retina. It has been suggested that Beta amyloid starts to accumulate in the retina even before it affects the brain. Some studies even showed amyloid depositions in regions close to age related macular degeneration.

Methods: We examined 25 patients with a family history of AD and mild cognitive defects. In the patients in whom we found hyper or hypo fluorescent lesions on FAF, OCT was performed through these regions to reveal depositions in the ganglion and nerve fibre layers. None of the patients had retinal vascular disease due to hypertension or diabetes mellitus; only drusen like spots- dots were noticed in different parts of the retina. Defects on RPE were not taken into consideration so that AMD lesions would be separated from the other accumulations.

Results: In 22 patients, we were able to find abnormal deposits in the ganglion and nerve fiber layers. We believe that these plaque- like lesions are related to neuro- degenerative disease (AD). All the patients had positive brain PET-CT findings.

Conclusion: We stress that all the middle- aged patients who have family history of AD should have thorough medical examinations and retina investigation may be a part of the exam. This is the first study in which AD plaques were shown in the retinas of alive AD patients with FDA approved devices.

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