Tau in the retina

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Introduction: Tau protein plays a crucial role in many neurodegenerative diseases including Alzheimer’s disease (AD). Tau inclusions and amyloid beta (AB) depositions have been described in the post-mortem retina exams of AD patients. Cryo-electron microscopy (Cryo-EM) was recently used to detect the detailed structure of Tau filaments.

Methods & Results: We examined the retinas of PET-proven live AD patients by spectral domain optical scanning tomography (SD-OCT) and fundus auto fluoresce in (FAF). The hyper or hypo-fluorescent lesions in the retina were scanned by OCT and images that completely corresponded with the histopathological and Cryo-EM shapes of tau filaments were observed.

Conclusion: Retinal tau is a very promising target to detect early changes in AD and retinal imaging may be an exciting and trustable technique to predict and monitor the disease.

Biography
Umur Kayabasi is a Graduate of Istanbul Medical Faculty. After working as a Resident in Ophthalmology, he completed his Clinical Fellowship Program of Neuro-Ophthalmology and Electrophysiology at Michigan State University in 1995. After working as a Consultant Neuro-Ophthalmologist in Istanbul, he worked at Wills Eye Hospital for three months as an Observer. He has been working at World Eye Hospital since 2000. He has chapters in different Neuro-Ophthalmology books, arranged international symposiums and attended TV programs to advertise the Neuro-Ophthalmology subspecialty. He has also given lectures at local and international meetings, published many papers in Neuro-Ophthalmology. He became an Assistant Professor at Uskudar University, Istanbul in 2016.

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