Abstract:

Purpose: To use high-resolution, multimodal imaging techniques to characterize the natural course of Multiple Evanescence White Dot Syndrome (MEWDS).

Methods: Retrospective analysis of one patient diagnosed with MEWDS. Wide-field fundus photography, fluorescein angiography (FA), fundus autofluorescence (FAF), and spectral domain optical coherence tomography (SD-OCT) were used to qualitatively describe features and evolution of retinochoroidal findings in MEWDS.

Results: A 37 year old man presented with a several day history of “shimmering lights.” There was no history of a preceding viral illness and his past medical history was unremarkable. Fundoscopy revealed mild, macular retinal pigment epithelial (RPE) changes as well as subtle, outer retinal multifocal white dots in the right eye. The left eye was normal. Wide-field FA revealed late hyperfluorescence in a wreath-like pattern. FAF highlighted multifocal areas of increased autofluorescence, which corresponded with the RPE and outer retinal changes on clinical exam. SD-OCT revealed a disruption of the inner segment-outer segment (IS-OS) photoreceptor junction. One month later, the patient noted a reduction in his symptoms. Serial FAF and SD-OCT imaging showed near resolution of the hyperfluorescent lesions and IS-OS junction abnormalities, respectively.

Conclusions: FAF and SD-OCT highlight the dynamic evolution of abnormalities in RPE autofluorescence and retinal structure in the initial and convalescent phases of MEWDS. These non-invasive imaging modalities complement the standard imaging techniques of fundus photography and fluorescein angiography by emphasizing what may otherwise be the subtle clinical findings that accompany this disorder. Moreover, the non-invasive FAF and SD-OCT modalities may be used to document the course of this disorder, whether by observation or by future, investigational pharmacologic strategies.