A 28-Year-Old Myopic Female with Blurred Vision in the Left Eye

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Introduction:

A 28-year-old myopic female presented with blurred vision in the right eye starting four days prior to presentation. She describes seeing stars in her right eye which have persisted since the onset of her visual changes. Upon additional questioning she does not endorse any pain nor significant photophobia. She is otherwise healthy and denies any preceding viral like symptoms.

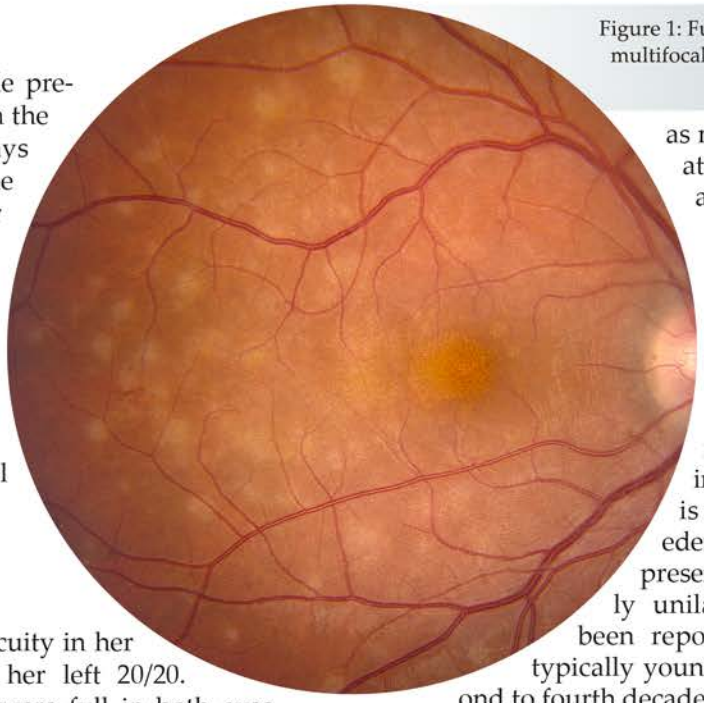

Figure 1: Fundus photo of the right eye with multifocal white spots in the posterior pole with macular granularity.

Exam:

On exam, corrected visual acuity in her right eye is 20/40 and in her left 20/20. Confrontation visual fields were full in both eyes. Anterior chamber examination was unremarkable. Fundus examination of the right eye revealed foveal granularity with a normal left eye exam (Figure 1). Fluorescein angiography revealed multiple focal areas of wreath like hyper fluorescence scattered throughout the posterior pole (Figure 2). OCT was remarkable for outer retinal disruption without edema (Figure 3).

Discussion:

Based on the clinical presentation and exam findings, suspicion was high for multiple evanescent white dot syndrome, or MEWDS. First described by Jampol et al. in 1984, MEWDS is an acute, inflammatory disorder manifesting as multifocal, small, white spots at the level of the deep retina and/or the level of the retinal pigment epithelium[1,2]. These lesions are 100-200 microns and may be missed on clinical exam. Lesions appear in the posterior pole and extend into the mid peripheral fundus. Granular pigmentary changes in the fovea in the correct clinical context is pathognomonic, and disc edema and vitreous cells may be present as well[1]. Although typically unilateral, bilateral cases have been reported. Affected patients are typically young myopic women in the second to fourth decade of life. Visual symptoms can be varied and range from blurred vision and photophobia to an enlarged blind spot or visual field loss. An antecedent viral illness can be identified in about one third of cases. The etiology is unknown, however it has been hypothesized to be an immune mediated process, and may be more likely in genetically predisposed individuals. During the acute phase of the disease, older spots may fade and newer spots may develop.

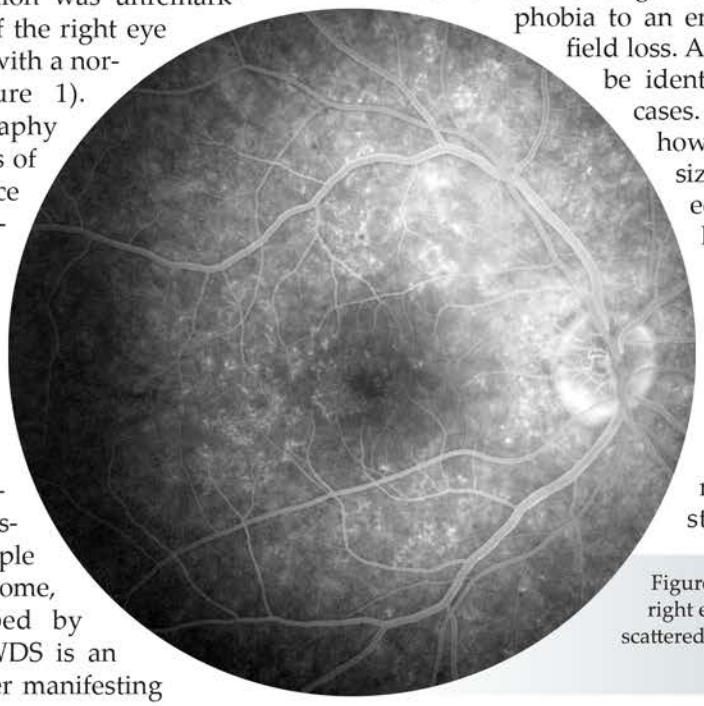

Figure 2: Fluorescein angiogram of the right eye with hyperfluorescent lesions scattered throughout the posterior pole in a wreath- like configuration.

During the acute stage, fluorescein angiography demonstrates punctate hyper-

fluorescence with minimal late staining classically described as a wreath like configuration. Indocyanine green angiography shows hypofluorescence in the late phase with a greater number of lesions than are apparent clinically. Optical coherence tomography (OCT) in MEWDS was first described in 2007 by Nguyen et al. and was notable for subtle disruptions on the inner/outer segment junction[3,4]. Fundus autofluorescence of active lesions are hyperautofluorescent, and more lesions may be seen on imaging than are present clinically[5]. These lesions correlate with the hypofluorescent lesions seen on ICG. Visual field testing reveals varying results with generalized depression, paracentral or peripheral scotomas, or enlargement of the blind spot.

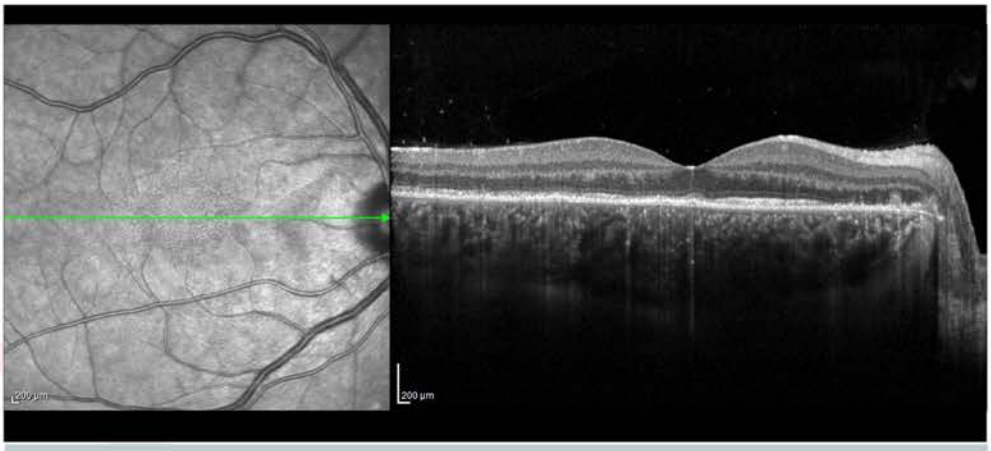

Figure 3: OCT of the right eye with outer retinal disruption.

The prognosis for MEWDS is good with full visual recovery in 2-10 weeks without treatment, however some residual photophobia and enlargement of the blind spot may persist for longer. Recurrence is uncommon and has a similarly good prognosis. There has been reports of MEWDS associated with multifocal choroiditis and panuveitis, acute zonal outer retinopathy and acute macular neuroretinopathy suggesting a common genetic susceptibility with other white dot syndromes.

Rarely, MEWDS has been associated with choroidal neovascularization[6]. The neovascular process is believed to be driven by ischemia at the level of the RPE or outer retina. As compared to several of the other white dot syndromes, the incidence with MEWDS os less given that the relative ischemia and the disease process are limited in both the extent and duration. When CNV does develop treatment with anti-VEGF is the standard of care.

Conclusion:

Our patient returned approximately one week later with a slight subjective improvement in her vision although she remains at 20/40 when measured with Snellen acuity. Her lesions are fading and she was instructed to follow up in another two weeks.

References:

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