A young myopic female with blurred vision

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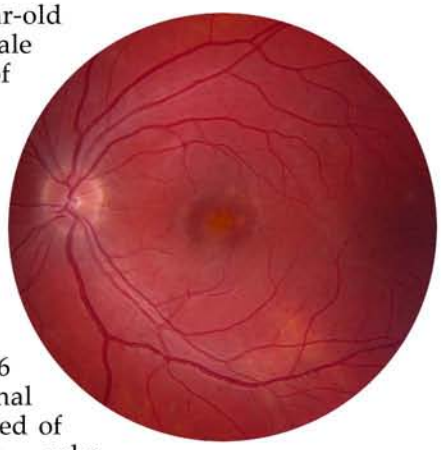
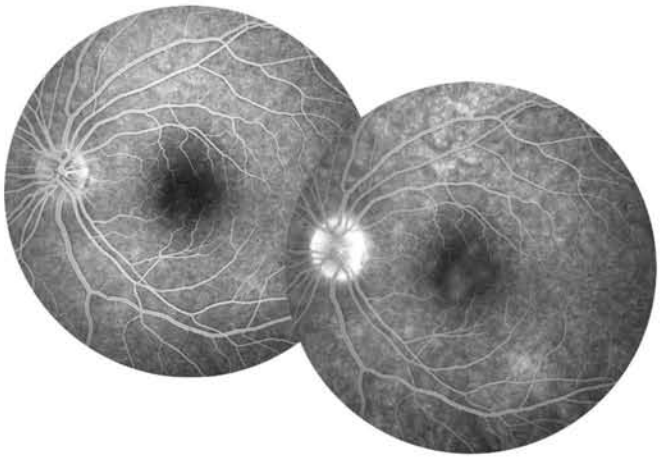
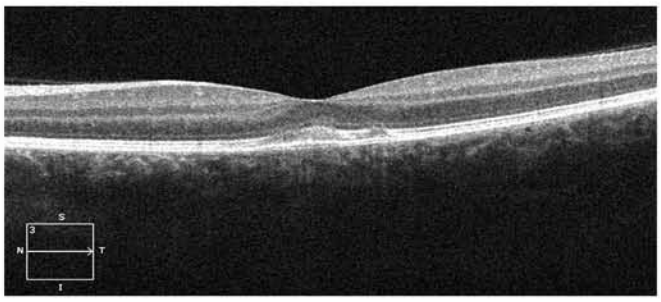
A nineteen-year-old Caucasian female complained of having blurry vision, distortion, and her "focus off" for two days. Her visual acuity was 20/20 OD and 20/40 OS; her intraocular pressure was 16 OU. Additional symptoms consisted of recent stomach ache, headache and increased malaise. Slit lamp examination was within normal limits and anterior chamber was deep and quiet OU.



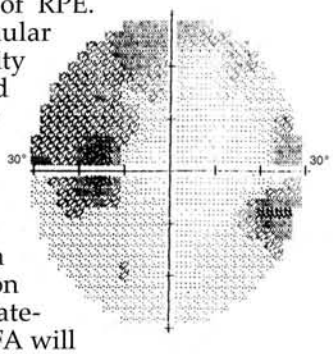


Possible diagnosis included punctate inner choroidopathy acute macular neuroretinopathy, masqueraders (such as syphilis), multifocal choroiditis, acute posterior multifocal placoid pigment epitheliopathy (APMPPE), and multiple evanescent white dot syndrome (MEWDS).



Clinical evidence supported the diagnosis of MEWDS. MEWDS is an idiopathic inflammatory condition of the outer retina. It affects 80% of the cases unilaterally, and produces flu-like prodrome in 50% of patients.[1] It generally occurs in young, otherwise healthy, myopic females (5:1).

With this condition, photopsias, enlarged blind spot, or paracentral scotomas may be present. Multiple discrete yellow or white spots (100-200 microns) appear in the perifoveal region at level of RPE. The fovea has a granular appearance. The possibility exists of disc edema and mild relative afferent pupillary defect.



The fluorescein angiogram often shows punctate hyperfluorescent lesions in a wreath-like configuration around the fovea with late-staining. Often times, the FA will show leakage of the optic nerve.

On indocyanine green testing (ICG), multiple hypofluorescent spots concentrated around the optic nerve can be seen.[2]

If an OCT is performed, the test may reveal disruption of the IS/OS junction of the photoreceptors.[3]

Electroretinogram could display a diminished a-wave suggesting decreased photoreceptor function. Foveal densitometry may indicate abnormalities in cone outer segments sensitivity. Additionally, EOG may be moderately affected. The ERG and EOG findings help confirm disease localization of inflammation to the outer retina/RPE.[4]

With MEWDS, the prognosis is generally excellent. Visual recovery usually results in between 2-10 weeks without treatment. The symptoms spontaneously resolve along with the clincal indicators. Observation is the preferred treatment to ensure that no other conditions develop. In some rare instances, CNVM has been reported.

Some variations along the same spectrum of the MEWDS disease are acute idiopathic blind spot enlargement (AIBSE), acute zonal occult outer retinopathy (AZOOR), and acute macular neuroretinopathy (AMN).

Take Home Points

- Multiple evanescent white dot syndrome (MEWDS) is an idiopathic inflammation of the outer retina and choroid.
- MEWDS usually is found in young, otherwise healthy myopic females.
- It is unilateral in 80% of cases, and usually presents with acute photopsias, scotomas, and blurred vision.
- Typical findings on ancillary testing include wreath-like hyperfluorescence on FA, hypofluorescent spots around the optic nerve on ICG out of proportion to the exam, and disruption of the photoreceptor layers on OCT.
- MEWDS has an excellent prognosis with most patients recovering vision within 2-10 weeks without treatment.

REFERENCES:

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2. Obana A, Kusumi M, Miki T. Indocyanine green angiographic aspects of multiple evanescent white dot syndrome. Retina 1996;16:97–104.

3. Nguyen MH, Witkin AJ, Reichel E, Ko TH, Fujimoto JG, Schuman JS, Duker JS. Microstructural abnormalities in MEWDS demonstrated by ultrahigh resolution optical coherence tomography. Retina 2007;27:414-8.

4. Sieving PA, Fishman GA, Jampol LM, Pugh D. Multiple evanescent white dot syndrome, II: electrophysiology of the photoreceptors during retinal pigment epithelial disease. Arch Ophthalmol. 1984;102:675-679.

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