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MEWDS: CASE REPORT

Benchekroun Reda, Arab Lamiaa, Daghouj Ghizlane, Loubna Elmaaloum, Bouchra Allali, Asmae Elkettani
**Pediatric Ophthalmology department , 20 August Hospital , Casablanca , Morocco*

- **Abstract Purpose:** Case presentation of MEWDS.
- **Study Design**: Retrospective clinical case.
- **Method:** Case report.
- **Results:**

Conclusion:

- **Keywords**

Multiple evanescent white dot syndrome · Fluorescein angiography · Fundus autofluorescence · Indocyanine green angiography · Optical coherence tomography

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I. INTRODUCTION

Multiple Evanescent White Dot Syndrome (MEWDS) is a rare condition characterised by numerous pale whitish dots seen in the posterior pole and the midperiphery. Symptoms may include sudden onset of vision loss, blind spots, decreased color vision, and sensitivity to light. The exact cause of MEWDS is not known, but it is believed to be related to an abnormal immune system response.

II. OBSERVATION

This is a case report of a 20-year-old patient with no particular medical history, apart of having a recent flu syndrome two weeks before, who consulted for myodesopsia and photopsia of the left eye that started a week before.

On examination, the patient had a visual acuity of 10/10 in both eyes. Pupils were equally round and reactive to light and accommodation and extraocular motility was normal.

On slit-lamp examination, anterior segments were normal.

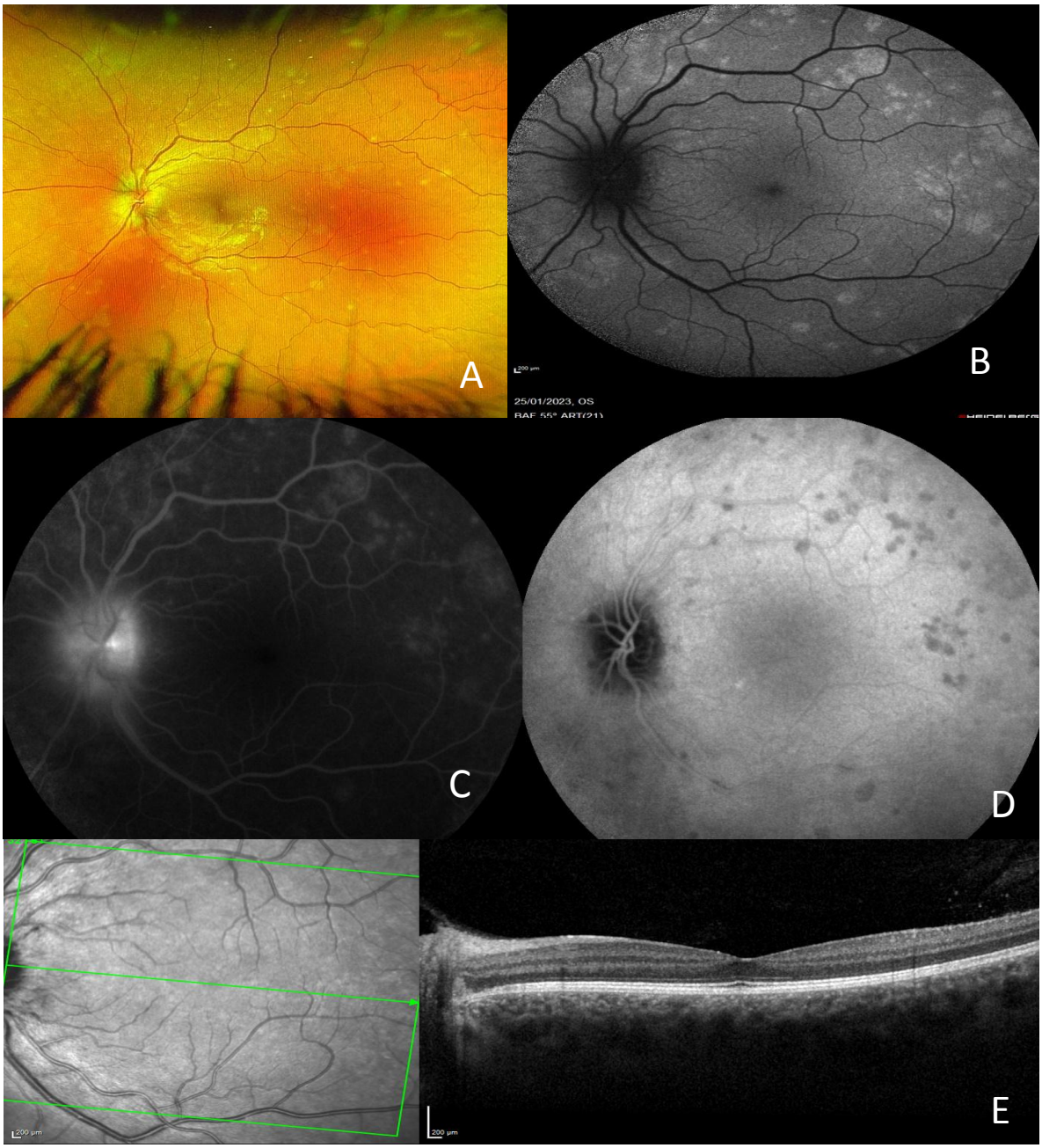
The fundus examination of the right eye was normal, and in the left eye it showed no signs of hyalitis, a papillary hyperaemia, and multifocal small white dots at the deep retinal layers were seen around the posterior pole and optic disc.

Optical coherence tomography : normal macular

On angiography, an appearance of hyper autofluorescent spots on average peripheral hyperfluorescent spots in early and late sequences with papillary hyperfluorescence

Appearance consistent with left eye MEWDS

A uveitis report was requested



III. DISCUSSION :

Multiple Evanescent White Dot Syndrome (MEWDS) is a rare posterior uveitis with an annual incidence of 0.22 per 100,000 (1)

It affects young women between the ages of twenty and forty. Except rare reported bilateral forms, it is a unilateral disease.

The cause of MEWDS is unknown. One possible etiology indicates that some people are more genetically predisposed to an immune-mediated response to a viral-like infection, which can potentially lead to inflammation in the peripapillary circulation. Vaccines may trigger an inflammatory cascade resulting in uveitis by means of molecular mimicry, direct antigen-mediated humoral immune response, or adjuvantmediated inflammation. The human papilloma, meningococcal, hepatitis A, hepatitis B, COVID-19, influenza, and yellow fever vaccines have been associated with a handful of MEWDS cases(2)

The functional signs are common to all white spot syndromes. Patients complain of subjective scotomas and photopsia. The decrease in acuity is very variable, depending on the areas involved and the severity of the process. In some cases, up to 50%, the ocular disease is preceded by a flu-like viral episode. (3)

The typical clinical picture associates evanescent white spots, macular remodeling, and moderate inflammation of the optic nerve. Vitreous inflammation is minimal. The foveolar area, which is not affected by inflammatory stains, takes on an orange granular appearance with loss of the foveolar sheen. (4) There is no intraretinal edema, retinal vasculitis (rare), and anterior segment inflammation (rare).

White spots are discrete and small (50 µm to 100 µm) and are confined to the posterior pole, the perifoveolar and peripapillary area. The spots are neither pigmented nor confluent.

On fluorescein angiography, the spots are hyperfluorescent from the early stages and throughout the sequence. signs appear in the early phases but show themselves more clearly in the mid-to late phases of the angiography. (5)

The damage on indocyanine green angiography is marked and diffuse. The lesions are much more numerous than on fluorescein angiography. They are hypofluorescent, disseminated at the posterior pole and throughout the midperiphery, and are particularly visible by contrast at late times on the indocyanine green sequence. These lesions may coalesce, creating large hypofluorescent areas with a perimacular and peripapillary predilection. A peripapillary hypofluorescent ring can be found especially in case of enlargement of the blind spot. (6)

The stains are not reflected on OCT. However, there are changes in the reflectivity of the outer layers of the retina with a loss of continuity of the photoreceptor line in the symptomatic phase in the macular and foveolar region. (7)

The evolution is an essential criterion. The spots are fleeting, disappearing in less than three weeks. They may give way to discrete alterations of the pigmentary epithelium. There is no chorioretinal atrophy. The granular appearance of the macula, papilledema, indocyanine green angiography, and ERG abnormalities may persist for some time after the spots have resolved. In the typical nonrecurrent form, visual acuity recovers spontaneously within one to two months and the spots disappear without scarring. Patients with enlarged blind spots may take longer to improve, but recovery will again be complete. (5)

No treatment is proposed given the favorable evolution.

IV. CONCLUSION :

Diagnosis of MEWDS can be challenging, as the symptoms are similar to other eye conditions. While MEWDS typically resolves on its own within a few months, some people may experience long-term visual changes. Early detection and treatment by an ophtalmologist can help manage the symptoms and prevent further damage to the retina.

Statement of Ethics

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

Conflict of Interest Statement :

The authors have no disclosures.

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