Multiple Evanescent White Dot Syndrome

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Multiple Evanescent White Dot Syndrome (MEWDS) is a disease of the retina causing shimmering lights, blind spots, and blurred vision. The retina is the nerve tissue lining the back of the eye where incoming light is transduced to a signal that travels to the brain. Figure 1 shows the normal anatomy of the eye. Figure 2 shows the appearance of a normal retina as seen by an examining ophthalmologist.

Figure 1. Anatomy of the Eye

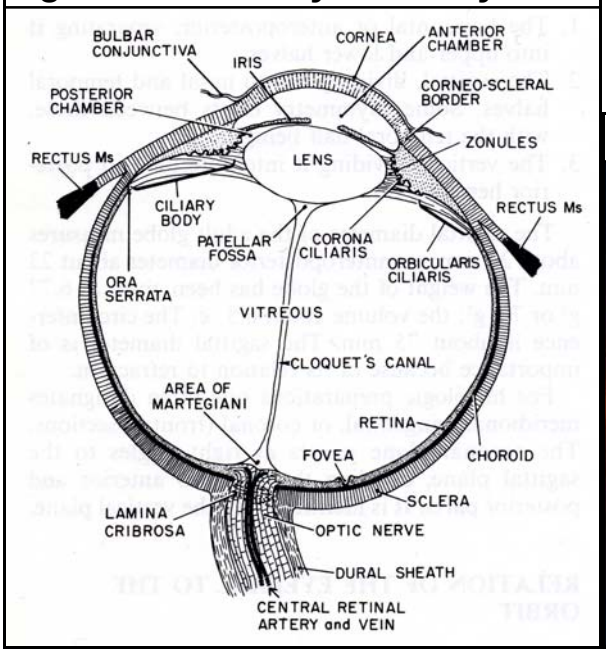
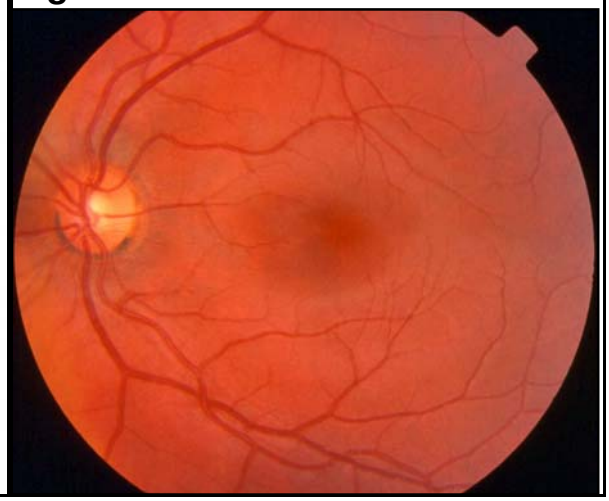


Figure 2. Normal Retina



Who Is Affected By MEWDS?

MEWDS most often affects young females. Females are affected five times as often as males. The typical age range is 14 - 44 years with an average age of 25, although a few cases have been reported of patients in their sixties. All races are affected.

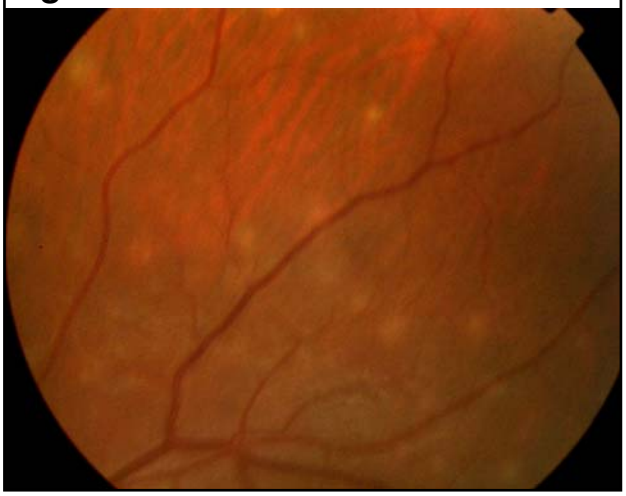
What Causes MEWDS?

The cause of MEWDS is unknown, but it sometimes occurs shortly after a viral illness and has been associated with elevated serum immunoglobulin levels (the antibodies made by the body after infections). These facts lead some experts to think the disease is infectious. However, some cases have arisen after vaccination, leading others to ascribe the disease to an immune reaction of the body in which retinal cells are attacked and damaged.

What Is A Typical Case Like?

Usually, one eye is involved. The patient reports shimmering lights, blurred visual acuity, and some areas of poor vision (blind spots). The retina may show a swollen optic disk, a granular appearance of the macula, and the presence of 100-200 micron diameter white spots in the mid-peripheral zone of the retina and sometimes in the macula (Figure 3). The ophthalmologist may inject one of two dyes in the vein of the arm and record a series of time lapse photographs of the inside of the eye. This test is done in the photography department, and is called an angiogram. Most commonly, fluorescein dye is used, and the optic disk may appear bright white. The retina will show white spots. Less commonly, ICG dye is used, which enhances the appearance of the choroid, a layer of blood vessels beneath the retina. In an ICG angiogram, the spots appear dark, and more spots are seen than can be appreciated on examination alone.

Figure 3. Retina with MEWDS



Work-Up Of Cases With Suspected MEWDS

Usually a visual field, which maps the areas of sight, will be obtained. Often, the normal blind spot will be enlarged. Visual field changes may last longer than the spots in the eye, and sometimes are permanent. Sometimes an electroretinogram (ERG) is obtained, which measures the electrical functioning of the retina in response to light flashes. The so-called A-wave of the ERG is often decreased. Blood tests may be ordered to check for possible masquerading conditions. They are usually all normal.

Treatment And Follow-Up

Most cases of MEWDS spontaneously improve over 8-10 weeks. No treatment is known to shorten the recovery time or improve the final visual outcome. Some cases go on to develop retinal scarring, and rarely, the shimmering lights and blind spots may last for months or years. Occasionally, patients develop secondary growths of blood vessels under the retina. It is probably wise for affected patients to be examined serially over the years to monitor for these uncommon outcomes.

Final Comments

MEWDS has only been recognized for 25 years, and there is some debate as to whether it is a new disease, or was just overlooked in the past. As our experience grows, we expect to arrive at a deeper understanding of its causes, as yet perplexing. After you read this brochure, we encourage you to browse our website.

If you have a focused question for which you cannot find an answer, we welcome you to ask Drs. Browning and Sanders by writing to them at: contact@retinareference.com. Another excellent resource for medical literature is Pubmed, on the National Library of Medicine website, accessible at www.pubmed.com.