What You Should Know About Multifocal Choroiditis and Panuveitis

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Occasionally patients of age 20 – 50 come to the ophthalmologist with complaints of strobing lights, floaters, blurred vision, or combinations of these. Upon examination of the affected eye, the ophthalmologist may discover inflammatory lesions of the outer retina, which the neural lining of the back of the eye. The retina converts focused light into nerve signals, which travel to the brain, via the optic nerve, to produce vision. Sometimes there are associated scars and spillover of inflammatory cells into the vitreous gel, the substance that fills the eye. This constellation of signs and symptoms may lead to the diagnosis of Multifocal Choroiditis and Panuveitis (MCP). In this educational brochure, we discuss aspects of this disease in hopes of informing you and enabling you to have the best possible outcome should you have this condition.

Relevant Anatomy

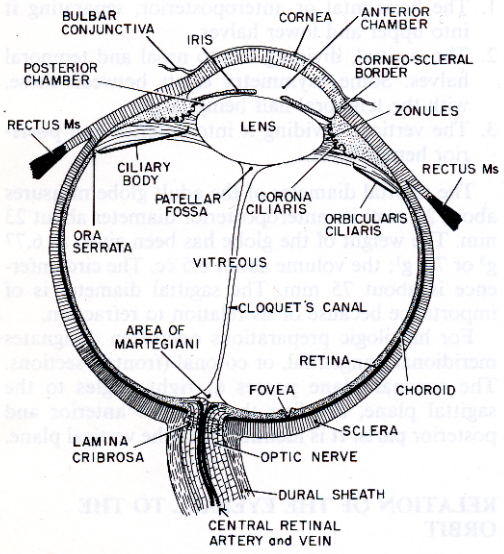

Figure 1. Anatomy of the Eye

Figure 1 shows the structures of the eye. The retina sits on top of the choroid, which is a layer of nourishing blood vessels just inside the tough white wall of the eye, the sclera. The scars and inflammatory lesions of MCP involve the inner choroid and the outer retina. The vitreous fills the inside of the eye, is clear, and may contain clumps of inflammatory cells causing floaters and blurred vision.

Figure 2 shows the normal appearance of the inside of the eye, called the fundus, as the ophthalmologist views it during an examination. Figure 3 shows the contrasting appearance of an eye with MCP. There are pigmented scars scattered around and often surrounding the optic disk. These scars may increase in number over the years. Active inflammatory lesions are often grayish with blurred margins, rather than black in color as shown in figure 3.

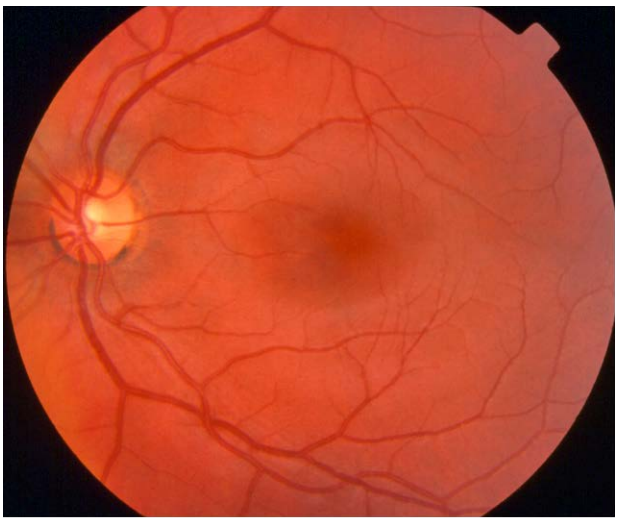

Figure 2. Photo of Normal Eye Interior

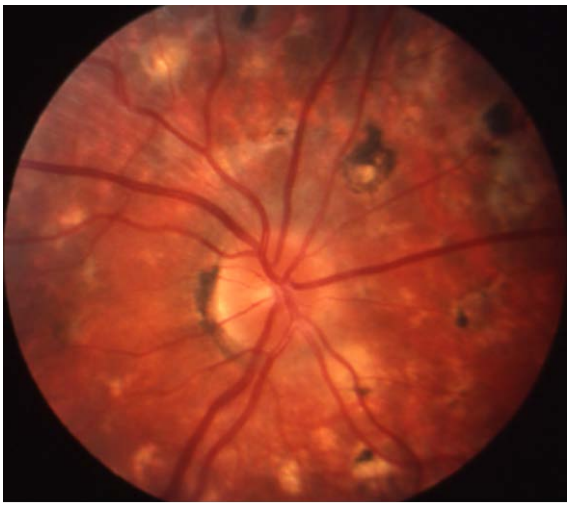

Figure 3. Eye Affected with MCP

Characteristics of Affected Patients

Multifocal choroiditis and panuveitis affects young women predominantly, and usually both eyes are involved.[1] Approximately 10 – 20% of patients with MCP are male. The average age of affected patients is 30 years. Most patients affected with MCP are nearsighted. By definition, patients do not have a systemic disease that leads to such eye findings. For example, sarcoidosis and tuberculosis can cause eye lesions similar to multifocal choroiditis and panuveitis, and these diseases should be ruled out before making the diagnosis of MCP. Other mimicking eye diseases with specific laboratory associations, such as birdshot retinochoroiditis are excluded by blood tests. If a patient is older than 50, the search for a diagnosis other than MCP intensifies, perhaps even including a nondirected conjunctival biopsy looking for the noncaseating granulomas seen in sarcoidosis.

Subretinal Neovascularization

In approximately one-third of patients with MCP, an abnormal blood vessel will grow under the retina in an affected eye. This can lead to bleeding, leakage, and growth of scar tissue, all capable of reducing vision. Patients can screen for this possibility by checking an Amsler grid daily for signs of visual distortion. To do this test, the grid is examined one eye at a time. Should new distortion or gap zones appear, the patient should be examined within a day or two so that the ophthalmologist can check for the growth of abnormal blood vessels. If present, these vessels can be treated with various types of laser or intraocular injections of medications designed to inactivate the vessels.

What Causes Multifocal Choroiditis and Panuveitis?

The cause of MCP has not been discovered, although Ebstein-Barr Virus, allergy to mold, and an autoimmune disease have all been considered and remain under

investigation. Patients may be asked to have certain blood tests drawn to check for diseases masquerading as MCP.

How is Multifocal Choroiditis and Panuveitis Treated?

No universally embraced treatment exists, probably because the cause of the disease is unknown. Systemic and regional steroids are used, as are immunomodulating drugs such as azathioprine, methotrexate, and mycophenolate. Injections of drugs such as bevacizumab (brand name Avastin) into the eye and sometimes photodynamic therapy can be used to treat the abnormal blood vessels that can grow under the retina in this disease. Lifelong follow-up is necessary, as flare ups of inflammation and development of secondary blood vessel growth can occur after diagnosis.

Prognosis

Two-thirds of all eyes with multifocal choroiditis and panuveitis end up with visual acuity of 20/40 or better. No eye affected by the disease goes completely blind, although loss of central vision rarely does occur.

Final Thoughts

After reading this brochure, if you have any questions, you may contact me using the Contact button on the left side of the home page of this website (www.retinareference.com). Another good resource is Pubmed at www.pubmed.com.

Updated 11-12-2016

References

1. Spaide R, Goldberg N, Freund KB. Redefining multifocal choroiditis and panuveitis and punctate inner choroidopathy through multimodal imaging. Retina 2013;33:1315-1324.