Successful Management of Uveitis in a Patient With Unilateral Multifocal Choroiditis

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Multifocal choroiditis is a panuveitis that predominantly affects women between 20 and 60 years of age, with a median of 28 to 33 years of age.[1,2] The disease has an unknown etiology, and it is categorized as a white dot syndrome due to its characteristic fundoscopic appearance. Patients with multifocal choroiditis often report blurred vision, floaters, an enlarged blind spot, and photopsias.[1,2] The following case report describes a patient who presented with clinical findings of unilateral multifocal choroiditis and who, upon correct diagnosis, was treated with RETISERT (fluocinolone acetonide intravitreal implant) 0.59 mg for long-term inflammatory control.

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Case Report: Unilateral Multifocal Choroiditis

BACKGROUND: A 48-year-old woman presented with flashes, floaters, constant haze, and progressive vision loss in her left eye. For nearly 1 year prior to her visit, she reported experiencing light sensitivity, blurred vision, and photophobia in her left eye. The patient was previously diagnosed with noninfectious uveitis and prescribed topical steroid eye drops for many months, which did not improve her vision. In the prior year, she received a combination of sub-Tenon triamcinolone and intravitreal dexamethasone injections every 3 months in an effort to better control the inflammation. The injections briefly improved her symptoms but failed to provide long-term, consistent control. As a consequence, the patient continued to have active uveitis and progressive vision loss with each injection. Patients with uncontrolled ocular inflammation are at a greater risk for ocular complications, so it was imperative to find a therapy that provided consistent long-term control.[3]

AT A GLANCE

- Multifocal choroiditis is a chronic inflammatory condition that requires long-term control.
- An accurate diagnosis is essential to determining an optimal treatment course, and further evaluation may be required for a patient who is not responding to treatment.
- A proactive treatment approach that controls the inflammation is important for preserving vision.

Indication

RETISERT® (fluocinolone acetonide intravitreal implant) 0.59 mg is a corticosteroid indicated for the treatment of chronic noninfectious uveitis affecting the posterior segment of the eye.

Important Safety Information

- Surgical placement of RETISERT® (fluocinolone acetonide intravitreal implant) 0.59 mg is contraindicated in active viral, bacterial, mycobacterial or fungal infections of the eye.

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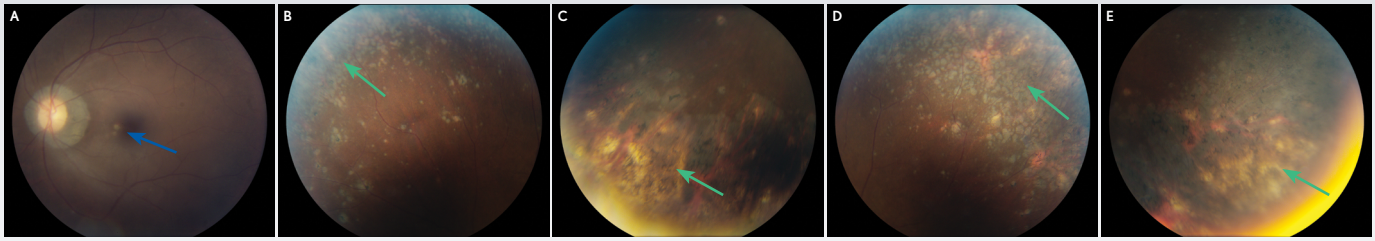

Figure 1. Vitreous haze and chorioretinal atrophy consistent with multifocal choroiditis. Blue arrow indicates yellow-white lesions in the macula (A). Green arrows indicate areas of chorioretinal atrophy in the retinal periphery (B-E).

DIAGNOSIS: The patient had a previous medical history of hypertension, asthma, anemia, as well as cataract surgery with intraocular lens implantation. Fluorescent treponemal antibody absorption, tuberculosis, and Lyme disease tests were all negative, minimizing the possibility of infectious uveitis.[4] Her results also revealed normal levels of serum angiotensin-converting enzyme, minimizing the possibility of sarcoid uveitis.[5] Other clinical measurements included an anterior chamber cell score of 1+, a vitreous haze score of 2+, and BCVA of 20/40 in her left eye. Examination of the fundus revealed media opacity consistent with vitreous haze. Peripapillary atrophy, as well as focal yellow-white lesions in the macula, were also visible surrounding the optic nerve (Figure 1A). Fundus images of the retinal periphery indicated multiple areas of chorioretinal atrophy consistent with multifocal choroiditis (Figure 1B-1E). Fluorescein angiography of her left eye revealed optic disc staining and focal areas of hyperfluorescence within the macula and scattered throughout the posterior pole, suggestive of window defects in the retinal pigment epithelium (RPE) (Figure 2). Further examination with OCT revealed areas of hyperfluorescence indicative of vitreous cells and vitritis (Figure 3). Additionally, areas of atrophy were visible in the macula temporal to the fovea, and the areas of RPE atrophy were consistent with the multifocal choroiditis lesions (Figure 3). All clinical signs were suggestive of noninfectious posterior uveitis or panuveitis, and the patient was ultimately diagnosed with unilateral multifocal choroiditis due to the presence of yellow-white peripheral and posterior chorioretinal lesions, which are typical manifestations of the condition.[1]

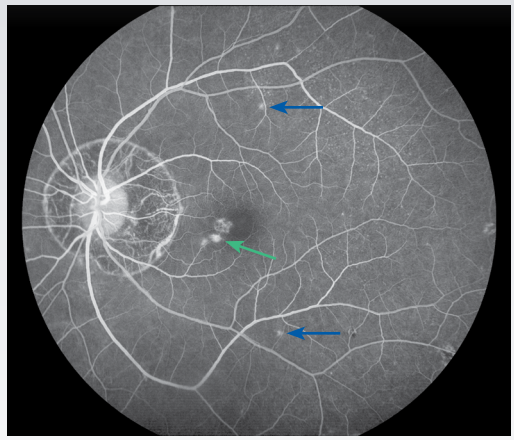

Figure 2. Areas of hyperfluorescence in the macula and posterior pole. The green arrow indicates an area of hyperfluorescence within the macula. Blue arrows indicate areas of hyperfluorescence scattered throughout the posterior pole.

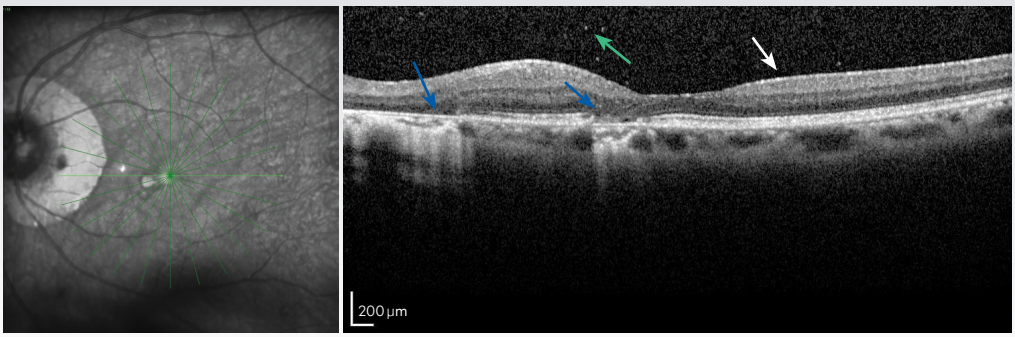

Figure 3. Detection of vitreous cells and areas of macular and RPE atrophy. The OCT cross section shows focal areas of hyperreflectivity in the vitreous (green arrow), macular atrophy temporal to the fovea (white arrow), and focal areas of disruption in the RPE indicative of atrophy (blue arrows).

WHY RETISERT? Multifocal choroiditis is generally a chronic condition.[1] The chorioretinal lesions may result in cystoid macular edema and choroidal neovascularization, which both contribute to vision loss.[1] Considering that the patient's vision was still intact, aggressive treatment was critical to preserve her vision and help prevent future vision loss. The chronic nature of the condition warranted a treatment that offered long-term control. Systemic therapy is often prescribed for patients with bilateral multifocal choroiditis, but it may not be appropriate for patients with single-eye involvement and no other organ systems involved.[1,6,7] Additionally, the patient was not interested in systemic immunosuppression due to concerns about side effects of systemic therapies, regular blood work requirements, and the length of treatment duration. The risk and benefits of RETISERT were reviewed with the patient, and she elected to receive a RETISERT implant in 2014.

FOLLOW-UP: The patient exhibited a temporary decline in vision during the first 4 weeks following implantation but her uveitis did not worsen. In the months following implantation, the patient's posterior uveitis was considered inactive, and she did not require any topical steroid eye drops. Her BCVA was 20/30, her quality of vision improved, and she did not see any floaters. A fundus photograph taken 7 months following implantation revealed that the vitreous haze had resolved (Figure 4). Although the peripapillary atrophy and the chorioretinal lesions in the macula remained, no new lesions had formed since RETISERT implantation. OCT imaging revealed clearance of vitreous cells, as indicated by an absence of focal hyperreflective

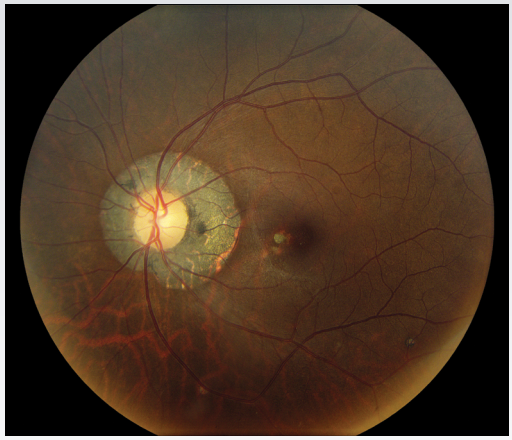

Figure 4. Vitreous haze resolved following RETISERT implantation. Peripapillary atrophy and chorioretinal lesions in the macula remained stable with no new lesions.

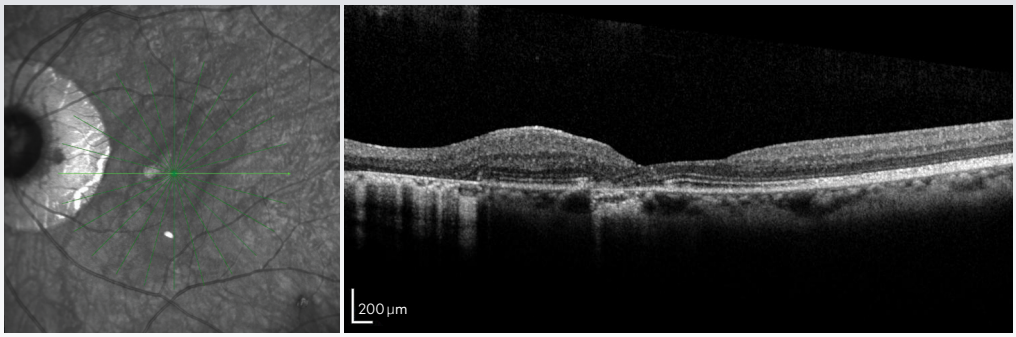

Figure 5. Vitreous cell clearance following RETISERT implantation. No hyperreflective spots consistent with vitreous cells were present. Temporal macular atrophy and areas of RPE atrophy remained stable, and no new lesions were identified.

Important Safety Information (cont'd)

- Based on clinical trials with RETISERT®, during the 3-year post-implantation period, nearly all phakic eyes are expected to develop cataracts and require cataract surgery.
- As with any surgical procedure, there is risk involved. Potential complications accompanying intraocular surgery to place RETISERT® into the vitreous cavity may include, but are not limited to, the following: cataract formation, choroidal detachment, endophthalmitis, hypotony, increased intraocular pressure, exacerbation of intraocular inflammation, retinal detachment, vitreous hemorrhage, vitreous loss, and wound dehiscence.
- Following implantation of RETISERT®, nearly all patients will experience an immediate and temporary decrease in visual acuity in the implanted eye which lasts for approximately one to four weeks post-operatively.

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areas (Figure 5). Although the macular atrophy temporal to the fovea and RPE atrophy remained, no new lesions were observed after RETISERT implantation. Two years following implantation, the patient's IOP had increased to 28 mm Hg. She began a combination therapy of brimonidine 0.2% and timolol 0.5% twice daily, and her IOP returned to the baseline measurement of 15 mm Hg.

REIMPLANTATION: RETISERT was designed to release fluocinolone acetonide locally to the posterior segment of the eye to deliver corticosteroid therapy for approximately 2.5 years where it is needed.[8] The RETISERT implant may need to be replaced following depletion of fluocinolone acetonide.[8] In 2017, the patient elected to receive a second RETISERT implant rather than risk having a flare recur. In the 18 months following the second RETISERT implantation, the patient's ocular inflammation remained controlled, and her vision remained stable with a BCVA of 20/30. Her eye pain and photophobia had also improved. The patient's IOP was maintained at an acceptable level using topical IOP-lowering medications.

Conclusions

Multifocal choroiditis exhibits classical lesions that are typically 50- to 100-µm punched-out chorioretinal scars at the posterior pole.[1] Patients with this condition also present with anterior segment cells, vitritis, and acute yellow-white choroidal lesions of the macula.[1] This disease typically manifests as a bilateral condition.[1] The clinical appearance of this case aligned closely with the classical features of multifocal choroiditis, but it was atypical in that only one eye was involved. An accurate diagnosis was essential to determining that the patient required an aggressive treatment to help preserve her vision as well as provide long-term control of inflammation. In this patient, RETISERT delivered long-term control of inflammation and improved her vision with minimal complications.

Important Safety Information (cont'd)

- Use of corticosteroids may result in elevated IOP and/or glaucoma. Based on clinical trials with RETISERT®, within 3 years post-implantation, approximately 77% of patients will require IOP lowering medications to control intraocular pressure and 37% of patients will require filtering procedures to control intraocular pressure.
- Patients should be advised to have ophthalmologic follow-up examinations of both eyes at appropriate intervals following implantation of RETISERT®. Physicians should periodically monitor the integrity of the implant by visual inspection.
- Ocular administration of corticosteroids has been associated with delayed wound healing and perforation of the globe where there is thinning of the sclera.
- The most frequently reported ocular adverse events in clinical trials with RETISERT® occurring in 50-90% of patients included: cataract, increased intraocular pressure, procedural complications and eye pain. The most common non-ocular event reported was headache (33%).

Please see additional Important Safety Information throughout and full Prescribing Information for RETISERT® here.

References: 1. Crawford CM, Igboeli O. A review of the inflammatory chorioretinopathies: the white dot syndromes. *ISRN Inflamm*. 2013;2013:783190. doi: 10.1155/2013/783190. **2.** American Academy of Ophthalmology. Multifocal choroiditis and panuveitis. https://www.aao.org/focalpointssnippetdetail.aspx?id=343dae27-6e6b-45f8-8eca-f5c72077fb1e. Accessed January 3, 2019. **3.** Dick AD, Tundia N, Sorg R, et al. Risk of ocular complications in patients with noninfectious intermediate uveitis, posterior uveitis, or panuveitis. *Ophthalmology*. 2016;123(3):655-662. **4.** Lin P. Infectious uveitis. *Curr Ophthalmol Rep*. 2015;3(3):170-183. **5.** American Academy of Ophthalmology. Sarcoid uveitis. http://eyewiki.aao.org/Sarcoid_Uveitis. Published May 1, 2018. Accessed January 3, 2019. **6.** American Academy of Ophthalmology. Medical therapy. https://www.aao.org/focalpointssnippetdetail.aspx?id=15edac1d-9cf5-4b78-a3d4-df2b1c04e4ce. Accessed January 7, 2019. **7.** McCluskey PJ, Towler HM, Lightman S. Management of chronic uveitis. *BMJ*. 2000;320(7234):555-558. **8.** RETISERT [prescribing information]. Bausch & Lomb Incorporated.

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