LONG-TERM INFLAMMATION CONTROL BENEFITS ALL TYPES OF UVEITIS

Preventing flare-ups is essential in the pandemic era.

BY ROBERT C. WANG, MD

Uveitis is a multifaceted disease that strikes in different ways, but the goal of treatment is always the same: to achieve quiescence with the fewest possible side effects. Whether a patient presents with iritis, panuveitis, or uveitis with systemic disease association, the retina specialist's objective is to eradicate vision-threatening inflammation and quell potential flares. To that end, we have an increasingly sophisticated arsenal of tools from which to choose.

By the time patients with noninfectious uveitis reach my clinic, they have typically been treated unsuccessfully with oral steroids and are then candidates for systemic immunosuppressives or intraocular corticosteroids. Options at this point include the bioerodible 0.7 mg dexamethasone intravitreal implant (Ozurdex, Allergan); the surgically placed 0.59 mg fluocinolone acetonide intravitreal implant (Retisert, Bausch + Lomb); and the injectable 0.18 mg fluocinolone acetonide intravitreal implant (Yutiq, EyePoint Pharmaceuticals).

When appropriate, I am partial to the newest option, the 0.18 mg fluocinolone acetonide intravitreal implant, because it is a low-dose implant that lasts up to 3 years. I've treated many patients with it who have then experienced long-term quiescence and few side effects. The 0.59 mg fluocinolone acetonide intravitreal implant is also an excellent option, but it requires surgical placement and delivers a higher dose of steroid.

As the following case studies illustrate, a thorough evaluation of the patient's clinical presentation and medical history guide the development of a well-suited uveitis treatment regimen, and frequent monitoring makes it possible to change course when necessary.

CASE 1: ANTERIOR UVEITIS

Presentation

A 9-year-old White child was brought to the clinic for evaluation and treatment. The patient had a history of psoriatic arthritis and decreased vision in her right eye. She presented with rebound iritis and worsening vision. The most common causes of vision loss in pediatric patients with anterior uveitis are cataract, band keratopathy, glaucoma, and cystoid macular edema (CME).

On presentation, the patient's VA was 20/40 OD and 20/20 OS, and OCT documented CME in the right eye. The patient had been treated on and off with systemic methotrexate and had been using topical prednisolone acetate in the right eye for the 2 months before presentation (Figure 1).

Treatment Course

I started the patient on topical 0.05% difluprednate ophthalmic emulsion (Durezol, Alcon) as a bridge to initiation of systemic adalimumab (Humira, AbbVie). With the topical treatment, the CME improved greatly, although the patient developed a mild steroid-induced IOP response, with elevation to 27 mm Hg.

I replaced the difluprednate with 0.5% loteprednol etabonate ophthalmic suspension (Lotemax, Bausch + Lomb) and gradually tapered the loteprednol to one drop daily. Adalimumab was started 2 weeks after the loteprednol taper, resulting in resolution of most of the CME. The patient's IOP returned to normal (11 mm Hg) and visual acuity stabilized at 20/25 (Figure 2).

AT A GLANCE

- The goal of uveitis treatment is to achieve quiescence with the fewest possible side effects.
- A number of implantable posterior segment steroid options exist for local control of inflammation.
- Ongoing coverage is a chief advantage of an implantable corticosteroid.

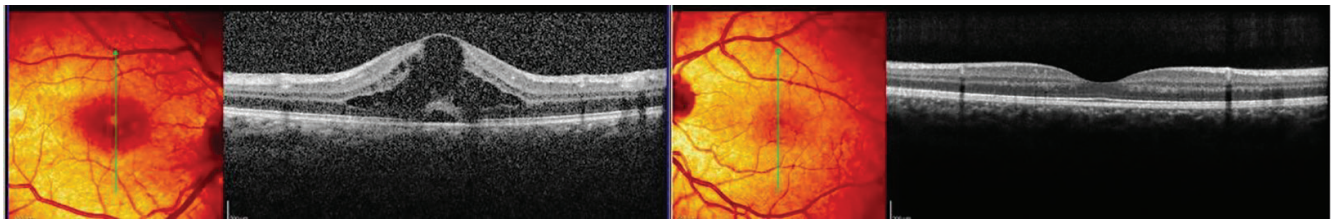

Figure 1. The Case 1 patient's OCT shows CME secondary to chronic iritis in the right eye (left panels), normal left eye.

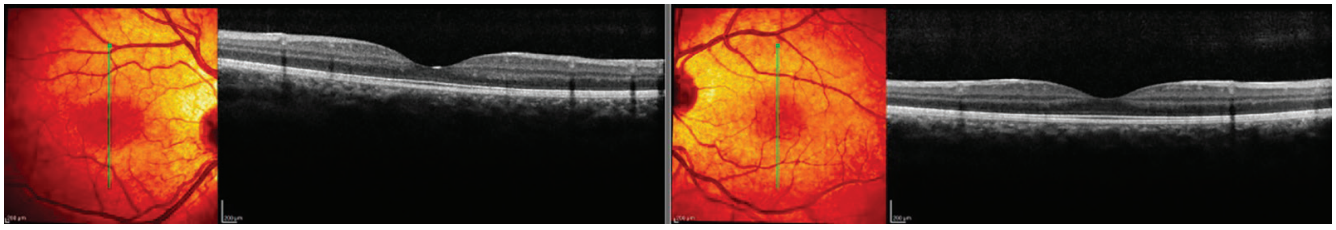

Figure 2. The Case 1 patient's OCT demonstrates resolution of CME in the right eye.

Current Status

Ten months after initiation of adalimumab, the patient's visual acuity remains 20/25 OD and 20/20 OS with normal IOP and no recurrence of inflammation or CME.

CASE 2: PANUVEITIS

Presentation

A 72-year-old White woman presented with panuveitis secondary to birdshot chorioretinopathy positive for histocompatibility leukocyte antigen (HLA)-A29. Birdshot chorioretinopathy is a rare form of chronic bilateral posterior uveitis. Despite its distinctive clinical phenotype and association with HLA-A29, delays in diagnosis and treatment are common, sometimes resulting in significant visual loss.[1]

Treatment Course

Because birdshot chorioretinopathy is thought to have an autoimmune etiology, therapy aims to regulate the body's immune response. I started the patient on oral prednisone and 50 mg of the antimetabolite azathioprine (Imuran, GlaxoSmithKline) three times daily. I began a taper of the oral steroids, and the patient achieved quiescence, but 4 months later she developed a recurrence of inflammation.

At that time, I initiated a pulse of oral steroids, which calmed the inflammation, and I prescribed 150 mg of azathioprine and 5 mg of prednisone daily for maintenance therapy. However, she again developed a flare 3 months later. We attempted to enroll her in a clinical trial of adalimumab, but the study had reached its closeout date. I consulted with rheumatology, intending to initiate systemic biologic therapy. With no other systemic diagnosis, however, the patient's insurance carrier would not approve any therapy.

I increased the dose of azathioprine to 200 mg daily, but the patient still demonstrated inflammation on exam. Next, I switched her to a daily regimen of 3,000 mg of mycophenolate mofetil (CellCept, Genentech) and initiated another steroid pulse. Despite the switch, the inflammation flared once again.

At that point, it was clear to me that the patient's disease would continue to flare without a move to local therapy. I placed a 0.7 mg dexamethasone intravitreal implant in the vitreous, after which the inflammation improved rapidly. This implant is expected to last up to 6 months, but I often find that its efficacy wanes by about month 3, and pharmacokinetic data supports that observation.[2]

I discussed with the patient the possibility of implanting the 0.59 mg fluocinolone acetonide intravitreal implant, but the patient was concerned about a higher incidence of glaucoma with this treatment in patients with birdshot chorioretinopathy.[3] In addition, the anticipated out-of-pocket cost was beyond her means. Instead, she elected to repeat the dexamethasone implant every 3 months for nine more treatments.

The 0.18 mg fluocinolone acetonide intravitreal implant subsequently became available. The patient was amenable to trying it when I explained that it would be implanted in an outpatient procedure under topical anesthesia, that it would last for 3 years, and that the reimbursement would be favorable.

Current Status

I placed the 0.18 mg fluocinolone acetonide intravitreal implant bilaterally in December 2019. Since then, her eyes have remained quiet with no other therapy needed.

CASE 3: UVEITIS WITH SYSTEMIC ASSOCIATION

Presentation

A 74-year-old White man presented with bilateral nyctalopia and vision loss. The patient had a history of autoimmune neuropathy predominantly affecting his right leg and, to a lesser degree, his left leg and both hands. He also had hearing loss, with cochlear implants bilaterally, and he was being treated with azathioprine for Sjögren syndrome. On examination, he had 20/20 VA OU and normal retina findings but very constricted visual fields bilaterally.

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Treatment Course

Blood testing for antiretinal and optic nerve antibodies was performed, demonstrating reactivity to retinal and optic nerve antigens. Systemic evaluation revealed no neoplasms, and intravenous immunoglobulin (IVIG) therapy was initiated for presumed autoimmune retinopathy.

Three months later, his peripheral visual field loss was resolved and, incidentally, hearing loss improved. The patient was treated with IVIG infusions every 3 months for 5 years. Two years after cessation of therapy, the patient again developed worsening of his peripheral field.

Current Status

IVIG infusions were resumed, and the patient's visual field loss resolved. Continued monthly IVIG therapy has been maintained to keep his vision stable.

FORGING AHEAD

We have more uveitis treatment options in our armamentarium than ever before, yet there are about 30,000 new cases of blindness each year in the United States resulting from uveitis that is undiagnosed or inadequately treated.[4] It is critical to diagnose and treat uveitis before irreversible damage occurs. It is equally important to ensure that treatment for chronic noninfectious uveitis is ongoing because a lapse in therapy can cause a flare, resulting in damage and vision loss.

Ongoing coverage is a chief advantage of an implantable corticosteroid. With a long-lasting implant, patients aren't required to keep up with a complicated regimen of topical steroids, and they can feel confident that the implant will control inflammation and limit the risk of vision-threatening flares. Furthermore, implantable corticosteroids don't require the expertise of a retina surgeon nor the input of a rheumatologist. Any trained ophthalmologist can implant one and monitor the patient's IOP. In the event that a cataract subsequently develops, an ophthalmologist can take care of that as well.

The benefits of long-term therapy are especially advantageous during this pandemic. People with severe chronic conditions and those in an immunocompromised state are more likely to experience dangerous symptoms if they become infected with COVID-19. Given this added risk, it is advisable to avoid prescribing medications that will suppress the immune system when alternatives exist. ■

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