RT Retina Today

UVEITIS RESOURCE CENTER
An ongoing series offering different perspectives on diagnosing and managing uveitis.

VIRAL ANTERIOR UVEITIS IN THE REAL WORLD

A clinician's account of how to identify and treat this condition.

BY ANAT GALOR, MD

Uveitis is a leading cause of blindness worldwide. Anatomic classifications of the condition include anterior uveitis (iritis), intermediate uveitis (pars planitis, iridocyclitis, phacogenic uveitis), posterior uveitis (choroiditis, chorioretinitis, retinochoroiditis, retinal vasculitis, neuroretinitis), and panuveitis (inflammation of the uvea). Recurring inflammation is a common problem in patients with uveitis and, if left untreated, uveitis can result in long-term vision-threatening complications.[1]

Retina specialists who treat uveitis have a growing number of treatment options from which to choose and must recognize the importance of selecting treatment regimens that are most efficient while minimizing patient burden. In an effort to help make the treatment decision process less daunting, Thomas Albini, MD, moderator of the Uveitis Resource Center, interviewed several clinicians to gain insights into their approaches to managing patients with uveitis. This print series complements videos of the interviews, which can be found on the Uveitis Resource Center (http://retinatoday.com/uveitis-resource-center/).

In this issue, Anat Galor, MD, of the Miami VA Medical Center and Bascom Palmer Eye Institute, addresses Dr. Albini's questions about how she treats viral anterior uveitis in a practice setting. Dr. Galor's comments have been turned into a short article, which appears below.

1. Antcliff RJ, Stanford MR, Chauhan DS, et al. Comparison between optical coherence tomography and fundus fluorescein angiography for the detection of cystoid macular edema in patients with uveitis. *Ophthalmology*. 2000;107(3):593–599.

With increasing frequency, what was previously referred to as idiopathic anterior uveitis has been found to be associated with virus. Anterior uveitis can be caused by herpes simplex virus (HSV) or, less commonly, by varicella-zoster virus (VZV).[1] This article discusses the classification and treatment of both forms.

CLINICAL SIGNS

When assessing the differential diagnosis of anterior uveitis, the clinician should always think both about infectious and inflammatory etiologies. If you are not thinking about it, you are not going to diagnose it, but if you keep a broad differential, you can be alert for clues.

Typically, viral anterior uveitis is unilateral. Symptoms include ocular aching, photophobia, and decreased vision.[1] Clinical signs can include pigmented keratic precipitates, which tend to be inferior, and associated iris issues such as iris atrophy. It is also important to check intraocular pressure (IOP) because, in general, patients with viral anterior uveitis tend to have elevated IOP. While none of these signs is pathognomonic for viral-associated uveitis, they can all serve as important clues that a virus may be underlying the noted inflammation.

DISTINGUISHING CAUSE

HSV or VZV?

Anterior uveitis can be caused by HSV, VZV, and, less commonly, cytomegalovirus (CMV) and Epstein-Barr virus (EBV). Although all viral uveitides have some common characteristics, each also has distinct features. The literature suggests that segmental iris atrophy is more likely to indicate HSV uveitis and that diffuse iris atrophy is more likely to indicate VZV uveitis.[2] I have found, however, that patients can also have a mixed pattern of iris atrophy. Concomitant corneal involvement can be seen with all viral uveitides. Common presentations of HSV include dendritic-shaped anterior corneal opacities (*ghost*

dendrites) and interstitial keratitis (neovascularization, lipid deposition, scarring). CMV more commonly presents with coin-shaped lesions in the cornea.

In general, VZV uveitis is not as big a diagnostic dilemma as HSV uveitis. In patients with VZV uveitis, a good history may reveal a previous episode of shingles, remotely or acutely, and skin lesions can often be seen, whether in acute form or as scars. I find HSV uveitis much easier to miss because patients may not recall having a remote history of periocular vesicles.

Polymerase Chain Reaction in the Anterior Chamber

No clinical trials have looked at the utility of polymerase chain reaction (PCR) of anterior chamber fluid for diagnosis of anterior uveitis in all comers. The data we have are based on retrospective studies in patients who already had an anterior chamber tap for clinical purposes.[3-5]

In a retrospective study, my colleagues and I evaluated PCR results in 53 patients who underwent an anterior chamber tap in the setting of anterior uveitis. In our study, there was a low yield of positive PCR results; HSV was found in four of 53 patients, CMV in one of 47, VZV in one of 35, and EBV in one of 18.[6] Overall, seven patients (13%) had a change in management based on PCR results from anterior chamber paracentesis. Four patients encountered paracentesis complications, one with long-term sequelae. As such, our current practice is to treat presumptively in cases of suspected HSV and to reserve anterior chamber tap for those who have persistent inflammation on adequate treatment.

TREATMENT

When I first see patients in whom I suspect a viral etiology, I tell them that this type of inflammation tends to be chronic. Both acyclovir (Zovirax, Valeant) and valacyclovir (Valtrex, GlaxoSmithKline) tend to be well tolerated by patients with HSV and VZV anterior uveitis. In a patient with suspected HSV, I start empiric therapy with 400-mg oral acyclovir five times a day, adding a steroid such as prednisolone acetate ophthalmic suspension 1% (Pred Forte, Allergan). If the patient responds to this initial treatment, I decrease the acyclovir to prophylactic doses (400 mg twice a day) after 14 days and follow clinically. I always try to completely taper off the topical corticosteroids, but as viral-associated uveitis tends to be chronic, in the majority of the cases, inflammation recurs once the patient is off corticosteroids. As such, I restart the patient on topical corticosteroids six to eight times a day and taper to a maintenance dose (one to two times a day), which generally keeps the inflammation quiet.

The Steroid Factor

Both HSV and VZV uveitis are exquisitely sensitive to steroids, and prednisolone four times a day generally resolves the inflammation. However, I tend to start patients with new onset inflammation on topical corticosteroids eight times a day with a slow taper once the inflammation is quiet. In cases of viral anterior uveitis, I have not seen a need to switch to a stronger steroid such as difluprednate ophthalmic emulsion 0.05% (Durezol, Alcon).

Generic vs. Brand Name

Generic oral acyclovir tends to cost less than its branded counterparts, but, as a tradeoff, it has to be dosed more frequently. In terms of efficacy, I have not seen a head-to-head study showing that one was superior to the other in the treatment of HSV uveitis. Valacyclovir, on the other hand, has better bioavailability and is dosed less often.

CONCLUSION

To summarize, viral etiologies must be considered in patients with anterior uveitis. Some clues that suggest a viral etiology include pigmented inferior keratic precipitates, iris atrophy, concomitant corneal disease, and elevated IOP. In general, treatment is presumptive, with PCR reserved for cases that fail to improve with adequate antiviral treatment. ■

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2. Takase H, Kubono R, Terada Y, et al. Comparison of the ocular characteristics of anterior uveitis caused by herpes simplex virus, varicella-zoster virus, and cytomegalovirus. *Jpn J Ophthalmol*. 2014;58(6):473-482.
3. Anwar Z, Galor A, Albini T, et al. The diagnostic utility of anterior chamber paracentesis with polymerase chain reaction in anterior uveitis. *Am J Ophthalmol*. 2013;155(5):781-786.
4. Kongya N, Sirirungsi W, Pathanapitoon K, et al. Viral causes of unexplained anterior uveitis in Thailand. *Eye (Lond)*. 2012;26(4):529-534.
5. Takase H, Kubono R, Terada Y, et al. Comparison of the ocular characteristics of anterior uveitis caused by herpes simplex virus, varicella-zoster virus, and cytomegalovirus. *Jpn J Ophthalmol*. 2014;58(6):473-482.
6. Anwar Z, Galor A, Albini TA, et al. The diagnostic utility of anterior chamber paracentesis with polymerase chain reaction in anterior uveitis. *Am J Ophthalmol*. 2013;155(5):781-786.

WATCH IT NOW

Dr. Galor talks about the management of viral anterior uveitis with Thomas Albini, MD.

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