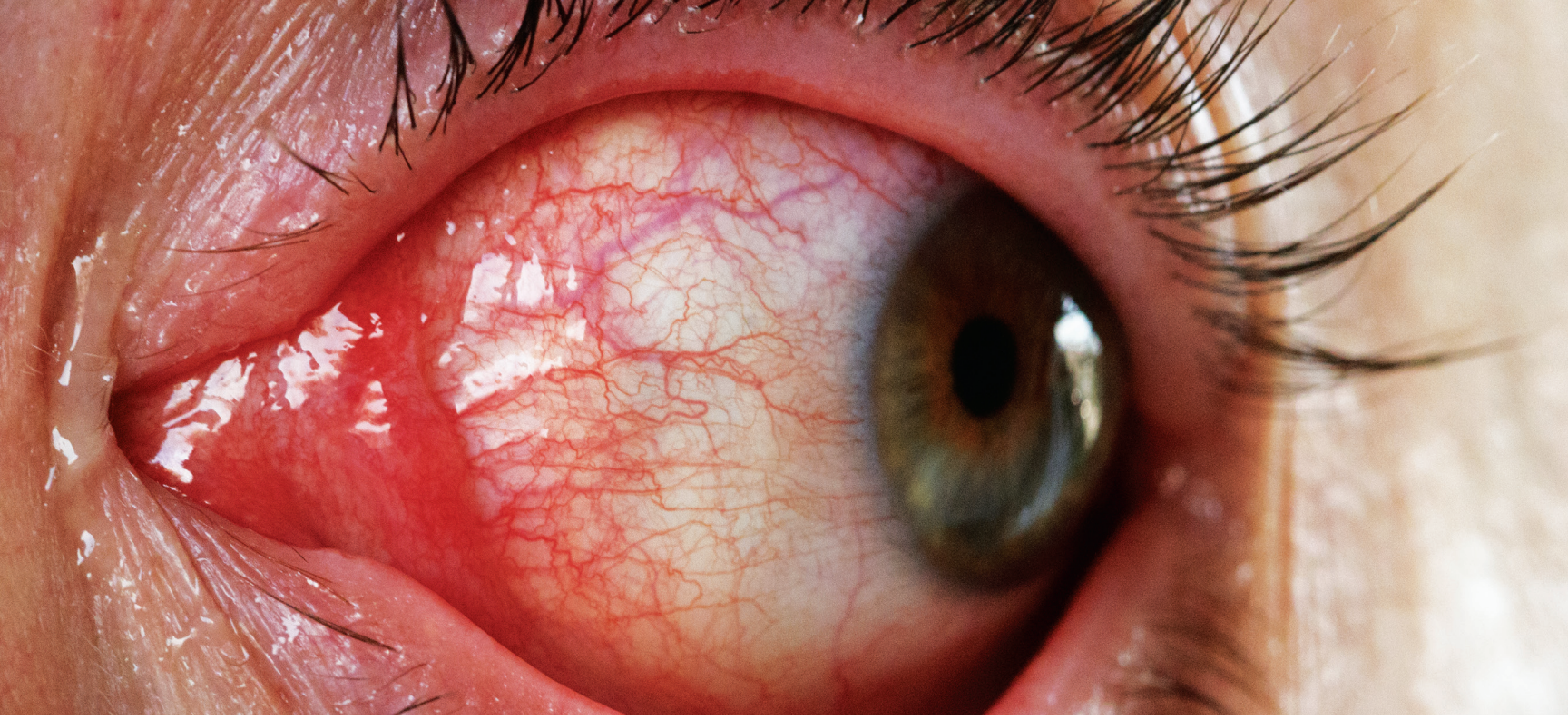

HOW TO HANDLE PINK EYE

A review of the latest options for diagnosis and treatment.

BY JOSH JOHNSTON, OD, FAAO

Conjunctivitis, often referred to as *pink eye*, is among the most common reasons patients schedule an urgent visit with an optometrist. Not only is the condition a nuisance, but it can also cost patients time at work and school. Because viral conjunctivitis is highly infectious, optometrists must be up to date on available diagnostic and treatment options.

BREAKING IT DOWN

Adenoviruses are the most common cause of acute viral infections of the conjunctiva. Unfortunately, adenoviruses resist standard disinfection and can live for weeks on towels, doorknobs, computer keyboards, and other objects and surfaces. Viral conjunctivitis may be divided into four syndromes: epidemic keratoconjunctivitis (EKC), pharyngoconjunctival fever, nonspecific sporadic follicular conjunctivitis, and chronic papillary conjunctivitis. EKC is highly contagious and spreads to the fellow eye in about 3 to 7 days in more than half of cases. EKC is more common in adults, although it can affect all age groups. Pharyngoconjunctival fever tends to be more common in younger populations.

Without early diagnosis and proper treatment, patients can develop corneal infiltrates after 1 week, which will cause photophobia, ocular discomfort, and decreased vision in the affected eye. Further delay in treatment can lead to stromal scarring that permanently decreases visual acuity. If infiltrates develop after you've started treatment, you need to be more aggressive with a stronger steroid or increased dosing frequency.

MAKING A DIAGNOSIS

Palpable ipsilateral preauricular or submandibular lymphadenopathy is common among patients with viral conjunctivitis, and these signs can aid differentiation from bacterial conjunctivitis (Figure). Point-of-care diagnostics are also useful for confirming a viral etiology in the office at the time of examination. These tests take approximately 2 minutes to perform and provide accurate results in about 10 minutes. See *Signs and Symptoms* for other helpful diagnostic information.

Patients with a noninfectious form of conjunctivitis (and their parents) can return to the office or school. Those with infectious conjunctivitis are considered contagious when their eye is inflamed and there is serous discharge. These individuals can shed and transmit the virus for up to 16 days after the onset of symptoms.

AT A GLANCE

- Adenoviruses are the most common cause of acute viral infections of the conjunctiva. They resist standard disinfection and can live for weeks on many objects and surfaces.
- Palpable ipsilateral preauricular or submandibular lymphadenopathy can help identify viral conjunctivitis and distinguish it from bacterial conjunctivitis.
- Palliative treatment of viral conjunctivitis to alleviate signs and symptoms, consisting of cool compresses, artificial tears, and a combination of over-the-counter vasoconstrictors or prescription topical steroids, has been the mainstay of care.

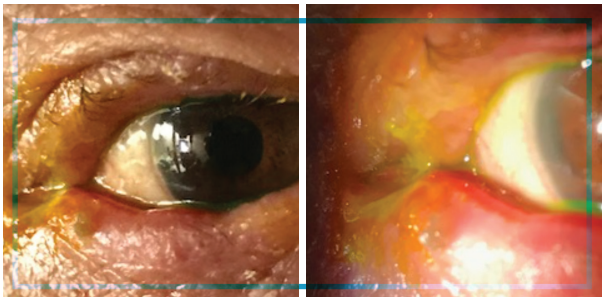

Figure. This patient had chronic blepharitis and meibomian gland dysfunction with acute bacterial conjunctivitis. Note the inflamed and edematous lid with mucopurulent discharge.

TREATMENT

Palliative treatment has been the mainstay of care for viral conjunctivitis for decades. It typically consists of cool compresses, artificial tears, over-the-counter vasoconstrictors, or prescription topical steroids to alleviate signs and symptoms.

There are no FDA-approved medications to kill adenovirus, and most treatments that attempt to do so are off-label. One approach is to administer a topical anesthetic and then four or five drops of a 5% povidone-iodine sterile ophthalmic preparation. After 1 minute, the eye is irrigated with an eye wash, and a topical nonsteroidal antiinflammatory drug or steroid is administered to improve patient comfort because the povidone-iodine can cause a short-term burning sensation in addition to blurring vision.

Another option is to prescribe topical ganciclovir off-label to decrease the severity and duration of viral conjunctivitis. Tabbara compared treatment with artificial tears versus ganciclovir and found that the drug significantly reduced both the duration and incidence of subepithelial infiltrates.[1] In the study, 22% of patients receiving ganciclovir developed subepithelial infiltrates, compared with 77% of patients receiving artificial tears. The recovery period was also significantly shorter among patients treated with ganciclovir than those using artificial tears (7.7 vs 18.5 days).

A phase 3 clinical trial of SHP640 (Shire) is under way. This combination broad-spectrum antiseptic and corticosteroid is being evaluated for the treatment of infectious keratitis in children and adults. SHP640 is a fixed combination of povidone-iodine 0.6% and dexamethasone 0.1%. The trial is studying a treatment regimen of one drop administered four times per day for 7 days. This medication has the potential to treat both bacterial and viral infectious conjunctivitis, an unmet need in eye care.

SIGNS

- Conjunctival edema
- Inflammation
- Hyperemia
- Lid edema
- Periorbital edema
- Subepithelial infiltrates
- Conjunctival injection
- Superior petechial hemorrhages
- Red eye
- Excessive tearing
- Serous discharge

SYMPTOMS

- Acute onset of tearing
- Irritated eye
- Foreign body sensation
- Itching
- Burning
- Decreased vision
- Sensitivity to light
- Decreased contact lens wear time and decreased comfort

AIM TO DIAGNOSIS AND TREAT EARLY

Conjunctivitis occurs in various forms. Overlapping manifestations of viral and bacterial conjunctivitis can lead to confusion and improper diagnosis. Early point-of-care testing and intervention can increase the accuracy of diagnosis and improve patients' ocular comfort and health. ■

1. Tabbara KF, Jarade EF. Ganciclovir effects in adenoviral keratoconjunctivitis. Paper presented at: Association for Research in Vision and Ophthalmology Annual Meeting; April 29-May 4, 2001; Fort Lauderdale, FL.

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