Differing diagnosis eye and allergy

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Although many treatments are available for both dry eye and allergic conditions, diagnosing the correct condition continues to be a challenge. Although a range of treatments for both conditions have emerged, differentiating them remains somewhat of an art form.

“'We’ve got effective treatments for most of these 'red eye' conditions—dry eye, infectious bacterial and herpetic conjunctivitis, ocular allergies—it’s just making that diagnosis, and then we can use our excellent commercially available agents,” said Francis Mah, MD, director of corneal and external disease and co-director of refractive surgery, Scripps Clinic, La Jolla, Calif.

Dr. Mah begins by using the symptom of itching as a key differentiator. Patients with itching could have allergic conjunctivitis but a lack of itching helps him exclude allergic conjunctivitis from the differential diagnosis. “The itching may not be the first symptom patients mention,” Dr. Mah said. “A lot of women or younger patients will come in because of the perocular swelling or the red eyes, and that will be their chief complaint.”

If patients report some itching, Dr. Mah tries to determine the extent of the itching, especially if there is a foreign body sensation with redness and swelling. Itchy eyelids, for example, might indicate blepharitis.

[You have to get] a feel for what the patient’s complaints are and how much you lean toward allergies, versus blepharitis or dry eyes or infection,” Dr. Mah said.

Neal Barney, MD, professor, Department of Ophthalmology and Visual Sciences, University of Washington School of Medicine and Public Health, Madison, Wis., noted that in general, the principle complaint of patients with seasonal allergic conjunctivitis (SAC) is itch. SAC usually occurs in patients with allergic phenotypes; the patients usually will have a history of rhini- tis, asthma, or other allergic manifestations. Additionally, the itch is seasonal and usually occurs annually with the onset of spring or early fall.

In contrast, dryness occurs typically has as its major symptom complaint of foreign body sensation. Scratch- ing and burning worse when they consume certain foods, such as reading or computer work.

Another indication of allergic conjunctivitis—assuming that the patient is not using eye drops—is bilateral symptoms. Although unilateral symptoms do not eliminate
allergic conjunctivitis, such a presentation leads Dr. Mah to consider other causes, including a reaction to eye drops.

Among key symptoms is periorbital redness, swelling and leathery skin, or raccoon eyes, which is common in contact dermatitis but may also be present in punctate keratitis, blepharitis, or meibomitis.

Meanwhile, white, ropey discharge is more associated with allergic conjunctivitis than dry eye. “Discharge usually makes us think infection, but if it is a white ropey discharge in the morning and there is a lot of itching going on for a couple of weeks, that is probably allergies, as opposed to infection, which usually has thick, goopy discharge that is more gray or green,” Dr. Mah said.

Testing help
Until the perfect diagnostic test is developed, such symptoms can help determine the diagnosis. A growing number of tests can further help differentiate the condition.

For instance, the TearLab Osmolarity System (TearLab, San Diego) can help differentiate dry eye from seasonal allergic conjunctivitis.

A test primarily designed to identify dry eye is the InflammaDry (Rapid Pathogen Screening, Sarasota, Fl.). However, since it identifies any type of inflammation in the eye, which can include allergic conditions, infections and blepharitis, the test wouldn’t help specifically separate the diagnosis.

Although Dr. Barney relies on patient histories for dryness and allergy relief, the tests he uses to confirm dry eye diagnosis include Schirmer’s tear collection values, fluorescein dye staining and lissamine green dye staining, and tear meniscus height.

Another option is the Doctor’s Allergy Formula test (Bausch + Lomb, Bridgewater, N.J.), which is a skin test administered by physicians and uses pinpricks in the forearms to identify the patient’s specific allergies. The test includes the most common allergens in their local area. The findings can help identify patients with atopic and allergic conditions such as conjunctivitis; however, it’s not specifically diagnosing the etiology of the conjunctivitis. Dr. Mah warned that physicians utilizing the test need access to an epinephrine auto-injector—if not a crash cart—because the test can elicit an anaphylactic reaction.

“It does help to identify those patients with a sensitivity, and the clinician can initiate therapy for allergic conjunctivitis if other clinical findings corroborate the pinprick test. More importantly, it can get these patients off to an immunologist or allergist and really impact quality of life,” Dr. Mah said.

Referral help
Dr. Mah invokes co-management with an allergist or immunologist for systemic treatment right away.

Although ocular complaints often are the driver for patient visits, allergies are still a systemic condition. And systemic treatment can not only improve the patient’s lifestyle and day-to-day activities but can also optimize the ocular management.

For example, some systemic medications may have a drying effect. Minimizing such effects through topical agents for the eyes or through the use of nasal medications for rhinitis could ease their lifestyles, Dr. Mah said.

Other ophthalmologists have concluded that systemic treatment is rarely needed when blepharocconjunctivitis is the main manifestation of the allergic phenotype.

“When symptoms and signs are unable to be controlled by local, topical treatments, a short course of oral steroids may be utilized,” Dr. Barney said.

Treatments used
Meanwhile, mild treatments Dr. Mah uses for seasonal allergic conjunctivitis or perennial allergic conditions begin with cold compresses or artificial tears then move up to antihistamines or combination antihistamine/mast cell stabilizers.

He echoed the use of steroids for acute, severe symptoms. “In using steroids my goal is to hit it hard and get the symptoms to abate and then taper off the steroids,” Dr. Mah said. “Then I put them on something a little more long term, like a combination mast cell stabilizer/antihistamine type therapy, which is much safer.”

Among novel treatments utilized by Dr. Barney is off-label use of tacrolimus for the vision-threatening chronic allergic eye diseases of atopic keratoconjunctivitis and vernal keratoconjunctivitis.

For vernal keratoconjunctivitis, which is difficult to control and can cause blindness, Dr. Mah uses steroids to get the symptoms under control, and mast cell stabilizers and antihistamines provide long-term management.

In addition to and short of tacrolimus ointment, Dr. Mah has found off-label Restasis (cyclosporine, Allergan, Dublin) relatively effective for treating atopic and vernal keratoconjunctivitis. However, its relatively low concentration and difficulty penetrating the epithelium at high doses sometimes necessitates the use of compounded cyclosporine in atopic or vernal patients. EW

Editors’ note: Dr. Barney has financial interests with Comparative Ophthalmic Research Laboratories (Madison, Wis.). Dr. Mah has financial interests with Alcon (Fort Worth, Texas), Bausch + Lomb, Allergan, and Ocular Therapeutix (Bedford, Mass.).

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AT A GLANCE

• Itching can differentiate allergies from dry eye.
• Although no diagnostic test has been developed, some tests can help.
• Immediate co-management with an allergist or immunologist can be helpful.
• Treatments range from cold compresses to steroids, depending on severity.