Floppy eyelid syndrome (FES) is a relatively rare condition that often masquerades as dry eye disease. Patients may exhibit clinical signs of chronic superficial punctate keratopathy (SPK) and meibomian gland dysfunction (MGD), as well as more acute symptoms of ocular dryness and grittiness. In this month’s column, we’ll examine the most effective diagnostic and management strategies for FES and its associated ophthalmic complications.

Findings
The lack of tight eyelid closure in patients with FES yields chronic corneal and conjunctival inflammation. This persistent irritation often leads to edema, chemosis, staining and occasional epithelial abrasions.1

Everting the upper eyelids frequently reveals an extremely elastic eyelid, and patients may even complain of spontaneous lid eversion. The upper eyelid also may reveal the presence of papillae secondary to chronic trauma.2

Many patients with FES may have a genetic or developmental problem that reduces the inherent structural rigidity of collagen or elastin tissues.3,4

Multiple studies have indicated that patients with obstructive sleep apnea (OSA) experience a partial collapse of the pharynx when breathing in while sleeping, resulting in loud snoring and gasping for air. Some authors have theorized that, like the upper tarsal plate, the pharynx may lack the necessary structural integrity for proper function.5,6

Other researchers suggest that a high percentage of matrix metalloproteinase enzymes located on the ocular surface and eyelids may, in fact, damage the elastic fibers present in the eyelid.7

Further, patients with FES are more likely to develop keratoconus secondary to a potential structural Integrity defect or repetitive nocturnal eye rubbing.8

Diagnosis
FES is frequently under-diagnosed or misdiagnosed by eye care providers because patients often present with concurrent SPK and advanced MGD. So, you must carefully evaluate the individual for more unique signs and symptoms of FES to help confirm the diagnosis.

For example, be sure to look for a stringy mucous discharge or evidence of severe ocular itch. FES patients also may report a history of corneal abrasions in the complete absence of traumatic insult. Additionally, because of the strong association between FES and OSA, remember to ask the patient about symptoms of fatigue, headache, and sleeping or breathing problems.8,9

Management
Treating the symptoms associated with FES may work for mild cases but, as the condition advances, eyelid-tightening surgery typically is required. Initial treatments for the ocular surface inflammation and SPK may include ample lubrication with artificial tears.

For more severe presentations, topical difluprednate 0.5% BID and loteprednol 0.5% QID could be used to control the initial inflammation. Be sure, however, to taper the loteprednol to BID in specific cases that require long-term treatment.

If a corneal abrasion is present, you must treat it with ample lubrication and topical antibiotics before initiating anti-inflammatory therapy. In some instances, the patient may require a bandage lens or overnight patching to help heal the abrasion.

Patients with corneal abrasions also may benefit from the use of bland ointments at night. Additionally, antibiotic ointments (i.e., erythromycin) or corticosteroid ointments (i.e., loteprednol) may encourage rapid healing in highly inflamed cases that exhibit significant papillae.
In severe or non-responsive cases of FES, eyelid tightening surgery often is the only effective treatment option. Following the procedure, you must maintain the best possible ocular surface conditions via artificial tears, punctal plugs and therapeutics for chronic SPK. Finally, don’t forget to manage the associated systemic disease components, including sleep apnea. Refer patients with OSA to a sleep specialist or pulmonologist. Interestingly, OSA management actually may actually help reverse or eliminate the signs and symptoms of FES.

It is also important to be aware of serious ocular findings that are more common in patients with both FES and OSA, including glaucoma and non-arteritic anterior ischemic optic neuropathy.

FES is a rare condition—and typically, it is these less common conditions that are often overlooked or misdiagnosed. Because the symptoms of FES are similar to those associated with ocular surface disease, it makes the diagnosis significantly more difficult to confirm. But, with cautious observation and a thorough differential, you can help identify and manage FES patients early in the disease process and minimize their discomfort.

Dry Eye
Rhein EyeSolutions

A new line of products and services from Rhein EyeSolutions aims to help patients understand dry eye, encourage visits to an eye doctor and to soothe irritated eyes and eyelids in mild to moderate cases. Available chiefly through eye care practitioners, the line is configured into three categories:

- The Inspect category consists of an iPhone app and 10x-magnification mirror to help individuals inspect the anatomical features of their eyes and eyelids alongside depictions characteristic of dry eye.

- The Help products allow patients to regain ocular comfort, to clean the lids and ocular adnexa, and to warm and massage the eyelids.

  Items include a warming mask, warming lid massager and lavender towelette lid wipes.

- Sustain focuses on food and nutrition. The Vision Bar Omega-3 1000 contains 1,000mg of triglyceride derived from omega-3 and organic ingredients identified as potentially beneficial in certain types of dry eye. The Vision Gels Omega-3 1000 nutritional supplement also seeks to sustain eye comfort through dietary augmentation.

  The book Eye Foods: A Food Plan for Healthy Eyes explains the relationship between nutrition and eye health, and offers dietary advice and recipes.


Nutraceuticals
Retaine Supplements for Dry Eye Relief

New Retaine OM3 and Retaine Flax dietary supplements from Ocusoft contain a blend of omega-3 and omega-6 essential fatty acids specially formulated to support ocular health in patients with dry eye. Retaine OM3 contains 800mg EPA and 400mg DHA per serving, while Retaine Flax contains flax seed oil—making it ideal for patients who cannot tolerate fish oil-based supplements.

Both supplements are packaged in blister cards to improve compliance and reduce the potential for missed doses. Retaine OM3 is to be taken twice daily and each package contains 60 softgel capsules, whereas Retaine Flax contains 120 softgel capsules and is to be taken four times daily (or as directed by an eye care professional).

Practitioners dispensing from their office can obtain introductory discount pricing on these products; however, patients may also order online directly at www.ocusoft.com/retaine.


Lens Autofluorescence Detection
ClearPath DS-120

Freedom Meditech presents the ClearPath DS-120 Lens Fluorescence Biomicroscope, an FDA-approved device that measures autofluorescence by scanning the crystalline lens of the eye with a blue light. A significant number of independent peer-reviewed studies have suggested that elevated lens autofluorescence may be an early indicator of the presence of diabetes.

The noninvasive ClearPath scan is pain free, takes just six seconds and does not require...
Ultrasound Biomicroscopy

Compact Touch UBM

With the new Compact Touch Ultrasound Biomicroscopy (UBM) system, physicians can diagnose and obtain measurements of the anterior segment.

This portable diagnostic ultrasound system from QuanTel Medical has a number of clinical applications, including artifact-free measurement of the anterior chamber angle in glaucoma, plateau iris, differentiation of tumors and cysts and lens/IOL anatomy.

The platform’s high-quality, 50MHz linear scanning technology can visualize structures behind the iris and pigmented tissues, helping the clinician to determine not only the severity of the conditions, but also the underlying cause, the company says.

The Compact Touch UBM was designed for use with the Clearscan sterile probe cover, which simplifies the UBM exam for both the doctor and patient.
