

Treating Ocular Surface Disease

Determine if the condition is mild, moderate, or severe before making a recommendation.

BY HENRY D. PERRY, MD

Not so long ago, patients struggled with deteriorating vision until their cataract progressed to the point that surgery was unavoidable. They suffered an extended and confined recovery period with eye patches or bandages, and they still had to wear glasses or contact lenses to achieve functional vision. The same patients who underwent traditional cataract surgery without postoperative complications and attained a visual acuity of 20/40 or better were considered a clinical success. With modern cataract surgery, advances in surgical techniques and technology have raised the bar on the entire cataract surgical procedure and patients' anticipated outcomes.

Today, in addition to an uncomplicated procedure and excellent postoperative visual acuity, patients expect to experience minimal or no pain, recover quickly, and require few office visits. They therefore consider any decrease in visual acuity or increased morbidity to be evidence that surgery was a failure. The preoperative treatment of ocular surface disease (OSD) is thus important. Aside from serious intraocular complications, the number one reason for patients' dissatisfaction with their outcomes is problems with the ocular surface. With a careful diagnostic approach, physicians can streamline therapy and tailor it to the individual patient. Herein are examples of typical patients' complaints and corresponding treatment regimens.

MILD DISEASE

The first example is a patient who has relatively mild symptoms and signs of OSD. His or her main complaint is of occasionally fluctuating vision and a mild foreign body sensation. The visual acuity is in the 20/20 range, and some mild inferior corneal staining is evident with 1+ lissamine green. The tear osmolarity is only slightly elevated, and the eye shows mild background injection.

The first treatment consideration in patients with



Figure 1. Note the prominently foamy tear film on the lower lid margin.

mild OSD is unpreserved artificial tears and lid hygiene. Because the majority of patients with symptoms of dry eye disease have some form of meibomian gland dysfunction (MGD), the importance of treating these glands' underlying inflammation cannot be overestimated. With this in mind, I frequently will massage the inferior eyelid to judge the quality and quantity of secretions. This will direct my approach.

Simple changes in lifestyle can also be of benefit. For example, I educate patients that, if they will be spending a lot of time reading, instilling an artificial tear beforehand can be of benefit. Similarly, when flying on an airplane, the frequent use of unpreserved artificial tears can be helpful. Minor changes to their environment can be worthwhile, for example, using a humidifier in the setting of forced-air heat, especially for sleeping.

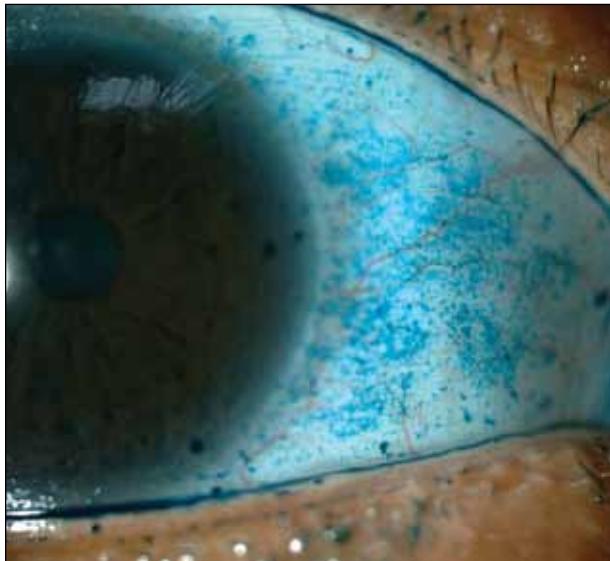


Figure 2. Confluent 4+ lissamine green staining of the interpalpebral conjunctiva.

Patients with mild OSD should have a follow-up examination within as little as 2 weeks to make sure that they are compliant with therapy.

MODERATE DISEASE

The next example is an individual who complains bitterly of a foreign body sensation; a sandy, burning feeling; eyelids stuck together upon awakening; and some crusting of the eyelids. This patient demands a more thorough diagnostic evaluation (see Kenneth R. Kenyon's article on page 40). Not uncommonly, there will be a foamy tear film on slit-lamp evaluation. This finding is diagnostic of MGD, as the tear film has a decidedly detergent action (Figure 1). In this patient group, epilating an eyelash and looking for Demodex can be helpful and, in certain rare cases, essential.¹ In this particular example, with these complaints and a mildly decreased visual acuity, the use of artificial tears is very important. I would obtain an accurate history to make certain that the patient is not placing other agents into his or her eyes. Many patients like the one in this example frequently use naphazoline 0.025%, pheniramine maleate 0.3% ophthalmic solution (Visine; McNeil Consumer and Specialty Pharmaceuticals) and do not mention it to their physician. Lid hygiene is also essential, and lid massage can help with regard to the diagnosis.²

Patients with moderate disease will have more significant lissamine green staining, so I thoroughly evaluate the superior tarsus for other changes and look for occult causes such as floppy eyelid syndrome.

Many patients with moderate OSD will have problems sleeping, and side sleeping can worsen their symptoms on that side. A simple change in sleeping habits can do much to ameliorate the problem. If the patient has a relatively decreased tear flow and significant signs and symptoms of OSD, the use of cyclosporine in the 0.05% concentration (Restasis; Allergan, Inc.) is indicated.³ This agent may help ameliorate MGD.⁴ Patients in this category should be considered for punctal occlusion, which can be performed in a temporary fashion by just touching the puncta with a heated platinum spatula.

SEVERE DISEASE

The final example is that of patients with severe OSD. Often, they do not complain of the usual burning and foreign body sensation, but on evaluation, they will have significant corneal staining with fluorescein and 4+ lissamine green staining in the interpalpebral cornea and conjunctiva (Figure 2). These patients lack symptoms that coincide with their disease severity, because they often have neurotrophic corneas. As such, when they are tested with Cochet-Bonnet esthesiometry, they have a corneal sensation of less than 4 cm in each eye.⁵ With regard to therapy, these patients require the full effort of the armamentarium. Patients with severe OSD require artificial tears, lid hygiene and massage, and nutritional help; vitamin therapy is paramount. Punctal occlusion is indicated as well as topical cyclosporine and, occasionally, azithromycin (AzaSite; Merck & Co., Inc.) and doxycycline, depending on their MGD.

An intelligent approach to the treatment of OSD preoperatively will go a long way toward helping to improve surgical outcomes and patients' postoperative satisfaction. ■

Henry D. Perry, MD, is the senior founding partner of Ophthalmic Consultants of Long Island in Rockville Centre in New York. He is a consultant to Allergan, Inc., and receives grant support from Alcon Laboratories, Inc., Bausch + Lomb, and Ista Pharmaceuticals, Inc. Dr. Perry may be reached at (516) 766-2519; hankcornea@aol.com.



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