

TREATING DED IN CONTACT LENS PATIENTS

Early diagnosis and treatment of dry eye disease is key to its prevention.

BY ALICE T. EPITROPOULOS, MD, FACS

Despite its growing prevalence, dry eye disease (DED) continues to masquerade among many of today's ophthalmology patients, particularly in those who wear contact lenses. A condition that produces a litany of ubiquitous symptoms — from general discomfort and a burning sensation to grittiness of the eyes and blurred vision — DED still persists to essentially hide in plain sight when patients are not appropriately assessed at disease onset. At the same time, it can blatantly cause frustration on the part of contact lens patients and providers who are actively seeking a resolution.

Many patients with DED who wear contact lenses are at a higher risk of failure if their ocular surface is not optimized or treated. So, it's incumbent upon today's eye-care practitioners to be more cognizant of the many symptoms and triggers of DED and to routinely screen for this disease, particularly in contact lens patients. Early diagnosis and treatment will help to prevent the progression of this chronic and often life-altering disease.

IN TUNE TO LENS INTOLERANCE

Contact lens wear is an increasingly

common trigger of DED, which can frequently remain asymptomatic in many patients who wear eyeglasses until they begin to wear corrective contact lenses. According to the CDC, an estimated 45 million people in the United States wear contact lenses. And DED is credited with being a leading cause of lens intolerance and the need for discontinuation.¹ Common presenting symptoms of contact lens intolerance include blurred vision, discomfort, irritation, eye fatigue and foreign-body sensation. Screening, diagnosing and treating DED will maximize the success with contact lens wear.

There are four levels of DED severity² based on consensus guidelines developed by the Tear Film and Ocular Surface Society (TFOS). Among the guideline highlights are that discomfort becomes more chronic and consistent after Level 1, as opposed to being episodic, and that corneal staining is apparent at Level 2 and beyond. Standard of care is the introduction of prescription therapy at Level 2 and beyond.

DED, particularly as it relates to contact lens intolerance, can further be exacerbated by the impact of digital devices and screen time. In addition, the recent wearing of facemasks during

the COVID-19 pandemic has led to an increased number of patients who prefer to wear contact lenses because of their glasses fogging. Masks also complicate any underlying DED because one's breath travels upward towards the eyes when masking, which causes a premature evaporation of tears. These environmental and societal factors have contributed considerably to the increased occurrence of DED.

TREATMENT OPTIONS FOR DED PATIENTS

The primary objective to caring for DED is reducing inflammation while restoring stability to the ocular surface and the homeostasis of the tear film. Treatment of DED or ocular surface disease ideally occurs before patients are fitted with contact lenses, but DED offers several approaches for successful treatment at any point of the disease's trajectory of symptoms.

The vast majority of DED patients have a component of meibomian gland dysfunction (MGD). When there are signs of gland blockage, consideration should be given to relieve the obstruction. A suggested three-step treatment approach includes lid margin hygiene, removal of obstruction and reduction or elimination of inflammation. These synergistic measures are most effective when performed earlier in the disease process before patients reach end-stage MGD with significant gland atrophy and dropout. Some commonly performed in-office procedures that address MGD include the LipiFlow thermal pulsation system (J&J Vision), Systane iLux (Alcon), TearCare (Sight Sciences) and BlephEx (Alcon). Another option is intense pulsed light. The non-laser light source was originally developed for use in dermatology and has been adopted for use in rosacea and, more recently, MGD to target abnormal telangiectatic vessels that contribute to inflammation. It was also



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recently FDA approved for DED due to MGD (OptiLight, Lumenis).

Standard initial therapy for DED is the utilization of artificial tears as a supplement to the body's natural tears as well as high-quality omega-3 supplementation. When these interventions are not effective, suggested strategies call for immunomodulators: Restasis (Allergan), CEQUA (Sun Ophthalmics) and Xiidra (Novartis). Other common treatments include serum tears, amniotic membranes and at-home therapies such as lid scrubs and warm compresses. The most recent FDA-approved therapy is Tyrvaya (Oyster Point Pharma), a varenicline nasal spray solution that increases natural tear production (see page 48).

Another novel treatment, Regener-Eyes, is a preservative-free biologic that uses d-MAPPS (derived-Multiple Allogeneic Proteins Paracrine Signaling) technology to stimulate stem cell communication without cell contact. Becoming more common as a maintenance therapy after an amniotic membrane is removed, Regener-Eyes is typically prescribed for mild-to-moderate or severe DED, particularly when there are corneal findings such as punctate

PENTAVISION'S ABBY MARKWARD RECEIVES OWL'S 2021 VISIONARY LEADER AWARD

Abby Markward, head of business development for PentaVision (publisher of *Ophthalmology Management*) and immediate past president of Ophthalmic World Leaders (OWL), received OWL's 2021 Visionary Leader Award at the AAO's annual meeting in New Orleans.

The award recognizes an individual who has demonstrated leadership throughout their career and "paved the way for diversity in their field through significant achievement." Ms. Markward has more than 20 years of experience in the ophthalmic industry.

In nominating her, a colleague

emphasized, "I can think of few people in this industry with greater dedication to enhancing diversity, supporting others' career paths and a strong commitment to growing the OWL organization."



Ms. Markward has been a member of OWL for nearly a decade.

As Head of Business Development for PentaVision, she has extensive experience in advertising, marketing and product management, and has worked for companies such as Johnson & Johnson and Bausch + Lomb.

epithelial keratitis. These drops can also be used in patients with DED who have not responded to traditional therapies to assist in improving comfort and preventing disease progression.

Regener-Eyes is also versatile enough to be used in patients wearing contact lenses or scleral lenses. It is recommended, however, that patients

use the drop 15 minutes before contact lenses are inserted and once the contacts are removed.

ALGORITHMIC APPROACHES, BIOLOGIC SUPPLEMENTATION

With no strict modality to providing care for DED required, possessing a

CONTINUED ON PAGE 55

QUICK NOTES

Alcon announced its intention to acquire Ivantis, developer and manufacturer of the Hydrus Microstent, a minimally invasive glaucoma surgery device designed to lower IOP for open-angle glaucoma patients in connection with cataract surgery. The transaction is anticipated to close in the first quarter of 2022.

LensGen Inc. received approval for an Investigational Device Exemption from the FDA to initiate a pivotal study of its Juvene IOL. Designed to restore clear and continuous vision

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QUICK HITS

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general knowledge base of the various algorithms and treatment pathways is important. Clinicians can also feel confident in borrowing from different aspects of the available step-wise algorithms.

TFOS published a four-step treatment algorithm built around subjective and objective measurements based on sign and symptom severity.³ It includes patient education, environmental modifications, dietary recommendations, prescription medications and home treatments that are both short-term and long-term in nature.

Other successful DED algorithms include plans developed by the Cornea External Disease and Refractive Society (CEDARS) and the ASCRS. The CEDARS algorithm divides DED into four categories: aqueous deficiency, goblet cell/mucin

deficiency, blepharitis/MGD and exposure keratopathy. A fifth category, the "co-conspirators," are conditions that can mimic DED. These include superior limbic keratoconjunctivitis, medicamentosa, Thygeson's, mucus fishing syndrome and others.⁴ The CEDARS algorithm helps clinicians to devise treatment plans,⁵ while ASCRS is directed toward surgical interventions.⁶

CONCLUSION

Considering the prevalence of MGD as a cause of DED and its consequential effects, early identification and treatment of MGD is critical. Incorporating advanced treatments will allow for greater success in management of the disease and help patients to be more comfortable, thereby improving long-term outcomes. OM

For references, see the online version of this article.