Ophthalmology MANAGEMENT
MARCH 2019

Shared Care in Today's DRY EYE PRACTICE

BUILDING THE PLATFORM FOR AN OPTIMAL PATIENT EXPERIENCE

FACULTY
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Marguerite McDonald, MD • Jerry Robben, OD
Patti Barkey, COE • Carrie Jacobs, COE

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References: 1. Korb D, Blackie C, Meadows D, Christensen M, Tudor M. Evaluation of extended tear stability by two emulsion based artificial tears. Poster presented at: 6th International Conference of the Tear Film and Ocular Surface: Basic Science and Clinical Relevance; September 22-25, 2010; Florence, Italy. **2.** Moon SW, Hwang JH, Chung SH, Nam KH. The impact of artificial tears containing hydroxypropyl guar on mucous layer. *Cornea*. 2010;29(12):1430-1435. **3.** Davitt WF, Bloomenstein M, Christensen M, Martin AE. Efficacy in patients with dry eye after treatment with a new lubricant eye drop formulation. *J Ocul Pharmacol Ther*. 2010;26(4):347-353. **4.** Willcox MDP, Argueso P, Georgiev GA, et al. TFOS DEWS II tear film report. *Ocul Surf*. 2017;15:366-403. **5.** Ketelson H, Rangarajan R. Pre-clinical evaluation of a novel phospholipid nanoemulsion based lubricant eye drop. Invest Ophthalmol Vis Sci. 2017;58:3929. **6.** Ogundele A, Ketelson H, et al. Preclinical evaluation of a novel hydroxypropyl-guar phospholipid nanoemulsion lubricant eye drop for dry eye disease. Poster presented at: The 36th World Ophthalmology Congress (WOC); June 16-19, 2018; Barcelona, Spain. **7.** Craig J, Nichols K, Akpek E, et al. TFOS DEWS II definition and classification report. *Ocul Surf*. 2017;15:276-283. **8.** Lane S, Paugh J, et al. An Evaluation of the in vivo Retention Time of a Novel Artificial Tear as Compared to a Placebo Control. Invest Ophthalmol Vis Sci. 2009;50(13):4679. **9.** Benelli U. Systane® lubricant eye drops in the management of ocular dryness. *Clin Ophthalmol*. 2011;5:783-790. **10.** Torkildsen G. The effects of lubricant eye drops on visual function as measured by the Inter-blink interval Visual Acuity Decay test. *Clin Ophthalmol*. 2009;3:501-506.

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DRY EYE IMPLEMENTATION MODELS

How practices are responding to the increasing need for professional dry eye management

By Patti Barkey, COE

As eyecare practices embrace caring for patients with dry eye, three practice models are emerging — referral-only, shared care, and comprehensive — depending on the level of care offered. Each model has a place in the dry eye care continuum and each practice should embrace their roles.

PRACTICE MODELS

In a referral-only practice, the goal is to recognize the signs and symptoms of dry eye disease and refer patients to a comprehensive dry eye practice for care. Referral-only practices may provide screening diagnostics and offer some retail products, but they're not usually treating pathology. They expect the comprehensive practice to handle that portion of patient care.

Shared care for dry eye is similar to comanagement for cataract surgery; however, when sharing dry eye care, each practice collects its portion of the fees for services. Typically, a shared-

“IT’S IMPORTANT TO ESTABLISH A PROTOCOL TO PROVIDE THE BEST CARE TO YOUR PATIENTS.”

care practice has some diagnostic tools, sells some over-the-counter products, and can administer some treatments. Shared care, which sometimes involves different practitioners in the same practice, requires continuity of access, regardless of where a patient originated.

Comprehensive dry eye practices provide the highest level of dry eye care, and serve as access points for referred care and shared-care practices. A comprehensive dry eye practice encompasses every aspect of dry eye for patients in a wide array of categories where a healthy ocular surface will enhance their comfort and vision. These practices offer diagnostics, therapies, products, and surgical procedures for full-service dry eye care. Many times, the comprehensive dry eye practices are a mixture of MD and OD providers working together to the highest level of their licenses.

COLLABORATING FOR EFFICIENT CARE

The relationships between comprehensive dry eye practices and referral-based and shared-care practices should be mutually beneficial and focused on patients. Comprehensive practices that wish to gain referrals would benefit from outreach to potential referring partners.

For the most part, referral-based practices are happy to send patients to a practice that will fully manage their dry eye. Most of the time, they don’t expect the patient to return to their practice.

Conversely, shared-care practices absolutely want their patients to return to them. They usually have diagnostics, such as tear osmolarity tests, matrix metalloproteinase 9 (MMP-9) tests, and LipiScan (Johnson & Johnson Vision), which enable them to screen patients for referral and then assess response to treatment on follow up.

Shared-care practices may also offer some basic treatments, such as BlephEx. In terms of retail products, I recommend that your practice and the practices in your referral base sell the same products, both for the convenience of patients and to avoid confusion.

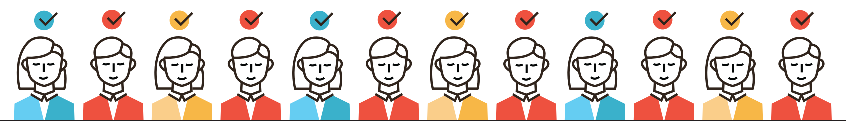
THE DRY EYE TEAM

Caring for patients with dry eye may involve several medical specialties in addition to ophthalmology and optometry: dermatology, because of potential side effects from some dry eye medications; rheumatology, because a patient with dry eye may have Sjögren’s syndrome; and obstetrics-gynecology, because of hormonal influences.

Within eyecare practices, staff members must be trained to work with patients seeking care for dry eye. Call center staff play an important role in ensuring that patients who report dry eye symptoms are seen by the appropriate practitioner in a timely manner. Technicians must quickly determine which diagnostic tests should be performed before the physician sees the patient. Scribes are instrumental in documenting the physician’s findings and instructions and then reviewing them thoroughly with patients. Counselors must be skilled in “reading” patients and managing their expectations, and, because many aspects of dry eye care are cash-based, they also must be comfortable discussing fees and financing. (For more on staffing roles, see “Key Staff for a Dry Eye Practice,” page 6.)

SKIN IN THE GAME

As the need for dry eye services increases so, too, does the importance of disease identification and management. Whether your practice offers comprehensive dry eye care or chooses to refer out for treatment, it’s important to establish a protocol to provide the best care to your patients.



KEY STAFF FOR A DRY EYE PRACTICE

Well-educated support staff enhance the patient experience and practice efficiency

By Carrie Jacobs, COE

Incorporating dry eye care into your business model is critical for any practice, particularly those that have premium channels for cataract and refractive surgery. After all, a healthy ocular surface is essential to delivering the optimal surgical results patients expect.

A critical component to dry eye care is having a knowledgeable and dedicated staff. Therefore, when you shift your focus to include dry eye management, be sure to educate staff members in every department to support this endeavor.

CALL CENTER STAFF

Employees who staff your call center should be good listeners and well-versed in how patients may describe dry eye symptoms. This way, they're able to not only schedule patients with the appropriate provider, but ensure the appropriate time is set aside for dry eye evaluation.

What's more, they should know what treatment modalities your practice offers and the associated cost to patients, and should be able to start the process of pre-qualifying patients for financing if they know someone is being referred from another provider's office for a dry eye procedure. We use CareCredit in our practice, and it's vital that our call center staff understand the application process and can provide this option to patients who inquire about payment options.

PROVIDING OPTIMAL DRY EYE CARE TO PATIENTS REQUIRES AN ALL-HANDS-ON-DECK APPROACH. EACH TEAM MEMBER PLAYS A CRITICAL ROLE IN THE SUCCESS OF YOUR DRY EYE PRACTICE."

TECHNICIANS

Your technicians must be trained to administer the SPEED questionnaire and then follow up with a conversation to elicit further information about the patient's chief complaints. They must be able to encourage patients to talk through what they're experiencing in their day-to-day lives, because patients often don't realize some of their symptoms are dry eye-related. Probing questions get patients to better assess and identify their symptoms.

The technician also should review the patient's prescription and over-the-counter medications, such as vitamins and omega-3 supplements, and determine whether they're using artificial tears, and, if so, how often.

Once the technician has identified the patient's chief complaints, he or she can perform diagnostic testing, such as matrix metalloproteinase 9 (MMP-9) and tear osmolarity, to provide the physician with the information necessary to confirm a dry eye diagnosis and determine the best course of treatment. The technician will perform additional scans and tests as directed by the physician.

COUNSELORS

The dry eye counselor has a pivotal role, but you don't necessarily need to hire new people exclusively for dry eye counseling. Your refractive and cataract counselors should be able to interact well with dry eye patients. They are already comfortable discussing fees and financing options with patients, so they should be able to explain the financial agreements and financing options, help patients understand the recommended treatment options, answer questions, and generally make sure patients feel comfortable with what is happening.

The counselor is the physician's right hand in the practice, guiding patients through the entire process and ensuring that family members are part of the discussion. Importantly, they can communicate with the physician if the patient doesn't seem to have a good understanding of the treatment plan and may need more time to work through some questions.

A TEAM EFFORT

Providing optimal dry eye care to patients requires an all-hands-on-deck approach. Each team member plays a critical role in the success of your dry eye practice.

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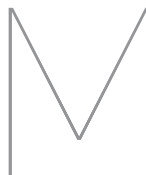
CASE 1: COMPREHENSIVE PRACTICE CASE FROM REFERRED PRACTICE

Education and communication are the foundation for effective referred care

By Elizabeth Yeu, MD



Much of what we have learned about sharing in the care of cataract surgery patients aligns well with our dry eye practices. Two underlying themes serve as the foundation for good shared care: education and the communication between clinicians to ensure that we're all speaking the same language. For example, it is important for the comprehensive care practice to know whether certain treatments were started in the shared-care practice.

As for the referral itself, I ask my referring doctors to be specific and use consistent terminology when describing the reason for the referral. For example, when a physician asks for a second opinion, I assume he or she wants my opinion but wants to take care of the problem, while "treat and manage" means we will treat and manage the issue.

The following is a treat-and-manage case from one of our referral practices.

INITIAL EXAMINATION

A 77-year-old woman with suspected dry eye was referred to Virginia Eye Consultants, a multispecialty practice with a comprehensive dry eye center. The patient was scheduled through a direct line to our dry eye counselor, who documented the patient's history. The patient reported she had tried artificial tears given to her as a sample, but experienced little relief. Her symptoms were quite bothersome, including some chronic, mild foreign body sensation that was worse in the morning.

Figure 1. Imaging of the meibomian glands showed mild truncation and atrophy, mild overall congestion, and good meibomian gland architecture.

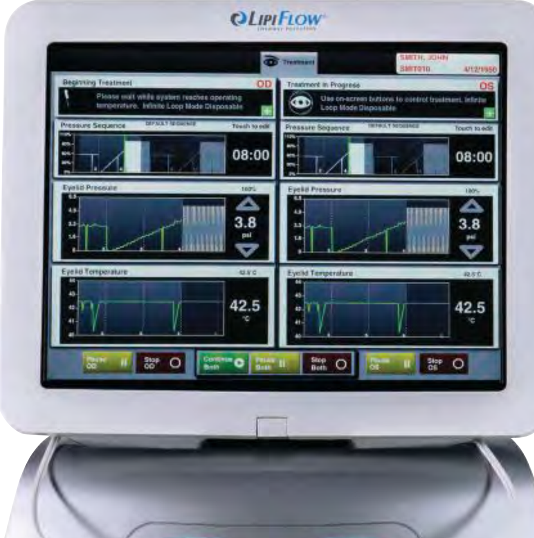
The patient had hypertension and seasonal allergies, which is a significant comorbidity as it relates to ocular surface disease. She was using metoprolol, pravastatin, and cetirizine HCl.

The patient's best corrected visual acuity was 20/30 OD and 20/40 OS.

At the initial visit, in addition to our standard intake form, we ask patients to complete a modified SPEED questionnaire, which helps identify classic and non-classic signs and symptoms of dry eye, including redness, foreign body sensation, and fluctuating vision. The technician tallies the score and performs additional testing as indicated, adhering to our "no-touch" protocol for dry eye patients, which precludes using vital dyes or even a Schirmer's test until the physician sees the patient.

Meibography showed mild truncation and atrophy, mild overall congestion, and good meibomian gland architecture (Figure 1). We now know that meibomian gland dysfunction (MGD) is part of the process in this patient. Because of her good architectural health, we predicted the patient would have →

LipiFlow® Treats MGD from the Inner Lid to Remove Obstruction and Increase Gland Function.[1,8]



Targeted

Vector Thermal Pulse Technology™ (VTP) provides simultaneous application to both upper and lower lids and meibomian glands.[8]

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- Increased mean gland secretion 3-fold on average with just 1 treatment[3]
- Reduced mean dry eye symptom scores by more than 50%[3]
- Increased patient comfortable contact lens wear time by approximately 4 hours on average per day, doubling pretreatment findings[6]

Please see indication and important safety information on back page.

*A topical anesthetic is used at the beginning of the treatment procedure to ease patient discomfort for device placement.

PP2018TS4201

a good response to treatments for MGD. Tear osmolarity was within normal range, and both eyes tested negative for matrix metalloproteinase 9 (MMP-9) with InflammaDry (Quidel).

With the information collected thus far, I wondered about masqueraders. Was there something else going on? With MGD and blepharitis, MMP-9 testing may be negative because inflammation may not be the primary issue; it is the congestion that leads to inflammation. Tear osmolarity can be normal in certain scenarios, such as conjunctival chalasis, allergic conjunctivitis, or lid margin disease. Corneal staining was minimal. I compressed and expressed the meibomian glands and extracted grade 3 meibum.

TREATMENT PLAN

Our initial examination opened up a whole host of issues with this patient. In terms of risk factors, she is a postmenopausal woman who has seasonal allergies and uses oral cetirizine. We must aim for normalization of the ocular architecture, including the lid margin, and address potential conjunctival chalasis to achieve a better response to a topical anti-inflammatory or lubricating treatment.

I explained to the patient that treatment would require several visits, and she likely would need a chronic medication. I also recommended HydroEye (ScienceBased Health). I have tried different oral omega supplementation and have found the GLA-based oral omegas in HydroEye truly make a difference. I also recommend lid wipes to debulk the debris and the biofilm, coupled with prescription Avenova (NovaBay). Both are extremely important to use in conjunction with one another, although patients don't have to use them at the same time of day. The pure hypochlorous acid in Avenova will sterilize the eyelids, and the mechanical action of wiping the lids will remove the debris and biofilm (See "Reducing Bacterial Load," page 12).

The patient had tried artificial tears without experiencing relief, but there are specific tears that will be better for her. I like recommending Systane Complete (Alcon) because I know I'm offering a drop that will be nonblurring and has a lasting effect that treats any of the symptoms related to ocular surface disease, regardless of the primary cause.

This patient is a perfect candidate for thermal pulsation therapy with LipiFlow (Johnson & Johnson Vision). I may need to address conjunctival chalasis, and if I proceed with a milder intervention that improves the tear film, recovery from the more invasive procedure will be quicker and easier.

> **"TWO UNDERLYING THEMES SERVE AS THE FOUNDATION FOR GOOD SHARED CARE: EDUCATION AND THE COMMUNICATION BETWEEN CLINICIANS TO ENSURE THAT WE'RE ALL SPEAKING THE SAME LANGUAGE."**

At this point, I personally introduced the patient to our dry eye counselor, who is also one of our refractive and cataract counselors. We can perform LipiFlow on the same day at any time for our patients, so the counselor is key in discussing the details of this treatment. And then, of course, it is important for us to send a letter to our referring doctors.

PANEL DISCUSSION

Counselors as Educators

Dr. Yeu: I'm curious, do you have designated dry eye counselors in your respective practices?

Marguerite McDonald, MD: I have trained our scribes to also serve as counselors, which works well in our practice. While I see the patient, the scribe documents everything in the electronic medical record. After I leave, the scribe stays behind in the examination lane and counsels the patient.

Jerry Robben, OD: Before patients see the physician, they see our counselors, who introduce some of the concepts and treatments for dry eye. New patients learn about HydroEye, Systane Complete, warm compresses, and prescription Avenova, because they are recommended for every patient. The counselors may also introduce cyclosporine ophthalmic emulsion (Restasis, Allergan) or lifitegrast ophthalmic solution (Xiidra, Shire) and, certainly, LipiFlow, if the diagnostic testing indicates using that.

Our counselors don't diagnose disease, but they understand where the treatment plan will go. By the time I see patients, they have already heard about these treatments, so I reinforce the treatment plan, and patients return to the counselor to schedule their next visits.

Patti Barkey, COE: Patient education is an integral part of treating and managing dry eye, and counselors play a key role. Patient education is a simple process for counselors, who can say, "According to the SPEED questionnaire, you have signs and symptoms of dry eye disease. So, before you see the doctor today, we want to make sure you understand some treatment options and products that are available to you that she may talk about."

Each of the vendors supplies us with educational material, including videos and brochures, which makes the process go smoothly.

Counselors also serve as vital communication links between patients and physicians. Our counselors often become friends with our dry eye patients, because they tend to see one another frequently. When patients return for follow-up, if they haven't been doing what the doctor asked them to do, the counselor can find out why and reinforce the importance of adhering to the doctor's recommendations. Having thoroughly educated →

counselors really does save time in the clinic. I'd be remiss if I didn't recommend Dry Eye University for all staff and providers.

Discussing Non-covered Costs

Carrie Jacobs, COE: I would like to ask the physicians on our panel how they respond when a patient asks how much a therapy will cost. Even though costs should be addressed by the counselors, I know every doctor hears that question.

Dr. Yeu: I may mention a roundabout figure, but I usually say I don't know the exact cost. I tell patients, "We are a comprehensive dry eye practice, and we offer the entire spectrum of services that are available to take care of you. Some are covered by insurance, but some are not." I refer the patient to our counselor after that. I think most patients understand that ours is a highly specialized practice.

I should mention that just as we have refractive package options for cataract surgery, we have package options for patients who need dry eye care and maintenance. Therapy may start with LipiFlow, but patients may have several BlephEx treatments during the year to extend the effect, particularly if they have moderate to severe disease. The package option provides value, and it involves one-time CareCredit financing.

Dr. Robben: I also tell patients that I don't know the exact cost of a treatment. I let them know that I am recommending the best treatment for them and that my staff will cover the financial component, and I refer them to our counselor, who discusses the financing straight away. The initial price point that patients hear is the financing price point.

Ms. Barkey: Treatment recommendations should be based on care, not on finances. Physicians should let staff handle the financial discussions. Some practitioners believe patients cannot afford certain services. However, we have found patients often can afford them. They just need to be educated, so they can make an informed decision. Practitioners who assume a patient cannot afford something, and, thus, bypass some portion of the discussion of recommended therapies, are not being fair to the patient.

Dr. McDonald: Never prejudge a patient's ability or willingness to pay for a therapy. I see patients at three different offices: one is in a wealthy neighborhood, one is in an upper middle class area, and one is in a lower-income neighborhood. I have the highest conversion to LipiFlow by patients at the lower-income office.

I practice in what I believe is now the largest private ophthalmology practice in the United States. We have 600 employees. Every day, I have different scribes and technicians with me. The scribes have been trained to do counseling, but I make the recommendations, and I have my speech edited down to the shortest possible impactful speech. I leave the scribe in the lane to explain everything. Almost every patient at all three offices uses CareCredit. The surgical coordinator, the same person who books our cataract surgeries, reviews the details of CareCredit with patients. Our approach may be somewhat different because the practice is huge.

Dr. Robben: Your approach is essentially the same as ours, in that you present the evidence, make the recommendation, and then have a team member answer questions related to costs. Utilizing this technique and utilizing the people around you in this way can make it possible for busy physicians to treat dry eye effectively.

Ms. Jacobs: The physician's word is gospel, so patients aren't likely to choose a treatment unless the physician recommends it. On occasion, however, after the physician leaves the room, patients may question the need for a therapy or the cost. The role of the support staff — whether it's a counselor, technician, or scribe — is to reinforce what the physician recommends.

Ms. Barkey: In comprehensive practices, continuity is important. All caregivers need to speak with a unified voice.

REDUCING BACTERIAL LOAD WITH HYPOCHLOROUS ACID

→ A RECENT CLINICAL STUDY authored by Stroman and colleagues[1] looked at the magnitude of bacterial load reduction on the periocular skin using pure hypochlorous acid cleanser (Avenova, NovaBay). Looking at 71 eyes across four sites, the study concluded that Avenova reduced the bacterial load significantly without altering the diversity of bacterial species remaining on the skin under the lower eyelid.

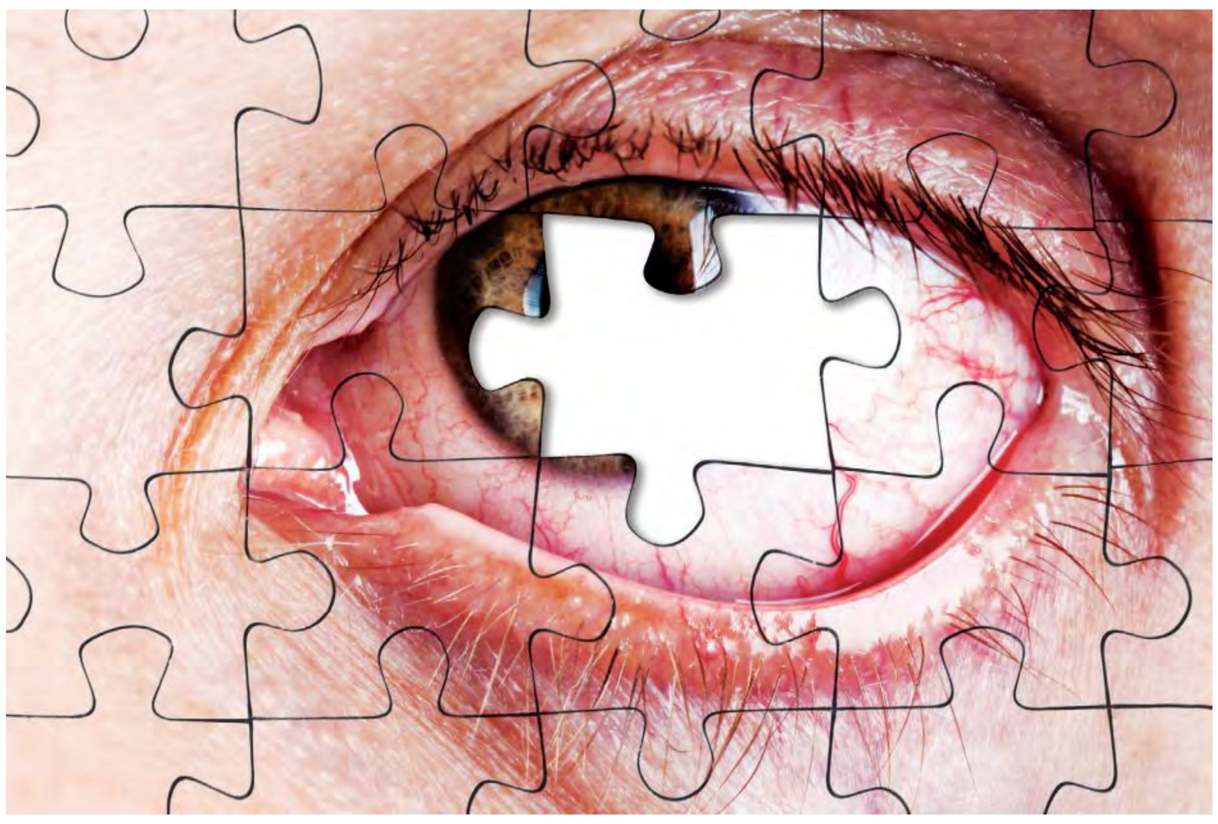
The study introduced the periocular skin as an ecosystem of diverse habitats and niches that support a wide array of microorganisms, including bacteria, fungi, and viruses. Meibomian gland dysfunction (MGD) was referenced as a well-recognized cause of tear instability — an important contributing factor in dry eye disease — and a cause of chronic meibomian gland inflammation and vascular changes around the eyelid margin.

The authors discussed Avenova's broad spectrum of activity and rapid kill kinetics because it acts as an oxidant. Its bactericidal effect is the result of lipid peroxidation or halogenation. The most prevalent strains, *Staphylococci* and *S. epidermidis* had reductions in colony forming units of 99.6% and 99.5% respectively. Additionally, Avenova removed staphylococcal isolates that were resistant to multiple antibiotics equally well as those isolates that were susceptible to antibiotics.

REFERENCE

1. Stroman DW, Mintun K, Epstein AB, Brimer CM, Patel CR, Branch JD, Najafi-Tagol K. Reduction in bacterial load using hypochlorous acid hygiene solution on ocular skin. *Clin Ophthalmol.* 2017;11:707-714.

MANAGING BIOBURDEN



AVENOVA IS THE MISSING PIECE IN ANY MGD DRY EYE OR BLEPHARITIS REGIMEN

- Avenova has patient study results demonstrating bacteria load reduction on the skin around the eyes.[1]
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- Patients with MGD Dry Eye or Blepharitis may benefit from using Avenova.

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1. Stroman, DW. Reduction in bacterial load using hypochlorous acid hygiene solution on ocular skin. Clinical Ophthalmology 2017:11 1-8. Reduction in microbial growth in the solution has not been shown to correlate with a reduction of infections in patients. Clinical studies to evaluate reduction in infection have not been performed.

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CASE 2: SHARED CASE REFERRAL FROM DEVELOPED NETWORK

Comprehensive care for a disappointed post-cataract surgery patient

By Marguerite McDonald, MD

Ophthalmic Consultants of Long Island offers quarterly lectures for shared-care practices in our network, and the patient I discuss here was referred to us by one of those practices. The practice uses diagnostics and products to care for patients with dry eye at an entry level. In this case, the referring practice wants us to make the patient happy and return him to their care after treatment.

POSTSURGICAL DISSATISFACTION

A 74-year-old man had undergone cataract surgery and received a multifocal IOL in the left eye. His uncorrected visual acuity was 20/25, but he was unhappy, stating he thought the lens was "a waste of money" and he has to limit his night driving.

The patient recently began using HydroEye (ScienceBased Health) and prescription Avenova (NovaBay), and he arrived holding a LipiScan (Johnson & Johnson Vision) image in his hand. Tear osmolarity was slightly elevated, 309 mOsmol/L and 294 mOsmol/L, and the InflammaDry (Quidel) test was positive, indicating surface inflammation. Corneal topography (Figure 1) showed some dropout, which is characteristic of dry eye, and some cylinder in the left eye. Tear breakup time was 6 seconds, and mild corneal staining was noted. On expression, the meibomian glands were definitely inspissated. I believe meibography is critical. We can talk and talk about dry eye and meibomian gland disease to patients, but it is white noise until they see the pictures. In Figure 2, the top image is the normal gland structure (patients will not understand their pictures unless you show them the normal image for comparison); gland truncation and dropout are visible on the bottom image. It's clear this patient has meibomian gland disease.

INITIAL TREATMENT

I started the patient on lifitegrast (Xiidra, Shire) and prescribed a quick-tapering dose of loteprednol etabonate ophthalmic gel (Lotemax, Bausch + Lomb) to control the inflammation. I also instructed the patient to continue taking HydroEye.

Our plan was to introduce a heated mask and have the patient continue twice daily Avenova, for its inherent antimicrobial and anti-inflammatory properties.

I also wanted to introduce microblepharoexfoliation with thermal pulsation therapy, basically, BlephEx and LipiFlow (Johnson & Johnson Vision), which we nearly always offer together. The patient was almost certainly going to need a small limbal relaxing incision (LRI) in his left eye to make him really happy.

I sketched this out and then referred the patient to the counselor for product education, consent, and scheduling.

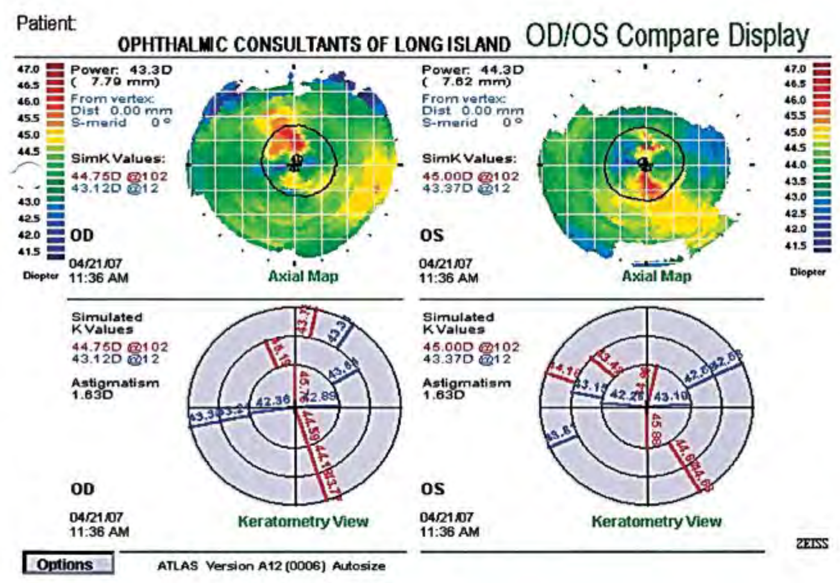


Figure 1. Corneal topography showed some dropout, and some cylinder in the left eye.

COUNSELING

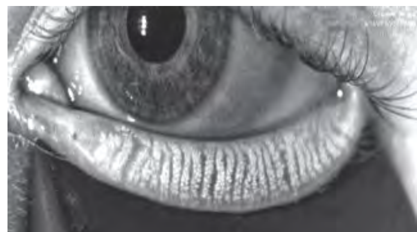
In this case, the counselor will show videos, review the consents for the LRI and LipiFlow treatment, and discuss pricing and payment options, starting with financing from CareCredit. I cannot tell you how valuable that is. The CareCredit program makes the difference between "yes" and "no" for most patients.

Because we have such a huge corporation, I can say with honesty to the patient before I leave the room, "Many of these treatments are not covered by insurance, and they are expensive. We pay the same price as our patients when we use these therapies," which is true, and I add, "Most of us use CareCredit and make affordable payments each month for 2 years. In addition, Avenova and the other medications I am going to prescribe offer various savings programs to lower your monthly out-of-pocket costs. But you'll get more details from our coordinator." That's all I say about money, and then the coordinator takes over.

The coordinator reviews the pricing, payment options, and procedures, and schedules follow-up appointments. If time permits, we perform same-day treatments, such as BlephEx and LipiFlow, particularly if a patient is from out of town. The longer your dry eye center of excellence is up and running, the farther people will come to see you, and the sicker they will be. So, if patients have traveled a long distance to see us, we do our best to make time for their treatment on that same day. If they are local, we try to schedule them for another time. We have LipiFlow spots scattered throughout every day that I am in the office.

SUCCESSFUL OUTCOME

The patient's quality of vision improved fairly rapidly over 6 weeks. When he was "all tuned up," so to speak, I performed a small LRI at the slit lamp. The patient was delighted with his vision, and he was thrilled that his ocular surface improvement resulted in virtually no symptoms.



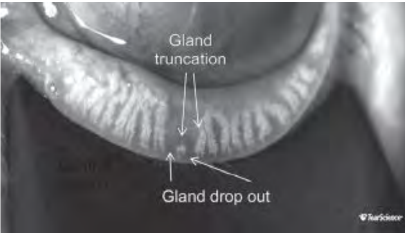


Figure 2. Normal gland structure (top) vs. gland truncation and dropout (bottom).

We sent him back to the network referral source with documentation of what we had done, and we advised the patient and the referring practice that he should continue treatment with his heated mask, HydroEye, and Avenova. We recommended gland observation with meibography every 6 months. Our coordinator facilitated the return appointment.

PANEL DISCUSSION

Dry Eye Center Within a Practice

Dr. Yeu: Dr. Robben, how are dry eye cases handled at your practice? Are you and Dr. Bowden the lead physicians? Is everyone a dry eye specialist?

Dr. Robben: We expect every doctor in our practice to reinforce the need for dry eye care. Whether a doctor is treating glaucoma or diabetes or prescribing contact lenses, if a patient has dry eye, that is part of the conversation at every visit.

If I send someone for a glaucoma follow-up, that is the focus, but Dr. Bowden or one of the other ophthalmologists will remind patients to continue with their dry eye therapies. All of us speak the same language, so the topic is never lost or convoluted between visits.

Dr. Yeu: Do you have some physicians who preferentially see dry eye patients?

Dr. Robben: In our practice, it depends on the referring physician. We have different relationships with different referring physicians, and we follow the referring doctor's preference.

Efficient BlephEx-LipiFlow Routine

Dr. Yeu: Dr. McDonald, how is thermal pulsation therapy handled in your practice?

Dr. McDonald: I like to use BlephEx treatment first to remove the biofilm and open the gland orifices, which takes no more than 10 minutes, usually 4 to 6 minutes. Then, I apply the LipiFlow activators, which takes another minute, so I'm in the room for a total of about 11 minutes maximum, usually only 6 minutes. The technician stays with the patient for the 12-minute LipiFlow treatment, removes the activators, and reviews home care instructions with the patient. I usually prescribe Lotemax Gel four times a day for 1 week. I like to have patients return in 3 months' time for a post-treatment visit with me or one of the optometrists. This gives the treatment time to work and for patients to experience results.

We call LipiFlow "the slow miracle." Patients will feel better immediately and a little better every day for 6 months. At 6 months, they should experience maximum benefit, which should last, on average, another 6 to 12 months (LipiFlow alone) or 12 to 18 months (BlephEx and LipiFlow). If we bring them back at 3 months, their tear osmolarity will have decreased significantly, and they will be feeling better. We don't want them to come back the next day and say, "This didn't work." The treatment has a profound effect; it just takes a little time to take effect. When we set patients' expectations, they are happy.

All of our optometrists perform LipiFlow treatments. So far, I am the only doctor using BlephEx with LipiFlow, but that will change soon, as we are training the optometrists to do that, as well.

CASE 3: SHARED CARE WITHIN A COMPREHENSIVE PRACTICE

A case of filamentary keratitis along with an exacerbation of dry eye disease presents significant challenges in a noncompliant patient

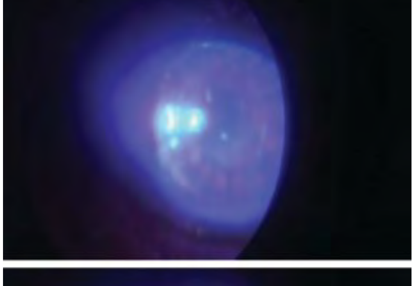
By Jerry Robben, OD

The following case demonstrates the smooth transitions that are possible between practitioners who are sharing the care of a patient within a single practice. In this case, the practice is Bowden Eye & Associates in Jacksonville, FL, where I am chief optometrist. This is just one of a multitude of scenarios possible with effective and timely communication between optometrists and ophthalmologists caring for patients who have dry eye.

CASE HISTORY

This patient, a 54-year-old female with a history of keratoconus, underwent penetrating keratoplasty in her right eye several years prior. She is a long-standing patient in our practice, but she often does not return for follow-up, which has created gaps in care. She has a history of corneal exposure and chronic dry eye, but she admits she usually doesn't follow our recommendations unless her eyes hurt.

The reason for her recent visit after a year-long absence was ocular irritation, photophobia, and significant foreign body sensation, greater in the right eye than the left, for 2 weeks. Her eyes were red and tearing. Her vision was blurry and seemed worse in the right eye.



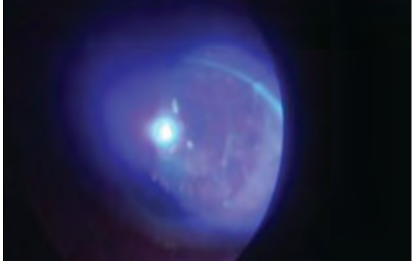


Figure 1. Slit lamp examination revealed eight filaments centrally located across the graft.

The patient stated she had been using some of her eye drops since the symptoms started, but they were not providing relief. She has a history of corneal erosions on the graft, and she was concerned that she was experiencing graft rejection.

CLINICAL FINDINGS

The patient's best corrected visual acuity was 20/30. Her SPEED score was 22, prompting our technician to perform diagnostic testing for dry eye.

The patient tested positive for matrix metalloproteinase 9 (MMP-9), and her tear osmolarity was elevated. Most notably, the number of meibomian glands was significantly reduced. During every examination in our practice, we use a cotton swab or a finger to examine the glands and estimate how many are expressible and open. We use the Meibomian Gland Evaluator (Johnson & Johnson Vision) to determine the gland score. Eyes with a low count and a low score are candidates for LipiFlow (Johnson & Johnson Vision) and likely will benefit from meibomian gland probing.

On slit lamp examination, I observed about eight filaments located centrally across the graft (Figure 1). That was the crux of the problem. We had to address the filamentary keratitis.

TREATMENT PLAN

The patient was experiencing an exacerbation of her dry eye disease. I discussed the chronic and progressive nature of this disease with her, emphasizing that we cannot cure it and that she must commit to adhering to treatment with consistent follow-up.

In the presence of filamentary keratitis or any breakdown of the ocular surface, our go-to therapy is Prokera cryopreserved amniotic membrane (Bio-Tissue). Prokera is our amniotic membrane of choice because of its cryogenically preserved properties, →

Connecting with Dry Eye Patients of Every Generation

For some patients, increased screen usage may be causing them to blink less, leading them to experience dry eye symptoms. Patients may also have dry eye after surgery or with certain medical conditions. With so many different causes, it's no surprise patients of all ages are seeking treatment for dry eye disease.

Cathi Lyons, administrator for Gordon Schanzlin New Vision Institute, a TLC Laser Eye Center, has some tips to help you connect with dry eye patients of every generation.

Make education a team effort.

Lyons recommends involving your entire staff in dry eye education. Everyone should be well-prepared to help patients understand what may be causing their symptoms, as well as their role in treating the condition.

TIP: *"We want to make sure everyone from the people who answer the phones to technicians to Patient Care Coordinators are educated on dry eye, so no one is surprised when somebody asks about it,"* said Lyons.

Your website is another effective way to connect with patients searching for information about dry eye. Be sure to include symptoms, causes and treatments so patients who are researching online can find you.

Understand their experience.

Not every generation is equally familiar with the causes of dry eye and available treatment options. Millennial patients may not connect symptoms such as eye fatigue to dry eyes. However, Baby Boomers may be familiar with medical conditions or changes in hormones that can cause the condition. By screening every patient, you can make the best recommendation to improve their situation.

TIP: *"We have all of our new patients fill out a speed questionnaire to find out what their potential level of frequency and severity for dry eye may (or may not) be,"* said Lyons. *"Everyone gets a number. We'll do additional testing at the consultation for patients who receive a score indicating potential dryness concerns."*

For many patients, continuing treatment at home and regular check-ups in the office can help increase compliance. Creating infographics such as "What is Dry Eye?" and "What is Your Homework?" can help make it easy for patients to follow on their own.

Introduce financing options.

Financing options like the ones available with the CareCredit credit card can help bridge the gap between insurance coverage and the cost of treatment. For patients who would benefit from manual gland expression or Lipiflow®, they can use their CareCredit credit card to pay for repeat treatment in your practice.*

"Most insurance will pay for dry eye exams because you're going for a medical diagnosis," Lyons said. *"However, most patients pay for treatment out-of-pocket. The cost can keep some patients from complying with their treatment plan."*

TIP: *The CareCredit credit card with special financing options* can also be used to pay for expenses that may not be covered by their insurance. It's a payment solution that can help patients fit treatment into their budget.*

Whether patients experience dry eye from screen usage, after surgery or because of a medical condition, incorporating education about the condition and financing options to help pay for treatment could help patients of all ages find relief.

To learn how to engage effectively with every age group, call the CareCredit Practice Development Team at 800-859-9975, option 1, then 6 to request Generational Insights Series Quick Guides.

*Subject to credit approval. Minimum monthly payments required. See carecredit.com for details.

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including the heavy chain hyaluronic acid/pentraxin-3 complex, that have been shown to play a major role in controlling inflammation and preventing scarring.

I prescribed cyclosporine ophthalmic emulsion (Restasis, Allergan) and loteprednol etabonate ophthalmic gel (Lotemax, Bausch + Lomb) to address the inflammation.

I also prescribed autologous serum eye drops. While Prokera is effective for rebuilding ocular tissue, reducing symptoms, and reducing the chance of scarring, the growth factors in the autologous serum eye drops will help with the chronic erosions long term. I also started the patient on prescription Avenova (NovaBay) to reduce the bacterial load, help remove biofilm, and reduce inflammation. I also had her begin using Systane Complete drops (Alcon) and Systane Nighttime Gel (Alcon) in the left eye.

After removing the filaments, I placed a bandage contact lens on the right eye, and we scheduled the patient for Prokera placement 1 week later. She returned to my clinic 1 week later, I removed the bandage contact lens and placed the Prokera Slim with no complications.

Six days after the Prokera procedure, the membrane had dissolved. I removed the ring and placed a bandage contact lens to preserve the integrity of the ocular surface during healing. One week later, I removed the bandage contact lens and instructed the patient to continue applying the Systane Nighttime Gel in her right eye.

CONTINUING FOLLOW-UP

About 4 weeks after we removed the bandage contact lens, the patient returned feeling well, but she was still symptomatic.

Her SPEED score improved from 22 to 8, and her vision, although improving, was still fluctuating. We saw improvement on the MMP-9 test, but it was still positive. Tear osmolarity was decreasing. The glands were about the same, and that is the constant. If we ignore the glands, we will still lose the war.

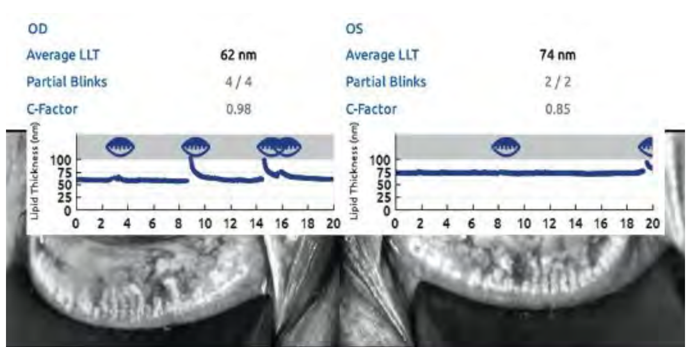


Figure 2. Meibography showed significant dropout and truncation.

We were able to obtain meibography at this visit, because the patient was experiencing less acute pain. There was significant damage with some full dropout and truncation across almost the entire array (Figure 2).

In our comprehensive practice, we use LipiView (Johnson & Johnson Vision). We find the lipid layer thickness (LLT) analysis drives home the need for treatment and also demonstrates that a patient is improving with treatment. This patient's LLTs were about 62 and 74. Based on my findings, I felt the patient would benefit from meibomian gland probing (MGP) to help unlock the keratinization, the biofilm, and the scarring that is blocking the glands.

ABOUT 4 WEEKS AFTER WE REMOVED THE BANDAGE CONTACT LENS ... THE GLANDS WERE ABOUT THE SAME, AND THAT IS THE CONSTANT. IF WE IGNORE THE GLANDS, WE WILL STILL LOSE THE WAR."

After educating the patient on this procedure, I referred her to our cornea specialist Frank W. Bowden III, MD, who agreed with my assessment.

The patient met with our counselor, who discussed financing through CareCredit, and the patient agreed to proceed with the recommended treatment plan.

POST MGP

Whenever a patient is scheduled for MGP, we perform BlephEx prior to the procedure (Figure 3) and LipiFlow immediately following it. My plan going forward is to use all of the supportive treatments, such as Avenova, and some additional anti-inflammatory treatment for a short period.

Six weeks after MGP, we evaluated the patient's response to treatment and reinforced the need for continued home therapy. The patient's glands improved significantly. LLT analysis showed a great improvement, particularly in the left eye (Figure 3). We will repeat the LLT analysis several times a year, depending on the patient's condition, to ascertain if retreatment is indicated.

From the beginning, we tell patients MGP is not a magical treatment that will cure them; but it is an effective treatment that will help control their disease. Maintenance will involve various treatments, such as BlephEx coupled with an iLux (Tear Film Innovations, Inc.) treatment every 4 to 6 months, and LipiFlow every 12 to 18 months, once the metrics start to improve. The patient may not require MGP again if we stay watchful and proactive.

CONCLUSION

While this case illustrates care being shared within a comprehensive practice, it can also serve as a model for patient care involving a comprehensive

practice and a shared-care practice. In such a scenario, the comprehensive practice can enhance that relationship, build loyalty, and optimize patient care by regularly educating referring doctors on the latest dry eye procedures and therapies.

PANEL DISCUSSION

Ensure Follow Through with Recommended Treatment

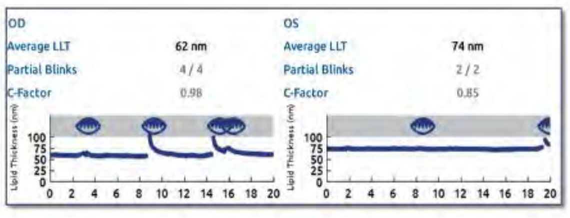
Patti Barkey, COE: This case underscores the importance of follow through. When setting up a new dry eye center, remember to teach your counselors appropriate follow-up techniques. When the doctor has recommended a treatment plan and then leaves the room, the counselor should reinforce the plan and be prepared to answer any questions.

I recommend a tracking mechanism to follow up with each patient. For example, when a patient wants to "go home and think about it," we make sure a staff member calls in a couple of days to encourage the patient to schedule the appointment for the procedure the doctor recommended That is critical.

Carrie Jacobs, COE: In our practice, we ask patients, particularly new dry eye patients, to have a family member accompany them. When they do, it helps avoid the, "I need to go home and check first" response that happens quite often when patients are alone.

Ms. Barkey: We have a staff member touch base with patients before their appointments to remind them to bring someone with them. We also send educational materials to patients before their appointments, so they can become familiar with the basics of dry eye and typical treatments. This helps save time when they arrive for their appointment.

Marguerite McDonald, MD: Many people arrive to our offices with pictures on their smartphones, asking, "Do you know about LipiFlow? Have you ever heard of this artificial tear?" They consult with "Dr. Google," and they are pretty well educated.



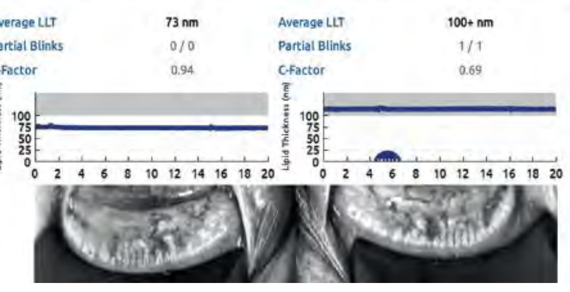


Figure 3. Six weeks after the initial visit, the patient's meibomian glands improved significantly, and lipid layer thickness analysis showed great improvement.

Ms. Barkey: Oddly enough, I've found that staff members don't use "Dr. Google," so if we don't educate them, they will know less than some patients.

Elizabeth Yeu, MD: Do you ever huddle with your dry eye counselors to ensure proper follow through?

Dr. McDonald: Always, yes.

Dr. Robben: At the end of every day, our counselor sends a progress report to me and to Ms. Barkey. That enables us to connect, review the day's cases, and discuss how we can improve our communication. Sometimes, we have to adapt. We cannot reach every patient the exact same way.

Ms. Barkey: We non-physicians know all too well that patients worship their physicians, but when the physician leaves the room, the patient sometimes admits he or she does not want the recommended treatment. We have to keep communicating and tweaking how we present information.

Dr. Yeu: That is such an important pearl. When people have cataracts that are affecting their vision, they will seek surgery. That is a fairly straightforward decision. A dry eye diagnosis has many different potential ramifications, including out-of-pocket costs.

For that reason, it is important that clinicians huddle with their counselors and obtain routine progress reports to gauge their effectiveness. We don't want to miss an opportunity to treat a patient properly. Patients may not agree to thermal pulsation, but they need their dry eye managed, so we have to develop an alternate treatment plan for them.

Ms. Barkey: We created a dry eye flow sheet, similar to a glaucoma flow sheet. On it, the counselor or the scribe will document if a patient declined or deferred a treatment. That is critical information, because the next time you see the patient, you don't want to start from the beginning with the education; you want to pick up where you left off.

Dr. McDonald: In the EMR, I may see a note, "BlephEx–LipiFlow discussed," and "patient will consider," or "patient defers at this time," so I know where we stand. I think that is wise.

Communicate and Educate

Ms. Barkey: We all agree that communication and managing patient expectations are critical to treating and managing dry eye. When sharing care within your practice, remember to keep communication lines open, and do not skimp on education. If your staff doesn't know your end goal, it is difficult for patients to know where you're going, as well. Keep in mind that many of these patients have been passed from practice to practice for years. They are looking for a savior. Be the champion who takes care of them.

Treating Dry Eye can be Complicated

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treatments

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1 John et al. "Corneal Nerve Regeneration after Self-Retained Cryopreserved Amniotic Membrane in Dry Eye Disease" 2017. Journal of Ophthalmology, 2017.

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