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Improving Meibomian Gland Dysfunction with Device Management

Announcer:

Welcome to CME on ReachMD. This activity, entitled "Improving Meibomian Gland Dysfunction with Device Management," is provided in partnership with the National Eye Institute of the National Institutes of Health, of the U.S. Department of Health and Human Services along with Prova Education.

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Dr. Ziemanski:

As many as one-third of patients present to eye clinics with complaints about dry eye. Is there something we should be doing besides warm compresses and artificial tears?

This is CME on ReachMD, and I'm Dr. Jillian Ziemanski.

Dr. Matossian:

And I'm Dr. Cynthia Matossian from Matossian Eye Associates.

Jillian, I'm so glad you asked that question: Is there something we can be doing besides recommending warm compresses and artificial tears to our patients? Most of the time when patients call, take the time to make an appointment, and come into our offices, they are suffering. That means that they are in need of something typically more advanced than artificial tears and warm compresses. But before we make that customized recommendation for our patients, we need to establish whether indeed they meibomian gland dysfunction, or MGD for short.

Jillian, can you tell us why we should be paying attention to these little glands and how to identify whether they have MGD or not?

Dr. Ziemanski:

Absolutely. I think you're absolutely right. Many of the corneal and conjunctival signs that we see in dry eye disease are just really nonspecific. To differentiate MGD from a more sort of aqueous deficient dry eye subtype, we really need to be paying close attention to the eyelid signs in particular. So for me, when I'm doing my clinical evaluation, I first really like to look at the overall lid architecture. I'm looking for things like scalloping, notching, any sort of keratinized ridges that can be along that lid margin. All of these things can really point toward chronic lid disease. After that, I then like to look at the severity of lid telangiectasia on the anterior aspect of the lid and lid margin hyperemia on the posterior aspect of the lid. That latter finding, posterior lid margin hyperemia, I really find that to be both sensitive and specific to MGD.

Next, I like to push on the lids to evaluate the amount and the quality of the meibum that's coming from the glands. You know, I work in a specialty dry eye practice, and I'm fortunate enough to have access to specialty equipment as well. So I also like to incorporate things like meibography and tear film interferometry so I can really evaluate the gland structure as well as the thickness of the lipid layer of the tear film specifically.

So once I have all of this clinical picture put together, I can really be confident, then, in ruling in or ruling out MGD as a patient's root

cause for their ocular surface disease. And then once I know whether it's a root cause, I can then target treatment toward the MGD specifically, if that's what's needed.

Dr. Matossian:

You know those comments, Jillian, are really fantastic. And sometimes we have to go even a little bit more aggressive with our approach. For example, eyelid debridement – when do we do it? Again, after I look at the eyelid margins and look whether the orifices of the meibomian glands are covered with that biofilm, I sometimes use a manual instrument like a manual debridement using a spud; it looks like a miniature ice hockey stick. Or we can go to a more advanced mechanical device such as BlephEx or NuLids Pro.

Sometimes, actually, we even need more advanced treatments. And I'm happy to discuss them. Sometimes we have to use more advanced heating and thermal pulsation devices. These are pieces of equipment that we purchase in our offices, and these are in-office procedures. And from time to time, meibomian glands need to have that, quote/unquote, deep clean, very similar to the dental model. The warm compresses, the artificial tears are like brushing and flossing, whereas the deep clean is what we get done when we go to the dental hygienist. Procedures like LipiFlow, procedures like iLUX or TearCare or ThermoFlo, all of these are aimed towards heating, melting the inspissated meibum, liquefying it, and then evacuating the impacted glands from this really turbid and thickened paste that's no longer healthy.

So it's so important to clear or clean out the impaction in order for the meibomian glands to be active, healthy, and produce that olive oil-like oil or meibum so that our tear film is healthy. After all, the tear film really is two-thirds of the refractive power of the visual system.

Dr. Ziemanski:

Cynthia, thank you so much for those descriptions. You know, I'm really curious what clinical data are out there that supports the use of these instruments? And then what clinical data do you really share with your patients to educate them on why these procedures are needed?

Dr. Matossian:

Jillian, fortunately, thermal pulsation and other heat approach to meibomian gland dysfunction have been around for quite some time, so we're fortunate to have lots of peer-reviewed articles, manuscripts, printed materials, which I cite and reference often. For example, one of the articles I have published showed that by doing a thermal pulsation procedure prior to my presurgical calculations, I changed my intraocular lens power and/or astigmatism management approach in 40% of patients. So statistically, there was relevance pre versus post LipiFlow in my IOL power and my astigmatism or LRI toric IOL use relative to my refractive target. So it does make a big difference to tune up that surface and reference these peer-reviewed journals of the importance of this type of approach prior to surgery, whether it's cataract surgery, or corneal refractive surgery like LASIK.

Dr. Ziemanski:

For those just tuning in, you're listening to CME on ReachMD. I'm Dr. Jillian Ziemanski, and here with me today is Dr. Cynthia Matossian. We're just about to discuss who should undergo thermal pulsation for meibomian gland dysfunction and how often.

Thanks, Cynthia. I really agree that thermal pulsation devices can really help to improve the clarity of vision and stabilize the tear film. The downside, though, is that there really can be an out-of-pocket expense associated with these treatments, so sometimes that can be cost-prohibitive for patients. One option that we can do is an in-office manual gland expression following just a typical warm compress that's delivered in office. We can also educate patients that when they do their at-home warm compresses, that they can follow up that compress procedure with their own manual lid massage. The outcomes of these 2 options really might not be as good as a thermal pulsation device, but it is a good alternative to consider.

So I'm curious on your perspective here. Who should undergo thermal pulsation and how often?

Dr. Matossian:

That is, Jillian, the million-dollar question. I believe that patients who have meibomian gland dysfunction, as long as they have glands on meibography or on pressing the glands, if you don't have meibography system available in your practice, they need that deep clean if you see that pasty, inspissated kind of capped glands. How often? That depends exactly on the level of disease, where the patient is being compliant with their at-home remedies that we're recommending or not. And we know notoriously patients are not compliant. So it's easier for them, at times, to undergo an in-office procedure and kind of skip a lot of what we asked them to do on a day in, day out basis.

Dr. Ziemanski:

So what would you say is the sort of shortest interval you would recommend for repeat procedure and maybe the longest interval you would recommend for a repeat procedure?

Dr. Matossian:

Often with thermal pulsation therapy, because it heats the glands from both the inside of the tarsal plate and the dermal skin side, so basically, the meibomian glands are sandwiched between the heated activators and LipiFlow, I recommend this once a year. I personally have it done once a year. And right around the time when it's reaching that 11th month, I'm getting close to my annual date, I feel a difference in my eyes. So often, I recommend it on an annual basis. But it's not, you know, sculpted in marble. It depends on the patient and the level of disease that they have.

Dr. Ziemanski:

Excellent. I love that you have kind of a standard approach but, of course, that you're flexible and that you can recommend it more frequently or less frequently so it's tailored to the individual patient.

So how do you think, Cynthia, that thermal pulsation compares to other devices like intense pulsed light?

Dr. Matossian:

Jillian, I'm so glad you asked that question because I get that question asked to me by my colleagues and by patients a lot. And my approach is: Nothing is the only or the absolute way to do things. Meibomian gland disease is complex, and different patients need different modalities to help them achieve that state of homeostasis with their tear film. So thermal pulsation heats, melts the meibum and then evacuates the impacted unhealthy meibum from the diseased glands. Whereas intense pulsed light, or IPL, uses an entirely different device. It's handheld, and it uses a specific wave light to close off the abnormal blood vessels that are leaking proinflammatory mediators. IPL works great in patients who have MGD and rosacea. It really helps treat the telangiectatic vessels associated with rosacea. And unfortunately, IPL, however, cannot be done on patients with more darkly pigmented skin tones. So patients who are darker skin tones cannot have IPL. It's ranked on the Fitzpatrick Skin Scale. Anybody like 5 and darker cannot undergo an IPL, whereas they can undergo a LipiFlow.

Dr. Ziemanski:

Well, Cynthia, you've certainly given us a lot to think about today. As we wrap up here, can you share your one take-home message with our audience?

Dr. Matossian:

I'd be happy to. We as eye care physicians need to listen to our patients. There are millions of patients suffering from dry eye disease, and MGD is one of the biggest causes of it. So we need to listen and hear what our patients are saying, do a thorough slit lamp exam, and then provide customized treatments for our patients to give them the relief that they so well deserve.

Dr. Ziemanski:

Definitely. And to really adequately treat the condition, MGD, it all starts with making sure we are evaluating our dry eye patients for MGD. So we have to make sure we're paying attention to the lid signs, looking at the glands, and really making sure we're differentiating an MGD subtype from other types of dry eye disease.

Well, that's all the time we have today. I'd like to thank our audience for listening in and thank you, Cynthia, for joining me and for sharing your valuable insights. It was great speaking with you today.

Dr. Matossian:

Jillian, thank you for inviting me and including me on this very valuable program. It's been so much fun.

Announcer:

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