Photo courtesy of Selina R. McGee, OD, FAAO

MANAGING *DEMODEX* BLEPHARITIS IN EYELASH EXTENSION WEARERS

Two cases illustrate the importance of education on lid hygiene and the benefits of a new available treatment option.

BY SELINA R. MCGEE, OD, FAAO

Demodex blepharitis is the most common form of anterior blepharitis.[1] This disease is caused by an overpopulation of *Demodex folliculorum*, which are mites that live in the hair follicles and meibomian glands and are the most common ectoparasite living on the human body.[2,3] An overgrowth of mites is evidenced by the presence of collarettes (a waxy buildup of mite waste at the base of the eyelash consisting of undigested material, keratinized cells, living and dead mites, eggs, and casings).[4] It is best to view collarettes while having the patient look down to enable a clearer view of the eyelashes. Patients with *Demodex* blepharitis may experience eyelid redness, inflammation, and ocular irritation, including itching.

THE PROBLEM WITH EYELASH EXTENSIONS

A good portion of my practice is dedicated to aesthetics, and many of my patients are concerned with eyelash thinning and misdirection, redness, thickened eyelid margins, and irritation from mascara. Oftentimes, these problems are due to an undiagnosed, underlying disorder, but patients may perceive that the only solution is to resort to cosmetic treatments, such as eyelash extensions. They may also be looking to enhance or simplify their makeup routine and minimize their day-to-day maintenance. Rarely do they come to

Figure 1. Presence of collarettes at the eyelash base and increased erythema of the upper lid margin.

Figure 2. After 4 weeks of treatment with lotilaner 0.25% twice daily OU, there was a decrease in erythema and collarettes. The eyelash distension also improved.

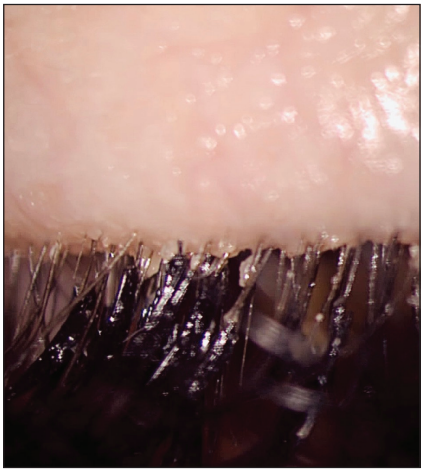

Figure 3. Collarettes and inflammation at the base of the hair follicle.

us with the understanding that we can truly help them with cosmetic concerns. The following two cases demonstrate the effectiveness of lotilaner ophthalmic solution 0.25% (Xdemvy, Tarsus Pharmaceuticals) in treating patients with eyelash extensions. This medication is prescribed twice daily for 6-weeks and eradicates the *Demodex* mites by disrupting their nervous system.[5]

Case No. 1

A 54-year-old female with eyelash extensions sought an urgent eye examination after initially being treated for a corneal infiltrate with moxifloxacin. At her follow-up visit, I implemented my routine protocol of examining patients with downward gazes during my slit-lamp evaluation and observed collarettes, leading to a diagnosis of *Demodex* blepharitis (Figure 1).

The patient also had erythema on the upper lid margin and eyelash distension of the hair follicles—more classic signs of *Demodex* blepharitis. I educated the patient about *Demodex* mites and the risks associated with eyelash extension use. She did not want to give up her extensions, and we chose to treat her with lotilaner 0.25% twice daily for 6 weeks. Although the pivotal Saturn 1 and Saturn 2 trials excluded patients who wore eyelash extensions,[6,7] this information is relevant, as we see patients with *Demodex* blepharitis who wear them every day.

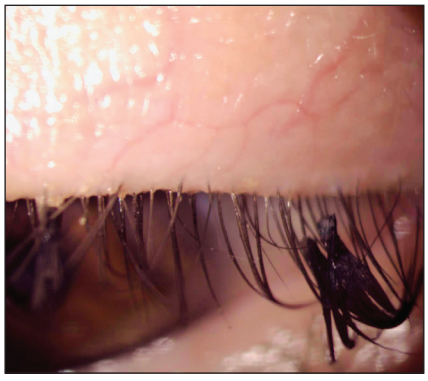

Figure 4. The patient removed her eyelash extensions, but two remained in place. She had been using lotilaner for 4 weeks with collarette reduction and will continue for the full 6 weeks of therapy.

At the follow-up visit 4 weeks later, there was improvement in the erythema and collarettes, and eyelash distension from the hair follicle was completely resolved (Figure 2). The patient was asked to continue with the lotilaner for 2 more weeks and return to the clinic in 3 months. It is important to ensure that patients complete the entire 6-week course of lotilaner 0.25%, as it is intended to eliminate two mite life cycles. The sustained control of collarettes following a 6-week treatment course suggests the potential for customized follow-up strategies for patients.[8] Of note, the

AT A GLANCE

- Patients will make choices that can compromise their ocular health, often unknowingly, such as wearing eyelash extensions. Our role as eye care providers is to educate them on the risks, benefits, and alternatives to these choices.
- An overgrowth of *Demodex* mites can be accurately diagnosed based on the presence of collarettes.
- Lotilaner can be used to treat *Demodex* blepharitis in patients who have eyelash extensions.

COLLARETTES VS GLUE

Eyelash extensions are false lashes glued to a patient's anatomic lash (Figure). In the setting of *Demodex* blepharitis, lash glue can be the same color as collarettes, so how does one differentiate the two? Collarettes, positioned at the base of the eyelashes, emerge directly from the hair follicle and typically manifest as cylindrical structures, encircling the lash like a collar. Lash glue tends to form closer to the extension, with space between the glue and the base of the lash. Also, the glue will often be horizontally oriented or ball-shaped.

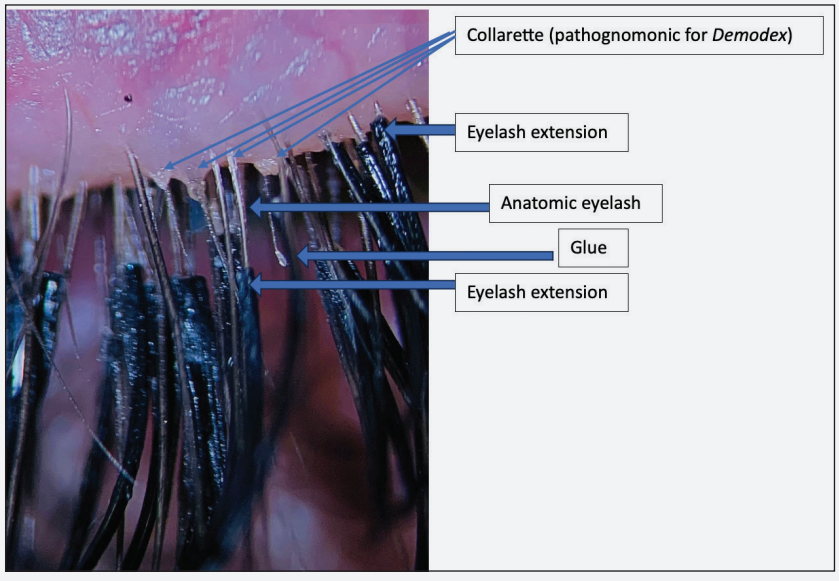

Figure. Eyelash extensions can be observed on routine slit-lamp examination.

medication did not appear to have any effect on the adhesive qualities of the eyelash extension glue.

Case No. 2

A 64-year-old female, one of my longstanding patients with dry eye, was stable on her treatment regimen when she decided to try eyelash extensions. Figure 3 shows her examination in my office 1 week after having the lashes applied. At her last dry eye exam in November, her Standardized Patient Evaluation of Eye Dryness (SPEED) score was 9/28, and her osmolarity levels were 313 mOsm/L OD and 315 mOsm/L OS. However, at her visit in early January after getting eyelash extensions, she expressed that her eyes felt significantly worse, despite using her dry eye medications. Interestingly, her SPEED score was 8/28, but her osmolarity levels had skyrocketed to 334 mOsm/L OD and 312 mOsm/L OS. She had developed *Demodex* blepharitis (Figure 3).

After confirming that the lash extensions were the only part of her routine that had changed, she opted to have them removed. I started her on lotilaner and continued with her other dry eye therapies. By her 4-week follow-up visit, she had removed her extensions, and the collarettes had greatly reduced (Figure 4). Although her SPEED score stayed the same (8/28), she subjectively stated her eyes "felt much better." Her osmolarity levels had normalized to 300 mOsm/L OD and 298 mOsm/L OS.

The process of removing eyelash extensions can be a bit traumatizing. I like to offer patients a lash serum that contains polypeptides, but no prostaglandins, to help their natural eyelashes recover. Of course, treating *Demodex* will also help the natural lash become healthier.

FIRST AND FOREMOST, EDUCATE

Patients will continue to make choices that can compromise their ocular health, often unknowingly. Our role is to educate them on the risks, benefits, and alternatives to the choices they make. We can feel confident about the effective use of lotilaner for their treatment, based on the outcomes of my cases. ■

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