Hydrogel contact lenses: Old friends are often the best friends
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As eye care providers, our primary concern should be our patients’ health, and over the years this driving force has propelled our profession to improve contact lens (CL) technology. Unfortunately, some products with great hopes, such as silicone hydrogel (SiHy) CLs, have not lived up to the original hype. In fact, since their introduction in the late 1990s, we have learned that even though many of these materials far exceed the Holden-Mertz criteria for no additional corneal swelling with extended wear,1 wearers of these CLs still develop vision-threatening conditions.2,3

The following is a list of facts indicating why conventional hydrogel CLs are still a superior choice for our patients and why SiHy CLs have failed to meet our expectations:

- SiHy CL wearers are about two times more likely to develop corneal infiltrates compared to hydrogel CL wearers.2,3
- Corneal infiltrates are less likely to develop in patients who wear daily disposable CLs, a modality that has many more hydrogel CL fitting options than SiHy CLs.3
- The high modulus of SiHy CLs is known to promote disease such as superior epithelial arcuate lesions (SEAL) and papillary conjunctivitis.2,4
- SiHy and hydrogel CL wearers have the same risk of contracting microbial keratitis.5
- A literature review determined there is no difference in eye comfort when comparing SiHy and hydrogel CLs.6

Given the obvious risks, lack of enhanced benefit, and often-additional cost associated with prescribing SiHy CLs, it is clear that hydrogel CLs should still be our treatment of choice. This new understanding has recently been illustrated in the CL market: SiHy CLs lost U.S market share in 2012 while hydrogel CLs remained steady.7 Although this article may further fuel controversy, it is with great hope that discussions like this one can someday result in a truly biocompatible CL.

References:

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