PTK-Assisted Surface Ablation on Aborted LASIK Flaps

We read with great interest the article by Brenner et al.\(^1\) in the February 2019 issue regarding early surface ablation on aborted laser in situ keratomileusis (LASIK) flaps. In femtosecond laser-assisted LASIK, the procedure was occasionally aborted due to various abnormal events that lead to complicated flaps. The rescue method reported in this article was photorefractive keratectomy or laser epithelial keratomileusis. These operations require a mechanical method to remove the corneal epithelium. However, in some cases with side cutting or lifting of the flap, the corneal flap did not adhere to the corneal bed firmly. Then the flap would be loose and displace during mechanical removal of the epithelium. We suggest that phototherapeutic keratectomy may be more suitable for epithelial removal in these circumstances. We have used the technique in clinical practice.

In addition, the application time of glucocorticoid eye drops in the article may be short. It is generally believed that glucocorticoid eye drops should be applied for at least 2 months after surface ablation. Brenner et al. reported that patients only received glucocorticoid eye drops for 4 weeks after surface ablation, which could lead to haze or myopia recurrence. The myopia deviation or decline in uncorrected or corrected distance visual acuity of the cases reported in the article may be related to this cause.

Chenghua Wei, MD
E Song, MD
Lixin Mei, MD
Anhui, China

Reply

Phototherapeutic keratectomy (PTK) is an option for epithelial removal prior to surface ablation on aborted laser in situ keratomileusis (LASIK) flaps. In our case series, we used alcohol to loosen the epithelium prior to ablation and thus there was minimal mechanical trauma involved. Additionally, flaps created by femtosecond laser are not true flaps until lifted, so mechanical removal of the epithelium is less of a concern if the flap was not lifted. There were no intraoperative flap complications in this series with this technique. Finally, PTK for this purpose is problematic for surgeons in the United States because many laser platforms are not approved for PTK by the U.S. Food and Drug Administration.

There was one case of mild corneal haze in our series. It is possible that extended length of steroid treatment may have prevented this. We do not believe there is compelling evidence that extended steroid use (2 to 4 months), when combined with mitomycin C (MMC), reduces the incidence of haze versus 1 month of steroids with MMC or MMC alone. For example, in a 2005 study, Gambato et al.\(^2\) found a lower incidence of haze with MMC alone (no steroid) when compared with a 3-month course of steroid alone (no MMC). Extended duration of topical steroids increases the chance of intraocular pressure issues and may not be warranted when combined with MMC.

Jason E. Brenner, MD
Samir Melki, MD, PhD
Boston, Massachusetts

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REFERENCES
