

incorporate an ablation profile from the 5.0 to 9.0 mm zones to be as effective as possible with the minimum amount of tissue removal as stromal tissue is already at minimum safe requirements. Wavefront treatment that adds to tissue removal should only be considered if HOAs are significant and, if on testing and questioning, the patient notices a reduction in contrast sensitivity, troublesome halos, or streaking of lights. Adjustment down by approximately 40% to the spherical refractive treatment value, using nomograms created by previously overcorrected myopia, is recommended to avoid overshooting to myopia again. Treatment can be reduced further by targeting a remaining spherical equivalent refraction of approximately +0.50 to +0.75 D sphere in the left eye to reduce potential anisometropia and the need for retreatment in the right eye. The patient should be advised that there has been a loss of BCVA in the left eye and retreatment is not likely to improve it.

Treatment in the right eye may not be required depending on the resultant CR in each eye. This should be assessed at least 3 months after the left eye has been retreated. If the right eye is dominant, more consideration may be given to retreating this as well, but this may be avoided if the 2 refractive states are balanced.

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■ The difference in refraction between the 2 eyes is not an artifact but is objectively measured on corneal topography. Such a huge amount of overcorrection can be explained only by malfunction of the mobile laser that was used. Although the operations were performed at the same site with the same mobile Nidek laser, they happened 1 month apart. Thus, we assume that the laser was moved between treatments and recalibrated and readjusted for the second operation. Because the configuration of the ablated area seems normal and centered, malfunction of the centration and eye-tracking programs cannot be responsible; therefore, the most probable reason is miscalibration of the laser energy. It would be helpful to investigate the results of patients operated on the same day immediately before and after this patient.

The patient is clearly a candidate for a reoperation, which we would perform as a customized topography-guided ablation using a 6.0 mm optical zone. The central keratectomy depth should be close to zero while the tilt should be switched off. Also, forward shift of the posterior cornea should be expected, detectable by the posterior float, because the stroma is further weakened by this

reoperation. This bulging-out effect may result in an additional hyperopic shift, which is why we would aim for full correction of the current refraction. Finally, the question remains as to whether the surface ablation should be done with or without MMC. The case report did not give clinical findings at the slitlamp; therefore, we assume there was no subepithelial haze at any time after surgery. This means that this cornea does not belong to the group of strong healers and, therefore, MMC is not mandatory.

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■ In retrospect, the preoperative Orbscan posterior floats are high in both eyes. I think this provides a valuable lesson. In addition, the patient's corneas were notably thinner than average bilaterally. Laser in situ keratomileusis was obviously not a viable option for this patient; however, he may have presented borderline forme fruste keratoconus based on Orbscan. Therefore, PRK seemed reasonable because he rejected intraocular surgery from the beginning. These corneas reacted unpredictably and perhaps emphasize the importance of careful scrutinization of the posterior float in very thin corneas as well as the location inferior to center of the thinnest portion of the cornea. Therein might lie the explanation for the different response of the 2 corneas.

As to what more can be done to try to reverse the current problems, because of the unpredictable response to the excimer laser treatment, I would not perform further subtractive laser surgery in these corneas.

Inasmuch as the patient has refused any lens-based procedure, I think the best remaining alternative to correct this unfortunate situation is CK. Peripheral pachymetry by Orbscan and ultrasound reveals peripheral corneal thickness adequate for CK. Postoperative corneas can be very sensitive to radio-frequency energy, and the patient has demonstrated a huge overreaction to excimer laser energy; therefore, I would begin with 1 ring of 8 spots at the 6.0 mm ring in the left cornea only and see how he does, giving him several months to stabilize after the procedure. Depending on how his current consecutive hyperopia responds, it may be reasonable or necessary to add further spots in the left eye at a future date. If the left eye does well and if the right eye remains hyperopic, I would offer treatment with CK of 8 spots at the 8 mm ring in the right eye.

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