

For Code V and Zemax, (1) becomes

$$x = \frac{ch^2}{1 + \sqrt{1 - (C+1)c^2h^2}} \quad (4)$$

The advantage of using (4) instead of (1) is not clear, as it requires an operation more than is required with (1), which is a little faster than (4) and has exactly the same validity. Therefore, the use of (4) instead of (1) does not offer any advantage.

For the aspherical coefficients of degrees higher than 2, we used the formula

$$x = \sum_{i=3}^{14} A_i h^i$$

which is valid both for odd and even degrees.—*Alessandro Franchini, MD*

REFERENCE

1. Kingslake R. *Lens Design Fundamentals*. London, UK, Academic Press, 1978; 37

Corneal ectasia after LASIK in one eye and uneventful PRK in the fellow eye

I would like to address some important issues raised by the article by Kymionis et al.¹ First, the authors showed the preoperative topography of the patient and emphasized that there was no evidence of keratoconus before surgery. The preoperative refractive astigmatism was similar in the 2 eyes: -1.75 diopters (D) in the right and -2.25 D in the left; however, the topographic astigmatism was 1.27 D and 2.84 D, respectively. The authors should address why there was a significant difference between the refractive and topographic astigmatism in the eyes.

Second, there was no preoperative or postoperative Orbscan corneal analysis (Bausch & Lomb) in this patient. Many authors believe that forme fruste keratoconus can usually be detected on the posterior surface of the cornea.²

Third, it is wise to compare the topography of the 2 eyes before deciding to perform refractive surgery. Although the preoperative imaging of the 2 eyes seems acceptable, if considered as separate findings, comparison of the corneal astigmatism in the 2 eyes might alarm the surgeon. An astigmatic variance between eyes of more than 1.0 D is usually considered an index for keratectasia, and it is prudent to avoid ablative refractive surgery, especially laser in situ keratomileusis (LASIK), in these patients.² In this case, the astigmatic variance between eyes was more than 1.5 D and LASIK was performed in the eye with the higher amount of

corneal astigmatism simply because photorefractive keratectomy (PRK) was performed in the right eye and LASIK was performed in the left eye in this prospective randomized comparative clinical study of LASIK and PRK. If the authors had paid more attention to the astigmatic variance between the eyes and performed PRK in the left eye and LASIK in the right eye, the keratectasia might not have occurred.

Fourth, the authors did not pay attention to an important issue, the biomechanics of the corneal tissue, which explains why some patients show keratectasia despite acceptable residual stromal bed and minor amounts of tissue ablation.

Fifth, the authors overlooked our recent report.³

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REFERENCES

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2. Agarwal S, Agarwal A, Agarwal A, eds. *Step by Step Corneal Topography*. New Delhi, London, UK, Taylor & Francis, 2005; 78–101
3. Javadi MA, Mohammadpour M, Rabei MH. Keratectasia after LASIK but not after PRK in one patient. *J Refract Surg* 2006; 22:817–820

REPLY: Mohammadpour suggests that our patient may have had subclinical keratoconus. He states that the difference between refractive and topographic astigmatism, the absence of Orbscan data, and the asymmetry in astigmatism between the 2 eyes were indications that the patient had subclinical keratoconus. None of these parameters has been reported (in an evidence-based study) as an indication of subclinical keratoconus.¹ Furthermore, our patient had none of the post-LASIK corneal ectasia risk factors (such as preoperative abnormal topography, preoperative corneal thickness less than 500 μm , or residual corneal bed thickness less than 250 μm , excessive flap thickness, or high attempted correction) reported in the major review studies of post-LASIK corneal ectasia.^{2–4}

In the fourth comment, Mohammadpour says that we did not pay attention to the patient's corneal biomechanics. While we agree that this is an important topic, it was not the purpose of the article to discuss this issue. It was a case report, with limited available space, insufficient to explain the entire background of post-LASIK corneal ectasia. Furthermore, we performed LASIK in this eye and PRK in the fellow eye because the assignment of eyes in a randomized prospective study is not the choice of the surgeon.