Prophylactic Brimonidine Before LASIK

To the Editor:

RA Norden, in his article entitled "Effect of Prophylactic Brimonidine on Bleeding Complications and Flap Adherence After Laser in situ Keratomileusis" (*J Refract Surg* 2002;18:468-471), reported that brimonidine administered before LASIK may significantly reduce subconjunctival hemorrhage and reduce hyperemia. We agree that brimonidine can be considered a strong vasoconstrictor based on alpha-2-adrenergic agonist activity. Prophylactic use of brimonidine would have an effect on bleeding complications not only after LASIK, but also other anterior segment surgical procedures. However, allergic reactions are reported more frequently with brimonidine.[1,2] Allergy was seen in up to 25.7% of patients treated with brimonidine.[3]

In a prospective study with a similar design, we evaluated the effect of brimonidine on bleeding complications during and after non-penetrating glaucoma surgery. In three of the first ten study patients, the use of prophylactic brimonidine caused an allergic reaction. The resulting hyperemia was so severe that we had to postpone surgery. Subsequently, we test the sensitivity of patients to brimonidine a few weeks before surgery.

Although Norden did not report any cases of brimonidine-related allergy, we believe that using a simple sensitivity test enables us to foresee this relatively common complication and take the necessary precautions.

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The Refractec® ViewPoint™ CK System is for the temporary reduction of spherical hyperopia in patients who have 0.75 D to 3.25 D of cycloplegic spherical hyperopia, less than or equal to 0.75 D of refractive astigmatism (minus cylinder format), and a cycloplegic spherical equivalent of 0.75 D to 3.00 D. Patients must be 40 years of age or greater with a documented stability of refraction for the prior 12 months, as demonstrated by a change of less than 0.50 D in spherical and cylindrical components of manifest refraction. The magnitude of correction with this treatment diminishes over time, with some patients retaining some or all of their intended refractive correction.

CK™ is an elective procedure with the alternatives including, but not limited to, eyeglasses, contact lenses, photorefractive keratotomy (PRK), laser-assisted in situ keratomileusis (LASIK), or laser thermal keratoplasty (LTK).

Approval of this application is based on a clinical trial of 401 eyes (233 primary and 168 secondary). Of all eyes treated, 358 eyes were available for analysis at 3 months, 352 eyes were available for analysis at 6 months, 350 eyes were available for analysis at 9 months, and 344 eyes were available for analysis at 12 months. Accountability was 99% at 3 months, 97% at 6 months, 96% at 9 months, and 99% at 12 months.

The data analysis was based on the refractive data at all follow-up examination time points (1 month, 3, 6, 9, and 12 months). At 12 months, this analysis showed that 318/344 (92%) eyes were corrected to 20/40 or better and 191/344 (56%) were corrected to 20/20 or better visual acuity without spectacles or contact lenses.

The study showed that all adverse events occurred at low rates (<1%).

Long-term risks of CK for hyperopia have not been determined. The safety and effectiveness of re-treatment procedures with the Refractec ViewPoint CK System or other refractive surgical devices have not been established.

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