

# PRIMARY CARE OPTOMETRY NEWS®

A SLACK Incorporated® publication

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PRIMARY CARE OPTOMETRY NEWS 7/1/2009

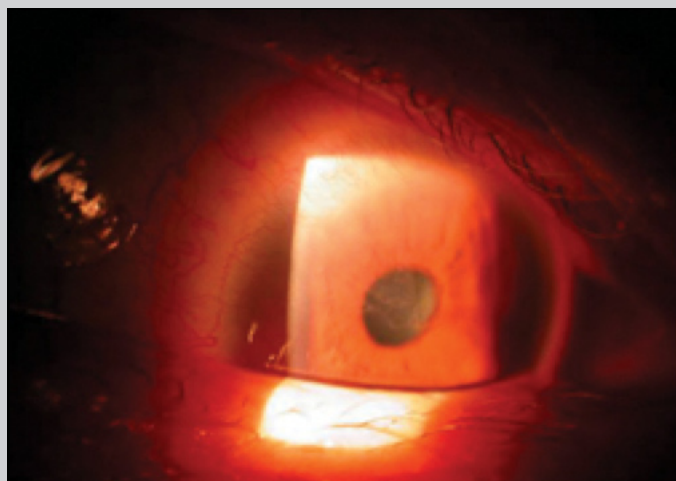
## Study shows LASIK, PRK safe for patients with uveitis

Presenters at this optometric symposium also addressed keratopathy, pain management and corneal collagen cross-linking.

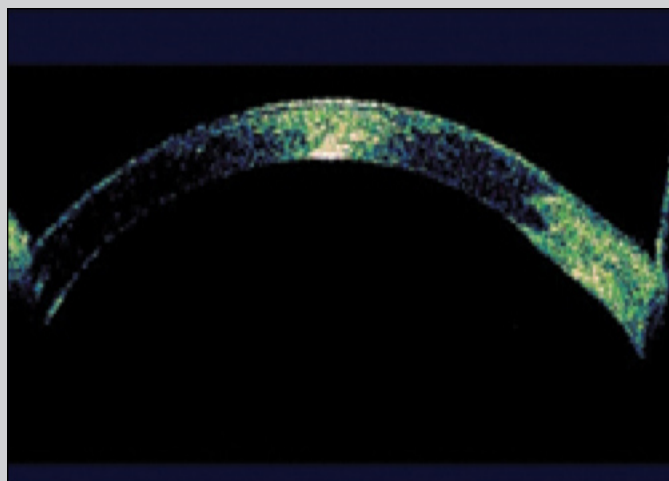
*Jennifer LeCoq*

SAN FRANCISCO — In a series of cases at Pacific Vision Institute, LASIK and PRK outcomes were comparable in patients with and without uveitis, according to a presenter here at the San Francisco Optometric Continuing Education Symposium.

Ella G. Faktorovich, MD, director of Pacific Vision Institute, presented a series of 16 patients with a history of uveitis who underwent LASIK or PRK at the institute. Thirteen patients had a history of anterior uveitis, eight of whom were



This sectoral epitheliopathy originated at the superior limbus and extended toward the center of the cornea in a wedge-like configuration.



This Visante OCT (Carl Zeiss Meditec, Dublin, Calif.) image shows the zigzag incision pattern in IntraLase enabled keratoplasty.

*Images: Faktorovich E*

positive for HLA B27. Outcomes in all patients were comparable, and no recurrence was noted at follow-up.

Dr. Faktorovich compared this data to that published in peer-reviewed literature that shows that the risk of uveitis recurrence following LASIK is the same as the risk of recurrence in patients with uveitis who do not undergo LASIK.

She emphasized the importance of achieving an inflammation-free, steroid-free eye for at least 3 months prior to LASIK or PRK. She also advised a longer postoperative topical steroid course of 2 weeks with slow taper, compared to 1 week in patients without a history of uveitis. These patients with uveitis had 1 year of follow-up.

### Keratopathy in contact lens wear

Dr. Faktorovich also reported on a series of contact lens wearers with unusual keratopathy who sought a refractive surgery consultation in hopes of improving their best-corrected visual acuity.

She described the keratopathy as sectoral epitheliopathy (SE) that originated at the superior limbus and extended toward the center of the cornea in a wedge-like configuration. The SE resolved slowly after discontinuation of contact lens wear and all topical medications. Patients needed to use hourly preservative-free artificial tears for the duration of the SE to expedite resolution, she said.

Dr. Faktorovich hypothesized that the etiology of this disorder most likely involves a disturbance of a sector of limbal stem cells superiorly, which could be due to mechanical forces, medicamentosa or toxicity of another etiology.

The prognosis is good with complete restoration of corneal clarity and 20/20 visual acuity, although the mean time to resolution was 3 months.

### **Pain management after PRK**

Dr. Faktorovich also described the latest protocols on managing pain after PRK. She presented data from randomized prospective studies showing safety and efficacy of topical analgesics targeting specific receptors on corneal nerves – opiate receptors and 5HT1D (triptan) receptors.

Topical morphine and topical Imitrex (sumatriptan, GlaxoSmithKline) were shown to be effective in relieving pain after PRK; however, topical morphine was a more effective pain reliever compared to topical sumatriptan in the concentrations used. Neither medication had an effect on epithelial healing and corneal clarity, proving both to be safe to treat pain of corneal origin.

She also described the use of oral sumatriptan, Neurontin (gabapentin, Pfizer), and Lyrica (pregabalin, CP Pharms) in patients after PRK. These agents are used four times daily until the epithelial defect heals, typically by postoperative day 4.

### **New method of PK**

Jonathan Song, MD, director of the Vision Center at Children's Hospital, Los Angeles, reported on a method of penetrating keratoplasty (PK) that results in less irritation, faster healing and less astigmatism.

Incisions are traditionally performed with trephination blades in PK, he said. While the incision in the patient is created from the anterior corneal surface, the donor button is usually incised from the endothelial side. This disparity is one source of both regular and irregular astigmatism, Dr. Song said.

With IntraLase enabled keratoplasty, or IEK, a femtosecond laser is used to create identical incisions in both the donor and host from the anterior corneal surface.

Several incision patterns are possible, but the zigzag pattern allows the incision to seal naturally by allowing a posterior valve effect that is similar to the clear cornea cataract incision valve, Dr. Song said. This method of PK results in less irritation, faster healing and less astigmatism. The sutures can be removed 6 months postoperative, he said.

### **Collagen cross-linking for keratectasia**

Dr. Song also reported that U.S. Food and Drug Administration clinical trials are showing that corneal collagen cross-linking using riboflavin and ultraviolet A (UVA) light for treatment of keratectasia results in decreasing corneal curvature over time.

In the trials, one eye has been randomized to receive the treatment and the contralateral eye is used as a control. The control eye can receive treatment at 3 months.

So far, the data show corneal curvature (maximum keratometry reading and average central K) increases at 1 month after the active procedure but decreases at 3 months and is reduced further at 6 months. Corneal curvature continues to increase in control eyes over time. Best corrected visual acuity is improving over time.

Complications are rare, but include four infiltrates, four cases of delayed re-epithelialization and one case of uveitis, which was deemed by the investigator to be of uncertain relationship to the treatment.

### **For more information:**

- Ella G. Faktorovich, MD, is director of Pacific Vision Institute in San Francisco. Dr. Faktorovich can be reached at Pacific Vision Institute, One Daniel Burnham Court, San Francisco, CA 94101; (415) 922-9500; Web site: [www.pacificvision.org](http://www.pacificvision.org). Dr. Faktorovich has no direct financial interest in the products mentioned in this article, nor is she a paid consultant for any companies mentioned.
- Jonathan Song, OD, is director of the Pediatric Cornea and Refractive Surgery Center and an assistant professor of ophthalmology at the University of Southern California in Los Angeles. He can be reached at Doheny Laser Vision Center, 1450 San Pablo St., Suite 4500, Los Angeles, CA 90033; (323) 442 6377; Web site: [www.dohenylaser.com](http://www.dohenylaser.com). Dr. Song has no direct financial interest in the products mentioned in this article, nor is he a paid consultant for any companies mentioned.