

Refractive surgery can be a lifelong experience for patients

Refractive surgeons should consider the lifelong implications of what they do for patients, said **George O. Waring III, MD, FACS, FRCOphth.** He said looking at a patient's refractive surgery experience as a single event may be a false assumption. There is a possibility that the patient will return to the same refractive surgeon for additional surgery.

"A refractive surgeon is more than a LASIK surgeon," Dr. Waring said. "A LASIK surgeon is not a refractive surgeon."

To illustrate his point, Dr. Waring traced the refractive surgical history throughout a hypothetical patient's life.

In childhood, due to rapid changes in refractive error, the eye is changing too fast for surgery, Dr. Waring said. In adolescence, the patient may be motivated to undergo refractive surgery because, socially, that is the most important decade to be spectacle free, he said. So in his teens, this hypothetical patient might opt for either LASIK or epi-LASIK to achieve spectacle independence for his minor refractive error.

As this patient reaches his 20s, he experiences a marked increase in high myopia, which is treated, again by the same surgeon, with a phakic refractive lens. Then while the patient is still in his 20s, he experiences a high residual error and unacceptable glare, so he receives his first wavefront-guided LASIK re-treatment.

In his 30s, this same patient undergoes progression of myopia, so he returns to undergo a second re-treatment.

As the patient ages into his 40s he starts to experience increasing presbyopia, so he undergoes another re-treatment for monovision, perhaps receiving a presbyopic corneal inlay.

In his 50s the presbyopia of the patient exceeds the reach of monovision, so he undergoes refractive lens exchange with an accommodating multifocal IOL.

Finally, in his 60s, the patient develops Fuchs' dystrophy and undergoes a corneal procedure that does not adjust his refraction, such as a posterior lamellar graft.

While this is just one example of the lifelong possibilities for interaction between a surgeon and his patient, Dr. Waring said his demonstration was meant to show the different refractive surgeries that are "appropriate

throughout life for the patient who wants [them]."

Cross-linking therapy a promising treatment for keratectasia

A therapy that uses ultraviolet light and riboflavin to create cross-linking of corneal collagen may be a promising treatment for keratectasia, a preliminary study has shown.

Maria Regina Chalita, MD, reported results from a prospective analysis of the treatment in seven patients who had developed corneal ectasia following LASIK surgery. Prior to the treatment, each patient had progression of ectasia documented by at least two corneal topography maps, she said.

Dr. Chalita said the procedure begins with proparacaine topical anesthesia, followed by mechanical epithelial debridement, and then instillation of a riboflavin solution 5 minutes before UV light irradiation using UV-emitting goggles. Patients then wear a bandage contact lens for 4 days after the treatment.

At the 3-month follow-up point, uncorrected visual acuity had improved in the seven patients and best corrected visual acuity remained the same, Dr. Chalita said.

"Most patients reported better [visual] quality than before surgery," she said.

"We expected to see a lot of change in corneal topography, but we didn't," she continued. "There were no reported adverse effects and no patients lost lines [of visual acuity]. No regression was observed at the 3-month follow up."

Dr. Chalita concluded that corneal cross-linking with riboflavin and UV light seems to be a safe procedure, but longer-term follow up with a larger patient cohort is needed.

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