Journal of Ophthalmology

Hindawi

Special Issue on

New Trends in Corneal Lenticular Procedures for Corneal Refractive Surgery

CALL FOR PAPERS

Laser vision correction has evolved tremendously since its beginnings in the mid-1980s. Today, the treatment aims not just to treat simple refractive errors, but to at least preserve, if not improve, the quality of vision of the patient. Numerous techniques and technologies are available, each with their own advantages, which can be roughly categorized into surface, lamellar (flap), and intrastromal techniques. Photorefractive keratectomy (PRK) was the first available surface ablation technique. Modern approaches enable us to treat corneal irregularities, scars, dystrophies, and ectatic disorders, together with refractive errors. It is generally accepted that surface ablations are more tissue-saving and allow the treatment of thinner, more high-risk corners. However, surface ablations are associated with longer visual recovery, early postoperative discomfort, and late-onset haze, especially in high ultraviolet exposure environments.

Laser-assisted in-situ keratomileusis (LASIK) is currently the most popular laser refractive surgery technique, with good visual outcomes, rapid postoperative recovery, and good safety profile. The introduction of the femtosecond laser for flap creation has made 'bladeless' LASIK even safer with reduced intraoperative flap-related complications. However, postoperative flap complications, such as traumatic dislocations, although rare, are still a lingering concern. The removal of the intrastromal lenticule alters the shape of the cornea, thereby correcting myopia and astigmatism. Because Bowman's layer remains intact, the procedure offers greater biomechanical stability, especially in the treatment of higher levels of myopia. The flapless property of small incision lenticule extraction obviates the risks associated with LASIK including adverse flap creation and dislocation. The potential advantages of this minimally invasive stromal lenticular technique over traditional femtosecond LASIK include reduced iatrogenic dry eye, a biomechanically stronger postoperative cornea with a smaller incision, and reduced laser energy required for refractive corrections. However, lenticular procedures have a steeper learning curve for surgeons, with potential complications related to lenticular dissection and removal, have limitations with enhancements and potentially slightly slower visual recovery in the initial phase, and are still not available for the treatment of hyperopia. New technologies have lower energy delivered to the cornea, as well as cyclotorsion control and eye-tracker guided centration, representing distinct advantages over established techniques in the treatment of higher amounts of astigmatism.

The aim of this Special Issue is to collate original research articles, clinical studies, experimental studies, and review articles investigating advances in refractive surgery on the cornea, discussing potential benefits on visual quality, patient/surgeon benefits, potential complications, and long-term impact on quality of vision/life. We are particularly interested in articles about newly developed lenticular techniques and technologies.

Potential topics include but are not limited to the following:

- Advances in novel lenticular techniques
- Advances in already established techniques and technologies
- Advances in femtosecond lasers
- Advances in the diagnostic techniques for corneal refractive surgery
- Visual quality, efficacy, and safety of lenticular surgery on the cornea
- Descriptions of potential complications and their management
- Updates on the management of corneal refractive surgery complications
- Patients' satisfaction after lenticular procedures

Authors can submit their manuscripts through the Manuscript Tracking System at https://review.wiley.com/submit?specialIssue=766115.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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