

the central flap thickness  $94,04 \pm 3,20 \mu\text{m}$  ( $P < .001$ ). Flaps in femtosecond group 3 had the least difference between the mean peripheral  $108,12 \pm 17 \mu\text{m}$  and the central flap thickness  $105 \pm 15,5 \mu\text{m}$  ( $P < 0.68$ ). Meridian flap uniformity measured at 10 measurement points at 90- and 180- degrees were uniform and regular for each femtosecond device. The flap thickness predictability was similar in all femtosecond groups ( $P = 0.312$ ).

Conclusions: Flap morphology differed according to the system used. Although the central flap thickness created by the Ziemer LDV was less than that created by the Intralase and VisuMax, measurements of 3 femtosecond lasers were close to the intended thickness.

**Keywords:** femtosecond laser; LASIK; flap thickness; myopia.

## PACHO SURGERY IN REDUCTION OF POST-KERATOPLASTY REFRACTIVE ERROR

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Purpose: To evaluate visual improvement in patients undergoing Phaco surgery under the corneal graft and to evaluate possible negative impact of cataract surgery for corneal graft survival.

Methods: Prospective, consecutive, interventional case series. The study analysed post-keratoplasty eyes after cataract surgery (Phaco) and spherical-error correcting intraocular lens (IOL) implantation. Incision site was made at the steepest axis determined by corneal topography (Pentacam); additional limbal relaxing incision (LRI) was made as needed. All surgeries were done after the suture removal, in patients aged 20 to 75 years. Uncorrected distance visual acuity (UDVA), best corrected visual acuity (BCVA), change in refractive error, graft clarity, endothelial cell density loss (ECD) and adverse events were recorded. The mean follow-up was  $8 \pm 3$  months.

Results. Twenty-seven eyes with cataract formation after PK were included. The mean age at cataract surgery was  $56 \text{ years} \pm 13 \text{ years}$  (SD). The mean refractive spherical equivalent decreased significantly, from  $-1.98 \pm D$  to  $0.38 \pm D$  ( $P < 0,05$ ). The mean refractive astigmatism also decreased significantly, from  $-5.34 \pm D$  to  $-1.86 \pm D$  ( $P < 0,1$ ). There was a significant improvement in the mean uncorrected distance visual acuity

(UDVA), from  $0.24 \pm 0.12$  to  $0.48 \pm 0.08$  ( $P < 0,05$ ) and in the mean corrected distance visual acuity (CDVA), from  $0.6 \pm 0.2$  to  $0.8 \pm 0.1$  ( $P < 0,05$ ) from preoperatively to the last follow-up (both  $P < 0,05$ ). At 1 year after Phaco, the UDVA was 20/40 or better in 37% of eyes and CDVA was 20/25 in 57% of eyes. Vision remained stable till 5 post-operative years, with UDVA of 20/40 or better in 34% of eyes and CDVA of 20/25 in 55% of eyes. ECD did not change significantly; from  $2049 \pm 370$  preoperatively to  $1987 \pm 513$  cells/mm<sup>2</sup> post-Phaco. During 5 years of ECD loss follow-up we found no significant difference in ECD loss between PK eyes submitted to Phaco or without Phaco.

**Conclusion.** Phaco after PK corrected most of the preoperative refractive error, bringing patients to significantly better UDVA and CDVA compared to their vision prior to cataract formation. Since Phaco surgery in a soft post-PK cataracts did not induce any significant ECD loss or changes in graft clarity, cataract may nowadays be considered as a relative post-PK complication.

**Keywords:** Phaco; cataract; keratoplasty; refractive error; corneal graft.

## REFRACTIVE OUTCOME OF KERATOPLASTY OVER MULTIFOCAL IOL

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**Purpose:** To present patient with implanted multifocal intraocular lenses (MFIOL) who underwent corneal transplantation for pseudophakic bullous keratopathy (PBK). To present a patient with implanted multifocal intraocular lenses (MFIOL) who underwent two different techniques of corneal transplantation for pseudophakic bullous keratopathy (PBK).

**Methods:** Due to development of bullous keratopathy after an uneventful cataract surgery, a 64-year-old female patient underwent penetrating keratoplasty (PK) on her right eye, and two years after UT-DSAEK (Ultra Thin - Descemet's Stripping Automated Endothelial Keratoplasty) on her left eye. During a 2 year follow up we compared visual recovery, best corrected visual acuity (BCVA), postoperative astigmatism, endothelial cell loss, and graft outcome.

**Results:** The eye that underwent UT-DSAEK procedure showed better postoperative BCVA, both in quantity and speed of recovery as compared to the other eye that underwent PK. UT-DSAEK eye achieved BCVA of 0.95 in less than 1 month