

2 years  $-0,38 \pm 0,6$  (-1,25 to +0,50) ( $p=0,09$ ). Mean IOP increased for 1,3mmHg ( $p>0,05$ ), but returned to baseline values after 3 months. One month postop ECC decreased by 5,1% ( $p<0,05$ ) and remained stable during the follow up ( $p<0,05$ ). Changes in average values for coma, trefoil and spherical aberration were not significant for 5mm pupil ( $p>0,05$ ). There were no intraoperative complications, postoperatively 2 lenses were explanted due to under sizing, and 2 eyes developed anterior lens opacities.

Conclusion: ICL implantation showed excellent refractive and visual results with high predictability and fast visual recovery. Rate of surgical and early postoperative complications was acceptable. Longer follow up and larger series of patients are needed to evaluate late postoperative complications and safety for crystalline lens and corneal endothelium. Lifelong follow up of these patients is mandatory.

**Keywords:** refractive surgery; implantable collamer lens; phakic intraocular lens; high refractive error.

## COMPARISON OF LASER IN SITU KERATOMILEUSIS FLAPS CREATED BY 3 FEMTOSECOND LASER

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Purpose: To evaluate the thickness of laser in situ keratomileusis (LASIK) flaps created by 1 of 3 femtosecond lasers using anterior optical coherence tomography (OCT -Carl Zeiss Meditec AG, Jena Germany) in patients with myopia and myopic astigmatism.

Methods: In this comparative case series, flap creation for bilateral LASIK was performed using an IntraLase (femtosecond group 1), Femto LDV (femtosecond group 2) and VisuMax (femtosecond group 3). We evaluated central flap thickness, mean flap thickness, meridian flap uniformity, difference between the mean central and mid-peripheral flap thickness 2 mm in the horizontal and vertical plane and flap thickness predictability (mean deviation between the achieved and attempted flap thickness). Flap thickness was determined at 10 points. Intended flap thickness was 110  $\mu\text{m}$ . Measurements were taken 3 months postoperatively.

Results: All femtosecond groups comprised 82 eyes. Eyes in femtosecond groups 1 and 3 had relatively even flap configuration. Flaps in femtosecond group 2 had a meniscus shape with the difference between the mean peripheral  $108,27 \pm 4,6 \mu\text{m}$  and

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