lar astigmatism, while those with irregular astigmatism, keratoconus, pellucid marginal degeneration, corneal scars, pterygium or any corneal irregularity should be excluded.

Correct and precise topography and IOL calculation, proper alignment and stability of the lens and preoperative marking are some of key items for success.

In clinical study with 16 patients binocularly implanted with trifocal toric intraocular lens we had reduction of mean astigmatism from 2,25±1.00 D to 0,32±0,25 D. All patients were free of any spectacles three months after the surgery.

Another clinical study in Eye Hospital Svjetlost, with implantation of toric Extended range of vision IOLs to 24 patients in both eyes showed reduction of mean astigmatism from 2,85±0,56 D to 0,25±0,24 D and only two patients have to wear reading glasses for small print.

In conclusion, we can say that toric presbyopia correcting intraocular lenses can correct astigmatism and presbyopia and enable patient's high spectacle independence.

Keywords: toric intraocular lenses; extended range of vision lenses; astigmatism; presbyopia.

REFRACTIVE LENTICULE EXTRACTION IN TREATMENT OF SHORT-SIGHTEDNESS WITH OR WITHOUT ASTIGMATISM

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Refractive surgery has gained high popularity within the last 20 years. One of the main reasons for the success story of recfractive surgery is the high quality of laser technology in corneal surgery. Zeiss company introduced around 10 years ago the latest step in corneal refractive surgery: "Refractive Lenticule Extraction (ReLEx - SMILE)".

This technique is suitable for myopia up to 10 D and astigmatism up to 5 D. Hyperopia treatment is under clinical investigation at the moment and commercially not available yet. ReLEx - SMILE has the advantage of a very short operation time, the need for only one femtolaser, a very fast visual recovery time and a very low complication rate.

In contrast to LASIK, ReLEx - SMILE has a very small corneal incision of 2-3 mm. Postoperative complications like epithelial ingrowth or flap striae do therefore not happen after ReLEx - SMILE. The risk for dry eyes or keratectasia is also lower after ReLEx - SMILE. The postoperative refractive results show 95% of the patients within target refraction of ± 0.5 D and a low regression of 0.07D during a follow-up period of 5 years.

ReLEx - SMILE can only be performed at the moment with the Visumax from Zeiss company, but other companies like Wavelight, Bausch & Lomb or Schwind are trying hard to catch up in this technology of refractive surgery of the future.

Keywords: corneal refractive surgery; ReLex-Smile; femtolaser.

NOVEL APPROACHES OF LASER CORNEAL SURGERY FOR PRESBYOPIA CORRECTION

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The author reviewing the current available corneal proce-dures and the recent advances of presbyopia binocular multifocal correction - no monovision with laser in situ keratomileusis (LASIK) - no knife procedure, who is carried out with two Lasers system - LDV™Femto second CristaLine for the corneal flap creation and other Excimer laser system for a new aspheric SupraCore procedure on the cornea.

Supracor multifocal treatment was applied on 240 eyes of 118 patients; 138 cases has hyperopia spherical equivalent (SE) +1,35 D SD 0.35 and 71 cases myopia correction SE -3,75 Dsph SD 0.15. The first postoperative months small fluctuation of distant and near vision was present in 38% of patients. After 6 months' stabilization was achieved in 90% of cases. Uncorrected visual acuity (UCVA) was some to preoperative best corrected visual acuity (BCVA). 8 % patients have reoperation and one year after treatment 100% of patients were satisfied to see well without glasses at all distances.

Keywords: presbyopia; refractive surgery; femtosecond laser; laser in situ keratomileusis.