

1st Article

Evaluation of single piece Diffractive Multifocal intraocular lens after cataract surgery

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Abstract

Aim: implantation of multifocal intraocular lenses is restoration of vision over a range of distances and reduction of spectacle dependence after cataract surgery. **Metods** There are two types of MFIOL: diffractive and refractive. Our clinical trial included 20 patients who underwent phacoemulsification with implantation of the diffractive MIOL ZMA00 in one or both eyes between January 2012 and December 2014. VA at distance, intermediate, and near; contrast sensitivity, visual symptoms and spectacle dependence were measured. **Results** Patients achieved excellent distance and near uncorrected visual acuity (UCVA). Distance UCVA better than 0.8 (20/25) was achieved in 80 % of eyes. Near UCVA was also good, 90 % read J2 or better. 78 % of patients never wear glasses and 35 % wear them sometimes when they read small letters or work at computer. Binocular UCVA was even better, 70 % of patients read 1.0 and 80% J1. 6 patients complained at mild to moderate night driving visual disturbances halos. 7 patients had problems with work at computer and they have to use reading glasses (+ 0.75D sph) when they work for a longer time. A significant increase in contrast sensitivity was detected for 6 cycles/o spatial frequency during follow up but no significant changes were observed for the rest of spatial frequencies. Distance uncorrected visual acuity (UCVA) at six postoperative month

Conclusion Diffractive MFIOL allows excellent far and near vision but with poor intermediate vision. Night visual disturbances disappear by time.