

## ADVANCED CATARACT SURGERY

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**Actuality:** The technology of the multifocal intraocular lenses is advancing as the objectives of the cataract surgery are becoming more embracing. Patients have more expectations about their vision and frequently desire the spectacle independence after cataract surgery. Trifocal IOLs implantation to correct presbyopia in cataract patients: experience and improvements in quality of vision clinical results.

**Purpose:** Our purpose was to evaluate visual and optical performances of cataract eyes after phacoemulsification and trifocal AcrySof® IQ PanOptix® IOL implantation.

**Material and methods:** Study is based on a follow-up of patients with cataract underwent uncomplicated phacoemulsification and trifocal implantation AcrySof® IQ PanOptix® IOL and AcrySof® IQ PanOptix® Toric. In the study was included patients with different stage of cataract asistans in the Medpark International Hospital. Cataract was removing in the patients with hyperopia, emetropy, myopia with or without astigmatism. Examinations including visual acuity, biomicroscopy, corneal topography, pachymetry, refractometry, keratometry, ultrasonography, perimetry, OCT, tonometry, calculation of IOLs etc. Surgery was performed by phacoemulsification with implant trifocal AcrySof® IQ PanOptix® si AcrySof® IQ PanOptix® Toric.

**Results:** Postoperatively, the following visual and refractive parameters were measured: distance (5 m), near (40 cm) and intermediate (60 cm) visual acuity. Preoperative distance UCVA was 0.1-0.6. Postoperative distance UCVA is 0.7-1.0, monocular and binocular uncorrected near vision and intermediate vision are 0.8-1.0. Postoperative refractive results within  $\pm 0.5$  diopter (sph equivalent).

**Conclusions:** Multifocal IOLs are good options to correct pseudophakic presbyopia as they achieve spectacle independence in the majority of the cases with high levels of patient satisfaction. To obtain success after surgery, it is crucial to adequately select the patient, include an extensive preoperative evaluation of ocular surface and macula. The careful selection of the patient, the knowledge about the IOLs' design, and their visual performance added to the proper surgical technique and management of possible complications are the key for the success implantation of the multifocal IOLs.