Purpose:
Nowadays cataract patients expect achieving spectacle independence after their operation. To fulfill this desire new trifocal intraocular lens (IOL) technology has been developed. The purpose of this study is to evaluate the short-term visual and refractive outcomes of a new trifocal aspheric IOL (Optiflex Trio).

Setting:
Smahliou Eye-Clinic, Athens, Greece

Methods:
In this prospective single-center case series study, 20 eyes of 10 bilateral patients (mean age: 61.80 ± 7.52 years, range: 48-72 years) were implanted with Optiflex Trio intraocular lens. The evaluated parameters included visual acuity (VA) at distance, intermediate and near with and without correction, contrast sensitivity, high order aberrations, defocus curve and report of patients’ satisfaction and possible side effects of the treatment by VFQ-25 questionnaire. The follow-up examination was 3 months after the cataract operation. All visual Acuities (Vas) are represented in LogMAR scale with standard deviation (SD).

Results:
Uncorrected distance and near VAs improved from 0.70 ± 0.40 and 0.60 ± 0.33 preoperatively to 0.07 ± 0.10 and 0.14 ± 0.12 at the last follow-up visit respectively. Distance corrected intermediate and near VA was 0.08 ± 0.13 and 0.12 ± 0.10, 3 months after the surgery respectively. Binocular contrast sensitivity was high in photopic and mesopic light conditions. One patient (2 eyes) complained of mild haloes in the early postoperative period. Defocus curve provided a VA equal or better to 0.1 LogMAR between defocus levels of +1.00 to -3.50D. The VFQ-25 questionnaire scores improved significantly with the IOL implantation.

Conclusions:
Optiflex Trio trifocal IOL provides good preliminary performance at distance, intermediate and near
positions. Binocular contrast sensitivity remains good at photopic and mesopic light conditions postoperatively. Glare and halos distribution on patients’ eyes are low (2/20). The VFQ-25 questionnaire indicates that patients who have the new trifocal IOL implanted bilaterally, report a high satisfaction rate in everyday life and activities. Thus, the short term performance of Optiflex Trio trifocal IOL implantation for cataract surgery shows promising results.

Financial Disclosure:
None

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