

ARTICLES

Outcomes of cataract surgery with toric intraocular lens implantation after keratoplasty

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Metrics

Abstract In Brief

Purpose:

To evaluate the efficacy and predictability of cataract extraction with toric intraocular lens (IOL) implantation after deep anterior lamellar keratoplasty (DALK) or mushroom penetrating keratoplasty (PK).

Setting:

Villa Igea Hospital, Forlì, Italy.

Design:

Prospective case series.

Methods:

Toric IOL implantation was offered to patients with cataract, corneal astigmatism >1.5 diopters (D) and regular central corneal topography after complete suture removal. Phacoemulsification was performed through a 2.4 mm scleral tunnel and an enVista monofocal toric MX60T or Eyecryl monofocal toric IOL was inserted in the capsular bag. Main outcome measures were uncorrected distance visual acuity (UDVA), corrected distance visual acuity (CDVA), manifest refraction, total prediction error, and IOL misalignment.

Results:

37 consecutive patients who had previously undergone either DALK (n = 27, 73%) or 2-piece mushroom PK (n = 10, 27%) were included. All patients completed the 6-month follow-up. The mean toric IOL power was 5.3 ± 1.1 D. Both UDVA and CDVA significantly improved (from 1.02 ± 0.27 to 0.46 ± 0.31 logMAR and from 0.65 ± 0.27 to 0.11 ± 0.12 logMAR, respectively; $P < .001$). 20 eyes (54%) reached UDVA $\geq 20/40$, whereas 35 eyes (95%) reached a CDVA $\geq 20/40$. Final refractive astigmatism was 0.93 ± 0.87 D, with 35 eyes (95%) within 2 D. Prediction error was ≤ 1 D in 18 eyes (49%). Absolute IOL misalignment was 3.3 ± 3.5 degrees.

Conclusions:

Toric IOL implantation in postkeratoplasty eyes allowed reduction of refractive astigmatism to predictably low levels with concomitant improved visual outcomes.

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