

Preliminary outcomes of randomized, controlled study comparing limbal relaxing incision vs toric intraocular lens for correction of astigmatism between 0.75 and 2.5 diopters during standard cataract surgery

Session Details

Session Title: Pseudophakic IOLs Toric

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Abstract Details:

Purpose:

To compare the subjective and objective outcomes after limbal relaxing incision (LRI) versus toric intraocular lens (tIOL) for correction of astigmatism between 0.75diopters and 2.5Ddiopters during standard cataract surgery.

Setting:

Sussex Eye Hospital, Brighton & Sussex University Hospitals NHS Trust, United Kingdom.

Methods:

In this prospective, randomized controlled study (UKCRN ID:16848), the first eye of 80 patients was randomized to receive either LRI (40 patients) or tIOL(40 patients). Patients were followed up at 1, 3, 6 and 12 months postoperatively. At all follow up visits, all patients underwent assessments which included LogMAR uncorrected distance (UCDVA), best corrected distance visual acuity (BCDVA), uncorrected near visual acuity (UCNVA), manifest refraction, Scheimpflug corneal tomography, retroillumination photograph after dilatation to assess posterior capsule opacification (PCO) and rotation of tIOLs. Spectacle independence was assessed through a standardized questionnaire at 1month.

Results:

Until March 2015, data on 32, 16 and 14 patients were available for 1, 3 and 6 months follow-up visits. Between the two groups, at all follow up visits, there was no significant difference in LogMAR UCDVA, BCDVA, UCNVA and spherical equivalent ($P>0.05$). Eyes with tIOLs had reduced refractive cylinder ($P<0.05$). Difference in mean keratometry pre and postoperatively was significant in LRI group only ($P<0.05$). There was no significant difference in the tIOL position. No significant difference was found in the mean PCO scores between groups. Difference in pre and postoperative spectacle independence was 12.7% more in tIOL group.

Conclusions:

This preliminary data from the ongoing study suggest that tIOLs significantly reduce postoperative refractive cylinder. More number of patients reports spectacle independence postoperatively after tIOL compared to LRIs. There is no significant tIOL rotation and the PCO was not different between the two groups. FINANCIAL INTEREST: One of the authors research is funded, fully or partially, by a company producing, developing or supplying the product or procedure presented, One of the authors travel has been funded, fully or partially, by a company producing, developing or supplying the product or procedure presented

