Reviewer’s report

Title: Clinical efficacy of implantation of toric intraocular lenses with different incision positions: a comparative study of steep-axis incision and non-steep-axis incision

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Reviewer: Jorge A. Calvo-Sanz

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REVIEW - Clinical efficacy of implantation of toric intraocular lenses with different incision positions: a comparative study of steep-axis incision and non-steep-axis incision

Authors propose an analysis of clinical outcomes obtained after cataract surgery with toric IOLs, using two type of incisions, in steep axis and in non-steep axis.

Although there are similar publications in this role, this is a promising and interesting work but there are several points that must be clarified.

In 102 (page 6), authors indicate that "Online toric calculator (…) was utilized to calculate the IOL cylinder power, taking into account keratometry data, SAI and the position of the incision". Well, due to the importance in toric IOL calculation, is essential to clarify with keratometry was used (IOLMaster, SimK from topography, TCRP from Pentacam?) and how the SIA was previously calculated. SIA is dependent from surgeon, operated eye, patient's age and incision radii from central cornea and diameter of incision. Also is important to note that nowadays Alcon IOL Toric calculator includes the Barret Toric Calculator; Authors should indicate what IOL power calculation formula was used (SKR/T, Holladay II, Haigis…?), and if they use any posterior corneal adjustment as Barret or Abulafia adjustment formulas.

In line 108 (page 6) authors indicate "The location of incision and axial position of OIL were marked on the cornea close to the limbus using a sterile marker pen". Is this the most accurate form to mark axis in a patient? What is the error range using this marking method? How was confirmed that the axis position of the lens was correct?

In line 128 (page 7), authors said that they assess the SIA measured after surgery. Does it vary from the previous SIA used in IOL toric power? If so, which was the mean and standard deviation? Is it clinically and statistically significant? In line 184 (page 10) the authors indicate that post-surgical SIA was 0.50 ± 0.21 D in steep axis, and 0.54 ± 0.25 D in non-steep axis, and indicate that there was a gap between axis orientation. This effect could be explained by a miscalculation of the toric IOL, due to a wrong SIA used?

In line 176 (page 10), authors indicate that 43.3% of patients had some kind of corneal surface irregularity. How was this irregularity classified? There was used any topographic index?
In results authors omit numeric data; Figures 1 could be eliminated and numerical data should be included in text.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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