Reviewer's report

Title: Comparison of Postoperative Visual Performance Between Bifocal and Trifocal Intraocular Lens Based on Randomized Controlled Trails: A Meta-Analysis

Version: 0 Date: 28 Nov 2018

Reviewer: Shisong Rong

Reviewer's report:

In this meta-analysis of randomized controlled trials (RCTs), the authors compared the clinical outcomes of bifocal and trifocal intraocular lens implantation in patients with cataract. The authors followed standard guidelines in performing this study. However, there are some important points regarding the results and general presentation of this study should be clarified.

Major issues:

1. The authors need to re-check the search strategies used to identify relevant studies. First, were the terms used sensitive (e.g., RCTs). Second, the Boolean logic operators for connecting the search terms. Please also present the different strategies used in Pubmed and Science Direct databases, respectively.

2. Did the authors search for potentially missing studies by scanning through the citations of relevant publications?

3. The selection criteria were not stated explicitly, particularly the exclusion criteria. E.g., what does it mean by 'sufficient date?' Page 5, Line 20. How about reviews and abstracts? What type of cataract?

4. Please present the number of included and excluded studies by reasons in Figure 1.

5. It was not clear how the sample sizes were processed and extracted from each study.

6. How did the authors perform the sensitivity analysis? When the random-effects model was used? Please clarify. Moreover, since the follow-up duration varied greatly among the included studies, this might be a potential source of heterogeneities.
7. It will be very helpful for the readers to understand the importance of this work by emphasizing the new information added to the knowledge of the field as there has been some similar meta-analysis in the literature. 1-4

Minor points:

1. Please explain the abbreviations when they were used for the first time in the text, e.g., UNVA, DCNVA, UIVA, CIVA, DCIVA, UDVA, CS, and CDVA.

2. In the introduction, the authors stated that 'the optimum choice for each cataract patient greatly depends on their visual status and expectation.' How did the authors touch the individualization of the cataract surgery in this meta-analysis?

3. In the abstract, the interpretation seems not always consistent with the data shown (what were those P values?). Please re-check. E.g., "no difference was found in distance-corrected intermediate VA(DCIVA) [MD= 0.09, 95%CI: (-0.04, 0.23), p<0.01] between two groups." And "the bifocal group had worse intermediate VA than trifocal group (AT LISA tri 839M) [MD=0.18, 95%CI: (0.12, 0.24), p=0.35 for UIVA and MD= 0.19, 95%CI: (0.13, 0.25), p=0.21 for DCIVA]." And many other statements/data across the texts.

References


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

No

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

Yes

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

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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