

Comparing iStent versus CyPass with or without phacoemulsification in patients with glaucoma: a meta-analysis

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To the Editor:

We appreciate the comments from Katz and Falvey on our recent publication ‘Comparing iStent versus CyPass with or without phacoemulsification in patients with glaucoma: a meta-analysis’.^{1,2} We have revisited our data in the context of their comments and note the following.

We agree that the ideal meta-analysis would include only those cases where the pre-intervention intraocular pressure (IOP) was noted either as washout or medicated. In the 33 studies included in our analysis, 18 indicated that the studies were performed without washout, 6 were with washout and 9 did not define the conditions of the starting IOP. We re-analyzed our data with these groupings. The mean preoperative IOP in the washout group was 20.9 ± 1.6 mmHg and in the nonwashout and unidentified groups combined was 21.0 ± 2.9 mmHg. The difference in pre-intervention IOP between these groups was not statistically significant ($p = 0.95$; confidence interval $-1.9, 2.0$). The main variable we used in our analysis was the magnitude of change in pre- and post-intervention IOP, which is independent of the absolute value of the pre- and post-intervention IOP. With no significant difference in pre-intervention IOP between the washout and nonwashout/unknown washout groups, we did not detect a significant effect on the outcome of our analysis with the distinction of washout/nonwashout IOP.

To decrease the risk of statistical errors and bias, we included multiple well-designed studies that clearly presented the data necessary for our meta-analysis. Although the details of the Flowers and colleagues’ study was not available in manuscript form, the abstract presented contained all of the data necessary to include in our meta-analysis.³ Thus, we did not think it appropriate to exclude it from our study.

There will always be a lag between the time-frame determined for a meta-analysis study, performing the study analysis and publication. The cutoff date for our study was 2016 and therefore excluded the full results of the COMPASS study. However, our analysis did include some of the preliminary results of this study (CyPass with concomitant phacoemulsification), which were available in our study time-frame.^{4–6}

Finally, we agree with the recommendation of Katz and Falvey regarding interpreting the results of our study with caution. These are inherent limitations of meta-analysis studies. Reliable evidence-based outcomes are best determined from well-designed clinical trials. When those data are not available, meta-analyses do provide a valuable means to use the results of many small studies to arrive at conclusions not possible from an individual study.

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Conflict of interest statement

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References

1. Mahdavi Fard A, Patel SP, Pourafkari L, *et al*. Comparing iStent versus CyPass with or without phacoemulsification in patients with glaucoma: a meta-analysis. *Ther Adv Chronic Dis* 2019; 10: 2040622318820850.

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2. Katz LJ and Falvey H. Letter to the editor: comparing iStent versus CyPass with or without phacoemulsification in patients with glaucoma: a meta-analysis. *Ther Adv Chronic Dis* 2019; 10: 2040622319847050.
3. Flowers BE, Rau M, Nardi M, *et al.* *Safety and efficacy of stand-alone cypass micro-stent implantation in patients refractive to topical glaucoma therapy: 1 year results.* San Francisco, CA: American Society of Cataract and Refractive Surgery Annual Meeting, 2013.
4. Rekas M, Pawlik B, Grala B, *et al.* Clinical and morphological evaluation of gold micro shunt after unsuccessful surgical treatment of patients with primary open-angle glaucoma. *Eye (Lond)* 2013; 27: 1214–1217.
5. Hoh H, Grisanti S, Grisanti S, *et al.* Two-year clinical experience with the CyPass micro-stent: safety and surgical outcomes of a novel supraciliary micro-stent. *Klin Monbl Augenheilkd* 2014; 231: 377–381.
6. Hoeh H, Vold SD, Ahmed IK, *et al.* Initial clinical experience with the CyPass micro-stent: safety and surgical outcomes of a novel supraciliary microstent. *J Glaucoma* 2016; 25: 106–112.

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