

Comments on the Article by Arnljots and Economou [Letter]

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Dear editor

First, I wish to congratulate the authors on their effort to analyze KDB vs iStent inject outcomes.¹ Although the study provides real-world data of an experienced surgeon, some important inconsistencies prevent definitive conclusions from the analysis.

1. Heterogeneous cohort: The study included primary/secondary open-angle glaucomas; standalone/combined procedures; patients with/without prior ocular procedures (including prior SLT, filtering surgery, and one patient with CRVO/PRP); and different surgical goals (e.g., patients with uncontrolled IOP and visual field progression despite maximum therapy, vs those with well-controlled glaucoma desiring medication reduction). Could the authors provide analysis/commentary regarding how they controlled for these baseline characteristics, given they may indicate different health of post-trabecular outflow (thereby affecting outcomes)?
2. Small sample: The dataset included 30 iStent inject and 32 KDB eyes; each subgroup included only 13–19 eyes at baseline and 7–13 eyes at final follow-up, elevating statistical uncertainty (evidenced by large SD/CI). For readers to interpret subgroup outcomes, could the authors provide data from individual cases?
3. The standalone iStent inject outcomes are based on 9 eyes at final follow-up; 5 of these 9 eyes were outliers. The authors acknowledge that excluding these five errant datapoints indeed altered results: “Excluding five outliers resulted in mean pre- and postoperative IOPs of 18.7 ± 1.6 and 16.2 ± 2.6 mmHg as well as a mean decrease of 2.4 ± 3.0 mmHg or 13.1% ($P = 0.043$).” Given the small sample and majority-outlier data, it may be more appropriate to report outlier/non-outlier results separately, and without associated inferences/statistics (which are inherently constrained by the small/skewed sample). Could the authors supply this information?
4. Selection bias: Procedure selection depended on surgeon preference, heightening possible selection bias. Average baseline visual field mean deviation was noticeably worse in the iStent inject subgroups, suggesting iStent inject was employed in more advanced cases than was KDB. This could confound outcomes, since trabecular MIGS may achieve better results in eyes with earlier glaucoma and viable trabecular outflow system.

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5. Clarification of surgical technique: In standalone trabecular MIGS procedures, it is important to specify how viscoelastic was removed at the end of surgery. In our standalone experience, removing viscoelastic via phacoemulsification irrigation/aspiration improves outcomes vs washing the anterior chamber with BSS via cannula. The authors may consider this and also specify their technique.
6. Different baseline IOP: Many MIGS studies have established that higher baseline IOP is associated with greater postoperative IOP reduction. KDB eyes had higher IOP than iStent inject eyes, confounding device comparisons.
7. Success criteria: Surgical indications may differ across MIGS patients, necessitating more comprehensive/nuanced evaluations of surgical success. For example, a 20% IOP reduction may be appropriate for eyes with uncontrolled IOP; meanwhile, significant medication reduction may best indicate success in well-controlled eyes. Given varied preoperative objectives, the authors may consider different survival analyses (e.g., qualified/unqualified success for

IOP < 18 mmHg/IOP < 15 mmHg, or proportion of eyes achieving target IOP while reducing medications).

8. Existing evidence: The study's standalone iStent inject results are noticeably different from prevailing literature, which was summarized in a recent meta-analysis (Healey 2021).² Could the authors please comment?

Disclosure

Dr Ricardo Augusto Paletta Guedes reports being a speaker/consultant for Glaukos, Allergan, and Alcon, outside the submitted work. The author reported no other potential conflicts of interest for this communication.

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