**Author's response to reviews**

**Title:** Effect of prophylactic 360 degrees laser treatment for prevention of retinal detachment after phacovitrectomy.

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**Author's response to reviews:** see over
Dear Prof. Murray

We deeply appreciate your generous consideration and comments on our manuscript entitled “Effect of prophylactic 360 degrees laser treatment for prevention of retinal detachment after phaco-vitrectomy.” Here, we address each comment, point by point, and explain how we modified the text accordingly.

Reviewer: Makoto Inoue

I believe this manuscript is well-written and informative. The setting of the manuscript concerning where this clinical investigation was performed, Nagoya, Toyama, or Baltimore, and which institutional review board approve this study were unclear. The author described significantly less incidence of postoperative retinal detachment after 360 prophylactic laser treatment. However, the information how the postoperative retinal detachment developed, where new retinal break located were upmost important. In the study of retinal detachment, the author compared two groups in the numbers of the retinal break whether single or multiple, but location of retinal breaks located at superior or inferior break, types of retinal breaks were not described.
We modified the Materials & Methods section to include information pertaining to the location at which this study was conducted, the details of the re-detachment, and we updated Table 1 to include the location and characteristics for completeness.

**Reviewer: Annal Meleth**

1. The overall rate of RRD in the macular hole series is 1.7% (2/112), which is in keeping with the historically reported rates of RRD after macular holes. In the context of a non-prospective randomized trial it is difficult to determine statistically whether the difference between the two groups is truly related to the addition of 360 prophylactic laser retinopexy. For this reason it would be essential to know the incidence of RRD in Dr. Iwase's series of macular holes prior to the initiation of this cohort.

We did not include the data before the year 2000 in the present study, because we changed our vitrectomy system to the Accurus vitrectomy system in the year 2000. The incidence of retinal detachment after surgery in the previous vitrectomy system was around 6%, which is almost the same as the control group in this present study. We added this comment to the discussion section.

2. What was the rate of cataract surgery complications in the series overall and in each group? Were the RRDs more common in patents with cataract surgery complications?
Only 2 eyes (0.4%) had posterior capsule rupture (1 eye was in the RRD control group and 1 eye was in the RRD 360° laser group) as cataract surgery complications, and the IOL was implanted on the anterior capsule in these cases. The eyes did not have any postoperative complications, including retinal detachment. The rate of cataract surgery complications was much lower than that in cataract surgery alone in our hospital, because the average age of the patients undergoing phacovitrectomy was younger than those that underwent cataract surgery alone. This is worth mentioning because the lens was softer and it was easier to complete the cataract surgery for these patients compared to the patients that received cataract surgery alone. Therefore, the rate of cataract surgery complications in the series was 0.4%. The vitreous connected to the capsular bag and IOL was trimmed sufficiently, resulting in no complications related to retinal detachment after surgery. We added clarification of this point in the Results section.

Minor essential revisions:

1. A more comprehensive discussion of the literature would be useful in the introduction. An 11% rate of RRD after macular hole repair is somewhat misleading as most recent literature has reported a much lower ~1.5% rate of RRD:
   a. rizzo et al; Retina 2010; 1.7% incidence of RD after MH
   b. rasouli et al; CJO 2012; 1.1% incidence of RRD after macular surgery
   c. Guillaubey et al; BJO 2007; 6.6% incidence of RRD
   d. Hwang et al Retina 2007; 0% incidence of retinal detachment (n=235)
The majority of the above series are using small incision vitrectomy surgery vs. the 20 gauge surgery Dr. Tawase prefers, but it would be important to present this literature more comprehensively in the discussion.

According to the reviewer’s suggestion, we added a more comprehensive discussion of the literature into the introduction section and the discussion section.

We would like to thank the reviewers for their comments and suggestions and we hope the reviewers will be satisfied with our revisions. We are looking forward to hearing from you.

P.S.) None of the authors have any financial or proprietary interests in any product mentioned.

Sincerely yours,

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