Author’s response to reviews

Title: Short-term Effects and Safety of an acute increase of intraocular pressure after Intravitreal Bevacizumab injection on Corneal Endothelial Cells

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Author’s response to reviews:

Thank you for your evaluation and good comments. We've reviewed the parts you mentioned.

(Reviewer 1) I suggest the authors to perform overall tests once again after excluding pseudophakic eyes. The readers would also like to know if previous cataract surgery has any effect on the results.

Answer: As you said, we performed overall tests once again after excluding pseudophakic eyes and 3 Table was added. Age was older and CD was lower in pseudophakic eyes, which were both statistically significant (p < 0.001, p < 0.001). As we think, the lower CD in pseudophakic eyes is probably due to age rather than cataract surgery. (Table 4) By the one-way repeated measures ANOVA, in 37 patients who didn’t have cataract surgery, the parameters except IOP did not show a significant difference over time. (table 6) The linear mixed model was also used for 37 phakic eyes. As above, only the CV of the endothelium significantly increased with increasing IOP (β = 0.612, p = 0.040). The other parameters did not show significant results as above (Table 8). Although only 5 patients (11%) who underwent cataract surgery were too small to be excluded separately, the same result was obtained after excluding pseudophakic eyes.

(Reviewer 2) 1. the amount of bevacizumab injected should be more clear in the article. was it 0.05ml or 0.1ml?

2. The article should highlight the short time duration of the IOP spike and that the articles referenced showing damage to the cornea were of longer time duration.
1. All patients included in this study were injected with 2.5 ml / 0.1 cc and it is already mentioned in the text.

2. As you pointed out, this study focuses on the momentary change of corneal endothelial cells by specular microscopy immediately after IOP elevation by intravitreal bevacizumab injection. An acute increase of IOP caused endothelial cells to stretch through direct mechanical damage as described above. It could explain the significant correlation between CV and IOP. The mean IOP at 2 minutes after injection was 49.71 ± 10.73 mmHg which is lower than normal stromal SP. And because IOP of most eyes returned to a normal range, it could not cause a long-term endothelial cell pump dysfunction or ischemic change, we supposed.

In addition

1) The table design has also been modified to make it easier to see

2) Other Changes or additions are marked in red

3) We also changed the pictures (Figure2 a to d) to a higher resolution (same contents)