Author’s response to reviews

Title: Short-term In Vivo Morphologic Changes of Amniotic Membrane after Fibrin Glue assisted Pterygium Surgery on Anterior Segment Optical Coherence Tomography: a case series

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Author’s response to reviews:

Dear Editor in Chief

Thank you very much for your encouraging comments on our manuscript entitled

" In Vivo Morphologic Changes of Amniotic Membrane after Fibrin Glue-assisted Pterygium Surgery on Anterior Segment Optical Coherence Tomography: a case series " (BOPH-D-16-00250). Enclosed is the first revised version of the manuscript. We hope that we have adequately answered the reviewer's questions. We did our best to shorten the manuscript, and we had it reviewed thoroughly by an English-proficient medical editor. The list of modifications reflected in the revised manuscript and our replies to the comments of the reviewers are also enclosed.

Additionally, we appreciate the insightful comments of Reviewers. We have revised the manuscript and provided point-by-point responses according to the two reviewers' comments, as follows.
Response to Reviewer 1

Accept after minor essential revisions

Q1. Did you observe any difference in the amniotic membrane integrated into the sclera of the patient that had undergone the scleral buckling surgery?

A1. Thank you for kind advice. We added the following sentences at Result, Case 1.

The authors did not observe difference in the amniotic membrane integrated into the sclera of the patient that had undergone the scleral buckling compared to Case 2 and Case 3.

Changes: Line 107-108

Q2. Did you find any relationship between the volume of blood and fibrin glue below the amniotic membrane and the time taken for the amniotic membrane to integrate into the sclera?

A2. Thank you for insightful comments. The authors added the following paragraphs in Discussion

“There are a few limitations in this study. First, we could not conclude the relationship between the volume of blood and fibrin glue below the amniotic membrane, and the time taken for the amniotic membrane to integrate into the sclera.”

Response to Reviewer2

Q1. morphologic ---- morphological

A1. Thank you for kind comment. We change the word “morphologic” to “morphological”

Q2. the frequency of postoperative AS-OCT imaging?
A2. As we described in Result and figure, routine AS-OCT exam were performed at postoperative 1 week, 2 weeks, and 4 weeks.

Q3. brand name and manufacturer of the fibrin sealant?

Q4. method of fibrin sealant application, mixed use of components or sequential use?

A3. A4. Thank you for kind comment. We added the brand name, manufacturer of the fibrin sealant, and the method of fibrin sealant application.

“In the operation room, the cryo-preserved AM was grafted using a permanent, inlay technique (epithelial side up) with fibrin glue (Greenplast Kit®, Green Cross Inc, Seoul, Korea) by mixed use of component.”

Q5. Line 100-101: What is meant by the "progressive changes of integrated amnion within the sclera"?

A5. Thank you for insightful comment. We added the details of “progressive changes” as follow;

Integrated amnion within sclera underwent progressive changes (decreased hyper-reflectivity of AM, decreased dead space under AM, and even (uniform) distribution of epithelium over AM) at 1 month postoperatively (F).

Q6. Line 154- authors state that complete re-epithelialization occurred within 4 weeks, examining the images one can see that it is completed even earlier, at 1 week.

A6. Thank you for kind comment. As shown in Figure 2, the epithelialization over amniotic membrane was completed at 1 week. Thus, we modified the sentences in Discussion.

“In our three patients, complete re-epithelialization were observed by AS-OCT within 1-4 weeks after surgery.”
Q7. A longer follow-up at monthly intervals (i.e. 2nd, 3rd month) might have provided further information about the time of total integration/or dissolving of the AM.

A7. We absolutely agree with Reviewer’s Opinion. However, one histopathologic study reported the AM integration in 11 of 14 patients up to 77 weeks after AMT. Thus follow-up periods in this case series is quite short. Thus, the authors added the following paragraph in Discussion.

“Second, this study had small numbers of patients (n = 3) and short-term follow-up period. And the authors could not conclude the time of total integration or dissolving of the AM. One histopathologic study reported the AM integration in 11 of 14 patients up to 77 weeks after AMT. Thus, further long-term and large observational study about the time of total integration/or dissolving of the AM.” And we added the word “short-term” in Title.

Reference

Q8. Lines 165-167: Compared to the simpler and cheaper method of fluorescein staining to check epithelial healing, AS-OCT does not seem to be a practical tool in monitoring regular, uncomplicated pterygium surgeries

A8. Thank you for kind advice. We added the following paragraphs in Discussion.

“Although, conventional slit-lamp biomicroscopic examinations allow direct viewing of the whole cornea and conjunctiva, comparisons performed during follow-up period are rather subjective.5,10 Moreover, compared to the simpler and cheaper method of fluorescein staining to check epithelial healing; AS-OCT does not seem to be a practical tool in monitoring regular, uncomplicated pterygium surgeries. Anterior segment photography may also used but these two modalities cannot provide detail of the anatomy below grafted AMs. However, on the other hand, AS-OCT images are objective, highly reproducible and can provide detailed anatomical information below AMs, and thus, we believe AS-OCT may be more useful for evaluations
performed after pterygium surgery in a large clinical setting where multiple doctors might follow a single patient.10"

Again, we thank you very much for giving us the opportunity to revise and improve our manuscript and for your consideration. We hope our manuscript is now suitable for publication in BMC Ophthalmology. Thank you in advance.

If you have further questions, please feel free to contact me:

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