Author's response to reviews

Title: Transient peripheral edema following displaced corneal graft after Descemet Stripping Automated Endothelial Keratoplasty (DSAEK): Case Report

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Author's response to reviews: see over
Title: “Transient peripheral edema following displaced corneal graft after Descemet Stripping Automated Endothelial Keratoplasty (DSAEK): Case Report”

Dear Editor,

We would like to submit the revised case report entitled “Transient peripheral edema following displaced corneal graft after Descemet Stripping Automated Endothelial Keratoplasty (DSAEK): Case Report” that has been corrected according to the comments in your last correspondence.

Below we describe the changes we have made:

Reviewer 1:

Reviewer’s Report:

This report deals with a rather common finding observed after corneal surgery. Any part of the cornea devoided of endothelium may develop edema. Provided the exposed area is large enough. With time edema subsides, partly because the endothelium spreads into the area, but also because scarring makes the exposed stroma impermeable to aqueous.
Authors’ Response:

We can understand the Reviewer’s comment but we believe that there are no similar reports of displaced (and not detached) edematous grafts after DSAEK that did not need further intervention such as graft repositioning or replacement. The main target of this manuscript is the attempt to deepen the knowledge on endothelial cell migration and function after DSAEK.

Quality of written English:

Needs some language corrections before being published

Authors’ Response:

Manuscript has been thoroughly checked by an English language expert as suggested and several changes have been made.

Reviewer 2

Reviewer’s Report:

1. The case described by Kymionis et al is very interesting, especially with regard to the possible pathophysiologic mechanisms related to the spontaneous clearance of the area not covered by the DSAEK graft. Subsequently, the authors are encouraged to focus on that area and the possible clinical impact this might have. Reporting such cases may attribute to further understanding and investigating the “re-endothelialization” process in
the host cornea. However, medium revision is required, so that the authors make their article stronger and more useful clinically.

Authors’ Response:

We would like to thank the Reviewer for his comments.

2. Is there any AS-OCT image of the cornea available during follow-up? OCT imaging or Scheimpflug imaging of the cornea and the graft would be very informative.

Authors’ Response:

Unfortunately, there are no AS – OCT or Scheimpflug images of the cornea and the graft available.

3. What was the initial and what was the final corneal thickness in the area of the displaced DSAEK graft, i.e the superonasal meniscus?

Authors’ Response:

We have included the following sentence in the Case Report section of the manuscript (page 5, last sentence): Patients’ initial corneal thickness in the area of the displaced graft was 743µm and 3 months later decreased to 685µm.

4. Were there any ECs found in that area, after it cleared spontaneously?

Authors’ Response:
5. What was the ECD of the donor graft and what was the age of the donor?

Could these parameters affect a possible EC migration?

Authors’ Response:

The donor’s age was 52 years while ECD was 2619 cells/mm².

6. Balachandran C. et al (AJO, 2009) initially suggested endothelialization of recipient posterior stroma in the presence of a detached graft, after DMEK. Dirisamer M. et al (AJO, 2011) have described extensively different endothelial healing patterns after DMEK. Re-endothelialization and “homing” may provide a possible explanation also to the case described herein by Kymionis et al. The above mentioned publications might prove helpful to the authors, in order to explain their findings more strongly.

Authors’ Response:

We agree with the Reviewer’s suggestions and therefore we have included an extra paragraph in the Conclusions section of the manuscript (page 7, 4th paragraph):

“Similar cases of detached but not displaced grafts have been reported in the literature. Balachandran et al⁹ described 2 cases of spontaneous corneal clearance after Descemet membrane endothelial keratoplasty (DMEK) suggesting endothelial transfer, migration, regeneration, or a combination thereof from either the donor or the recipient as possible explanations of the phenomenon. Dirisamer et al¹⁰ analyzed the presence of different re- endothelialization patterns after DMEK such as massive endothelial migration or some form of cell signaling to draw donor endothelial cells toward the recipient posterior stroma ("homing").
7. Reference #5 does not need to be mentioned both in text and in the references.  

Please remove the reference in brackets.

Authors’ Response:

The reference in brackets has been removed from the manuscript.

8. Reference #8 should be correctly cited.

Authors’ Response:

Reference 8 has been altered as follows: Book Chapter Smolin G, Thoft RA, eds. The Cornea: Scientific Foundations and Clinical Practice. 3rd edition. Boston: Little, Brown; 1994: 3-67

9. Grammar and structure editing of both the Abstract and the Text is advised.

Authors’ Response:

Manuscript has been thoroughly checked by an English language expert as suggested and several changes have been made.

Thank you for the constructive suggestions proposed.

Sincerely
George D. Kymionis MD, PhD