

Regarding the descemetorhexis for anterior synechiolysis prior to endothelial keratoplasty

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Dear editor

We read with great interest the article by Droutsas et al¹ entitled “Isolated descemetorhexis for anterior synechiolysis prior to endothelial keratoplasty – case report and technique.” The authors introduced an interesting case in which isolated descemetorhexis was first performed for the management of flat anterior chamber and extensive iridocorneal synechiae, and subsequently Descemet stripping endothelial keratoplasty (EK) was successfully done for visual rehabilitation.¹ This stepwise approach is expected to be helpful for restoration and maintenance of corneal clarity.¹ The authors also employed an useful method of scoring of Descemet’s membrane by using a reverse Sinsky hook (D.O.R.C., Zuidland, the Netherlands) after filling the anterior chamber with air. As previous studies have suggested, Descemet’s membrane stripping under air, instead of viscoelastic material, can improve visualization, even in corneal opacity due to bullous keratopathy.^{2,3} We believe the technique was helpful for preventing damage to adjacent tissue and reducing postoperative inflammation.

In this case, EK appeared to be challenging due to shallow anterior chamber and anterior synechiae. Although the authors did perform excellent surgery, we would like to recommend that employment of an anterior chamber maintainer could be helpful.

The authors did a vitrectome-assisted membranectomy for restoration of a round and unoccluded pupil 1 month after the EK. Although the procedure might be simple and less invasive, there is a concern that repetitive intraocular surgery could lead to endothelial cell damage. We would like to suggest that noninvasive methods, such as lysis of the pupil-occluding membrane using Nd:YAG laser, can also be considered as alternatives.⁴

We would also like to point out that close monitoring of intraocular pressure is mandatory after the EK for prevention of endothelial cell damage and graft failure, especially because the patient has prior history of trabeculectomy and severe iridocorneal synechiae.

Disclosure

The author reports no conflicts of interest in this communication.

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Authors' reply

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Dear editor

We would like to thank Dr Han for the valuable comments on our article entitled “Isolated descemetorhexis for anterior synechiolysis prior to endothelial keratoplasty – case report and technique.”

We agree that the air-to-endothelium interface drastically improves visualization of Descemet's membrane as pointed out in previous reports.^{1,2} However, due to the extent of central synechiae, an adequate anterior chamber depth could not be maintained by air until after removal of the majority of synechiae.

Concerning the use of an anterior chamber maintainer, we indeed routinely insert this device in Ultrathin-DSAEK procedures to facilitate atraumatic insertion of the endothelial lenticle with the Busin glide and forceps as described previously.^{3,4} This was not described in the present report in detail in order to emphasize on the synechiolysis technique.

Apart from that, the anterior chamber depth had been fully restored before the DSAEK procedure.

Furthermore, we agree that Nd:YAG laser-assisted perforation of the pupillary membrane could have been applied instead of a vitrectome-assisted membranectomy. However, as we mention in the article, the iridocorneal tissue in the pupillary plane appeared to be stiff and thick. Therefore an Nd:YAG laser procedure did not seem adequate to provide the desired results. Moreover, in order to clear the visual axis from the iridocorneal remnants, a large amount of energy and number of laser spots would have been necessary. This could have caused severe inflammation in the eye jeopardizing the clarity of endothelial keratoplasty graft and the function of the filtering bleb.⁵ Finally, the described approach also offered a round pupil with restored motility.

Disclosure

The authors report no conflicts of interest in this communication.

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