Author’s response to reviews

Title: Descemet Membrane Detachment in Femtosecond Laser-Assisted Cataract Surgery: A Case Report

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Author’s response to reviews:

Dear editor:

We have modified our manuscript according to the suggestions of reviewers. Followings are the response to the comments.

Reviewer reports:

Yong Wang, M.D. (Reviewer 1):

General Comments:

The paper entitled “Descemet Membrane Detachment in Femtosecond Laser-Assisted Cataract Surgery: A Case Report (BOPH-D-17-00386)” by Chen P et al, has a potential to be accepted, but some important points have to be revised or fixed before the publication. I here summarize these points.
Comment 1.

How much intracameral perfluoropropane (C3F8) gas (14%) injection was injected to anterior chamber. And which incision (main incision or side incision) did C3F8 inject through?

Re: In the surgery, we injected 0.3mL C3F8 gas (14%) into the anterior chamber through the inferior temporal incision (5 o’clock), and let aqueous humor flow out through the inferior nasal incision (8 o’clock) at the same time. Both of incisions were located at the transparent cornea area. Finally, we ensured the normal intraocular pressure at the close of surgery. We have added these information in the manuscript.

Comment 2.

In the “Case Report Section”, Line50-53 is as follows: “A topical steroid and a nonsteroidal anti-inflammatory drug (NSAID) were prescribed for the patient”. Please explain the frequency of eye drops.

Re: Each drug was given four times a day. We have added this information in the manuscript.

Comment 3.

If the severe corneal edema had last one week, why not perform the OCT check at that time.

Re: Yes, we should perform AS-OCT at that time. But unfortunately, because the patient’s visual acuity was 20/200 at one-week follow-up, better than which was HM one day after surgery. And the corneal edema had a certain amount of improvement. So at that time, we considered that the corneal edema was resulted from the phacoemulsification energy, and could be cured with the treatment of dexamethasone and NSAID. So we did not perform AS-OCT in time. We have drawn a lesson from this case.

Hui-Ju Lin (Reviewer 2): This is an interesting case report. Femtosecond laser-assisted cataract surgery (FLACS) become popular in recent and give many helps to Ophthalmologist in cataract surgery. Descemet membrane detachment (DMD) varying degree is a common complication is clear cornea approach cataract surgery. Experienced surgeons are familiar with prevent DMD in clear corner wound not only in FLACS but also in traditional phacoemulsification cataract surgery. Besides, not only 2 layers but also 3 layers cornea wound, without well control, all will induce DMD.
Re: In our manuscript, we suggest that when we make incision by femtosecond laser, both of the corneal status and incision design are important things we should pay attention to. In our case, apparent cornea arcus senilis of the patient may induce the incomplete endothelium penetration. Then the blunt force of the separation possibly made tiny dotted tears at the inner side of corneal incision. Furthermore, during phacoemulsification process, the weak endothelium became a support point for the phaco probe due to the biplanar incision design. Finally, because of the frequent movement of the phaco probe and the irrigation, a serious DMD occurred at the end of the phacoemulsification. DMD in our case results from all the factors in the whole process. Yes, not only 2 layers but also 3 layers cornea wound, without well control, all will induce DMD. But we think that the biplanar incision design may increase the incidence of DMD, especially when there exists the tiny dotted tears in endothelium, because of the direct force of instruments on endothelium. however, more clinical studies are required to confirm this.