Author’s response to reviews

Title: Acute clouding of trifocal lens during implantation: a case report

Authors:

Qian Liu (liuuqian@126.com)
suhua zhang (zhanggsuhua@126.com)
Xiaogang Wang (movie6521@163.com)
Weifang Cao (cwf20170624@126.com)
Yading Jia (yadingjia@163.com)

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Passara Jongkhajornpong (Reviewer 1):

1. After 1-hour post-operation, the author exchanged and put a new but same model lens into patient's eye. Please give a detail of the 2nd lens temperature at that time. If the lens was already warm, then thermal change could not explain this phenomenon.

Answer: Thank you for your comments. Due to high cost of trifocal lenses, same dioptric power of lenses may not present in theater during surgery, which need delivered from the company outside. (The temperature outside was about –3°C. The IOL had been in the theater for about 10 min before implantation into the eye). Therefore, we trust that the IOL temperature was lower than normal, which cause the IOL cloud.

2. The authors reported that the lens became clear after 5 minutes placed at operative room. Does this imply that performing lens exchange might not be necessary?

Answer: Thank you for your comments. Actually speaking, when we impanted the first IOL, we were not sure the temperature was the real reason for the cloudy lens at the operating time. Therefore, we exchanged the lens finally. After literatures review, we got the information about temperature affecting lens cloudy and our finding also confirmed the previous case report.
Youngsub Eom (Reviewer 2):

This phenomenon is especially prevalent in cold countries and during the winter months.

1. Is this phenomenon prevalent in cold countries and during the winter months? If so, a case report that presents a prevalent phenomenon is not worth publishing.

Answer: Thank you for your comments. This phenomenon should not be prevalent in cold countries. Our hospital do lots of cataract surgeries every year, this case was the first case. The reason for our finding was that the lens transportation in cold temperature and relative short waiting time before implantation. The IOL experienced fluctuation of temperature. So this phenomenon should be noticed by surgeons especially who chose AT LISA tri 839mp for implantation in cold countries or winter.

2. In the discussion section, the sentences of the introduction are repeated.

Answer: Thank you for your comments. We rephrase this part. Check them please.

3. This case report is quite similar with a reference 9.

Answer: Thank you for your comments. This phenomenon and the reason of IOL clouding is similar with the reference 9, so our findings also confirmed their results. Moreover, this is the first case report about trifocal lens, which is helpful for surgeons.

4. Case report of reference 5 is not a case of intraoperative clouding of acrylic hydrophilic IOLs but a postoperative IOL opacification which was found ten months following the implantation of the IOL. The author would have attempted to cite Reference 9 in this sentence.

Answer: Thank you for your comments. we made the corresponding change of this part. Check them please.
5. However, to the best of our knowledge, there was no report about IOL opacification caused by femtosecond laser and correlative inflammatory cytokines.

To say that the femtosecond laser-induced inflammation did not cause IOL opacification, it is recommended to show that this phenomenon was caused by the temperature change. The AT LISA tri IOL stored at low temperatures can be moved to body temperatures to determine if the IOL opacification occurs in vitro.

Answer: Thank you for your comments. We really want to do this experiment and now we are making project plan to observe the effect of low temperature for all other available IOLs.

Ceyhun Arici (Reviewer 3):

The authors studied a case about acute opacification of trifocal lens intraoperatively

Trifocal lenses have been increasingly used recent technological lenses and have high cost. Therefore, change of transparency during implantation can make contribution on literature. Whereas, due to high cost of trifocal lenses, same dioptic power of lenses may not present in theater during surgery. So, disappearance of opacification may have been present after an hour. Different case reports were present about opacification of foldable hydrophilic acrylic IOLs and acrylic hydrophobic IOL during surgery and improvement of opacification were detected after ≥ 3 hours. The authors should mention that disappearance of opacification may have been present after an hour.

Answer: The first IOL maintained opacification in vivo for about 1 hour and without any trend to be clear until we moved it out. Therefore, we have no evidence to declare the disappearance of opacification may have been present after an hour.