Author’s response to reviews

Title: Continuous ab interno repairing of traumatic cyclodialysis cleft using a 30-gauge needle in severe ocular trauma: a clinical observation

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Author’s response to reviews:

Dear Editors,

Thank you for your kindly review. Here are responses to the comments.

Reviewer reports:
Shikha Gupta (Reviewer 1): It is advisable to refer to article: Cyclodialysis: an updated approach to surgical strategies.Selvan H, Gupta V, Gupta S.Acta Ophthalmol. 2019 Aug 6.'standard nomenclature should be used to refer to different surgical techniques.

Answer: Thank you. We have deleted the sentence (Among these approaches, direct suture via scleral incision is often used, but it is very complicated to perform). And we add your latest article as a reference.

2. Why was wound debridement done? It is done in cases of infection?

Answer: UBM is a contact examination. In our study, there were 4 cases of open globe injuries. We recommended open globe injuries should be debridement done (wound closed) before UBM examination. We have replaced the word “debridement” with “closure” in revised manuscript. There is no case of infection.

3. Please tell whether an anterior segment or a posterior segment surgeon performed all the surgeries

Answer: a posterior segment surgeon performed all the surgeries. We have mentioned in revised manuscript.

4. was partial thickness scleral flap fashioned?

Answer: The suture buried under the tunica conjunctiva. We did the cyclopectx combined with PPV surgery. Partial thickness scleral flap would increase the bleeding, time consuming, and scleral ischemia. In our experience partial thickness scleral isn’t necessary. We refer to the paper (Yavuz

5. not clear whether anterior or posterior route used for nucleus removal

Answer: There were 2 cases with anterior route (phacoemusification) used for nucleus removal, others with posterior route (pars plana lensectomy). We have mentioned in revised manuscript.

6. What was the length of 30G needle? Is it readily available?

Answer: The length of 30G needle was 25 mm. It is readily used in China. The needle is produced by Zhejiang Kindly Medical Devices co. Ltd., and can be booked on website: http://www.zjkdl.com/. The following figure showed the difference between 30G needle and 26G needle.

7. Lots of grammatical errors, eg, Silicone oil filling was performed in 5 patients due to rhegmatogeneous retinal detachment, and C3F8gas filling was performed in 1 patient; Their VA of the nakedeye was further improved to different degrees

Answer: thank you. We have corrected these sentences in the revised manuscript. Silicone oil endotamponade was used in 5 patients due to rhegmatogeneous retinal detachment, and C3F8 gas endotamponade was used in 1 patient. The UCVA was improved to different degrees.

8. why was exposed suture not reported, only conjunctiva was used to bury them without sclera?

Answer: Partial thickness scleral flap would increase the bleeding, time consuming, and scleral ischemia. In our experience it isn’t necessary. In the last follow up, no exposed suture was reported. We refer to the paper (Yavuz Bardak, MD, et al, J Cataract Refract Surg 2000; 26:173–176). In our previous paper (Li Haibo WD, Cai Jinhong, Huang Yanming, et al: Clinical observation on closed chamber repairing with 30 gauge needle for iridodialysis. Chin J Ocul Traum Occupat Eye Dis 2017, 39(2):81-84.), no exposed suture was reported in iridodialysis when suture under conjunctiva.

9. In 2019, Gupta et al. used a 26G needle with a single suture and a single knot to repair large iridodialysis24: it was for cyclodialysis

Answer: Thank you. We had corrected this word in the revised manuscript.

10. why was prolene suture not used, there is a risk of breakage of nylon suture when tightening leading to loss of traction all over.

Answer : We used prolene suture in some cases. We have replaced the word “nylon suture” with the word “10-0 suture”. Figure 1 showed the prolene suture. We think both sutures can be used. As we know, 10-0 nylon interrupted suture is used to close the clefts. This method is widely used with high success rates in clinical practice (Ormerod LD, Baerveldt G, Sunalp MA, Riekhof FT: Management of the hypotonous cyclodialysis cleft. Ophthalmology 1991, 98(9):1384-1393.; Agrawal P, Shah P: Long-term outcomes following the surgical repair of traumatic cyclodialysis clefts. Eye (Lond) 2013, 27(12):1347-1352) and iridodialysis repair (Yavuz Bardak, MD, et al, J Cataract Refract Surg 2000; 26:173–176). Its black color seems easily performed when across the needle. In our study we didn’t
find any breakage when tightening. Surgical experience is important when tightening.

11. where are the patients with open globe injury as mentioned in the manuscript? not mentioned in the table

Answer: Case 2,3,4,5 are open globe injury. We have mentioned in the revised manuscript.

12. why did the authors perform UBM in eyes with RD and hypotony suspecting a cyclodialysis? is this a routine practice for all cases of trauma.

Answer: Hypotony is associated with cyclodialysis, RD and choroid detachment. We must confirm whether cyclodialysis exist in a hypotony eye. In our opinion, this is a routine practice for cases of trauma with hypotony, but not for all cases of trauma.

13. in the video shown, the authors have not used scleral incision before needle exit. no markings have been made either. as a result, the suture passes at contiguous points is irregular, the fifth pass is very posterior compared to the previous passes, also the surgeon is facing great difficulty in suture passage due to hypotony, very less G of needle used 30 G instead of 26G, no counterforce from the scleral incision.

Answer: We rotated the knot within the suture tract into the vitreous cavity. In the last follow up, no exposed suture was reported. It is hardly to pass at the marking site when the needle across the sclera from inside way. The sutures pass at contiguous points were depended on surgeon experience. Marking is a good way to perform. We will try in the future. Thank you!

Norma Allemann (Reviewer 2):
- Methods. 2. Diagnosis of cyclodialysis cleft ... Page 3 Lines 43-44. ..."after immersion of the probe in a water bath, UBM (probe frequency 50 to 100 MHz, depth 5 mm)..." Authors should suppress the word "water bath" which can give an idea, to an unexperienced examiner, that immersion technique in UBM can be performed using water. Saline solution is more indicated in immersion technique. Distilled water can be used when Clearscan is used to perform UBM. A High-frequency transducer can vary from 50 to 100 MHz, but not in the same equipment. 100 MHz- transducer is not available commercially. So best for the authors should be reporting only the frequency of the transducer used in the specific equipment. Authors should suppress the depth=5 mm, since the UBM images show that the transducer used allows more than 5 mm depth, since the cyclodialysis cleft was seen in the images. The high frequency ultrasound transducer used in this images provided at the Figure 2 allows images in a depth larger than 5 mm.

Answer: Thank you. We have replaced the word "water bath" into “saline solution”. We have confirmed the Tianjin Suowei Electronic Technology Co., Ltd. The frequency transducer is 50 MHz, and the max area is 16*9mm. we correct in the revised manuscript.

- Methods. 3. Surgical procedure. Page 4 Lines 31-32. ...", and exited the site on the scleral surface 2 mm behind the corneal limbus"... please use terminology: "2 mm posterior to the corneal limbus".

Answer: Thank you. We have replaced this word in the revised manuscript.

- Page 6. Lines 44-46. Correct terminology of the sentence: ..."Their VA of the naked eye was....."
Answer: Thank you. We have replaced this word with UCVA in the revised manuscript.

- Page 7. Line 8-9. Correct typing error: "gonioscope" to "gonioscopy"

Answer: Thank you. We have replaced this word in the revised manuscript.

- Page 7. Line 8-9. Include citation of extra reference using UBM in cyclodialysis repair (imagens pre and postoperative) attached to the review.

Answer: Thank you. We have added the extra reference.

- Page 7. Lines 14-16. Authors should verify is UBM used clinically to detect cyclodialysis was equipped with a 50-MHz transducer, because 100-MHz transducers are not commercially available and would not have penetration (depth of focus) viable to examine the ciliary body.

Answer: Thank you. We have corrected in the revised manuscript.

- Page 8. Lines 12-17. Authors should rephrase to: "...In 2019, Gupta et al. reported a case using a 26G needle....". And Suppress the following sentence: "....However, this was only a case report.".

Answer: Thank you. We have corrected in the revised manuscript.

- Overall: How long after the trauma were the patients operated on? Include this information in the Session: Results.

Answer: Thank you. We have added this information in the revised manuscript.

- Legend Figure 1. Change the word "behind the corneal limbus" to: "posterior to the corneal limbus".

Answer: Thank you. We have corrected in the revised manuscript.

- Legend Figure 2. Correct typing error: "Clerft" to "cleft"

Answer: Thank you. We have corrected in the revised manuscript.

- Table 1. Suggestion to include only the amount of clock hours of cyclodialysis in the column of Extent of clefts by UBM, for example: 3 clock hours, 2.5 clock hours. etc.

Answer: Thank you. We have corrected in the revised manuscript.

- Table 1. Authors should include information about intraocular pressure pre and postop in the table.

Answer: Thank you. We have corrected in the revised manuscript.

- References. Extra reference to be included.

Answer: Thank you. We have corrected in the revised manuscript.