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Shui Qiu,
Science Editor,
Editorial Office
World Journal of Clinical Cases

ESPS Manuscript NO: 24782
Title: Surgeon-Performed Point-of-Care Ultrasound (POCUS) in severe eye trauma: Report of two cases and Mini-review of the Literature

Dear Editor:
Thank you for your kind positive response and asking us to revise the above manuscript. The manuscript has now been completely re-written as advised by the reviewers. We thank the reviewers for their highly encouraging and useful comments which have helped us to dramatically improve our manuscript. Due to the interest and extensive information requested by the reviewers, we have changed the title and extended the discussion to be a Case Report and Mini-Review. All changes made in the manuscript are highlighted by yellow color to facilitate the review process. The answers to the reviewers' comments are as follows:

Reviewer 1 (number 00505061)

Dear authors, The presented manuscript is interesting and shares your experience with the Point-Of-Care-Ultrasound POCUS ultrasound in the Emergency Care Unit in two patients with severe eye trauma. I have the following comments and suggestions:

Comment 1. Please, give some more details about the method POCUS, i.e. what is the difference and advantage over the contemporary ophthalmic B-scan ultrasound.

Answer: The POCUS examination has now been described in detail as requested (Pages 7 & 8, Figure 10). The differences between POCUS and the contemporary ophthalmic B-scan ultrasound have also been explained as requested (page 7, first paragraph). Both are B mode ultrasound.

Comment 2. Please, add the visual acuity testing of both patients, it would be more applicable and precise than just mentioning "blurred vision" or "loss of vision".
Answer: The visual acuity of both patients has now been added as requested (Page 4, paragraph 2, and Page 5, last Paragraph).

Comment 3. Is it really possible to examine pupil reactions with POCUS? Please, add literature review to state this, because it is not shown by your two cases.

Answer: Yes it is possible and we use it routinely if we cannot properly lift the eyelid. This has now been described in detail (Page 8, second paragraph, Figure 11) and a reference has been added as requested (reference 8).

Comment 4. There are some grammar and expression errors: emergency setting rather than "acute setting" (p. 4), vitreo-retinal rather than "vitro-retinal" (p. 4). Please, check spelling.
Answer: Grammar and linguistic corrections have been performed as advised. The final version of the paper has now been revised by a native English speaker as requested.

Comment 5. Abbreviations, appearing for the first time in the text should be given in full, even if the term is widely used – GCS and ICU on p. You have written POCus instead of POCUS on p.4.
Answer: Abbreviations, appearing for the first time in the text have been given in full as advised (Page 5). Abbreviations were not used for those used once. POCus has been changed to POCUS as advised (Page 4).

Comment 6. As this manuscript is case presentation, you need not to give a big number of cases, but as general I would add that you may continue further research and give more illustrative cases, underlining all POCUS advantages over the routine techniques.

Answer: Thank you for your encouragement. We agree that there is a need to continue studying this important are and we are planning to follow that advice and perform a larger clinical study.

Reviewer 2 (number 00505045)

Comments: The authors evaluated the effectiveness of USG in two patients with eye trauma, one with penetrating eye injury and other with blunt trauma. I would make following comments:

Comment 1. How and why the author performed the USG in sterile conditions at the point of the care?

Answer: POCUS should be performed under sterile conditions in eye injuries because the ultrasound probe can transmit infection. We have now described our technique in performing POCUS in sterile conditions as requested (Page 7, last paragraph; page 8, first paragraph).

Comment 2. It is more suitable to state 'retrobulbar space' instead of the 'back of the eye'

Answer: The term has been changes as advised (Page 4, Paragraph 2).

Comment 3. The term penetrating eye injury may be misunderstood by the readers because the term of penetrating eye injury means full thickness laceration of the eye globe. If there is no full thickness laceration in globe wall, then the term of penetrating eye injury is incorrect.

Answer: Thank you for your accurate comment. We have now changed "penetrating eye injury" to "foreign body injury" through the manuscript to avoid the misinterpretation.

Comment 4. I think that second case is inconclusive to test effectiveness or helpful of POCUS. Because the patient was evaluated by CT scan two times within 48 hours and at the third day another CT scan was performed. In normal condition an orbital CT or MRI can show retrobulbar space (orbit) and ON very well. In that period ON and orbit could be evaluated by orbital MRI and BT.

Answer: The advantages and disadvantages of POCUS, CT scan and MRI has been discussed in detail (Pages 8-10). We stressed that their role are complementary and not competitive (Page 10, third paragraph).

Comment 5. The authors say that second patient had vision loss. The measurement of Visual acuity should have been done at that time.

Answer: The measurement of visual acuity has now been added as requested (Page 5, last Paragraph)

Comment 6. I think that an ophthalmologist should be consulted for ophthalmic evaluation when these patients were seen in emergency department. If an ophthalmologist is not existing or could not be reached, then these patients can be evaluated by the physicians of emergency medicine.

Answer: Both cases were managed in collaboration and consultation with the ophthalmologist who was available at the same time of performing the POCUS exam and agreed that the study was useful. This has now been added to the discussion (Page 10, paragraph 2). One of the authors of the paper is an ophthalmologist.

Comment 7. As the authors said, orbital CT and MRI (if no suspect of metallic foreign body in the eye) is good imaging methods in such situations. The scenario of the article can be changed a little to defend the benefit of the POCUS. The POCUS can be helpful in such condition as a secondary or additional imaging method or in the lack of other imaging methods.

Answer: We have now modified the discussion to highlight the advantages and disadvantages of each modality including the POCUS study. We have highlighted that ultrasound is useful when MRI and CT scan are not available in disaster situations (Page 9, third paragraph) and referenced that (Reference 17)

Comment 8. If there is a suspect of open eye injury then globe and orbital USG must be done very carefully if needed, otherwise should be avoided, because intraocular content may exit if pressure applied to the globe.

Answer: We completely agree with the reviewer. We have now rephrased this point as a limitation of ultrasound (Page 9, last Paragraph)

Comment 9. Lastly, please make a scenario for this article that cannot be contrary to ophthalmic emergency principles.

Answer: Same to point 6.

Reviewer 3 (number *00505222*)

Dear authors, This manuscript is interesting in that it deals with the usefulness of an ocular ultrasound in emergency center for eye injuries. However, in my opinion, this manuscript should be revised in some aspect.

Comment 1. Please add the details about the Point-of-Care Ultrasound(POCUS). Ophthalmologists also use an ocular ultrasound called B-scan. Is this POCUS different with B-scan?

Answer: The POCUS examination has now been described in detail as requested (Pages 7 & 8, Figure 10). The differences between POCUS and the contemporary ophthalmic B-scan ultrasound have also been explained as requested (page 7, first paragraph). Both are B mode ultrasound.

Comment 2. In second case, I think the exact diagnosis is a traumatic optic neuropathy. In Acute phase of the traumatic optic neuropathy, the optic nerve usually appears normal. So, we diagnosis the traumatic optic neuropathy with a complete ophthalmic history, visual acuity test, pupil test, color vision test, and visual field test. I understand the author's intention to show the accuracy of the POCUS even if it is a negative finding. However, in my opinion, to add the cases with positive findings, not with negative findings, is more useful in this article.

Answer: Thank you for your useful comment. We have now changed the term to be traumatic optic neuropathy through the manuscript as advised. We present a positive case and a negative case to support the high sensitivity and specificity of the test. This has now been added to the discussion (Page 9, 3rd paragraph).

Comment 3. Is it really possible to check the pupil reaction with an ultrasound? With B-scan, we cannot check the pupil reaction. Please describe in detail about that.

Answer: Yes it is possible and we use it routinely if we cannot properly lift the eyelid. This has now been described in detail (Page 8, second paragraph, Figure 11) and a reference has been added as requested (reference 8).

Comment 4. It has some grammatically incorrect expressions or spelling errors. Please revise these expressions. For example, Page 4, Case 1, last line : vitro-retinal → vitreo-retinal ?Page 7, 1st line : our present two cases → Two cases that we had presented

Answer: Grammar and linguistic corrections have been performed as advised. The final version of the paper has now been revised by a native English speaker as requested.

Reviewer 4 (number 00505209):

Comment: I consider this study to have valuable data that would be of interest if published. However in my opinion it needs a major revision. The major issue is a small number of cases. It should be rather a case series of 5-10 patients with tables showing clinical and demographic data and with direct comparison of ultrasound accuracy with other diagnostic techniques.

Answer: Thank you for your highly encouraging comment which is very similar to the first reviewer. We agree with the reviewers that there is a need to continue studying this important and we are planning to follow that advice and perform a larger clinical study.

Thank you for your consideration for this manuscript and we hope that it will finally find a place in your reputable journal.

Yours sincerely

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