Response to the Comments of Peer Reviewers

June 06, 2022

Subject: Revision and resubmission of manuscript number: NO: 77260

Dear Professor , Editor-in-Chief of World Journal of Clinical Cases

Thank you for your letter and opportunity to revise our paper on "Twin reversed arterial perfusion (TRAP) sequence: A rare and dangerous complication form of monochorionic twins – a case report"

We have carefully considered all the comments and have addressed them in the following attachment. Parts of the manuscript have been modified in response to the reviewers' suggestions and comments.

We trust that our responses are satisfactory to you and the reviewers and that it is now suitable for publication in the World Journal of Clinical Cases.

We hope the revised manuscript will better suit World Journal of Clinical Cases but are happy to consider further revisions, and we thank you for your continued interest in our research.

Yours sincerely,

EDITORIAL CORRECTIONS:

Comment 1: Before final acceptance, uniform presentation should be used for figures showing the same or similar contents; for example, "Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...".

Response to comment 1: Many thanks for your comment. We revised the figure legend correctly.

Comment 2: Please provide the original figure documents.

Response to comment 2: We had also provided the figure documents.

Comment 3: Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor.

Response to comment 3: We had prepared the original figure in the attached PowerPoint file.

Comment 4: In order to respect and protect the author's intellectual property rights and prevent others from misappropriating figures without the author's authorization or abusing figures without indicating the source, we will indicate the author's copyright for figures originally generated by the author, and if the author has used a figure published elsewhere or that is copyrighted, the author needs to be authorized by the previous publisher or the copyright holder and/or

indicate the reference source and copyrights. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT): Copyright ©The Author(s) 2022.

Response to comment 4: Many thanks for your comment. The figures are original and we have add the following copyright information as instructed.

Comment 5: Before final acceptance, when revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the RCA. RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: https://www.referencecitationanalysis.com/.

Response to comment 5: Done as requested.

Comments of 06283805:

Comment 1: Diagnosis was amended to a 26-week TRAP sequence stage Iib. Comment : I don't know or hear if TRAP Sequence have any staging like TTTS i.e. Quintero Staging, please correct if I am wrong.

Response to comment 1: We are very thankful for reviewer's comment. We have clarified accordingly as requested. We based on Wong et al. 's clasfification (reference # 11) (Wong AE, Sepulveda W. Acardiac anomaly: current issues in

prenatal assessment and treatment. Prenat Diagn. 2005 Sep;25(9):796-806. doi: 10.1002/pd.1269. PMID: 16170844. table 1, pages 796-806. Table 1, pages 800).

Table 1—Proposed classification of acardiac anomaly

Type	Acardiac: pump-twin AC ratio	Signs of pump-twin's compromise[a]	Management
Ia	<50%	Absent	Reclassify within two weeks based on follow-up scan. Consider treatment if no change in stage but increase in absolute size or persistence of moderate or significant vascularity of acardiac twin
Ib	<50%	Present	Reclassify within two weeks based on follow-up scan. Prompt treatment if increase in absolute size or persistence of moderate or significant vascularity of acardiac twin
IIa	≥50%	Absent	Prompt intervention
IIb	≥50%	Present	Emergency intervention

AC, abdominal circumference.
[a] Defined as physical changes visualized on two-dimensional ultrasound (moderate-to-severe polyhydramnios, cardiomegaly or pericardial effusion) or abnormal Doppler signals (tricuspid regurgitation, reverse flow in the ductus venosus, pulsation in the umbilical vein or high middle cerebral artery peak velocity).

Prenat Diagn 2005; **25**: 796–806.

Comment 2: The acardiac twin was 7.5cm at the longest length, and the pump twin showed fetal distress with PSV-MCA = 1.6MOM. Comment : there are many literature mention about the weight of acardiac twin can be calculated based on the measurements in 3 dimensions, using the formula of the prolate ellipsoid (V=pi/6 * length *anterior posterior diameter*width in cm^3 or grams) not only one measurement like longest length, and I don't agree about diagnose a fetal distress with PSV-MCA above 1.5 MoM, it cant be like that I thing, you must mention about ductus venosus a wave, or umbilical arteries or vein doppler, or CPR ratio, or biophysical profile components.

Response to comment 2: We are very thankful for reviewer's comment. We have clarified accordingly aabout the fetus weighting method based on Moore et al.'s suggestion (reference # 8).

Estimate the weight of acardiac fetus: weight (g) = 1.2 × (longest length in cm)^2 - (1.7 × longest length in cm)

Comment 3: We performed emergency laser photocoagulation of the acardiac twin's umbilical cord (26 weeks GA) Comment : many literature suggest laser coagulation only for below 20 weeks GA, because above 20 weeks the cord become thick, laser likely to fail, please explain me and give your reason, why you choose the laser coagulation for 26 weeks GA, and you don't mention about the device you used for laser or camera system, about the energy (Watts), how many seconds to shot, how many times your wait until asystole for acardiac twin, how many sites you coagulated, and what micronmeter the laser fiber you used to coagulate, and how you access the amniotic cavity, which trocar you used, and are you use saldinger technique or not, do you performed the amnioinfusion before or not, and what kind tocolytic you used in this patient?

Response to comment 3: We are thankful for reviewer's comment. We have clarified accordingly the surgery procedure as requested.

Anesthesia was performed by combined general anesthesia (intravenous sedation) and local anesthesia (using Lidocaine 1%). The surgery was performed in a separate operation room for fetal surgery. Diode laser, with a 600µ fiber, was used for cord occlusion. We used fetoscopic instruments Image IS 4U of Karl Storz (Tuttlingen, Germany), laser instruments of Medilas D MultiBeam of Dornier; Laser light guide of Dornier Medtech. The Seldinger technique was used to enter the polyhydramnios cavity under ultrasound guidance. Scop diameter was 2mm. Laser photocoagulation was applied to reduce the umbilical cord of the acardiac twin. The umbilical cord vessels were ablated under direct vision, power settings from 50-60W were required to achieve complete occlusion. The technique was considered successful when the entire umbilical cord blood vessel was occluded in the acardiac twin. That was

demonstrated by the loss of umbilical cord flow at the site of the ablation on doppler ultrasound examination. The amniotic fluid was subsequently drained until the maximum vertical pocket (MVP) reached the normal range (MVP 5cm or 6cm).

Comment 4: Fetoscopy is a new and effective treatment for this condition Comment : I don't agree with that statement, not fetoscopy, this only camera system to view the inside womb, not for the treatment.

Response to comment 4: We are grateful for reviewer's comment. We have clarified accordingly as requested that "Fetoscopic laser photocoagulation is a new and effective treatment for this condition".

Comment 5: The intrauterine fetal intervention was necessary when the pump twin showed signs of fetal distress Comment : in Europe centers they offer fetal therapy for TRAP Sequence from 16 weeks GA, in US centers offer fetal theray once the size of acardiac twin exceeds 50% of the size of the pump twin.

Response to comment 5: We are thankful for reviewer's comment. To the best of our knowledge, there are no fully consensus about this indication. In our institution, we cautiously consider the indication basing not only the size of the pump twin but also the gestation week (normally > 20 weeks). In order to assure the efficacy and safety for patients, the further global consensus or guideline should be issued. We hope that reviewer happily adopt this explanation.

Reviewer Comments, Author Responses, and Manuscript Changes

Reviewer 1

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: I congratulate you all on your work. A few grammatical errors are there in the script, which need to be addressed before publishing.

We are thankful for reviewer's comment. Prior to submission, this manuscript was edited by a professional linguistic service. We also read cautiously the final version before revised submission.

Reviewer 2

Scientific Quality: Grade D (Fair)

Language Quality: Grade C (A great deal of language polishing)

Conclusion: Major revision

Specific Comments to Authors: First : there is no new thing in this manuscript Second : there is no new concept, I don't thing many important things not mention by author Third : many lack of data; during operation, follow up, many unappropriate things

We are very thankful for reviewer's comment. We have added and clarified accordingly the information as requested. We hope that our revision makes reviewer feel satisfactory.