

Dear editors:

Thank you for your letter and for the reviewers' comments concerning our manuscript entitled " The safety of the improved patent ductus arteriosus occluder for transcatheter closure of perimembranous ventricular septal defects with abnormally attached tricuspid chordae tendineae " (ID: 45281). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have made correction which we hope meet with approval. Revised portion are marked in red in the paper. The main corrections in the paper and the responds to the reviewer's comments are as flowing:

**Reviewer #1** (Reviewer's code: 03251363):

1. Comment 1: Interesting work on the approach of Transcatheter closure of perimembranous ventricular septal defects with abnormally attached tricuspid chordae tendineae using an improved patent ductus arteriosus occluder. The manuscript describes a series of clinical cases treated by a new transcateter device. It is an interesting approach, although it will require multicenter randomized studies. The manuscript is simple, since it is a descriptive study, however, since it is a

recently patented device, it can lead to the development of studies of greater clinical importance.

**Response:** Thank you for your kindly suggestion. Although there is a concern that the improved PDA occluder is not designed for the interventional therapy of PmVSD, our study showed that the improved PDA occluder might provide an valid and secure option in selected patients with abnormally attached tricuspid chordae tendineae. The availability of the improved PDA occluder might allow interventional therapy of PmVSD a wider range. However, given its nature, the present study shares all of the limitations of observational studies. Longer period follow-up in a large number of population is still warranted, especially the RCTs.

**Reviewer #2** (Reviewer's code: 02954382):

1. Comment 1: Title: Does the title reflect the main subject/hypothesis of the manuscript? Generally Yes. I think that the title will better reflect the core of the manuscript if it starts as: The safety of the improved .....

**Response:** Thank you fur your kindly suggestion. We have already changed the title to " The safety of the improved patent ductus arteriosus occluder for transcatheter closure of

perimembranous ventricular septal defects with abnormally attached tricuspid chordae tendineae ".

**2. Comment 2: Abstract:** Does the abstract summarize and reflect the work described in the manuscript? Generally yes. But in the section “Results”, authors should include patients’ characteristics

**Response:** I completely agree with the reviewer’ s opinion. However, since most of the Abstract sections have words limits, we have listed the patients’ characteristics in the Results part of the main body of the manuscript.

**3. Comment 3: Key words.** Do the key words reflect the focus of the manuscript?

**Response:** I think the key words reflect the focus of the manuscript.

**4. Comment 4: Background.** Does the manuscript adequately describe the background, present status and significance of the study?

**Response:** Thank you for your suggestion. We have added the Background section to the manuscript (Page 3).

**5. Comment 5: Methods.** Does the manuscript describe methods (e.g., experiments, data analysis, surveys, and

clinical trials, etc.) in adequate detail?

**Response:** The detail methods have been described in the Research methods section (Page 26).

**6. Comment 6: Results.** Are the research objectives achieved by the experiments used in this study? What are the contributions that the study has made for research progress in this field?

**Response:** Research progress in the field is evaluation of the new treatment procedure based on improved device.

**7. Comment 7: Discussion.** Does the manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically? Are the findings and their applicability/relevance to the literature stated in a clear and definite manner? Is the discussion accurate and does it discuss the paper's scientific significance and/or relevance to clinical practice sufficiently?

**Response:** Yes.

**8. Comment 8: Illustrations and tables.** Are the figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents? Do figures require labeling with arrows, asterisks etc., better legends?

**Response:** We have modified the Figures according to your

requirements.

**9.** Comment 9: Biostatistics. Does the manuscript meet the requirements of biostatistics?

**Response:** Yes.

**10.** Comment 10: Units. Does the manuscript meet the requirements of use of SI units?

**Response:** Yes.

**11.** Comment 11: References. Does the manuscript cite appropriately the latest, important and authoritative references in the introduction and discussion sections? Does the author self-cite, omit, incorrectly cite and/or over-cite references? Generally

**Response:** Yes.

**12.** Comment 12: Quality of manuscript organization and presentation. Is the manuscript well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate?

**Response:** Yes.

**13.** Comment 13: Research methods and reporting. Authors should have prepared their manuscripts according to manuscript type and the appropriate categories, as follows: (1) CARE Checklist (2013) - Case report; (2) CONSORT 2010

Statement - Clinical Trials study, Prospective study, Randomized Controlled trial, Randomized Clinical trial; (3) PRISMA 2009 Checklist - Evidence-Based Medicine, Systematic review, Meta-Analysis; (4) STROBE Statement - Case Control study, Observational study, Retrospective Cohort study; and (5) The ARRIVE Guidelines - Basic study. Did the author prepare the manuscript according to the appropriate research methods and reporting?

**Response:** We have prepared their manuscripts according to manuscript type and the appropriate categories as your requirements.

**14.** Comment 14: Ethics statements. For all manuscripts involving human studies and/or animal experiments, author(s) must submit the related formal ethics documents that were reviewed and approved by their local ethical review committee. Did the manuscript meet the requirements of ethics?

**Response:** Yes.

**15.** Comment 15: At the end of the manuscript in the section "Article Highlights" all sub-sections are wrongly added to the manuscript, because in this section is prescribed something else, not the topic of the manuscript.

**Response:** I'm very sorry for my mistake. We have modified the Article Highlights section as required.

We tried our best to improve the manuscript and made some changes in the manuscript. These changes will not influence the content and framework of the paper. And here we did not list the changes but marked in red in revised paper. We appreciate for Editors/Reviewers' warm work earnestly, and hope that the correction will meet with approval. Once again, thank you very much for your comments and suggestions.

Thank you and best regards.

Yours sincerely,

Lu He