

Peer Review File

Article information: <https://dx.doi.org/10.21037/tp-21-163>

Reviewer A

I was disappointed in reading the text of the paper after seeing the misleading title and abstract. I expected to read about the daring pioneer surgeons referred to in the abstract, but was disappointed to find no mention of the truly daring pioneers of cardiac surgery, such as John Gibbon, Dwight Harken, Charles Bailey, Brian Barrett-Boyes, Francis Fontan, Aldo Castaneda, and William Norwood (who lost more than 20 HLHS patients before his first success) — none was mentioned in the text. Instead, the authors described nearly all recent innovations, none of which seem particularly daring. The misleading title should be changed to something less misleading, such as “Recent Innovations in Surgery for Congenital Heart Disease”.

The authors make many assertions without evidence. For example:

“...overall procedure volume is often prioritized in an attempt to safeguard quality metrics...”.

(Pp 3-4) What is the evidence for this prioritization?

The authors’ mention of the failure of risk stratification to factor in important strategic differences in management is correct and important, but they then make the leap to “surgeons and/or hospitals may either avoid operating altogether or accept less advantageous multi-staged treatment strategies...”. (P 4) What is the evidence they actually choose between these two alternatives rather than choosing the best option for patients?

They then further assert, “Such an environment also presents much farther-reaching negative impacts on the growth and development of junior surgeons and trainees”. (P 4) What is the evidence for any effect on surgeons and trainees?

And the authors go on to say, “...risk averse surgical behavior ... is creating an environment not favorable for the children born with truly complex congenital heart defects.” (P4) What is the evidence for the actual occurrence of risk averse behavior?

Each of those statements should be qualified with modal verbs: “may be” for “is often; “might present” for “presents; “might be creating” for “is creating”.

Although the authors say that their review aims “to establish a historical perspective”, they include only token mentions of historical background, such as a brief reference to Ebert, McKay, and Quaegebeur. (P 9) The rest of their review details contemporary research initiatives that fail to meet the standard of “daring”, much less “daring greatly”.

The brief discussion of ranking methodology and results (P 10) is interesting, but lacks interpretation and possible implications of the Table and the statistical analysis.

Some of the Conclusions (Pp 10-11) seem unjustified. For example, the first sentence of the Conclusions section mentions (again) “pioneering efforts of innovative and daring surgeons”, but the review contained essentially no discussion of daring pioneers. The lack of “a strong correlation between currently available hospital ranking systems and performance of high-risk congenital heart operations” was not documented in the Ranking section. Moreover, an argument for “the establishment of identified centers of excellence” is mentioned for the first time at the end of the last sentence of the ms, yet the authors have not discussed at all the extensive literature on the controversies surrounding centers of excellence.

Finally, the ms displays a tone of self-congratulation both in the singling out of the authors’ own data from the Table (no other center is mentioned in the text) and in the inclusion of 8 of their own references as examples of daring innovation.

Response

We would like to thank you for your very careful review of the manuscript, and for all your comments.

The manuscript has been revised, following all your suggestion.

Page 1. The title has been changed, exactly as you suggested.

Page 3 and 4. A list of pioneer surgeons has been added.

Page 4. All your comments related to the “lack of evidence”. For each sentence, we quoted the source, in particular References 1, 2 and 3. We have avoided quoting the sentences from those articles, to avoid duplicate texts.

Although the authors say that their review aims “to establish a historical perspective”, they include only token mentions of historical background, such as a brief reference to Ebert, McKay, and Quaegebeur. (P 9) The rest of their review details contemporary research initiatives that fail to meet the standard of “daring”, much less “daring greatly”.

Page 9 and 10. The References of Ebert, McKay and Quaegebeur were on purpose taken from the past, “to establish a historical perspective”, as evidence of the first attempts at partitioning or septating of hearts with single ventricle. The “contemporary research initiatives” refers to the most recently published articles (2017 to 2021) dealing with the same issue

The brief discussion of ranking methodology and results (P 10) is interesting, but lacks interpretation and possible implications of the Table and the statistical analysis.

Page 10 and 11. The Ranking section has been modified by adding the interpretation of both the Table and the Results of the statistical analysis, as you requested.

Finally, the ms displays a tone of self-congratulation both in the singling out of the authors’ own data from the Table (no other center is mentioned in the text) and in the inclusion of 8 of their own references as examples of daring innovation.

The Table is reproducing all the data collected from USNWR and from CHSD-STC, as indicated, and all the name and locations of the hospitals involved are clearly indicated. Direct comparison with any other hospital has been on purpose avoided, exactly to avoid being accused of “self-congratulation”. All references in the list are coming from PubMed as the source, including publications from our group (8) as well from other hospitals (45).

Each of those statements should be qualified with modal verbs: “may be” for “is often; “might present” for “presents; “might be creating” for “is creating”.

The “tone” of the entire manuscript, from the Abstract to the Conclusions, has been revised, exactly as you suggested.

Reviewer B

this paper is well written. The authors touch on many important questions. The authors should define the scope of their review in a more precise way. the readers can be lost and miss the main point that the authors want to convey.

Response:

We would like to thank you for your very careful review of the manuscript, and for your positive comments.

We did our best to improve the manuscript, revising the text following all your suggestion, in order to clarify the message for the readers.

Reviewer C

The topic of this review is very interesting. the manuscript is well written. nevertheless the articulation of the innovations in the field of ped CT surgery on the one hand and the main message of the manuscript about the risk aversive surgical behavior related (in part) to the ranking-based decision-making is confusing in the manuscript. This manuscript could almost be divided into 2 manuscripts. Also limiting the risk aversive behavior to the ranking system only is quite simplistic and needs more analysis/thoughts/discussion.

the title emphasizing the "Innovations" is misleading as this manuscript message does focus mainly on the ranking and risk aversive behavior.

Response:

We would like to thank you for your very careful review of the manuscript, and for all your comments. The manuscript has been revised, following all your suggestion.

Page 1. We could not agree more with you regarding the title, misleading.

As a matter of fact, our the title had been already modified in the past, following the comments received from a previous reviewer, despite we didn't agree.

Now the title has again been changed, exactly as you suggested.

We also agree about the importance of the outcomes evaluation, but we had to modify and understate our opinions in regard of the ranking system available to the public, because the previous Reviewers considered too strong our opinions.

The current revised edition has been modified, from the Abstract to the Conclusions, in order to give more importance to the issue of the ranking system, and the potential consequences on the modern approach to complex congenital heart defects.