Reviewer’s report

Title: Gender differences in the prevalence of congenital heart disease in Down's syndrome: a brief meta-analysis.

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Reviewer: Michael Zwick

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Gender difference in the prevalence of congenital heart disease in Down's syndrome: a brief meta-analysis.

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Comments: This revised manuscript reports the results of a large meta-analysis of 12 published studies that report the prevalence of congenital heart disease in Down's syndrome by gender. The reviewers have responded to previous reviewer comments. Specific aspects of the paper that have been significantly improved include:

1. Data from 12 studies are included as compared to just 4 studies in the initial version. This revised manuscript includes 20,465 patients with DS (11,165 male and 9,300 female).

2. The statistical methods used to analyze the data are now clearly presented. The raw data are now included in a supplemental file. Thus, a reader of this article could replicate the analyses shown with the original data.

3. The discussion now is more careful in interpreting the observed gender difference in AVSD in children with DS. I think the conclusions drawn are supported by the data.

Minor Comments:

1. I suggest changing the last sentence of the first paragraph to:

"However, until now, there has been few reports looking into the association of gender with CHD in DS."

I suggest this change because the use of the word "genesis" suggest a mode of direct causation that cannot really be tested by these data (as the authors state in the conclusion).
2. I suggest you consider providing a more in depth collection of references at the end of the second paragraph. There have been a number of genetic studies of CHD in both humans with DS and mouse models of DS.


Sailani, M. R., Makrythanasis, P., Valsesia, A., Santoni, F. A., Deutsch, S., Popadin, K. et al. (2013). The complex SNP and CNV genetic architecture of the increased risk of congenital heart defects in Down syndrome. Genome Res, 23(9), 1410-1421. (this was cited later in the manuscript)


Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?  
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English  
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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