

Peer Review Report

Review Report on Pregnancy loss and risk of all-cause mortality in Chinese women: findings from the China Kadoorie Biobank

Original Article, Int J Public Health

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Submitted on: 02 Feb 2023

Article DOI: 10.3389/ijph.2023.1605429

EVALUATION

Q 1 Please summarize the main findings of the study.

This study investigate the association between pregnancy loss with all cause mortality in Chinese women. The main findings of the study indicate that two or more pregnancy losses including more than one spontaneous abortion or stillbirth were associated with long term all-cause mortality, particularly among older women with cardiovascular disease or diabetes at baseline.

Q 2 Please highlight the limitations and strengths.

The main strength of the study is huge number of participants including 299,582 women aged 30–79 years from 10 diverse regions of China.

As mentioned in the paper limitations are self-reporting of the data from the participants and inability to include all risk factors. Also, in my opinion data must be revised and explained more thoroughly.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

This is a big study, and it is very interesting, also investigating important topic for every woman and whole society. However, some issues should be explained in more detail.

1. In table 3 it was presented that aHR was calculated for age, among other covariates. Why age is taken in account for adjustment if data are stratified according to women age? If that is the case all results must be revised.
2. Also, in the method section was reported that medical history data were self-reported. Because data are presented stratified for diabetes and cardiovascular disease, and especially because that are the important study findings, it must be clarified which type of diabetes is it? As a consequence of pregnancy gestational diabetes may occur. Maybe higher all-cause mortality and also stillbirths were connected with gestational diabetes? It must be clearly explained in the methodology which data for diabetes were collected and then explain results and discuss in more detail.
3. It was reported that women were recruited from 2004 to 2008, and then followed-up. Furthermore, it should be reported when follow-up was ended for purposes of the study, and what was the minimum follow up for all participants.
4. In my opinion explanation that "Recurrent spontaneous abortions and stillbirths were associated with increased risk of all-cause mortality, particularly among women aged ≥ 50 with cardiovascular disease or diabetes" is not best fitted, and also may be discutable. It is so expected that all-cause mortality is higher among older women with cardiovascular disease. We can see that women without cardiovascular disease do not have higher mortality even if they were older. As I asked in question 1, if the data are adjusted for age and stratified on age, results may need revision. As discussed very thoroughly in the paper, is it possible that CVD presence is the consequence of pregnancy loss? And therefore just a step closer to mortality? As thoroughly discussed, "Consistent with our findings, published research have indicated that women with a history of

pregnancy loss are at greater risk of cardiovascular risk factors high blood pressure and type II diabetes". Women with pregnancy loss and diabetes are at higher risk for CVD and diabetes, so diabetes and CVD are consequences of pregnancy loss, and also they are obviously connected to higher mortality. Data analysis and explanation must be more concise.

5. There are a lot of technical issues in the paper that should be corrected (missing spaces, line 29 - reference is listed as Organization, etc).

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Yes, title is appropriate, concise and attractive.

Q 5 Are the keywords appropriate?

Yes, keywords are appropriate.

Q 6 Is the English language of sufficient quality?

Although I am not native English speaker I think that English language should pass editing service.

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

Yes, the reference list cover relevant literature adequately and in an unbiased manner.

QUALITY ASSESSMENT

Q 9 Originality



Q 10 Rigor



Q 11 Significance to the field



Q 12 Interest to a general audience



Q 13 Quality of the writing



Q 14 Overall scientific quality of the study



REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.