
Ref. MS 1189417154132410: “Seroepidemiology of infection with Toxoplasma gondii in healthy blood donors of Durango, Mexico”.

Dear Editor,

Attached please find a revised version of our manuscript that had been modified according to the reviewers’ comments. In addition, please find below our response to each of the reviewers’ comments on a point-by-point basis.

We hope the new version of the manuscript may satisfy the reviewers and can be published in *BMC Infectious Diseases*.

Kind regards,

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RESPONSE TO THE REVIEWERS’ COMMENTS

Reviewer: Eskild Petersen

1. The authors do not discuss the lack of power due to the very low number (32) of T. gondii positive subjects. This was a comment to the first version of the paper and it is not mentioned at all in this version.

I feel it is an important point because some well known risk factors reach almost statistical significance, and it need to be emphasised that with a larger sample size of T. gondii positive subjects the power of the study would have been better. Thus the study do not rule out meat as an important risk factor simply because of a low power, and this must be discussed.

We have further discussed on the statistical power of the study in the Discussion section as follows:

…However, the very low number of donors with anti-T. gondii antibodies found in this study reduces the statistical power to find further associations between seropositivity and the epidemiological characteristics in blood donors. Certainly by increasing the sample size the statistical power increases and some risk factors with borderline significance might turn out to become significant. This is especially interesting for risk factors including meat consumption, [13, 29], and soil floors [13].

2. Statistical review: Yes, and I have assessed the statistics in my report.

In the Discussion section we added the information on statistics mentioned above (point 1).

In the Statistical analysis section we added the following information:

… Descriptive statistics were used for numerical (mean and median) and categorical (frequency or percentage) variables.
Reviewer: Veeranoot Nissapatorn

Materials and methods:

1. Inclusion criteria: line 6-10 → revise.

After reading, I am not clear in No. 3 I presume that authors took the sera for Toxoplasma testing from these healthy blood donors after they were screened and freed from HIV, HCV, HBV, or VDRL infections prior to blood donation. (if anything is more than this, please clarify). 3. regardless…--> remove. It is more appropriate to include all donors who showed seronegative for HIV status and other blood-borne diseases.

We have corrected the numbers in the list of criteria. Number 3 was wrongly repeated, therefore, the second number 3 was changed for number 4. In addition, we clarified on the serological status of viral and bacterial infection markers in the blood donors. The new information is as follows:

…1) voluntary blood donors; 2) aged 18 years and older; and 3) who accepted to participate in the study. All samples were routinely tested for antibodies against human immunodeficiency virus (HIV), hepatitis C virus (HCV), and Treponema pallidum, and hepatitis B virus surface antigen (HBsAg) in parallel to testing for antibodies against T. gondii. None of the blood donors was seropositive for HIV, HCV, HBsAg and Treponema pallidum….

2. Line 7-8, 9-10.

From line 7-8 → total blood donors are 432 from 2 blood banks. Line 9-10 → None..., and in total 342…?>?

We have corrected the number as follows:

… and in total 432 voluntary healthy blood donors participated in the study.

3. Discussion. The authors should avoid using too many “may” in the same sentence or in one paragraph. The content of this part should be logically proven to the readers.

The word “may” was not used in the same sentence or in one paragraph anymore.

4. 1st paragraph; line 4-9 → summarize these sentences

We have summarized the sentences as follows:

…The sensitivity of the IgG test is 94%. Quality control of both IgG and IgM test runs showed valid results. The low prevalence of seropositivity for T. gondii found is comparable with that detected in other healthy population of Durango City using a different detection method [13]....
5. 2nd paragraph; line 5-6; This finding...our finding → combine (this deserves further study in which additional results might agree or challenge our finding).

We have combined the sentences as recommended:

…This finding deserves further study in which additional results might confirm or challenge our finding.…

6. Line 10-11 → revise (too many “may”)

We have deleted the word “may”.

7. Line 16-17, In contrast, since ….city → remove (it would be better to replace with the reasons to support why further study needs to be done in female donors, particularly during reproductive period associated with seronegative or seroconversion).

We have deleted the sentence:

In contrast, since most blood donors in Durango City are male, and we studied a higher number of males than females, our findings are representative of the epidemiology in blood donors in Durango City.

And we have instead added the following sentence:

The knowledge of factors associated with seroconversion in women is particularly important during their reproductive age in order to design preventive measures and avoid acute infections during pregnancy. (Second page of Discussion section, lines 20-22).

8. Line 23-25 → revise (any studies were agree or contrarily with this finding since we know that this is one of the significant contributing factors towards acquiring Toxoplasma infection).

We have added information in the Discussion section on the results of association of this factor in other studies.

9. Line 26 → Other blood…..with infection → remove

We deleted the following sentence:

Other blood donors’ characteristics did not show an association with infection.

10. 3rd paragraph; line 11-12, but...may...infection. Therefore...may...exists. → revise
We have modified those sentences as follows:

Anti-*T. gondii*-specific IgM antibodies are detectable early after infection and can persist for prolonged times after infection [2, 30]. IgM-positive donors with parasitemia may hold a potential for parasite transmission by blood transfusion.

11. *It would be better to standardize the word Toxoplasma or Toxoplasma gondii ➔ italic*

The word “Toxoplasma” was written in italics throughout the manuscript.


We added in the laboratory tests “IU/ml”:

13. *Statistical analysis. The authors gave full description of the comparative analysis. How about simple analysis such as mean, median, frequency or percentage?.*

We added information on descriptive statistics as follows:

…. Descriptive statistics were used for numerical (mean and median) and categorical (frequency or percentage) variables….

14. *Table 1, 2, and 3 ➔ out of how many total number of blood donors (avoid confusion).*

We clarified in the title of Tables 1, 2 and 3 that the data is from 432 blood donors.

15. *Table 1 ➔ Occupation.*

No labourer ➔ Professional, businessman, and employee.
Labourer ➔ Farmer and worker in factory or construction areas.
Other/unemployed ➔ student and housewife.

We have modified the Table 1 as recommended.

*Quality of English: Need some language corrections before being published.*

The manuscript was reviewed and corrected by a native English speaker.