Author’s response to reviews

Title: The Epidemiology of intransient TB- induced hyperglycemia in previously undiagnosed Diabetes Mellitus 2 individuals: a protocol for a systematic review and meta-analysis

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Author’s response to reviews:

We wish to express our gratitude to the reviewers for providing us with very good feedback. We have addressed the comments in the following fashion:

Reviewer 1

Abstract

lines 31-32: I suggest a bit of modification on the title to "...individuals with previously undiagnosed type 2 Diabetes Mellitus"

SM: yes, we have changed the title according to this suggestion

line 40: incomplete statement (previously undiagnosed....)

SM: yes, we have completed this statement

lines 44-45: Authors are suggested to use a standard reporting guideline, PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses). I have seen this in the method section but it has to be mentioned here also.

SM: yes, we have added this crucial information
The aim of sensitivity analysis, in my opinion, is to see the influence of a single study on the overall estimate. Therefore, authors should consider correcting the use of sensitivity analysis to check publication bias. Furthermore, there are several tools available to assess study quality, and I suggest that authors should mention which type of tool they would use to check the quality of studies they will include in their systematic review. Similar to the comment above, this has been discussed in the method section, but not reflected here.

SM: Yes, we indeed this paragraph needed to be revisited and we have reformulated the aim of sensitivity analysis and mentioned the tool used to assess the study quality.

briefly report your response to these questions in the method section of the abstract. I have noted that these have been answered in detail in the body of the method section.

how do you check the between study heterogeneity?

SM: Yes, we have discussed the heterogeneity issue.

Please state whether you do a sub-group analysis or not?

SM: Yes, we have mentioned this aspect.

Which type of model would you use to estimate the summary effect (s)?

SM: Yes, we have discussed that we would use, OR, HR, or RR.

Consider using funnel plot and/or Beggs or Egger's test to assess publication bias.

SM: Yes, we have mentioned the use of the Egger’s test to assess publication bias.

lines 49-50: I don't see the importance of this statement here as the authors have already started the journey to publish their work.

SM: yes, indeed, we have deleted this statement.

line 52: is it "in-transient hyperglycemia" or just "hyperglycemia". the term "in-transient hyperglycemia" remained in the title, and was not used in the remaining section of the document. For sake of consistency, however, it needs definition for appropriate use.
SM: yes, we have kept it as intransient hyperglycemia

Background

line 62: check the journals citation style, it requires citation within square bracket.

SM Yes, we have adjusted it according to the journal’s citation style.

line 77: Check the following articles for further information, and consider modifying the statement in lines 76-77:


SM: Yes, we have added the pooled prevalence for of TB in diabetic patients


SM: As we are interested in the risk factor for TB-intransient hyperglycemia in diabetic patients, this study is less relevant to our research question.

lines 85-88: Statements in these lines should be used together with other supporting evidence to elaborate the statement in line 77.

SM: We have added the Wagnew et al study to the background information, although we have not explored the risk factors as we are primarily interested in the risk of intransient hyperglycemia in patients with TB.

line 81: comma is needed here after "...by rifampicin administration"

SM: Yes, we have added a comma
line 96: edit punctuation, full stop is needed before "Secondly"

SM: Yes, we have added a full stop

line 100: "Our protocol has been registered PROSPERO (CRD42019118173)." Better to provide an active link.

SM: Yes, we have provided an active link

Methods

line 113: edit as "...DM cases will be excluded"

SM: Yes, we have addressed this comment.

line 117: does your study consider including all age groups? please elaborate on this.

SM: We will include all patients of all age groups

There was also no mention of the type of TB and diagnostic requirement/s.

SM: a chest x-ray and a sample of sputum to ascertain whether the person has TB disease.

line 124: i suggest authors to include search strings used and number of identified studies per data base searched.

SM: yes, I will include this information in the annex

line 131: also consider whether the study adjusted for con-founder or not

SM: Yes, we have included this aspect.

line 132: expand this on first use

SM: Yes
strengths and limitations

line 171: make sure that you included all the major data bases not to miss potential articles than just mention this as a strength.

SM: Yes, we have included this statement

I rather appreciate that the authors plan to use risk of bias assessment (and grading of evidence), sub-group analysis and meta-regression if there is any heterogeneity.

SM: I am unsure as to whether we should add this, this is what is expected.

List of abbreviations

line 182: abbreviations used in the document are not exhaustively listed

SM: Yes, we have added all abbreviations

Reviewer 2

1) Unclear, since sensitivity analysis doesn't assess publication bias or quality of study

SM: yes, we have adjusted this important point.

2) it is an outdated data. please use the update information from International diabetes report

SM: updated with 2017 figures from the International Diabetes Federation

3) Here, the searching strategy for each database is various. Thus, you have to elaborate the detail searching strategy for all data bases.

SM: we have included the search strategy in the Annex

4) what is your rational to included articles which only peer reviewed published? gray literature will consider in this systematic review and meta analysis for minimize potential publication bias.

SM: As we are interested in reviewing the literature systematically, we choose to include only peer reviewed articles.
5) Reference for TB-induced hyperglycaemia is defined by having impaired fasting glycemia - IFG (fasting plasma glucose 120 (FPG) levels ≥100 mg/dl (5.6 mmol/L) or impaired glucose tolerance - IGT (2-hour oral glucose tolerance 121 test (OGTT) of ≥140 mg/dl (7.8 mmol/L).

SM: yes, we have added our source

6) As TB-induced hyperglycemia is not rare, we will not be able to consider 147 HRs, RRs and ORs as the same

SM: We will present different outcomes separately.

7) how do you treat if presence of publication bias using Egger's test in your finding?

SM: we will acknowledge it as a limitation

8) you will also consider the vital statistics including sensitivity analysis and sub-group analysis

SM: Yes, we have added a sentence to mention that we will indeed consider a sensitivity analysis and a sub group analysis

9) on your search strategy, you will search with out language restriction, inconsistency

SM: yes, this was indeed an inconsistency, we will take this sentence out.