

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Accuracy of testing for anti-Helicobacter pylori IgG in urine for H. pylori infection diagnosis: a systematic review and meta-analysis
AUTHORS	Gong, Yuehua; Li, Qiuping; Yuan, Yuan

VERSION 1 - REVIEW

REVIEWER	Nazri Mustaffa Universiti Sains Malaysia, Malaysia
REVIEW RETURNED	19-Aug-2016

GENERAL COMMENTS	<p>The overall spelling, grammar and sentence structure for this manuscript needs to be improved.</p> <p>Exclusion item #2 not needed (as in inclusion criteria you already mention that the study needs to have a comparator method)</p> <p>Page 5,Line 10: Discrepancies were resolved by consensus. Who made the decisions? What were their backgrounds, ie were they experienced enough to adjudicate</p> <p>Page 16 Table 1: Footnote of abbreviation does not tally with ones used in Table</p> <p>Page 18: Table formatting issue, also is it necessary to report AUC to 4 decimal points</p> <p>Page 19: what is cte, s. Multiple spelling errors noted</p> <p>Page 21: spelling errors</p> <p>I feel that the citing of a few more recent studies would be good for the discussion, as most of the references are from the studies themselves which may not be so recent.</p> <p>There are quite a few statistical methods that I am not familiar with, thus it may be better if this manuscript were to be vetted by an independent statistician (if this has not been done yet)</p>
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REVIEWER	Samaneh Asgari Prevention of Metabolic Disorders Research Center, Research Institute for Endocrine Sciences (RIES), Shahid Beheshti University of Medical Sciences, Tehran, Iran
REVIEW RETURNED	03-Oct-2016

GENERAL COMMENTS	Table and Figure legends should clearly defined, abbreviations
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	should be defined. Figures at the end of manuscript do not have legend and therefore it was not possible to follow them in the text.
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REVIEWER	Zhiguo Zhao Vanderbilt University, USA
REVIEW RETURNED	04-Dec-2016

GENERAL COMMENTS	<p>In this article, the authors systematically reviewed performances of testing for anti-Helicobacter pylori IgG in urine for H. pylori infection. The authors identified and analysed 23 eligible studies in this manuscript. Overall the systematic review and the meta-analyses were well carried out. The authors assessed the quality of literature, heterogeneity across studies, potential publication biases and employed the random effects models for the primary analyses. The conclusions were supported by the data presented. However, the manuscript was not written smoothly and caused some confusions. The following are few minor comments/suggestion that may help clarify some concerns that the potential audiences may have.</p> <ol style="list-style-type: none"> 1. Included studies may used different cutoff points for concluding infection outcome. How was this be adjusted in the current analysis. 2. "Diagnostic accuracy" has been used in multiple situation, while this is not a clearly defined measurement. Is it sensitivity? Specific? This need to be clarify at each occurrence. 3. Line 20-23 is not a whole sentence. 4. In multiple places, the author compared the performance of the diagnostic test between various groups and the conclude that the performance is better in one group than in the other one. This conclusion need to be supported by a statistical test and statistical significance need to be assessed by either p values or confidence intervals. 5. The author concluded that "that potential publication bias did not exist " . This is a wrong interpretation for a non-significant test result.
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name
Nazri Mustaffa
Institution and Country
Universiti Sains Malaysia, Malaysia

Please state any competing interests or state 'None declared':
None

Please leave your comments for the authors below:
The overall spelling, grammar and sentence structure for this manuscript needs to be improved.
Respond: Thank you very much for your comments. The revised article has been edited by a professional English editor.

Exclusion item #2 not needed (as in inclusion criteria you already mention that the study needs to have a comparator method)
Respond: Thank you for your reasonable suggestion. We have removed the exclusion criteria #2 from the revised article.

Page 5, Line 10: Discrepancies were resolved by consensus. Who made the decisions? What were their backgrounds, ie were they experienced enough to adjudicate.

Respond: Two researchers (Yuehua Gong and Qiuping Li) screened all the titles, abstracts and extracted the data from the original studies independently. Discrepancies were discussed with the third researcher (Prof. Yuan Yuan who is skillful in Meta analysis) and eventually reached agreement.

Page 16 Table 1: Footnote of abbreviation does not tally with ones used in Table

Respond: Thank you for your valuable reminding. We have modified the footnotes of abbreviation in Table 1.

Page 18: Table formatting issue, also is it necessary to report AUC to 4 decimal points

Respond: Thanks to the reviewers, we have changed the four decimal points of AUC in Table 3 to two.

Page 19: what is cte, s. Multiple spelling errors noted

Respond: Many thanks to reviewers for their comments. "Cte" is an abbreviation for "constant coefficient", which we have noted in the footnotes of Table 4. We also have corrected other spelling errors.

Page 21: spelling errors

Respond: Thank you for your kind suggestion. We've modified the misspellings in Figure 1.

I feel that the citing of a few more recent studies would be good for the discussion, as most of the references are from the studies themselves which may not be so recent.

Respond: Thank you for your kind suggestion. We have already supplemented some recent references in the discussion section.

There are quite a few statistical methods that I am not familiar with, thus it may be better if this manuscript were to be vetted by an independent statistician (if this has not been done yet)

Respond: Thank you for your kind reminding. The statistical method used in this study is a commonly used method for diagnostic meta-analysis, and statistical counseling has been conducted with a statistical expert.

Reviewer: 2

Reviewer Name
Samaneh Asgari

Institution and Country
Prevention of Metabolic Disorders Research Center, Research Institute for Endocrine Sciences (RIES), Shahid Beheshti University of Medical Sciences, Tehran, Iran

Please state any competing interests or state 'None declared':

None declared

Please leave your comments for the authors below

Table and Figure legends should clearly defined, abbreviations should be defined.

Respond: According to your advice, we have clearly defined the Table and Figure legends and added the abbreviations.

Figures at the end of manuscript do not have legend and therefore it was not possible to follow them in the text.

Respond: Thank you very much for your careful reading and correction. We have supplemented figure legends in the below of Supplemental Figures 1, 2 and 3.

Reviewer: 3

Reviewer Name

Zhiguo Zhao

Institution and Country

Vanderbilt University, USA

Please state any competing interests or state 'None declared':

None declared

Please leave your comments for the authors below

In this article, the authors systematically reviewed performances of testing for anti-Helicobacter pylori IgG in urine for H. pylori infection. The authors identified and analysed 23 eligible studies in this manuscript. Overall the systematic review and the meta-analyses were well carried out. The authors assessed the quality of literature, heterogeneity across studies, potential publication biases and employed the random effects models for the primary analyses. The conclusions were supported by the data presented. However, the manuscript was not written smoothly and caused some confusions. The following are few minor comments/suggestion that may help clarify some concerns that the potential audiences may have.

1. Included studies may used different cutoff points for concluding infection outcome. How was this be adjusted in the current analysis.

Respond : Thank you for your professional question. Certainly, included studies in this paper used different cutoff points for concluding infection outcome. But for all that we only determined the positive or negative results of H.pylori infection based on the cut-off value of the urine IgG according to the manufacturer recommended. And we further used the internationally accepted QUADAS-2 tool to evaluate the risk of bias in the included articles, which may avoid the bias as much as possible.

2. "Diagnostic accuracy" has been used in multiple situation, while this is not a clearly defined measurement. Is it sensitivity? Specific? This need to be clarify at each occurrence.

Respond: Thank you for your critical suggestion. Terms "diagnostic accuracy" used for comprehensive evaluation in this article includes a set of diagnostic quantitative results, namely pooled sensitivity and specificity, pooled positive and negative likelihood ratio, summary receiver operating characteristic, etc. As what you indicated, "diagnostic accuracy" is not suitable in multiple situation. Accordingly, we substitute "diagnostic accuracy" for specific terms, like sensitivity or specificity, etc. at each occurrence.

3. Line 20-23 is not a whole sentence.

Respond: Thank you for your critical suggestion. We have detected all the grammatical problems throughout the text and the revised article has been edited by a professional English editor.

4. In multiple places, the author compared the performance of the diagnostic test between various groups and the conclude that the performance is better in one group than in the other one. This conclusion need to be supported by a statistical test and statistical significance need to be assessed by either p values or confidence intervals.

Respond: Thank you very much for your professional suggestion. In the revised version, we added two-sample Z-test analysis to compare the AUC values in different subgroups in order to clarify

statistical significance to support our conclusion. The results and discussion were modified correspondingly.

5. The author concluded that "that potential publication bias did not exist" . This is a wrong interpretation for a non-significant test result.

Respond: Thank you very much for your pertinent correction. We have modified the expression of this section to replace "that potential publication bias did not exist" with "No significant publication bias was found in the pooled analysis of the studies".

VERSION 2 – REVIEW

REVIEWER	Zhiguo Zhao Vandebilt University Medical Center, USA
REVIEW RETURNED	17-Feb-2017

GENERAL COMMENTS	Instead of performing the Z-test for two AUCs, please provide the confidence intervals for each AUCs and make conclusions based on the overlap of the CIs.
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VERSION 2 – AUTHOR RESPONSE

Thanks very much for the comments and suggestions from you and the reviewers. In the revision, we replenished the statistical analysis and re-organized the results and made other relevant modifications according to reviewers' comments.