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OPEN PEER REVIEW

Correlation Between Renal Dimensions and Anthropometric Indices Using Computed Tomography in Adults Without Known Renal Disease: A Cross-Sectional Prospective Study

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1 Original submission

2 comments · 10 Aug 2024 – 10 Aug 2024

Referee 1 Reviewer

MAJOR REVISION 10 Aug 2024

Dear E.I.C
Title/Introduction:
The title does not indicate its cross-sectional design.
The introduction does not sufficiently establish the need to evaluate these relationships specifically in the Iranian population.
Methods:
In the methods, details about the sampling strategy, sample size calculations, etc., are missing.
Inclusion/exclusion criteria could be more selective to reduce potential confounding.
The authors mention using canonical correlation analysis but do not provide sufficient details about the specific methodology and interpretation of the results.
Results:
Weak Correlations: The authors consistently report "very low statistically positive relationships" between renal dimensions and anthropometric parameters. While statistically significant, these weak correlations may have limited clinical utility. The authors should discuss the practical implications of these weak correlations and acknowledge their limitations.
Statistical adjustment for potential confounders is needed.
Subgroup/stratified analyses could provide more clinically meaningful insights.
Use more graphical tools to present concepts and results.
Discussion:
The study focuses solely on the correlation between anthropometric measurements and kidney size without considering clinical factors that might influence renal dimensions. The authors should discuss potential confounding factors such as underlying medical conditions, medications, and lifestyle factors.
While findings are contextualized, the discussion does not critically evaluate methodology or acknowledge limitations sufficiently.
While the manuscript cites some relevant literature, the discussion section could benefit from a more comprehensive review of existing research on the topic. The authors should critically evaluate their findings in the context of previous studies and address any discrepancies or inconsistencies. Thus, comparisons with other populations lack a systematic approach.
Clinical and public health implications could be more strongly emphasized.
The authors conclude that kidney size can be predicted using anthropometric measurements but fail to provide a clear rationale for this claim based on the presented findings. They should elaborate on the clinical significance of their results and discuss potential applications.
Conclusion:
The conclusion overstates the generalizability/strength of the findings given the limitations in design/analysis.
Alternative explanations for observed relationships (e.g., residual confounding) are not discussed.
Overall, in its current form, the conclusions may be premature.

Associate Editor MAJOR REVISION 10 Aug 2024

Major Revision

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor,

I am very grateful that you gave us a chance to be reviewed in your privileged journal and I wish to express my appreciation to the editor for the time and precise opinions.
I have revised the manuscript on the base of the comments and all the revisions and edits, which has been made, are highlighted in yellow in manuscript body.
We hope that these changes to the manuscript will facilitate the decision to publish this study in your journal.

Reviewer 1:
We would like to extend our sincere gratitude for your insightful comments, which have helped us significantly improve the paper.

Title/Introduction:
1. The title does not indicate its cross-sectional design. The title was edited.

2. The introduction does not sufficiently establish the need to evaluate these relationships specifically in the Iranian population. Some explanations were added in introduction to indicate the need for this evaluation.

Methods:
3. In the methods, details are missing around sampling strategy, sample size calculations etc. Inclusion/exclusion criteria could be more selective to reduce potential confounding. Details about sample size and strategy were added. We excluded all potential confounding factors and

4. The authors mention using canonical correlation analysis but do not provide sufficient details about the specific methodology and interpretation of the results. The results and tables were edited and more descriptions were added.

Results:
5. Weak Correlations: The authors consistently report "very low statistically positive relationships" between renal dimensions and anthropometric parameters. While statistically significant, these weak correlations may have limited clinical utility. The authors should discuss the practical implications of these weak correlations and acknowledge their limitations.
The statistical adjustment for potential confounders is needed. The limitations of study were added at the end of the discussion. Since most of the confounding factors were excluded from the study, the concern about influencing the results was minimal.

6. Subgroup/stratified analyses could provide more clinically meaningful insights.
Use the more graphical tools to present concepts and results. Tables and figures were edited and new ones were added.

Discussion:
7. The study focuses solely on the correlation between anthropometric measurements and kidney size without considering clinical factors that might influence renal dimensions. The authors should discuss potential confounding factors such as underlying medical conditions, medications, and lifestyle factors. As mentioned in methods the potential confounding factors were excluded from this study and they were not our purpose. This is the limitation of our study and these factors can be assessed in another study and we suggested it in the end of the discussion.

8. While findings are contextualized, the discussion does not critically evaluate methodology or acknowledge limitations sufficiently. Some corrections have been made in discussion and a number of sentences that may have created misunderstanding regarding the type of study and its purpose were removed and also new relative references added.

9. While the manuscript cites some relevant literature, the discussion section could benefit from a more comprehensive review of existing research on the topic. The authors should critically evaluate their findings in the context of previous studies and address any discrepancies or inconsistencies. So, comparisons to other populations are lacking systematicity. Discussion has been corrected and more comparisons were done between our results and previous studies.

10. Clinical and public health implications could be more strongly emphasized.
The authors conclude that kidney size can be predicted using anthropometric measurements but fail to provide a clear rationale for this claim based on the presented findings. They should elaborate on the clinical significance of their results and discuss potential applications. More descriptions were added in introduction and discussion to clear the importance of this study and its findings.

Conclusion:
11. Conclusion overstates the generalizability/strength of findings given limitations in design/analysis. The corrections have been made in conclusion.

12. Alternative explanations for observed relationships (e.g. residual confounding) are not discussed. Overall, in its current form the conclusions may be premature. The corrections have been made in conclusion.

Best regards,

Al J

Corresponding author

2 Revision 1

2 comments · 24 Sep 2024 – 24 Sep 2024

Referee 1 Reviewer

ACCEPT 24 Sep 2024

Accept

Associate Editor

ACCEPT 24 Sep 2024

Accept