

Review Form 3

Journal Name:	Microbiology Research Journal International
Manuscript Number:	Ms_MRJI_123532
Title of the Manuscript:	Comparative Analysis of Stool Antigen and PCR Tests for Diagnosing Helicobacter pylori Infection and Associated Gut Dysbiosis in Wad-Medani City, Sudn
Type of the Article	Original Research Article

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript addresses a significant clinical issue, Helicobacter pylori (H. pylori) infection, and its diagnosis through non-invasive methods. Considering the global prevalence of H. pylori and its association with severe gastrointestinal disorders, the study's findings on the comparative effectiveness of stool antigen tests and PCR provide valuable insights for diagnostic improvements. The exploration of gut dysbiosis adds an innovative aspect to the research, offering a broader understanding of the infection's impact. Overall, this study is a valuable contribution to the scientific community, particularly for clinical microbiologists and gastroenterologists.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title contains a minor typo: "Sudn" should be corrected to "Sudan." The title is generally appropriate but can be made clearer and more concise. A more suitable title could be: "Comparison of Stool Antigen and PCR-Based Diagnostics for Helicobacter pylori Infection and Gut Dysbiosis in Wad-Medani City, Sudan." This title clearly communicates the purpose of the study and includes key elements like the diagnostic methods and geographic location, improving clarity and precision</p>	
<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>The phrase "beta diversity analysis quantifies the degree of variation among samples" is vague. Specify how beta diversity was assessed and what variation was found. The abstract provides a decent overview but lacks some detail, particularly in the results and conclusion sections. The addition of numerical data regarding the sensitivity, specificity, and statistical significance of the findings would improve its comprehensiveness. Also, the microbiome analysis is mentioned vaguely. The abstract could benefit from a clearer mention of how H. pylori infection contributes to gut dysbiosis, which is an important aspect of the study. Overall, the abstract is informative but could be enhanced with more specific results. The last sentence of the conclusion, "although we did not reach statistical significance," could be rephrased for clarity. Consider: "while no statistically significant differences were observed."</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The manuscript is generally well-structured with appropriate subsections, including the introduction, methods, results, and discussion sections. The methodology is presented in enough detail for reproducibility, and the results are logically presented. However, the study would benefit from a clearer presentation of the statistical analysis. The results section could also be better organized, with clearer distinctions between the diagnostic comparison and microbiome findings. Repetitive use of "(number)" citations interrupts the flow. Consider rephrasing some sentences to naturally integrate references. Clarify how positive controls were selected, as this is critical for the PCR section. Demographic Characteristics (Table 2): It would be helpful to include p-values for differences in prevalence across gender and age groups. Figures and Tables: The figures referenced (e.g., Figures 2, 3) are not included. Ensure all figures and tables are numbered correctly and included in the manuscript. For the microbial diversity analysis (e.g., alpha and beta diversity indices), clarify whether there was any significance between groups, especially in the discussion of Figure 5. There are a few places where references are missing or unclear. For example, "(2)" appears without a proper citation, which should be addressed.</p>	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>This manuscript appears scientifically robust and technically sound. Overall, the study's design, execution, and analysis are technically solid.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p>	<p>The references are largely sufficient and relevant, but some are slightly outdated, particularly those referring to the stool antigen test performance. Incorporating more recent studies from the last 3-5 years on H. pylori diagnostics and gut dysbiosis could strengthen the manuscript. For example, recent</p>	

Review Form 3

:	meta-analyses on PCR and antigen testing in H. pylori detection should be considered to provide a more current perspective.	
<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	The language of the manuscript is generally clear but could benefit from some minor revisions to improve fluency and readability. There are a few awkward phrases, such as "considers gram-negative bacteria" in the introduction, which should be revised to "is a gram-negative bacterium."	
<p>Optional/General comments</p>	This study addresses a relevant and clinically important topic, contributing to the understanding of H. pylori diagnostics and its impact on the gut microbiome. The findings have the potential to improve non-invasive diagnostic approaches, particularly in low-resource settings. However, I recommend the authors refine the presentation of statistical results and clarify their discussion on dysbiosis to ensure a more impactful contribution to the field.	

PART 2:

	Reviewer's comment	Author's comment (if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in detail)</i></p> <p>The manuscript does not seem to have any major ethical issues based on the content provided. The study involves non-invasive diagnostic methods (stool antigen tests and PCR) on human samples, which typically require ethical clearance.</p>	

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