

Peer Review

Review of: "Misdiagnosis of Dengue Fever as Malaria and Typhoid Fever and Their Co-infection in Rural Areas of Southwest Nigeria"

Adeolu Oluremi^{1,2}

1. Ladoke Akintola University of Technology, Nigeria; 2. University of Arkansas at Little Rock, Little Rock, United States

General Comments

The study addresses a critical public health issue in Nigeria, highlighting the misdiagnosis of dengue fever as malaria/typhoid. The methodology is robust, combining ELISA and RT-PCR for confirmation. However, the manuscript requires revisions to improve clarity, formatting, and consistency. Below are specific corrections and suggestions.

Section-by-Section Feedback

1. Abstract

Corrections:

- Define abbreviations (e.g., DENV, NS1) at first mention.
- Clarify percentages for readability: "315 (29.4%)" → "315 (29.4% of total samples)."

Suggestions:

- Add a brief note on the public health implications of misdiagnosis to strengthen the conclusion.

2. Introduction

Corrections:

- Fix inconsistent citation formatting. Replace superscript letters (e.g., ^[1]) with numerical references (e.g., [1]).

- Shorten overly detailed historical background (e.g., dengue epidemiology) to focus on gaps in Nigerian data.

Suggestions:

- Merge paragraphs on malaria, dengue, and typhoid to avoid repetition.
- Clearly state the study's novelty (e.g., first investigation of DENV-malaria-typhoid co-infection in Nigeria).

3. Methods

Corrections:

- Clarify the sampling timeframe: "October to September the preceding year" → "October 20XX to September 20XX."
- Specify the exact diagnostic criteria for malaria/typhoid (e.g., RDT brand, cutoff values).

Suggestions:

- Add a flowchart for sample selection and testing procedures.
- Define all abbreviations (e.g., RT-PCR, EDTA) when first used.

4. Results

Corrections:

- Fix table formatting: Align headers and ensure numerical consistency (e.g., Table 1 total malaria cases = 714, but table lists 741).
- Remove placeholder notes in figure captions (e.g., "AI-generated content may be incorrect").

Suggestions:

- Include p-values and confidence intervals in the text (e.g., "co-infection was statistically significant, $p=0.045$ ").
- Summarize key findings from tables/figures in the text (e.g., "Males had higher DENV infection rates [63.5%] than females [36.5%] (Table 1)").

5. Discussion

Corrections:

- Avoid speculative statements (e.g., "the reason for this may be attributed to..."). Replace with evidence-based explanations.
- Expand limitations: Discuss how false negatives in RT-PCR (28 NS1+/PCR- samples) might affect prevalence estimates.

Suggestions:

- Use subheadings (e.g., "Comparison with Previous Studies," "Demographic Trends") for readability.
- Link findings to actionable recommendations (e.g., "Training clinicians on dengue symptoms could reduce misdiagnosis").

6. Conclusion

Corrections:

- Remove redundant phrases (e.g., "the importance of this paper cannot be undermined").

Suggestions:

- Emphasize the urgency of integrating dengue testing into national health guidelines.

7. References

Corrections:

- Standardize citation style (e.g., Vancouver format). Remove URLs and extraneous symbols (e.g., $\wedge$, *).
- Ensure completeness (e.g., add DOIs, page ranges, and journal names for all entries).

Example Revision:

- **Original:**

1. $\wedge$ [a] $\wedge$ Charrel RN, Brouqui P...

- **Revised:**

1. Charrel RN, Brouqui P, Foucault C, De Lamballerie X. Concurrent dengue and malaria. *Emerg Infect Dis.* 2005;11(7):1153-1154. doi:10.3201/eid1107.050157

8. Tables and Figures

Corrections:

- Renumber tables/figures sequentially (e.g., "Table 1," "Figure 1").

- Ensure all figures are legible and include axis labels.

Suggestions:

- Convert Table 3 into a line/bar graph to visualize monthly trends.

Overall Recommendations

1. **Formatting:** Adhere to journal guidelines for headings, citations, and abbreviations.
2. **Clarity:** Simplify complex sentences (e.g., "The NS1 protein is the first to be produced...").
3. **Data Presentation:** Use graphs to highlight co-infection rates and misdiagnosis trends.
4. **Language:** Proofread for grammatical errors (e.g., "the trio co-infection was not significant" → "triple co-infections were rare").

Final Note: The study provides valuable insights into dengue misdiagnosis in Nigeria. Addressing these revisions will enhance its impact and readability for publication.

Declarations

Potential competing interests: No potential competing interests to declare.