



SDI Review Form 1.6

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| Journal Name:            | <a href="#">Microbiology Research Journal International</a>           |
| Manuscript Number:       | Ms_MRJI_41090                                                         |
| Title of the Manuscript: | Dengue virus infection among suspected yellow fever patients in Ghana |
| Type of the Article      | Original Research Article                                             |

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1: Review Comments**

|                                     | Reviewer's comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
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| <b>Compulsory</b> REVISION comments | <p><b>MAJOR REVISION:</b> It deserves to be published</p> <p>Lines 169-179: Redo paragraphs. Suggestion:<br/>Table 1 presents the summary of the descriptive statistics of the results of the three tests performed. In the 360, 44% (159/360) and 56% (201/360) were female and male respectively. The age of the population ranges from seven months to 82 years, with a median age of 16 years.<br/>One percent of the study sample (4/360) was positive for yellow fever*. The proportion of positive cases for Dengue NS1 antigen was 2.5% (9/360). For Dengue IgM, 1.9% of the cases were positive, while 3.6% of the cases were positive for Dengue IgG. 16 years was the median age of women and men was 15 years.<br/><b>*(It is necessary to better discuss these result).</b></p> <p>Lines 180-182: "All clinical samples that were considered positive by the NS1 antigen test and the capture ELISA for both anti-IgM and anti-IgG antibodies to Dengue were further submitted to molecular testing and were considered negative by RT-PCR." <b>It is necessary to better discuss these results.</b></p> <p>Lines 183-192: Redo paragraphs. Suggestion: Most study patients, 174 (48.3%), was 15 years old or younger.<br/>The results show the dengue NS1 antigen was relatively more prevalent (N = 4) aged 16 to 30 years.<br/>In addition, 06 of the 09 positive cases for Dengue NS1 antigen had 30 years or less in age. IgM dengue was not detected in cases between the ages of 46 and 75 years although the NS1 antigen was present in these ranges.<br/>Of the 7 positive cases for dengue IgM antibodies, 6 were detected among the age groups of 45 years or less.<br/>Although no Dengue NS1 detected in cases older than 75 years, anti-IgM detected 1 case in this age group.<br/>The positive Dengue IgG was relatively more prevalent in the range of 15 or less (N = 7). Neither anti-IgM or anti-IgG were detected in cases between 61-75 years, although the NS1 antigen has been detected in this age group (Table 2).</p> <p>Lines 193-197: Redo paragraphs. Suggestion: The results presented in Table 3 indicate that none of the samples included in this study It was positive for both the Dengue NS1 antigen as for Dengue IgM. However, 2 of 360 samples examined were positive for both NS 1 and IgG. In addition, 7/360 of the samples that were positive for Dengue IgM, were negative for the NS1 antigen and 11/360 were positive for Dengue IgG and negative for NS1 antigen.</p> <p>Lines 198-205: Redo paragraphs. Suggestion: As shown in Table 4 most of the samples in this study 21% (74/360) came from the Brong Ahafo region while the smaller sample came from the Northern Region 2% (8/360). The largest proportion of the samples was NS1 antigen and most positividade also in the Brong Ahafo region (0.8%) followed by Ashanti and Upper West regions with 0.6%, respectively. The positive IgM was higher in the High West (0.8%) The IGM test detected no cases in Brong Ahafo. On the other hand Eastern Region recorded the highest IgG positivity index (1.1%). Both Ashanti and Volta region recorded relatively high proportions of IgG, 0.8% and 0.6%, respectively (Figure 1).</p> <p>1. Table 1: "Statistical summary of results of interest"<br/>Suggestion: "Descriptive statistics of results according to gender and test performed on 360 blood samples". Put in the table only the columns: N and%, maximum and minimum amplitude and Coefficient of variation (%). Remove text from table footer.</p> <p>2. Table 2: "Distribution of Dengue indicators by age groups". Suggestion:"Distribution of number of negative and positive results by age group". Remove row % from table. Remove text from table</p> | Noted with thanks                                                                                                                                                             |



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|                                  | <p>footer. Discuss results of whole numbers, small samples do not make sense to discuss %.</p> <p>Table 3: Cross tabulation of dengue NS1 antigen results against dengue IgM and IgG results respectively. <b>Redo table according to model. Remove text from table footer.</b></p> <p>4. Table 4: "Proportional distribution of indicators of dengue infection by region". <b>Suggestion: "Distribution of positive and negative numbers by test and region in Ghana". Put positive total column. Remove text from table footer.</b></p> <p>5. Figure 1: Geographical distribution of Dengue a) NS1 antigen, b) Dengue-specific IgM antibodies and c) Dengue-specific IgG antibodies in Ghana ". <b>Suggested: "Geographical distribution of positive results for dengue second test in Ghana: a) NS1 antigen, b) specific dengue IgM antibodies and c) specific IgG antibodies.</b></p> <p>Lines 209-211: Hypothesis mentioned by other authors (22+ Oyero OG &amp; Ayukekbong JA. High dengue NS1 antigenemia in febrile patients in Ibadan, Nigeria. <i>Virus Res.</i> 2014;191:59–61. Schoepp R et al. Undiagnosed acute viral febrile illnesses, Sierra Leone. <i>Emerg Infect Dis.</i> 2014;20:1176–1182.</p> <p>Lines 215-227: The positive results in the tests and not confirmed with the molecular tools of RT-PCR used, should be best argued in light of the literature.</p> <p>Line 262 add: <b>Further studies are needed to elucidate the transmission and non-detection of dengue in Ghana. And the possible epidemiological implications for the population of Ghana and visitors!</b></p> <p><b>*It is necessary to better discuss these result:</b> One percent of the study sample (4/360) was positive for yellow fever</p> <p><b>**Consider in the discussion the article by Jaenisch T et al. Conference result in Ghana 2013 to discuss Dengue on the African continent. This manuscript responds to the suggestion of studies indicated in the report of the conference: “Jaenisch T et al. Dengue Expansion in Africa—Not Recognized or Not Happening? <i>Emerging Infectious Diseases.</i> 2014;20(10):e140487. doi:10.3201/eid2010.140487.”</b></p> |  |
| <b>Minor</b> REVISION comments   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| <b>Optional/General</b> comments | <p>The study is interesting and addresses a subject little explored in Ghana and other countries in Africa. It deserves to be published, presents results that corroborate the hypotheses already pointed out by other authors that the circulation of serotypes of dengue virus in Ghana has existed for a long time. It appears that these cases are not detected and also do not result in clinically important cases. However, what are the factors that contribute to this epidemiological profile of dengue in Ghana? What are the factors that make it difficult to diagnose such cases? What are the epidemiological implications for the local population for visitors from Ghana?</p> <p>Authors may discuss or raise hypotheses for other studies.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |