Reviewer's report

Title: Risk Factors for Mycobacterium ulcerans Infection (Buruli Ulcer) in Togo — A Case-Control Study in Zio and Yoto Districts of the Maritime Region

Version: 0 Date: 06 Sep 2017

Reviewer: Kingsley Nnanna Ukwaja

Reviewer's report:

Abstract

* "bathing with water from open boreholes (p = 0.01)"

Please be consistent in using either OR or P-value

* Please in multivariable analysis, only three factors viz: age (<10 years (OR =11.48 (3.72-35, 43) and 10- to 14 years (OR = 3.63 (1.22-10.83), receiving insect bites near a river (OR = 10.76 - 74.27)) and bathing with water from open borehole (OR = 5.77 (1.11-29.27)) were independent predictors of acquiring BU infection. I feel only these factors should be included in the Abstract

Introduction and Methods Section

These sections are well-written

Results Section

* This is fairly well-written

* The OR obtained following multivariate logistic regression analysis should be labelled adjusted odds ratio (aOR).

* Table 5: what is the meaning of "ans" in Table 5

Discussion

* Page 14, line 35-42: "Our study also identified other water sources of M. ulcerans infection such as swimming in a river, frequently crossing a river, receiving insect bites or injuries of cuts near the rivers. The same results were found in Ghana [12,38], Ivory Coast [13], Cameroon [14] and Benin [11]."
There is need to highlight that after adjustment for potential confounders, this factors were no longer risk factors for BU infection. Therefore, it is important to discuss the differences with studies who found them significant and reasons why they did not remain predictors of BU following adjustments

*Page 16 line 18-19 :" This study had some limits. We did not reach all participants especially some BU cases due to their unavailability during the survey time."

Please change "limits" to "limitation".

Why were the controls very few since you used the 1 case: 2 controls in enrolment for the study?

Explain the effect of inadequate controls as limitations. There are differences in Age, Sex and educational level between cases and controls. It is important to highlight this in the limitations and how it may affect the study findings.

Conclusions

* "This study found some major significant risk factors for M. ulcerans infection. The major risk factors were age (<15 years), bathing with water from open boreholes, swimming or frequently crossing a river, as well as receiving insect bites or cuts near rivers. Factors identified as protective from BU include wearing pants or hats during agricultural activities, frequent use of detergents for washing clothes or dishes and hygiene practice."

These were not the factors that were independent predictor of BU following multivariable regression analysis. The conclusion should reflect the final analysis please
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I am able to assess the statistics

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