Author's response to reviews

Title: Complicated malaria and other severe febrile illness in a pediatric ward in Libreville, Gabon

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Author's response to reviews: see over
Dear Editor

Thank you very much for the reviews and comments on our article untitled: “Complicated malaria and other severe febrile illness in a pediatric ward in Libreville, Gabon”

We have made appropriate changes as suggested by the referees. In the light of this, we hope that you will reconsider this paper for publication.

Sincerely,

Marielle K Bouyou-Akotet
REVIEWER 1

COMMENTS ON THE ABSTRACT:
The Objective as stated in the abstract is not supported by the available findings/evidence; suggestions like:
- to determine the proportion of children with febrile illness hospitalized for primary diagnosis of malaria who had confirmed malaria. This is because primary diagnosis of malaria was the main criteria for administration.
To assess the management of febrile illness and to determine the proportion of children with febrile illness hospitalized for primary diagnosis of malaria who had confirmed complicated malaria in a public health hospital of Gabon, after implementation of new malaria control strategies.

Methods:
Needs clarification: Is the study involved those children who benefited from haematological measurements and microscopic diagnosis of malaria OR those children who presented with febrile illness and hospitalized for primary diagnosis of malaria. Please clarify;
Hospitalized children with fever or a history of fever, with a primary diagnosis of clinical malaria, aged less than 18 years old, who benefited from hematological measurements and microscopic malaria diagnosis,

Results:
Line 2: Sentence beginning Only 56.7% -------with final diagnosis of malaria had Plasmodium *Plasmodium falciparum* has positive blood smears. Need some clarifications, does it mean that 56.7% of those as clinical malaria cases had *Plasmodium falciparum* infection.
Only 56.7% (n=95) of the 168 patient admitted for clinical malaria cases had *Plasmodium falciparum* positive blood smears.
Line 5: Sentence may be rephrased “Respiratory tract infection was the leading cause of hospitalization (41.1%) followed by ”
Sentence has been replaced
Line 6 and 9: “Co-infection” can be rephrased as co-morbidity since that could be interpreted as different malaria species.
Co-infections has been replaced by co-morbidities in the whole document

3. BACKGROUND COMMENTS:
Line 4: During recent decades---------------- in many settings. You may add “though is presently declining” to this sentence
Corrected
Line 10: in fact “opoka et al” , may be replaced with “ In fact evidence suggest” ahiger mortality---
Corrected
Line 13: the sentence beginning” In many endemic countries” should be referenced.
Two references have been added
The aim of the study may be rephrased as suggested in the abstract section.
Corrected
Additional referencing should made to the introductory page
References have been added

METHODS
Study site:
This section can be split into two; study site and study design and each describe in detail
For instance Line 1: A prospective and observational study is a design issue
Method section comprises now one paragraph untitled study site and another untitled study design (see lines 30 to 57)
The reason(s) why the study was restricted from June to December should be stated.
This period covers the dry and the rainy seasons, as well as the period at which the maximum number of consultations is observed at the CHL i.e. after returning from holidays from remote areas at the time of the start of the new school year.
The reason why the study was restricted to one children hospital instead of the two in the town should also be stated.
During the study period, due to the closing of the second ward (22 beds) for rebuilding, the recruitment was performed in the main pediatric ward which has a capacity of 35 beds and about 1440 hospitalized children per year.

Data collection:
Please consolidate the various statements on this section into sentences
Corrected
Treatment: Describe in detail the drugs and treatments for the major diagnosis illness / diagnoses classified in this study.
See lines 89-95
Ethical consideration:
The reasons why the approval was not sought from a properly constituted ethical committee and also why oral consent had to be sought for study which is of not minimal risk should be stated. This oral consent was obtained from parents or guardians in order to complete the demographic and medical history sections on CRF by questioning the parents if necessary (see lines 100-102).

RESULTS:
Paragraph one: study population
A complete trial log/study log should be described: Total hospital attendance, total number of children who attended hospital, total admitted, total number screened during study period, total number referred, and total admitted during into the study during the enrolment period and total who received haematological diagnosis. The methods section states that the total annual capacity is about 1440 yet only 431 who had febrile illness were admitted.

During the year 2008, 4684 children were screened at the MCORU, 2521 were hospitalized in the different wards. From June to December, 804 patients were admitted in the pediatric ward, 431 febrile of them were considered as malaria cases and benefitted for both malaria diagnosis and haematological count (see lines 116-119)

Paragraph three Line 6
The sentence beginning with “Among the 168 treated for malaria” needs to be rephrased. There is a need to clarify the term pneumonia as used in this study.

Among the 168 patients with a final diagnosis of clinical malaria, 56.6% (n=95) had confirmed P.falciparum infection (see lines149-151).

Not all pneumonias are infective and/or bacterial infection.
Corrected as follows: low respiratory tract infection

Malaria patients
Paragraph one/Line one/first sentence: “All malaria infections------” this sentence is not clear. Suggestion “Approximately 23% (X/Y) of the participants had confirmed malaria infections, “Children with malaria (x/y) were significantly older than those without malaria(x/y) .
See lines160-163)

Paragraph two:
“The use of Bednet was associated with reduced risk of malaria; state the proportions of infection in Bednet and non bednet users, the odds ratio with their CI and the P-value (OR; X versus Y; P<....).
Bednet use was associated with a reduced risk of malaria (17.0% versus 34.1%) (Table 3). See table 3, logistic regression analysis and lines 164-165

DISCUSSION
Paragraph One.Line1: First sentence should be referenced
See reference 8
Line 9: sentence beginning “Clinical diagnosis through-----“should be referenced
Please see references 11-13

Paragraph two:
Line 7; co infection can be changed to co-morbidity which is less ambiguity.
Corrected
Paragraph two the last sentence should be referenced
Please see reference 15

Paragraph three:
Line three and the second sentence beginning “This suggests” should be referenced
Please see references 26, 29, 30.

Line 9 – the number 9 after the full stop should be corrected
Corrected
Last sentence: Any speculation why the severe anaemia has not seen significant change since 2001 will be help to readers.
Please see lines 263-266

Paragraph four:
Line 15 and Last but one sentence the number 9 after the full stop should be corrected
Corrected

Other suggestions:
There is a need for additional discussion of the study findings /results and to draw inferences from other publications outside Gabon
Additional aspects have been introduced in the discussion section: lines 217-219 (malaria is now the 2nd cause for hospitalization); lines 24-243 (clinical symptoms and biological predictive of malaria; lines 290-297 (relation between malaria frequency and control strategies).
10 references have been added in the discussion section.

A paragraph on Limitations of this study should be clearly stated in the discussion Stated (lines 298-306).
Abstract
1. Under results, ..., and co-infections are frequent - do the authors mean co-morbidities?
Co-infection has been replaced by co-morbidity in the whole document.
2. Over treatment with anti malaria should be 43% not 46%:
corrected

Background
1. It may be useful to provide a summary of the major findings of the study on there duction in malaria in Libreville.
   Indeed, a threefold reduction of malaria cases was observed in the country. A shift toward a higher susceptibility of children older than five years was also noted for uncomplicated malaria, suggesting an epidemiological transition of the infection in the country (see lines18-20).

Methods
1. Since patients were only recruited from one ward, how comparable or different were the two wards? Would this affect the results?
   The second ward was closed during the study period. When both wards are opened, children are alternatively hospitalized in each ward every two days. Therefore the results are not affected by recruitment in one single service.

Results
What were the criteria for admission from OPD? Emergency ward to the main wards.
See the method section: Patients seen in outpatient ward or emergency are hospitalized following examination by clinicians or pediatricians when clinically indicated, without criteria depending on the ward.

2. What was meant by asthenia? FATIGUE
3. Provide the definitions of moderate or severe malnutrition;
   Added: see lines 68-70.
4. What was the criteria for blood transfusion:
   Severe anaemia (Hb<5g/dL) or untolerated moderate anaemia was corrected by transfusion of packed red cells.