



SDI Review Form 1.6

Journal Name:	International Journal of TROPICAL DISEASE & Health
Manuscript Number:	Ms_IJTDH_45337
Title of the Manuscript:	Sickle cell disease and severity of malaria
Type of the Article	Short 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>)

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)
Compulsory REVISION comments	REVIEW SCD Sickle cell disease and severity of malaria Abstract Methodology 1. The objective is to assess the relative risk between sickle cell disease and the severity of malaria. Epidemiological, clinical and biological characteristics have been described. The authors should have given a little more details on what was done. Just indicating that "epidemiological, clinical and biological characteristics have been described," is not informative enough. Results 2. 974 malarious patients records were examined. What does this statement mean? Did all the subject have malaria? Introduction 3. Sickle cell disease is a hereditary disease with autosomal regressive Mendelian transmission. <i>Some corrections are required;</i> Sickle cell disease is a hereditary disease with autosomal recessive Mendelian transmission. 4. in which glutamic acid of the β-chain in position six is replaced by valine. <i>A more clear phrase could be as follows;</i>....in which glutamic acid in position six of the β-chain is replaced by valine. 5. The abnormal hemoglobin Hbs <i>Modify to:</i> The abnormal sickling hemoglobin, HbS	OK OK OK Yes all have malaria OK OK OK OK OK OK

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	6. Reference 1 cannot be correct. The cited authors did not make the stated finding.	OK
	7. In deoxygenated environment this abnormal hemoglobin polymerizes and sticks to the red blood cell membrane, altering the membrane function by increasing its ion permeability and dehydration.	OK
	The statement could be modified as follows; In hypoxic environment this abnormal hemoglobin polymerizes, making the red cells rigid, disrupting the red blood cell membrane, altering the membrane function by increasing its ion permeability, causing dehydration.	OK: Change of structure
	8. Finally, it crystallizes	OK
	What crystallises?	
	9. irreversibly deforms the red blood cell sickle.	
	This is an odd phrase	
	10. These red blood cells, which are characteristic of sickle cell disease, are rigid, undeformable, have a short lifespan and are responsible for vaso-occlusive complications (2).	OK
	The vaso-occlusive process is not a complication of SCD. The statement can be modified as follows; The irreversibly sickled red blood cells, which are characteristic of sickle cell disease, are rigid, undeformable, have a short life span and are responsible for vaso-occlusive crises (2).	OK
	11. Reference 2 is also inappropriate; a more appropriate reference should have been cited. OK	OK
	12. For reference 3, the year of the WHO document should have been stated.	OK
	13. In Niger, the prevalence of sickle cell disease is 16.43% in 2015.	
	In Niger, the prevalence of sickle cell disease was 16.43% in 2015.	OK
	14. This information on the prevalence of SCD in Niger should have been referenced. The prevalence appears to be too high.	OK
	15. Reference 4 is doubtful. The format for the author's name does not conform, and the title of the article is queer.	
	16. The hemoglobin profile shows that there are 87% healthy carriers (AS), 3% of SS, 3% of SC, 3% of AC (4).	There is 4% of unknown hemoglobin
	Why is that the percentages do not add up to 100 but 96?	
	17. Sickel cell disease is a hereditary ubiquitous disease that is particularly prevalent in African populations. Remove the highlighted word.	OK
	18. This explains the superposition of the distribution area of sickle cell disease with malaria endemic areas (5).	OK
	The highlighted word is incorrect, making the whole statement unclear.	
	19. The first theory is emitted in 1949 by Haldane, OK	OK
	'emitted' is an inappropriate word.	
	20. then taken up in 1954 by Allison, who argues in favor of a selective advantage of	It is epistasis

	AS heterozygous subjects against malaria. OK	
	The highlighted word is malaria 21. This is an example of a negative epistatic effect (6).	Sickled cells
	What is epistatic effect?	
	22. This hypothesis puts a direct mechanism of interaction in falciformed red blood cells	OK
	What is falciformed red blood cells?	OK
	23. The third hypothesis of the indaptation of parasite	OK
	Indaptation is a strange word	OK
	24. Several of the remaining statements in the ‘Introduction’ are not clear.	
	25. The phrase “by calculating the risk relationship between severity malaria and sickle cell disease” is vague.	OK
	26. Calculating risk cannot be the objective of the study.	OK
	Methodology Type and site of study 27. She was taken to pediatric services A and B of Niamey National Hospital.	
	The foregoing statement is meaningless The population of study 28. There is a poor description of the study population.	
	29. Were the subjects for the study in-patients or out-patients?	
	30. What were the clinical conditions?	
	31. What were the inclusion criteria for the selection of the subjects?	
	32. What were the exclusion criteria?	OK
	33. What do the authors mean by heavy drop?	
	34. The type of sample collection should have been stated.	OK
	35. Details of how the haemoglobin was confirmed ought to have been provided	
	Data collection tools 36. This sub-heading should have been numbered 3 but not 2.	OK
	37. The data was collected using survey cards.	
	What does collecting data by survey cards mean?	OK
	38. The variables collected were used to describe the epidemiological, clinical and laboratory characteristics of patients with both severe malaria and sickle cell disease.	OK
	Without any details, one is at a loss what variables were measured. 39. The whole methodology was so poorly described that it is difficult to follow what was being measured.	OK I change it By microscopy



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	40. Was there no ethical approval for the study? 41. What about informed consent? RESULTS Epidemiological characteristics 42. This sub-heading is inappropriate 43. How was it shown that the patients were infected with Plasmodium falciparum? 44. The mean age of the patients was 53.69 months ($\bar{O} = 41.23$ [3; 168]). Sex ratio of 1.28. What was the standard deviation for the ages? 45. What do the numbers in brackets stand for? 46. 1.28 cannot be a sex ratio Clinical features and biological characteristics 47. Due to the poor description of the methodology, it is very difficult to accept the results. The data provided are unsupported 48. Those features described as biological characteristics have been inappropriately described 49. It appears so strange that the authors could identify SS, SC genotypes but no AS, the sickle cell trait. 50. Table 1 is confusing Discussion 51. Since the methodology is defective, making the results unsupported, the discussion is just speculative. 52. The discussion contains several errors Overall recommendation Due to the many errors enumerated, the paper should be rejected.	SD = 41.23 IC95% Male-female sex ration OK OK We collect patients hospitalized for malaria. We don't see AS because, they are protect against complicated malaria OK OK
<u>Minor</u> REVISION comments		
<u>OKOptional/General</u> comments		

PART 2:

	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)
Are there ethical issues in this manuscript?	<u>(If yes, Kindly please write down the ethical issues here in details)</u>	