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Journal Name:	**International Journal of TROPICAL DISEASE & Health**
Manuscript Number:	**2014_IJTDH_8985**
Title of the Manuscript:	**Serum Iron Status and Haematological Profiles in Adult Nigerian Sickle Cell Anaemia Patients**
Type of the Article	**Original Research Article**

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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.
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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)*
Compulsory REVISION comments	**Introduction.** A frequency of homozygous sickle cell anaemia (SS) of 2-3% is not consistent with a heterozygote frequency of 23%. According to H-W equilibrium, if the heterozygote freque3ncy is 23%, the predicted SS homozygote frequency is about 1.8%. Given the size of the Nigerian population, 1.8% is significantly different from 3% and even from 2%. Ref. 7 is incomplete and I could not find it. **Materials and Methods.** A classic parameter for recognizing iron deficiency is the Transferrin Saturation Index (TSI). Usually one takes a TSI of less than 20% as suggestive of iron deficiency (ID), and a TSI of less than 15% as definite ID. Here unfortunately this important parameter, TSI, is not shown; and ID is not even defined. The description of patients is poor. We are told that 90% of patients received only 1-2 blood units, but: (a) is it possible that there were no patients who received 0 blood units? (b) over what length of time were those blood units received? (c) was the blood transfusion record identical in the SS group and in the VOC group? **Results** Table 2 is a poor way to present the data: dot scattergrams would be much better. I think there must be something wrong with the units. At face value the mean TSI would be 5.3% in the VOC group, 3.8% in the SS group, and 4.9% in the CC group: thus, all groups would be severely ID, including the controls. Once this is corrected, it would be still important to know	Understood and agreed. Reference changed. It is difficult for me to defend a referenced publication by Adekile et al. %TFS calculated and included. None has a %TFS of <20 2. Our records showed that all the SCD patients recruited had received varying amount of blood transfusion within the range of 1-2 units in their lif time. The blood transfusion history between the SS and the VOC group were not compared since the transfusion load was considered low and insignificant. Table 2. Thank you for pointing out this. TIBC unit has been adjusted now and %TFS calculated.

	not just mean values, but how many patients in each group qualify for ID. No units are shown for transferrin. Table 3. Again dot scattergrams would be more informative. However, a striking difference in MCHC is seen even from the mere mean values: the MCHC is high-normal in both sickle cell groups, and marginally low in the control group. This in itself would suggest that ID must be at best very rare in the former, and possibly not so rare in the latter. It is also noteworthy that MCV and MCH are significantly lower in the SS group than in the VOC group. Low MCV and low MCH with normal MCHC are highly suggestive of alpha thalassemia; and it may well be that this trait is more common in the SS group because it exerts some measure of protection against VOC. Response: Noted with thanks. Adjustment made appropriatey. **Discussion** Surprisingly, many of the above points are not discussed. Even more important, no attempt is made to infer from the data what proportion, if any, of the two groups of sickle cell anaemia patients have IDA; or what proportion, if any, have iron overload. This is most disappointing since the reader would have had the impression that this was the main aim of the study. Also, surprisingly, whereas the role of blood transfusion is discussed, no attempt is made to correlate the iron status of individual patients with their respective previous transfusion history. Contrary to the statements in lines 207-209 and 234-236, low MCV with normal MCHC does not support IDA, but rather alpha thal (see above). Response: The whole discussion has been re-written	

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Minor REVISION comments	**Introduction**. Chronic anaemia is not a 'complication' of sickle cell anaemia: it is one of its main defining manifestations. A search of PubMed for sickle cell anaemia + iron deficiency yields n = 251: even if not all these papers may be pertinent, it seems a bit cavalier to quote only very few and to say there is limited info. **Materials and Methods.** The choice of acronyms seems unfortunate: SS usually means homozygous sickle cell anaemia; here instead it means steady-state. CC usually means homozygous Hb C disease: here instead it means case control. **Results**. I did not understand the many P values of 0.000 in Tables 2 and 3. **Discussion** In my view the discussion is rather loose, largely as a result of the major criticism above. Only a few of many previous relevant papers are quoted. In addition, some statements are pre-empted by rather elementary knowledge of sickle cell anaemia: for instance, it is a given that they are anaemic due to haemolysis (lines 232-234)! In contrast, I cannot see 'multi-organ failure' (line 209) as relevant to this group of patients, since from the description given they were not terminal.	Sorry for the mix-up. It has been adjusted. Variouss complications are now included. "Limited info" refers to limited info in respect of this subject in the authors location of practice. I do agree. They were chosen and explained to make the write-up tidy. The highlighted can not be found in be found in lines 232-234 of this manuscript. Probably a mix-up. The quoted lines discussed the significance of RBC indices values. Progressive multi-organ damage and eventual failure, which occurs in SCD adversely affects iron metabolism.
Optional/General comments	Since there is a vast literature on sickle cell anaemia, blood transfusion management, IDA and iron overload, from a new paper on the topic I would expect something new that I do not see. In addition, there are many shortcomings that I have tried to list.	