Author's response to reviews

Title: Factors associated with poor prognosis among patients admitted with heart failure in a Nigerian tertiary medical centre: a cross-sectional study

Authors:

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Author's response to reviews:

The Editor-in-Chief
BMC-series Journals

Dear Sir
RE: Factors associated with poor prognosis among patients admitted with heart failure in a Nigerian tertiary medical centre: a cross-sectional study (Manuscript MS: 1106808486182148); Authors: Kamilu Musa Karaye, Mahmoud Umar Sani

Thank you for considering our manuscript for possible publication in your reputable Journal. Please find our responses below to the reviewers’ comments.

Reviewer #1 (Dr Alfredo Jose L Mansur):

General Comments: ‘Unfortunately, the study sample size was small – 79 patients. May be this is the main limitation of the manuscript. The small number of patients hinders statistical evaluation and a broad view of the disease. May be the authors might emphasise in the report the experience with peripartum cardiomyopathy. This approach might give some originality to the manuscript and be the main focus of the report. Such an approach would need an overhaul of the manuscript by the authors.’

Response:

• We have added a new paragraph on pages 19-20, the last in the Discussion section, in which the sample size of the study was discussed as a limitation.
• In order to present and discuss our experience with peripartum cardiomyopathy, as well as other aetiologies of heart failure (please note that reviewer #2 suggested in his conclusion that we should also focus on the causes of heart failure), we reviewed our study objectives in the last paragraph of the ‘Background’ section. This now reads as follows: ‘The aims of the present study were to determine the causes of heart failure among patients admitted to a Nigerian tertiary medical centre, to determine the prevalence of factors known to be associated with poor prognosis among these patients, and to compare the factors and causes between males and females.’ As noted by the reviewer, we had to overhaul the whole manuscript to address his suggestion. In the methods section, paragraphs 1, 3, 5 and 6 were therefore rewritten (though partly to
accommodate the concerns of reviewer #2 in the section). The results section was also rewritten, to present the data on aetiologies of heart failure in more detail. A new Table was added titled ‘Distribution of prognostic factors among heart failure patients grouped by aetiology’. In addition, more data on patients with peripartum cardiomyopathy was presented in paragraph #4 of the results section. Peripartum cardiomyopathy was then discussed in paragraph #8 of the discussion section, and its relevance was captured in the conclusion and abstract of the manuscript. We believe that readers of the manuscript will appreciate our focus on the disease.

Specific comments: ‘I suggest avoiding unconventional abbreviations throughout the manuscript, as HHD, PPCM, RHD or DCM. Please, avoid also as much as possible abbreviations in the Tables. It contributes to reduce unnecessary footnotes.’

Response: This has been done. The retained abbreviations are very few, and include LV for Left Ventricle, LVEF for LV Ejection Fraction and HF for Heart Failure.

Reviewer #2 (Dr Christian Torp-Pedersen)

Major comments:

1. It is not possible to understand how the population was defined. Does the hospital have regional uptake or do the patients represent a selected subset of Nigerian patients?

Response: This question has now been answered in paragraphs #1 and 3 of the ‘patients and methods section’. Essentially, the study centre is the only tertiary medical centre (Teaching Hospital) in Kano State, the most populous state in Nigeria. The Hospital receives referrals from hospitals in Kano as well as from parts of neighbouring States. Patients were recruited consecutively, and inclusion criteria were: patients should be at least 15 years of age or older, diagnosis of Heart Failure should be confirmed, and patients must be admitted to the medical wards of the study centre. Furthermore, the Title of the study was changed to ‘Factors associated with poor prognosis among patients admitted with heart failure in a Nigerian tertiary medical centre: a cross-sectional study’. This was to clarify any ambiguity in the previous title.

2. Does the young age of the patients for example represent selection bias or does it represent possibly highly interesting differences from other countries?

Response: The studied patients, as mentioned above, were consecutively recruited after satisfying the inclusion criteria. They therefore represent the typical patients attending the study centre. The age of the patients was discussed in paragraph #2 of the discussion section.

3. Hypertension and postpartum cardiomyopathy were common aetiologies, but with the apparent high prevalence of hypertension, could the highly prevalent postpartum cardiomyopathy actually reflect hypertension?

Response: The characteristic of patients with peripartum cardiomyopathy was presented in paragraph #4 of the results section, and the findings were discussed in paragraph #8 of the discussion section. We showed that the prevalence of
peripartum cardiomyopathy is unlikely to be a reflection of that of hypertension.

4. How was the diagnosis of ischemic heart disease established?
Response: The answer to this question will be found in the patients and methods section, paragraph #6. Lack of facility for coronary angiography in the study centre was discussed in the last paragraph of the discussion section, as a limitation of the study. We would like to mention that practice of Medicine in poor developing countries is significantly modified by several factors, principally lack of facilities and funding. In several ways, we the practitioners do devise ingenious ways of going round the problems, whenever we can.

5. Major focus in this paper is put on poor prognostic signs, but many reflect characteristics that are highly dependent on treatment including hyponatraemia and a high heart rate. Do the findings reflect severe heart failure or no treatment at the time of admission?
Response: We agree that hyponatraemia, tachycardia and hypotension are factors that could be caused or influenced by drugs used in the treatment of heart failure. In the study, some patients were truly admitted while taking drugs for treatment of the heart failure. For these reasons, we decided to drop out the data on the 3 factors, and to concentrate on the other seven. This was one of the reasons why we had to overhaul the manuscript.

Minor comments:
The paper needs a language work over. To start with, the title of this study does not address poor prognostic factors but excellent prognostic factors that characterise a poor outcome.
Response: We agree with this comment, and have changed the title of the manuscript to “Factors associated with poor prognosis among patients admitted with heart failure in a Nigerian tertiary medical centre: a cross-sectional study”. We have also reviewed the style of written English (United Kingdom), and hope it is now up to the desired standard.

As suggested by reviewer #2 in his concluding remarks, we have discussed the aetiology of heart failure in greater detail. We sincerely hope that we have addressed the concerns of both reviewers.

Kind regards,
Dr KM Karaye
(Corresponding Author)