Author’s response to reviews

Title: Management of severe acute malnutrition by cow milk in resource contraints settings: experience of the Nutritional Centre of the University Clinics of Graben

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Introduction

Page 4. Line 7 and 8. Do these stats refer to children worldwide? Please clarify. These stats refer to children worldwide. Appropriate corrections have been made.

Line 13 "...allowed to codify.." I do not know what this means. It means “allowed to standardize”. This word has replaced “codify” in the text

Lines 19 and 20. Is this malnutrition in general or in under 5 year olds? This is malnutrition in general. Appropriate corrections have been made.

Line 25. "starchy"...what is this? It refers to starchy foods containing cereals such as corn or maize. Appropriate corrections have been made.

Line 30 and 31. What is F75 and F100. Please provide the nutrition composition of each, or at least a reference in which the composition can be found. Requested information has been provided.

Line 38. What is meant by "the domestic circuit"? It refers to the national distribution system. It has been corrected as appropriate.
Methods

Page 5. Line 7. What were in inclusion/exclusion criteria? Were any children treated during the stated time fame excluded from the study analysis? If so, how many and why? All children treated during the stated time were included in the study. All incomplete records (i.e. not containing the study parameters) were excluded from the study.

Line 34. Please explain how data were checked for consistency and completeness. Data were checked for consistency and completeness by matching the source records, the data collection form and the electronic database by a double independent verification process and were analysed by SPSS 20 software.

Line 37. The data processing and analysis sections needs more detail. What was the rational for the use of the statistical tests stated? What version of SPSS was used? I don't think "means of variances" is the correct term. This section has been more detailed and the appropriate corrections made. In fact, according to the different objectives in malnutrition treatment the ANOVA test was the most appropriate to show changes during the follow up (for weight)

Line 42. I note that the patients did not give consent, therefore "enrolled" is not an appropriate term. How were the data anonymised? How was patient confidentiality maintained? Of course the word enrolled was misused in this case. It has been changed. All personal identification information was coded in the database. The analysis was performed in an anonymized database. Only authorized staff accessed source documents which contained identification of patients.

Results

Page 5. Line 54. If this was a database exercise, then how were patients "enrolled"? The text has been edited as appropriate.

Line 57. Are the minimum and max ages in months? Please insert units. Units have been inserted
Table 1. It would be useful to have the age of the children in each group here, and their weight and MUAC at baseline. The requested data have been provided. The MUAC was not recorded in the database as it was missing for many patients in source documents.

Table 2, 3 and 4. Rather than comparing means, it would make more sense to compare amount of weight gained in each of the treatment groups. The ANOVA test was appropriate in this case to compare changes of the considered days of evaluation to gives a good estimation of trends. Of course it would have been better to compare the amounts of weight that individuals gained to assess the efficacy of both therapeutic approaches. Since the efficacy of WHO therapeutic milk is already proved in many evaluations, we only wanted to show that trends in mean weight gain were comparable in both treatment groups.

What is the ANOVA comparing? Please be explicit. The explanation has been provided in the text.

Line 55. The difference between the means may not be the same as the mean weight gain if individual weight gains are considered. The differences were statically tested to conclude whether or not they were different by the F test in ANOVA equivalent to T test of Student and with the p values.

Figure 1, 2, 3 and 4. The axes need titles and units. The data points should also show the SD's. I am not sure what figure 4 is showing. Is this the sum of the "crosses" for all the children at each time point? Titles and units have been added in the axes. Figure 4 shows the number of oedematous patients over 21 days. Title has been appropriately changed and the graph presented as a histogram.

Page 10, line 13. "resolved" would be a better term than "melted"? Melted has been changed to “recovered”.
Page 10, line 12 to 21. How do these co-morbidities affect the interpretation of the data? Comorbidities may delay the recovery time of malnutrition. We provided the relevant references.

Line 12. Should this be table 5? Yes, this is table 5

I do not think that figure 1 is the most appropriate way to show these data as much of the individual detail is lost. I would suggest showing how many patients on each day had 1, 2 or 3 crosses in a histogram or something similar. These figures give a visual idea on the trends of weight changes in both treatment groups. Figure 4 has been corrected as a histogram to show how oedema resolved in both treatment groups.

Lines 21 and 22. Please explain what these statistics mean. They refer to the number of oedematous patients regardless of the number of crosses in different follow up days.

Table 6. The data presented in this table need a full interpretation in the text. The interpretation has been provided.

Page 11. How was clinical outcome assessed? Please provide an explanation in the text of the data presented in table 7. This has been reported as a weakness in our study. Clinical outcome was not assessed objectively, i.e. with the use of weight for height z-score or the MUAC at discharge. These data were missing for most of the patients at this cut off day. Table 7 has been deleted as it was not needed to present these brief data.

Discussion.

The discussion is very brief. It could be improved by a more thorough comparison with published literature, and a discussion of the limitations as well as the strengths of the approached used. I am concerned that the conclusions reached cannot be properly supported by the data and would suggest a more thorough statistical analysis of the data with the guidance of a statistician.
We have tried to enrich the discussion. However, we could not retrieve many studies conducted of this specific topic of using locally produced foods to treat SAM in comparison with WHO recommended ones. We have also highlighted the weaknesses of the study. The available data effectively support our conclusions by proving that the two treatment groups are comparable in terms of weight change trends, oedema resolution, digestive tolerance and clinical outcome. Further studies with broader controlled parameters will help to confirm our observations.