Author's response to reviews

Title: Epidemiology of Bacteremia caused by Uncommon Non-fermentative Gram-negative Bacteria

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Author's response to reviews: see over
Dear Editor,

Thank you for your recent review of our manuscript entitled, “Epidemiology of Bacteremia caused by Uncommon Non-fermentative Gram-negative Bacteria”. We thank the reviewers for their thoughtful and attentive review of our manuscript. We greatly appreciate the opportunity to respond to their comments and suggestions and believe the changes made in response to these comments have served to strengthen the manuscript considerably.

Detailed responses to each of the reviewers’ critiques begin on the next page. In the manuscript document file, all revisions have been highlighted in yellow.

Please do not hesitate to contact us with any additional questions or comments.

Yours truly,

Pinyo Rattanaumpawan, MD, MSCE
In addition please address the following editorial points:

* Please include an authors’ contributions section.

The author's contributions section has been added at the end of manuscript (page 14).

* Please clarify within your methods section if these clinical samples were taken as part of standard patient care and if you obtained informed consent for their use.

The suggested information has been added as follows.

The study protocol including waiver of informed consent for using patients' clinical isolates were approved by Siriraj Institutional Review board.

Reviewer: Cecilia Godoy Carvalhaes

Comments to the Author

Reviewer's report
Title: Epidemiology of Bacteremia caused by Uncommon Non-fermentative Gram-negative Bacteria
Version: 1 Date: 8 October 2012
Reviewer: Cecilia Godoy Carvalhaes

Reviewer's report:
The authors provided the information suggested and clarify my comments. There are no remaining comments and in my opinion the manuscript should be published on BMC Infectious Disease.
Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests: I declare that I have no competing interests.

We thanks the reviewer for considering our manuscript is suitable for publication.
Reviewer's report:
The authors present an interesting and significant piece of work. As they describe in the introduction, there is a gap in the knowledge around bacteremia caused by uncommon NFGNB.

We thank the reviewer for the positive comment.

In the attempt to explore this, they compare a set of different potential risk factors between participants with uncommon and common NFGNB and they move on to explore inter-relationships using a stepwise method. Stepwise regression is a commonly used approach especially in areas that have not been investigated before (no a priori expectations) due to its exploratory nature. However, it would be very useful for the reader if the authors could describe more explicitly in the methods section the stepwise process. So, have the authors followed a stepwise process according to which in each successive step, all variables were examined separately and the variable with the highest statistical significance (and with a p<0.20) was entering the model and (in the same step) if any of the previously entered variables had a p-value >0.05 was exiting the model? Or have they included all predictors with a p-value <0.2 from the univariate analysis in a single model and then removed those with p>0.05? If the latter, the authors will need to reconsider their approach.

We performed the stepwise regression analysis as your recommendation. To make this more clearer, we added the brief description of stepwise regression as shown below. If the reviewer think that we should add more details, we are more than happy to do so.

........ To identify factors that independently associated with the uncommon NFGNB bacteremia, we subsequently built a multivariate logistic model by the stepwise method which is a combination of backward elimination and forward selection approaches........

Other than the above comment, that is a more general concern on the analysis conducted here, there are some smaller concerns that the authors could take into consideration. Specifically, regarding the analysis that is presented in Table 3, I have the following comments:

1. The only two continuous measures reported here are age and length of hospital stay. They describe the distribution of these measures by medians and ranges. I think that presenting IQRs instead of ranges would be a more useful measure as that would give a better description of the distribution in contrast to the minimum and maximum values.

The range of age and length of hospital stay have been replaced with IQRs as suggested.

2. According to figures reported in the table, median length of hospital stay is shorter for the uncommon NFGNB than for common NFNGB with an OR [95% CI] = 0.996 [0.986-1.005].
Though the reported p-value for this association is <0.001. Could the authors correct either the CI or the p-value (depending on which of the two is incorrect)?

Sorry for the mistake. The correct OR is 0.996 [0.986-1.005] with a p-value of 0.37. This mistake has already been corrected.

3. The authors describe in the statistical analysis part that categorical variables were compared by using chi-square or Fisher’s exact test. It would be useful if the authors could specify by notation in the table which of the 2 p-values is reported in the right-hand column (that of Pearson’s chi2 or that of the Fisher’s exact test). Could the authors also re-check the p-values reported in the same table? In cases where the number of counts is less than 10 or 5, where one would expect to see a Fisher’s exact test (according to the common rule of thumb) the chi-square value is reported instead (ie. for chronic lung diseases, HIV infection etc).

The table has been revised as suggested.

4. Could the authors re-check the figures and particularly the p-values reported in the table? The significance of some of them should not be reported as <0.001 if the actual p-value is higher than that (for example p-value for cardio diseases is 0.008 (?)).

All tables and figure have been checked and revised.

In the last section of the results (factors associated with uncommon NFGNB bacteremia), my comments are:

1. The authors report that the median length of hospital stay was significantly lower in the uncommon NFGNB group. However, the 95% CI does not support this (see comment 2 above).

Sorry for the mistake. To make this clearer. that sentence has been revised as shown below.

.......... When baseline characteristics of patients in both groups were compared, a median length of hospital stay prior to the onset of bacteremia was slightly lower in the uncommon NFGNB group (1 day vs. 10 days). However, this difference did not reach statistical significance............

2. The authors incorrectly report that patients in the uncommon NFGNB group were less likely to have cardiovascular diseases (51% in the uncommon vs 33% in the common NFGNB group).

This typo has been corrected as shown below.

.......Patients in the uncommon NFGNB group were less likely to have underlying hematologic malignancy as well as exposure to beta-lactams, aminoglycosides and metronidazole. However, the uncommon NFGNB group had a higher prevalence of underlying cardiovascular diseases.....

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:
I declare that I have no competing interests