Author's response to reviews

Title: Nasal Carriage of a Single Clone of Community-Acquired Methicillin-Resistant Staphylococcus aureus among Kindergarten Attendees in Northern Taiwan

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Version: 2 Date: 3 May 2007

Author's response to reviews: see over
Assistant Editor
Liz Hoffman
BMC Infectious Diseases

May 3, 2007

Dear Dr. Hoffman

We are pleased that our manuscript (MS: 9600580881285414) entitled “Nasal Carriage of a Single Clone of Community-acquired Methicillin-resistant Staphylococcus aureus among Kindergarten Attendees in Northern Taiwan”, has been provisionally accepted as a research article, pending adequate revision according to the attached comments and the further satisfaction of the editors.

Please find the revised manuscript, resubmitted for publication in the Research Article section of BMC Infectious Diseases. Furthermore, we would like to take this opportunity to thank the reviewers for their most valuable, expert advice. The revised manuscript has been read and approved by all the authors. We greatly appreciate your patience and your consideration of our article for publication.

Sincerely yours,

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Dear Dr. Purcell:

Thank you for your valuable comments on our manuscript. Our replies and corrections are as follows:

Minor Essential Revisions:

Abstract

1) “The last sentence of the results…”: We changed the last sentence to clarify the results as “All of the colonization isolates carried the staphylococcal cassette chromosome mec type IV, but none were positive for the Panton-Valentine leukocidin genes.” (Page 3, Lines 17, 18 and Page 4, Line 1).

2) “The first sentence of the conclusion…”: To emphasize the more unusual finding, we changed “featuring high macrolide resistance” to “featuring high clindamycin resistance” as suggested (Page 4, Line 3).

Methods

1) “In the first sentence of the study subjects section of the methods…”: The word “prospective” was deleted as suggested (Page 6, Line 4).

2) “There is mention of study approval by an IRB,…”: We added a statement “Participant or parental informed consent was obtained in all cases.” according to the suggestion to provide a statement about whether consent was required (Page 6, Lines 6, 7).

3) “The age classification is a little confusing…”: Based on this comment, we provided clear definitions of the age categories as follows: “toddler (2–younger than 4 years), older toddler (4–younger than 5 years), preschool child (5–younger than 6 years), and child attending the kindergarten prior to leaving for school (6–younger than 7 years)” (Page 6, Lines 8-11).

4) “In the last paragraph of the study subjects section of the methods…”: The unclear description of exclusion criteria regarding “acute medical problem” was deleted (Page 6, Lines 13, 14).

5) “In the first paragraph of the cultures and questionnaires section of the methods…”: The revision provides a more detailed list of the MRSA risk factors assessed which addresses the comments of the reviewer. In particular, the relevant time frame of surgery and endotracheal intubation was clarified as the previous 12 months and a list of the types of underlying disorders screened for
was added (Page 7, Lines 2-9).

Results

“In the prevalence of *S. aureus* and CA-MRSA nasal carriage section of the results,…”: We agreed that the numbers of subjects were too small to make meaningful comparisons between different age groups and deleted these observations.

Tables and Figures

We agreed with the comments on the relative merit of tables and figures and deleted Table 1 and associated contents from the manuscript.

Discussion and Conclusion

We noted the recent publication by Alfaro et al cited in reference 26 concerning the prevalence of MRSA nasal carriage in a study of South Texas children. The content in the first paragraph of discussion was revised according to the suggestions you provided (Page 12, Lines 9-17).

References

We appreciate the very useful reference and interpretation provided in this comment.
Dear Dr. McDougal:

Thank you for your valuable recommendations for our manuscript. Our answers and corrections are as follows:

Major Compulsory Revisions:

1) “Because the carriage rate was unusually high…”: The manuscript has been revised to explain that a questionnaire was given to the guardian of the participant to collect information on risk factors for MRSA acquisition which included recurrent skin infections, history of MRSA infection or colonization, or a worker of a health care environment (Page 7, Lines 2-9).

2) “Although the prevalence of *ermB* in *S. aureus* is rare,…”: We compared the PFGE patterns of the 9 CA-MRSA colonization isolates in the present study with the CA-MRSA infecting strains in reference 7. However, they did not appear to be related by PFGE (<80% similarity). The genetic background of the 9 CA-MRSA colonization isolates was further analyzed by MLST (reference 13). With regard to MLST, our CA-MRSA colonization isolates were all of a single type (ST59), which was the same as the CA-MRSA infecting strains in reference 7 (Page 3, Lines 16, 17; Page 8, Lines 7-11; Page 11, Lines 9, 10; Page 14; Lines 9-11).

3) The single, phenotypically unique CA-MRSA clone colonized among healthy kindergarten attendees in this preliminary study has now been subsequently monitored in the same group of children. To date, none of the children originally colonized with this CA-MRSA clone demonstrated evidence of subsequent infection. However, as MRSA colonization can continue for several years, further follow up of the nature history of such colonization is needed to determine the clinical significance.

4) Page 13, “MLS resistance and *ermA*…”: The relevant information concerning mechanisms of MLS resistance in HA-MRSA and USA300 (ST8) CA-MRSA strains noted by the reviewer is covered in the Discussion section of the revised manuscript with citation to references 32 to 36 (Page 13, Lines 9-13).

Minor Essential Revisions:

1) Page 6, line 9: The description “a half-an-hour” was revised to “one-half hour” (Page 6, Line 11).

2) Page14, line 2: We added the following sentence as suggested by the comment: “The eight patterns were not indistinguishable by PFGE, but differed by 1 to 2
bands.” (Page 14, Lines 11, 12).

Discretionary Revisions:

1) Page 3, last sentence: As suggested by the reviewer, we revised the last sentence as follows: “All of the colonization isolates carried the staphylococcal cassette chromosome *mec* type IV, but none were positive for the Panton-Valentine leukocidin genes.” (Page 3, Lines 17, 18 and Page 4, Line 1).

2) Title: As suggested, we changed “common” to “single” (Page 1, Line 1).