Author's response to reviews

Title: A Analysis of Microbiota-Targeted Therapies in Patients with H7N9 Infection

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

MS: 1262312262101691 - A Retrospective Analysis of Microbiota-Targeted Therapies in Patients with H7N9 Infection

Our manuscript, referenced above, has been revised according to the reviewers’ comments. Revised portion are underlined in red. And the answers to the questions are listed as follows:

**Reviewer's report:**

This is an important topic and there is some very interesting data in this manuscript. However, there are still some minor changes needed to make this paper easier to understand.

Minor changes;

1. in the Results section where the authors have done B/E ratio they should explain why they did that and interpret their data

Thanks. It has been added in lines 92-95, and lines 329-341.

Intestinal colonization resistance is defined as the resistance to colonization by ingested bacteria or inhibition of overgrowth of resident bacteria normally present at low levels within the intestinal tract [1]. The data of B/E values in the study revealed most young and elderly adult patients with H7N9 infection had disequilibrium in the balance between *Bifidobacterium* and *Enterobacteriaceae*. The disequilibrium might have many causes such as the aging process, flu virus infection, antibiotics, anorexia and so on. Our results showed that *Bifidobacterium* were most sensitive to antibiotic suppression and hardly recovered even without antibiotic intervention. Additionally, The advancing antimicrobial drug resistance among Enterobacteriaceae [2] largely
accounted for the disequilibrium. Bifidobacterium is known to inhibit the growth of various pathogens by several mechanisms including production of antimicrobial agents and short-chain fatty acids, and competitive exclusion [3-4]. Thus, they play an important role in resistance to microbial colonization of the intestine.

2. Fig. 2 and 4 - what does the x axis mean?
Thanks, the texts of x axis have been added in the Fig. 2 and 4, respectively.

3. The word “retrospective” should be removed from the title. This is not a retrospective study.
Thanks, the word “retrospective” has been removed from the title.

4. It is not appropriate to acknowledge the reviewer in the acknowledgement section.
Thanks, it has been removed from acknowledgment section.

5. The authors should seek some help with improving the English in this manuscript (grammar and spelling)
Thanks, it has been re-edited by a native-English speaker with scientific expertise, BioMed Central recommends Edanz.

We would like to thank the comments of reviewer for the constructive suggestions of the manuscript.

If there are other errors or further requests, please contact me by e-mail.
With best wishes,

Haifeng Lu


