Author’s response to reviews

Title: Bacterial Contamination of Home Nebulizers in Children with Cystic Fibrosis and Clinical Implication on the Number of Pulmonary Exacerbations

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Dear editor in chief and the reviewers

We are so grateful for your valuable, precise and detailed suggestions and comments on the manuscript entitled “Microbial Contamination of Home Nebulizers in Children with Cystic Fibrosis and Clinical Implication on the Number of Pulmonary Exacerbations”. All the comments and recommendations were reviewed by all co-authors, and the changes were made. Finally, the revised and edited manuscript was read by all co-authors. Below you can find each reviewer’s comment and the answers (yellow highlights). We are kindly asking you to let us know if we should provide more changes.
Reviewer 1

This second revision of the manuscript has corrected some errors and ambiguity from the R1 version. I have no further request except maybe an editorial check of English editing.

Thank you for your valuable comment and the time you have spent on reviewing this manuscript.

Reviewer 2

Thank you for your detailed and kind comments and the time you have spent on reviewing this manuscript.

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: The manuscript reads much better now. There are a few corrections in the language still required, but those are relatively minor. ADDITIONAL REQUESTS/SUGGESTIONS:

Abstract results: mention that the number of exacerbations as presented is mean ± ? (SD? SEM?).

SD was added to the text

Background Paragraph 3: After mention of References (11-13): Change the next two sentences as indicated (without the quote marks): "Nebulizers generate very small particles, which can easily reach the terminal bronchioles and alveoli; therefore, nebulizer organism reaches the lungs easily, which may lead to pulmonary colonization. This highlights the importance of cleaning of home nebulizers (14)."

The mentioned changes were done.

Background Paragraph 4: Change the second and the third sentences as indicated (without the quote marks): "To the best of our knowledge, no surveys of bacteriological contamination of these nebulizers have been conducted in Iran. There are only a few international articles, that too with small sample sizes (11, 15, 16)."

The mentioned changes were done.
Background last sentence; change as indicated (without the quote marks): "We also sought to study the clinical implication of microbial contamination of home nebulizers, which has not been studied previously."

The mentioned changes were done.

Methods: Patient selection section. Please check this last sentence for accuracy. "In the current study, there were no missing data due to the referral policies for all outpatient and inpatients, even if they were in a county." What is the significance of 'county' here?

We also agree that this part is not significant and we deleted “even if they were in a county." From the text.

Methods: Hygiene section. Please change the 'its' to 'their' in the first sentence.

The mentioned correction was done.

Also, please check the third sentence. Is 'fulfilling' the correct word to use? Does the pediatric pulmonologist fill up or review the list?

The mentioned correction was done.

Results: Paragraph on daily inhalation numbers: After the first sentence, please use lowercase t in 'the' after the semi-colon.

The mentioned correction was done.

Also, please indicate in the text that the written numbers represent mean ± error (which error measure: SD? SEM?).

The mentioned correction was done.
Results: Paragraph starting with "Among 61 home nebulizers...": Change the second sentence as indicated (Without quote marks): "Patients' medical records were investigated in order to obtain the number of CF exacerbations which ended in hospital admission and IV antibiotics during the past 12 months."

The mentioned correction was done.

Last line of Paragraph before Table 4: "The mean age of the subjects who were not properly observing the hygiene of nebulizers was significantly higher than the ones doing the whole process correctly..."—Please change this sentence. Considering that the subjects were children aged only about 8 years or younger, it is unfair to say they were not properly observing the hygiene. You can write, for example, "The mean age of subjects was higher in households where nebulizer hygiene was inadequate than in households where nebulizers were maintained following proper procedures..."

Thank you for your kind suggestion. The sentences was corrected accordingly.

Discussion: First Paragraph: "... and we are reporting this type of study from Iran"—If this is the first study of this kind in this cohort in Iran, you should mention that unique fact.

Yes, it is the first study in Iran.

Next paragraph: The sentence starting with "This less rate of nebulizer contamination..." Please change 'less' to 'lower'.

The mentioned correction was done.

I understand that you did the antibiogram for only the isolated Pseudomonas spp, but why not mention the outcome of the antibiogram at least in the discussions—if you noticed any specific patterns with the antibiotics tested?

Thank you for your valuable comment. We do believe that it is worthy to report our antibiogram results even if it was done only for isolated Pseudomonas spp.

Last paragraph of Limitations: Please change 'exception' to 'exempt'.

The mentioned correction was done.