Reviewer’s report

Title: Factors influencing microbial colonies in the air of operating rooms

Version: 1 Date: 22 May 2017

Reviewer: Xiaoling Ma

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This manuscript assesses microbial colony counts in working ORs and analyses the factors affecting air contamination in a tertiary referral medical center.

The observation of this study is "The number of personnel and their activities critically influence the microbe concentration in the air of the OR." This conclusion seems to be a common sense. The innovation of this manuscript is to some extend weak and the content of experiments is not plentiful.

In addition, the following points need to be improved:

1. The author mentioned that "More than 31,500 surgical procedures were performed in the ORs annually, with an average of approximately 100 surgical procedures per workday." This study was conducted from Monday to Friday, May through August 2015. But we notice that only 250 surgical procedures were enrolled in the study. It is not clear whether there is a screening criterion?

2. Were 250 surgical procedures collected from different ORs? Did author measure the microbiologic air counts before performing an operation. It is not clear whether there are any differences in microbiologic air counts in different ORs?

3. No details are provided on the bacterial species detected in this study and are there any differences between bacterial species and types?

Are the methods appropriate and well described?

If not, please specify what is required in your comments to the authors.

No
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:
Needs some language corrections before being published

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