Reviewer’s report

Title: Topical povidone iodine inhibits bacterial growth in the oral cavity of patients on mechanical ventilation: a randomized controlled study

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Reviewer: Eitoyo Kokubu

Reviewer's report:

The manuscript entitled "Topical povidone iodine inhibits bacterial growth in the oral cavity of patients on mechanical ventilation: a randomized controlled study" is reported the effectivity of the using povidone iodide after mouth wash treatment. This article is valuable method for patients on ventilation, and other oral care treatment. There are some parts which need to be explained detail discussion.

Materials and Methods

The total number of oral bacteria was collected from an immersed cotton swab. Was there any difference in the amount of saliva volume from patients? If the amount of saliva secretion is different, the number of collected bacteria degree of density also different.

Oral care in control group was wiping with hydrogen peroxide and irrigation with tap water, intervention group was also wiping and irrigation subsequent irrigation povidone iodine. Does patient of control group provide any solution instead of povidone iodide after irrigation tap water?

Was the collection term same time? Diurnal variation in oral environment are likely to occur.

Discussion

Does each patient's oral environment, such as remaining teeth or plaque index, are affect to oral care? The data in Figure 4, Streptococcus species and Pseudomonas aeruginosa were counted 10^4 cfu/ml each number. These cells effect biofilm formation.

How many times do the author consider the patient oral care in one day? The bacterial number was increase slowly after until 3 hours in intervention group, following data were not counted.

Figure

In figure 3, the number of bacterial cfu was slightly increase at 1hour to 3 hours in experiment group, in Figu4, the number of proliferations were inhibited each 6 bacterial species. The author described that topical povidone iodine did not disturb the balance of the flora in the oral cavity or promote the growth of bacteria (P11:L29). Only pathogenic bacteria were affected by povidone iodide?

In figure 3, the character was inserted apart. (cf, p= , 15, *).
In figure 4, it difficult distinguish dashed line whether control or intervention group.
Also, please adjust group explanation in Fig 3 and 4. Control group description was first.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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?
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I am able to assess the statistics

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