Reviewer’s report

Title: The effect of diluting povidone-iodine on bacterial growth associated with speech

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Reviewer: Hiroyuki Nakashizuka

Reviewer’s report:

Recently, the use of povidone-iodine as a strategy for endophthalmitis in increasing intravitreal injection is advocated and is attracting a great deal of attention. The author’s experiments methods are clear but not realistic.

We also struggle to understand why they reproduced an environment that they talk for 5 minutes after the addition of povidone-iodine. In the protocol of the intravitreal injection, the use of face mask or avoidance of talking is strongly recommended[1]. Immediate after disinfection with povidone-iodine, intravitreal injections are commonly performed, and it cannot be assumed that speech should be continued for as long as 20 cm, even for 5 minutes after disinfection.

The excess is discarded after 2.5 ml of povidone-iodine has been added to the blood agar test plate, but the protocol recommends that povidone-iodine should not be dried before intravitreal injection. Experiments performed without discarding the excess may have been more realistic.

It is necessary to state the size of the blood agar test plate, how the medium was supplemented with povidone-iodine, and how the excess was discarded.

In the discussion session, authors commented that though the free iodine becomes more abounding, when the concentration of the povidone iodine is low proportionally, there are the possibility in which it differs in vivo. However, there is a report that the endophthalmitis can be prevented using the povidone iodine of 0.25% in the intravitreal injection[2]. Even from this point of view, the bacterial load in this experiment may not be realistic.

It is necessary to reconsider the above and add comments in detail.


Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Unable to assess

**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?**
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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:

Acceptable

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