Reviewer’s report

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

Version: 2 Date: 03 Dec 2018

Reviewer: Hiroyuki Nakashizuka

Reviewer’s report:

1. As authors commented as follows, these experiments methods are unrealistic and brought unrealistic results. At least, the following sentence should be added in the discussion section.

The time duration was chosen to maximize the potential bacterial dispersal onto the blood agar plates and by extension assess the effectiveness of the various PI concentrations under a heavy bacterial load. While this may be unrealistic, our aim was to assess the effectiveness of PI concentrations under a heavy bacterial load.

2. Furthermore, author used blood agar plate. This may cause povidone iodine ineffective at once. Because blood agar plate will contain blood and protein which can accelerate inactivation of PI. From this point of view too, this study is unrealistic. This may be the reason why 1% PI was ineffective for bacterial growth in this study.

3. Lower concentrations of PI have been shown to have greater concentrations of free iodine. Authors comment about diluted PI has not satisfied us.

In fact, recent report also showed that application of diluted PI solution is an effective alternative 5% PI for endophthalmitis. In this report, the incidence of endophthalmitis has been reported to be 0.04% for 5% PI, 0.02% for dilute PI, and 0.31% for no PI prophylaxis.

Authors should add detail comment about diluted PI referring these studies.

Peden MC, Hammer ME, Suñer IJ

DILUTE POVIDONE-IODINE PROPHYLAXIS MAINTAINS SAFETY WHILE IMPROVING PATIENT COMFORT AFTER INTRAVITREAL INJECTIONS.


4. Authors commented in the discussion section as follows. However, there is now sufficient evidence to support the notion that the use of topical antibiotics is not associated with a reduced
incidence of endophthalmitis in the context of IVI injections and could contribute to drug resistance. The statement below seems to be out of date.

Even under this heavy bacterial load, 5% PI did not generate any growth on 8 of the 21 (38%) plates; supporting the claim that effective pre-injection antisepsis is essential for reducing the risk of endophthalmitis.

Bhatt SS, Stepien KE, Joshi K. Prophylactic antibiotic use after intravitreal injection: effect on endophthalmitis rate. Retina 2011;31:2032-2036


**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?**
If not, please explain in your comments to the authors.

Unable to assess

**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

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:
1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal