Reviewer's report

Title: Influence of light-curing mode on the cytotoxicity of resin-based surface sealants.

Version: 3
Date: 21 February 2014

Reviewer: Mabel Cordeiro

Reviewer's report:

Thank you for submitting your manuscript to BMC Oral Health. The following are the considerations made by this reviewer.

Discretionary Revisions:
1) At the end of the first paragraph of Background, please correct “fast”.
2) At the beginning of the first paragraph of Sample Preparation (Materials and Methods section), please correct “dentine discs were prepared form…” to “dentine discs were prepared from…”
3) Several times along the text appears “manufacture” when the correct, in those cases, is “manufacturer”.
4) In the second paragraph of Discussion, please correct “lager” for “larger”.
5) In the third paragraph of Discussion, please correct “extracellulalry” for “extracellular”.
6) Minor Essential Revisions:
1) In the Abstract, in Methods, it is important to indicate that the dentine discs are from bovine teeth. The paragraph could initiate as: “Bovine dentine discs…”
2) Also in this section of Abstract, LDH must be entirely written, and not only the acronym.
3) Please, indicate the passage number used in the experiments, for each type of cell. This is important, mainly in the dental pulp cell culture, since there are cells that have a higher rate of proliferation and overcome the other cells. As it was not isolated a specific cell type from the dental pulps, the passage number will indicate if there were different cell types in the culture or it was a more homogeneous culture formed mainly by dental pulp fibroblasts, for example.
4) Also, indicate the percentage of confluence that the cells were when the conditioned medium was added to the well. This is important since in a culture that have reached a 100% confluence it is expected to have a higher cell death.
5) In Results, for each cell type, please indicate in the text which sealant showed to have a significant influence on cytotoxicity.
6) It would be interesting to present, in the Discussion, the light-curing protocol and the sealant that the authors recommend for the clinician taking into account
the results of this study. This is cited at the end of the Conclusion, but no protocol is really recommended, but four different protocols of light-curing that were used in the experiments.

Major Compulsory Revisions:
1) Please, indicate why the released LDH assay was chosen for the study. Why not to use an assay that would verify mitochondrial function? This would indicate that the cells were affected by the surface sealants, but not necessarily would have died. This is important since, in a clinical situation, it is expected some level of cell injury but, also, it is expected the recovery of the cells. When a cell is affected, it may release growth factors that will attract other cells and help to mediate and resolve the inflammatory process started by the injury, which in the case of the manuscript would be the cytotoxicity of the sealants, but not necessarily the cell has to die.

2) Explain why it was not included a naïve control group (cells cultured in regular media). It would help to eliminate any factor present in the conditioned media that could eventually have been released from the bovine dentine. With this information, data could be more accurate regarding the influence of the surface sealants on cytotoxicity and cell death.

Sincerely,
Dr. Mabel Cordeiro, DDS, PhD

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.