



Letter to the Editor

Responsibility of scientific community in claiming to have found an association with recurrent pregnancy loss



Dear editor,

After reading the recently accepted manuscript “Oral sex is associated with reduced incidence of recurrent miscarriage” by Meuleman et al., we would like to share our concerns (Meuleman et al., 2019). Couples suffering from recurrent pregnancy loss form an incredibly vulnerable patient population. The wish for a healthy live born in these couples is very strong and they would do anything to increase their chances. Therefore, every association between recurrent pregnancy loss and lifestyle, or other factors, should be presented with a thorough biological rationale, well designed method and statistical evidence.

However, the biological rationale of this paper is not well substantiated. The articles that are being referred to in the introduction provide no more than hypotheses (Robertson and Sharkey, 2001; Koelman et al., 2000). Other referenced research is only carried out in mice, which is not a good model for early pregnancy loss in humans, since mice absorb embryos rather than miscarrying them (Clark et al., 2013; Moldenhauer et al., 2009; Ho et al., 1994). Hence, there is no reason to assume any biological causality between oral sex and a reduced incidence of pregnancy loss.

Also, the experimental design of the research is problematic. Questionnaires asking women about their sexual behavior after the event of pregnancy loss were compared to women that were questioned about their sexual behavior after they had an uncomplicated pregnancy. Importantly, no confounder analysis regarding sexual behavior at time of index pregnancy was performed.

In addition, the statistics on which the association is based are too limited. A sample-size calculation was carried out, but only 47.4% of cases and 55.9% of controls filled out the questions about sexual behavior, making this study underpowered. After imputing the missing values, which meant that half of the study population needed to be imputed, the already barely significant correlation between oral sex and pregnancy loss disappeared completely.

In summary, the conclusion that oral sex is associated with reduced incidence of recurrent pregnancy loss lacks biological rationale, is based on a flawed method and limited statistical substantiation.

Moreover, scientists should realize that a topic which covers oral sex is very likely to be picked up by public media. It is the responsibility of the scientific community to protect a vulnerable patient population from unfounded feelings of guilt or meaningless changes in sexual behavior.

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DOI of original article: <https://doi.org/10.1016/j.jri.2019.03.005>

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<https://doi.org/10.1016/j.jri.2019.07.001>

Received 1 May 2019

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