Reviewer’s report

Title: Maternal plasma levels of oxytocin during physiological childbirth – a systematic review with implications for uterine contractions and central actions of oxytocin

Version: 1 Date: 19 Nov 2018

Reviewer: Keiichi Kumasawa

Reviewer's report:

In this investigation, the authors reviewed and integrated the extracted 20 articles that investigated the profiles of oxytocin levels, the relationship between uterine contraction and oxytocin levels, the central action of oxytocin, and the effect of synthetic oxytocin.

This study is very important in finding and recognizing the historical and high-quality studies and integrating these evidences about oxytocin. However, a few concerns that need to be addressed by the authors to further improve the quality of this article.

The authors found and reassessed the profiles of oxytocin and maternal physically and psychologically changings. They also tried to elucidate the pathology of AFLP, a serious complication of pregnancy from the viewpoint of endothelial dysfunction. Moreover, they speculated that the gastrointestinal perforation result in sFlt-1 in AFLP.

(Comments)

1. On page 5, line 99, I couldn't understand the terms of "mammalian young". Does it mean "offspring"? The sentence "mammalian young" should be corrected to "mammalian offspring".
2. The authors indicated that the variation of serum oxytocin levels due to several assay. Please note that which is appropriate to measure the serum oxytocin levels during labor by RIA or ELISA.
3. On page 24, line 565, please correct the word from "texst" to "text" or "texts".
4. On page 30, from line 708 to 713, the authors indicated that oxytocin link to maternal behavior, and inhibition of neurological system such as epidural anaesthesia resulted in blocking maternal behavior and attachment due to blocking of central oxytocin releasement via nervous system. On the contrary, on page 32, from line 760 to 764, the author indicated that oxytocin gives pain relief via brain opioid system. Which is more dominant among these evidences when pregnant woman receives epidural anaesthesia for pain relief during labor?
5. On page 35, line 836, please correct from "…oxytocinase," to "…oxytocinase."

6. On page 36, the author described that pulsate administration may help to decrease the total dosage of synthetic oxytocin, and recommended interval of 30-40 minutes administration. If you know the evidences that too high and frequent exposures of oxytocin may occur the down regulation of the sensitivity of oxytocin receptor on uterine myometrium, please add the information of these evidences.

7. On this article, please replace from "+-" to "±" using special character of "Symbol" style.

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.

Unable to assess

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?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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