Reviewer's report

Title: Antepartum urinary tract infection and postpartum depression in Taiwan - a nationwide population-based study

Version: 0 Date: 07 Apr 2017

Reviewer: Hilary Davies

Reviewer's report:

This article was an observation study examining the association between antepartum urinary tract infection and postpartum depression using data from the National Health Insurance Research Database of Taiwan. The initial introduction is good, however I would question the statistical analysis as it is unclear how the model was derived to best fit the data. I would suggest that this data is reanalysed and both unadjusted and adjusted odds ratios are reported.

1) Overall the grammar i.e. tenses used are not always consistent, please revise this

2) In your introduction, could you expand on the disparity between the DSM definition (4 weeks) and the actual 6 months; please provide a reference for 6 months. (Line 4&5 on page5)

3) Please include an explanation for why women below 20 years were excluded from the study. It seems that age could be a confounding factor and it is unusual to exclude this age-group from studies regarding pregnancy. (Line 8, page 6).

4) It is unclear if the urine analysis was collected by the health professionals and then information was collected via the insurance company or if the urine was collected by researchers. (line 15, page7).

5) It is unclear if you included or looked at woman had depression before the pregnancy (with regards to prescriptions x number of months before pregnancy).

6) You need to make it clearer how and why covariates were chosen. It is also unclear how the statistical models were chosen (i.e. log likelihood tests and AIC); it seems that all covariates were included into the model. There seems to be collinearity with covariates. I recommend that you re-do this analysis and do a forward stepwise approach to choosing the model of best fit.
7) It is also not recommended to put Antepartum UTI, Upper UTI and Lower UTI as one variable. You would need to divide it by Total antepartum UTI compared with no UTI or the Upper UTI and Lower UTI compared with no UTI.

8) Please explain why you have not included age in the model.

9) Please be consistent with reporting Odds ratios to one decimal place rather than 3, this includes CI.

10) Please use ASM criteria for reporting p-values.

11) It would be more useful to report unadjusted as well as adjusted odds ratios and not include estimate, standard error and Wals Chi-Square (unless you discuss these in the results section).

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

No

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.

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