Reviewer's report

Title: Biomonitoring of Bisphenol A Level in Maternal and Umbilical Cord Blood Relevant to Birth Outcomes and Adipokine Expression

Version: 1 Date: 22 February 2011

Reviewer: Karin Michels

Reviewer's report:

Major comments:
1. This manuscript’s major weakness is its lack of clarity and large amount of textual errors. The study’s findings are interesting, timely, and contribute to the field but the manuscript needs to be substantially reworked. Moreover, it is unclear how the statistical analyses were performed.

2. Neither in the title nor manuscript mentions the type of study design. Although the authors describe the design in the methods section, it is not explicitly named with a commonly used term per the STROBE guidelines.

3. In the methods section, there is no suggestion of how the study size was determined nor the recruitment time frame. When during pregnancy was maternal blood collected for the BPA assessment? It is also unclear why the exposure variable (BPA) is modeled with binary “high and low” levels in Table 1 and then subsequently in tertiles (though incorrectly named quartiles). For the binary “high and low” modeling, the manuscript does not define the cut point, though this information is listed in Table 1. Furthermore, it remains unclear whether reference is made to the maternal or the umbilical cord blood BPA in the table legends.

4. The coefficients of variation for BPA assessments are not provided. There is no mention of any laboratory quality control measures for any of the analytes.

5. Why was low birthweight defined as <2600g? Similarly, the cut-off levels for high and low adipokines are not provided.

6. In regards to statistical methods, the authors do not address the manner in which they handle missing covariate data, if there is such missingness, nor the way in which they model BPA levels below the limit of detection (LOD).

7. When the authors present the unadjusted and adjusted analysis in the results section, there is no explanation about why each of the potential confounders is being included. Although it is mentioned in the methods section that the confounder data is collected via self-report patient questionnaire, there is no description for how these variables are modeled. We can assume all variables are modeled continuously based on their presentation in Table 1 but this could be stated more clearly. The text, table, and figures report only odds ratios but the authors make numerous references to risks ratios, which may have been a typographical error or a larger methodological issue.
8. Table 2: Most of these correlations are not informative. Suggest deleting. Just keep correlations between maternal and fetal BPA levels in the text.

9. Table 3: It is unclear how this association was modeled. What was the dependent variable? What was the independent variable? Was the independent variable binary or continuous or differently categorized? No tests for heterogeneity by gender were performed.

10. Figures 2, 2A and 2B mentioned in the text are missing.

11. Lastly, in the discussion section, there is a nice interpretation of the results contextualized in regards to similar studies. However, the Furthermore, there was no discussion of the study’s limitations nor the generalizability.

Minor comments:
Please number your pages!
There is inconsistent usage of past and present tenses throughout the manuscript.
Line 38: delete “has persistent nature to”, add “s” to “accumulate”
Line 39: delete “,” after organisms and “would”, add “s” to “influence”
Line 41: add “conducted” after “was”
Line 42: delete “the”
Line 47: delete “the”, capitalize “L” in logistic
Line 55: change “The” to “Higher”
Line 62: delete “being”, change “become a great deal of material used in” to “being used in”
Line 63: change “manufactories” to “manufacturing materials”, specify units on the “2,214,000” (tons?)
Line 66: change “human” to “humans”
Line 67: delete “the environment”
Line 76: change “the decrease of” to “a decreased”
Line 77: change “are” to “may”, change “development” to “develop”
Line 79: change “does” to “dose”
Line 83: delete “body”
Line 83: delete “body”, change “control” to “controls”
Line 89: delete “human”, change “adipose” to “adipose tissue”
Line 97: delete “the”
Line 99: change “prenatal exposure to BPA” to “prenatal BPA exposure”
Line 100: clarify “as to the fetal development is oriented to hormone regulation”
Line 115: add “were” after “study”
Line 120: delete the last common
Line 229: change “male” to “males”, change “attributed to the” to “and”
Line 230: change “females” to “female neonates”
Lines 233-234: This is not reflected in Figure 2
Line 236-7: clarify the reference group earlier in the sentence
Line 238, 241: “Figure 2A” doesn’t exist
Line 244: “Figure 2B” doesn’t exist
Line 249: change “because the BPA can transport to the fetus across” to “particularly because BPA can cross the”
Line 251: change “rodent” to “rodents”
Line 252: change “effect” to “effects”
Line 255: change “disrupt” to “disrupted”
Line 256: change “the” to “a”, change “regarding maternal exposure to BPA on fetal birth” to “about”
Line 257: delete “outcomes”, change “does” to “dose”, clarify this sentence
Line 263: change “Most of pregnant” to “Most of the pregnant”
Line 264: change “the” to “a”, say more regarding “there was no significant…”
Line 265: insert “of” after “27%”
Line 267: change “the” to “that maternal”, delete “from maternal”
Line 269-271: unclear as written
Line 271-274: unclear as written
Line 276: insert “maternal” after “varied”, delete “level in pregnant women”
Line 277: change “women exposed” to “BPA exposure”, delete “of BPA”, change “reversely” to “inversely”
Line 278: change “no significantly correlation” to “not significantly correlated”
Line 280: delete “body”
Line 281: change “does” to “doses”
Line 283: change “body weight of” to “the weight of the”
Line 286: delete “the”, change “It suggested the increased body” to “They have found an increased”
Line 287: insert “were” after “mothers”
Line 288: change “mouse” to “mice”
Line 289: change “were” to “showed”
Line 293: change “modes” to “mode”
Line 297: delete “in contrary,” change “investigated” to “found”
Line 300: change “level” to “levels”
Line 302: change “that” to “a”
Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited
Statistical review: Yes, and I have assessed the statistics in my report.

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