Reviewer's report

Title: Effect of folate intake on health outcomes in pregnancy: a systematic review and meta-analysis on birth weight, placental weight and length of gestation

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Reviewer: Hidemi Takimoto

Reviewer's report:

The current manuscript focused on the relationship between folate intakes and birth outcomes through meta-analyses of randomized controlled trials. This issue is still important where folate fortification of foods is widely practiced. However, the manuscript needs some revisions. Overall, I found the results of this study rather confusing, whether the authors wanted to focus on the effect of prolonged supplementation or on increased folate intake throughout pregnancy.

- Major Compulsory Revisions
  1. I suppose the objective of this study was to estimate the effect of total folate intake (diet plus supplements) throughout pregnancy to birth weight, placental weight, and gestational length. However, the studies listed in Table 1 seem inadequate for the study objective, since all of them except Klingler et al are comparing various doses of iron + folic acid versus iron. There is a possibility that these different doses of iron had different effects on fetal growth, according to the pre-intervention iron status of the mother. This should have been considered in the inclusion criteria, or at least been mentioned in the Discussion section.
  2. The mean duration of the interventions is shown in Table 1, but the timing of the intervention is also influential. Were these interventions started from preconception, or from the first trimester?
  3. The objective was to examine the effect of total folate intake, but the average total folate intake (as DFE) is not shown in Table 1.
  4. There is no description on how the conversion of 5-MTHF to Dietary Folate Equivalent has been done.
  5. Birthweight increases with longer gestational weeks. Were the results shown in Figure 2 adjusted for gestational length?

- Minor Essential Revisions
  1. Page 3, line 40: I think this should be “unequivocal”, not “equivocal”.
  2. Page 9, line 181-182: Please cite a literature that shows that folate requirement reaches the peak in the last trimester.

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.