

Correspondence

Awareness of folic acid use among pregnant women in Taipei – Reply to letter to the Editor

We appreciate Dr. Tsai's advice on our previous study [1] and his extensive review on this topic. Dr. Tsai has pointed out several important issues, and we would like to make further discussions here.

First of all, Taiwan is a low prevalence area for neural tube defects (NTDs) and the potential adverse events due to folic acid fortification on other vulnerable populations must be seriously considered according to The Netherlands' experience [2]. However, the experience of Mainland China, which essentially involves a similar ethnic race as Taiwan's, has revealed that the folic acid supplementations can effectively reduce the incidence of NTDs in both high and low prevalence areas [3]. In addition, there is no statistical analysis to show the association between periconceptional use and positional plagiocephaly for a small study group in the Netherland study [2], and, currently, there are no other clinical observations supporting these findings. Authors of the study attributed the possible association to a double use of folic acid supplements dose but not folic acid fortification. The additional intake of approximate 100 µg/day folic acid through food fortification can effectively reduce the incidence of fetal NTDs among mothers with low folic acid intake [4], but it does not add much to women who already take supplements. Food fortification should not significantly increase the incidence of possible adverse events.

Secondly, we agree that over the counter prenatal vitamins or other supplements containing 400 µg to 1 mg of folic acid are readily available over the counter in Taiwan, and many women do take them. However, only 15% of women took folic acid before pregnancy in our study [1]. The critical period for periconceptional folic acid supplementations includes the period from about 1 month before conception to early pregnancy. The U.S. Food and Drug Administration policy of folic acid fortification is based on the facts that only a small proportion of women use folic acid supplements before their pregnancies but about one-half of the pregnancies are unplanned. The rate of periconceptional use of folic acid in Taiwanese women is higher than other Asian countries in the periconceptional stage (Thailand, 9.7%; northern region of China, 14.7%; Korea, 10.3%; Taiwan, 15.6% before pregnancy and 90% during early pregnancy) [1,3,5,6]. We have discussed the possible reasons in the discussion section of our paper.

Thirdly, a blood test to check folic acid levels may be a more precise method for advising folic acid supplementation. However, it is invasive test and impractical. We seldom advise vitamins use to patients based on blood levels in the clinical practice. The recommended dietary reference intakes (DRI) of folic acid for Taiwan was announced in 2011 [7].

We agree that Dr. Tsai's suggestion of the statement "...may be or probably is needed" is better than the assertive words "...is needed" that we used. However, our study also concluded "it is warranted to evaluate the cost-effectiveness for a folic acid fortification policy." We also agree that detailed discussions and probably extensive epidemiologic surveys are needed before an important policy such as folic acid fortification is implemented, and we all should encourage such discussion to achieve a common consensus. The problem, however, is how much time we should spend before taking action. Presently, most clinical evidence and results of folic acid fortification policies in several countries have revealed that food fortification of folic acid may be the most cost-effective method to increase periconceptional folic acid intake and to decrease the incidence of fetal NTDs. Finally, we appreciate the suggestions and discussions from Dr. Tsai and hope to see policy discussion on this topic in the near future.

References

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