COMMENT ON FARREN ET AL.

The Prevention of Gestational Diabetes Mellitus With Antenatal Oral Inositol Supplementation: A Randomized Controlled Trial. Diabetes Care 2017;40:759–763

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Diabetes Care 2017;40:e172 | https://doi.org/10.2337/dc17-0847

We read with interest the study by Farren et al. (1) investigating the effect of a combination of *myo*-inositol and *D*-chiro-inositol on preventing gestational diabetes mellitus (GDM) in women with a family history of diabetes. The authors reported a not statistically different incidence of GDM in the intervention group compared with control subjects. However, it seems that important factors were not considered for the complete interpretation of results.

First, the selection of the study population was not limited to women with only a family history of diabetes as a risk factor for GDM. Women with other well-known risk factors (i.e., obesity, previous GDM) were also included. The presence/absence of previous macrosomia was not specified. With regard to ethnicity, the authors report that some women were Irish-born, but we do not know if the others belong to a race at risk. Women with a family history in a first-degree relative of diabetes, either type 1 or type 2, were studied. This latter aspect could be relevant, as daughters of parents with type 1 diabetes may have a different genetic predisposition to develop GDM than daughters of parents with type 2 diabetes.

The other existing article published on the same subject (2) showed a significantly reduced incidence of GDM occurrence when *myo*-inositol was administered to women with a family history of diabetes compared with control subjects. In that case, the authors selected only family history of diabetes as a risk factor for GDM. This could partly explain why Farren et al. did not find any preventive effect. Furthermore, other studies (3–5) testing the effect of *myo*-inositol on preventing GDM also involved a selected population of women with only one specific risk factor.

The other important criticism, as the authors discuss, is that the lack of preventive effect of inositol could depend on the dose of the supplement that was used. Indeed, they used a combination of *myo*-inositol (1,100 mg) and *D*-chiro-inositol (27.6 mg), which is different than the treatment (4 g *myo*-inositol in a powder formulation) used in other trials (2–4). A pharmaceutical formulation in soft gel with a higher bioavailability was used in the study by Farren et al. (1). As the amount of *myo*-inositol in a soft gel (550 mg) is comparable to 1,650 mg in powder form, this means that a dose of *myo*-inositol almost 20% lower than that used in previous trials was used by Farren et al., potentially explaining the study results.

The last point is that inositol is found in a variety of foods. Differences between published studies may be due to different dietary habits of the population involved (Irish vs. Italian). Italian women are more likely than Irish women to be followers of a Mediterranean diet, containing more foods with inositol, and this could increase the effect on GDM prevention.

Finally, the authors concluded that "companies that manufacture antenatal supplements should not add inositol to their products, as there is not enough known regarding its efficacy" (1). This may be too strong a statement coming from the generalization of a single study finding. Conversely, several randomized controlled trials (2–4) and meta-analyses (5) have shown beneficial effects of *myo*-inositol dietary supplementation.

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

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