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LETTER TO THE EDITOR

Comment and Reply on–Comparison of Walking versus Stretching Exercises to Reduce the Incidence of Preeclampsia: A Randomized Clinical Trial

The paper written by Yeo et al. (1) is extremely opportune and valid, and propounds to clarify issues that remain controversial with respect to physical exercise and pregnancy. The study serves to stimulate interest in the subject; nonetheless, the results raise some questions.

The first point that we would like to emphasize was mentioned in the paper and intrigues us greatly. It refers to the principal finding of the study: a lower risk of preeclampsia in pregnant women who carry out stretching exercises (mild intensity exercise) compared to those who walk (moderate intensity). These findings differ from results reported by other authors evaluating the same subject in which it has been emphasized that although the outcome depends on the type of exercise, it is determined principally by the intensity with which that exercise is performed, beneficial results being obtained when intensity is moderate (2–4).

We believe that the results of the present study may be due to the fact that the pregnant women initiated their exercise program at 18 weeks of pregnancy, a period in which the process of trophoblastic migration is already at its conclusion (5,6). In agreement with these data, a randomized clinical trial carried out by Clapp et al. (3) reported a 25% increase in placental function and an increase in the birthweight of the infants of women who initiated a physical exercise program of moderate intensity at the beginning of pregnancy. Although the authors did not specifically evaluate the effects on the occurrence of preeclampsia, we know that the process of placentation, represented by the waves of trophoblast migration, is involved in the etiology of preeclampsia, restricted fetal growth and in adequate placental function.

Another factor that may have affected this result was the fact that 20% of patients were lost-to-follow-up. The cause of these cases of lost-to-follow-up and of post-randomization ineligibility was not clarified by the flowchart of

the profile of the clinical trial, and may have masked cases of preeclampsia that had not been established by the time the patient was lost-to-follow-up. In addition, a discrepancy was found between the number of participants at each stage in the study, as described in the Results section and in the flowchart. We are not even sure how many pregnant women agreed to participate in the study (109 in the Results section and 209 in the flowchart).

Finally, it should be clarified why data collection was finalized prior to reaching the defined sample size, which should have been 260 patients (120 in each group) according to the parameters provided for sample calculation. Was some kind of interim analysis performed? Why was participant admission stopped? In our opinion, five years should have been sufficient time in which to achieve a more adequate sample size.

We agree with the authors in their conclusion that new studies should be carried out focussing on improving methodology, and in our point of view follow-up should be initiated earlier. Nevertheless, these observations in no way detract from the importance of this paper; on the contrary, this study serves as a model and stimulus for new studies on the subject.

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