



Reply to: “Is serum level of trace elements and heavy metals associated with threatened abortion?”

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DEAR EDITOR,

We thank Dr. Peng-Hui Wang for his interest and valuable comments¹ on our article named “Change of the levels of trace elements and heavy metals in threatened abortion” published in JCMA in July 2019.² The author’s comments are generally discussed below under the three headings.

First, author asked when blood samples were taken from the study group. Blood samples was taken in the morning time and stored at -20°C until the day of analysis. When we say, “blood was taken from all patients at the same time”, we meant blood was taken at the same time period of day. I think a shortcoming in the sentence causes misunderstanding. The mean gestational age of the pregnant group had asked by the author. In our study, the mean gestational age was 8.8 ± 1.4 weeks in the patient group. We conducted our study in the Spring in 2017. In addition, the author asked why we did not use the similar gestational age of “normal” pregnant women without threatened abortion as the control group for comparison. First, we compared threatened abortion group with healthy pregnant women. However, when we sent the article to the journal (JCMA), they asked us for a major revision and said that it would be more appropriate to compare our group of patients with healthy nonpregnant women. Therefore, we changed our control group and we compared abortion group with nonpregnant healthy group. On the contrary, the author asked us similar studies. Each study may contain different results because the analysis method used in each study, samples, the device, the calibration of the device, the calculation method, and even the statistical method may be different. Some studies have similar results with us.^{3,4} Also, there are many studies of Prof. Dr. Halit Demir on different topics related to trace elements.

Second, the author indicated “for Pb level it might be difficult to make the definition of potential toxic level”. 10 micrograms of blood lead level during pregnancy is considered toxic.⁵ On the other hand, it is considered that lead-related toxicity can

occur at levels as low as $5 \mu\text{g/dL}$.⁶ In addition author indicated that “samples obtained from the different time of day might also influence the final results of concentration”. For these reasons, in our study blood was taken from all patients in the morning times. Trace element levels also change during pregnancy. In our study, we took blood sample from pregnant women one time. This is one of the limitations of our study. I think it would be appropriate to add this to the section of limitations of the study.

Third, it was pointed out that our patient group was not homogeneous. However, when we selected our patients and took their blood sample, our group was homogeneous (all of them were at risk of abortion and were of similar age). We were also not able to predict in advance about the results of each pregnancy. As we have already mentioned above, having blood taken one time during pregnancy is among the limitations of our study.

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