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Correspondence

Kisspeptin and preeclampsia

Dear Editor,

We read the recent article by Ziyaraa et al. [1] entitled "Correlation of Kisspeptin-10 level and fetal well-being in preeclamptic patients" published in the *Taiwanese Journal of Obstetrics and Gynecology* with interest. The authors reported that plasma kisspeptin-10 level was lower in preeclamptic pregnant women and inversely correlated with the severity of the disease [1]. In addition, plasma kisspeptin-10 level at either second or third trimester directly correlated with fetal birth weight in women with mild preeclampsia but inversely correlated with fetal birth weight in women with severe preeclampsia. We congratulate the success of the authors. This article is interesting and worthy discussing.

First, in the second trimester, plasma kisspeptin level was lower in women with preeclampsia and inverse correlated with the disease severity (2.30 mg/ml of controls, 2.18 mg/ml of mild preeclampsia, and 1.59 mg/ml of severe preeclampsia, respectively); however, this inverse correlation was not found in the third trimester, even though women with preeclampsia had a lower plasma level of kisspeptin consistently than women without did (2.16 mg/ml, and 2.39 mg/ml vs. 2.95 mg/ml) [1]. Plasma kisspeptin levels were dramatically elevated in women with severe preeclampsia from the second trimester to the third trimester (from 1.59 mg/ml to 2.39 mg/dl). This finding could not support the negative correlation between the plasma kisspeptin levels and severity of preeclampsia the authors made. In theory, plasma kisspeptin should be continuously low. Recently, one animal study reported that except during the pre-implantation period, kisspeptin expression was higher in the non-pregnant uterus compared to all gestational periods, indicating a pregnancy-related downregulation [2]. The other study reported that women with preeclampsia had higher placental kisspeptin expression but lower circulating serum kisspeptin levels that women without did [3], suggesting the possibility of discrepancy of kisspeptin function between local effect (paracrine and/or autocrine) and systemic effect (endocrine). If the authors could provide the data based on the longitudinal study to evaluate a correlation between plasma kisspeptin levels and gestational age, it may more easily explore the role of plasma kisspeptin. In addition, what is the cut-off value to predict the development of preeclampsia? The audience might be interested in it.

Second, fetal body weight was significantly correlated with gestational weeks [4,5]. Women with server preeclampsia have a higher risk for early delivery [6,7], indicating that their newborns might be delivered at the earlier gestational weeks, contributing to the significantly low fetal birth weight in this population. There is no exception to get the low fetal birth weight in the preeclampsia group compared to that in the normal control group. The plasma kisspeptin levels should be adjusted by gestational weeks.

In conclusion, the discovery of kisspeptin originally derived from its antimetastatic property and its role in reproductive function was a milestone in the field of reproductive biology [8]. Preeclampsia is still a biggest challenge for both physicians and pregnant women, partly because of unclear pathogenesis and partly because of a major cause of maternal, fetal and neonatal morbidity and mortality [9]. In the absence of effective treatment of preeclampsia except delivery, the identification of any new biomarker for early diagnosis of preeclampsia is welcome.

Conflicts of interest

The authors declare that there are no conflicts of interest related to the subject matter or materials discussed in this article.

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