https://doi.org/10.1590/1806-9282.20221238

Comment on "Serum vascular endothelial growth factor as a marker for tubal pregnancy"

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Dear Editor,

We are very happy to read the article entitled "Serum vascular endothelial growth factor as a marker for tubal pregnancy" by Cabar et al.[1] In this study, the authors investigated the diagnostic value of serum vascular endothelial growth factor (VEGF) in tubal pregnancy. The authors classified all participants into three groups: abnormal intrauterine pregnancy, tubal pregnancy, and normal intrauterine pregnancy. Their results found that patients with tubal pregnancy had significantly higher serum VEGF concentrations than the other two groups. In addition, when the serum VEGF concentration was >188.7 ng/mL, it had a higher diagnostic value for tubal pregnancy, with a sensitivity and specificity of 96.7 and 95.0%, respectively. We really appreciate for their great contribution, as the findings of this study provide an important basis for the early diagnosis of tubal pregnancy. However, according to our opinion, there are some concerns that deserve further elucidation.

First, the information on the female participants included in this study[1] is not comprehensive. Did the participants included in this study have a history of recurrent pregnancy loss (RPL)? Results from a previous study[2] indicated that women with a history of RPL had significantly higher serum VEGF concentrations than the control group (210.33±108.23 pg/mL versus 123.91±18.8 pg/mL, $p<0.05$). This finding suggests that elevated maternal serum VEGF concentrations are associated with RPL. However, it is unclear whether the participants in this study had a history of RPL. In the absence of RPL information, one possible hypothesis is that participants with tubal pregnancy had more RPL, resulting in significantly higher serum VEGF concentrations than other groups. Therefore, it is necessary to clearly describe the differences in RPL between groups.

Second, from the statement included in this study "*There was no difference in maternal age between the three subgroups (p=0.633), but gestational age was significantly different between the subgroups (p=0.003),*" it is noted that there was a significant difference in gestational age among the three groups. It should also be noted that gestational age also has a significant effect on serum VEGF concentrations. Evans et al.[3] demonstrated that serum VEGF concentration was positively correlated with gestational age, and this correlation continued up to 10 weeks of pregnancy. In addition, the gestational age in this study was between 42 and 56 days, which indicates the range of 10 weeks of pregnancy. In that case, gestational age rather than tubal pregnancy may be the underlying factor leading to the significant increase in serum VEGF concentration. Therefore, it is necessary to balance the differences in gestational age between groups.

AUTHORS' CONTRIBUTIONS

ZL: Conceptualization, Investigation Methodology, Writing – original draft. **JT:** Conceptualization, Investigation, Writing – review & editing.

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Conflicts of interest: the authors declare there is no conflicts of interest. Funding: none.
Received on September 14, 2022. Accepted on October 12, 2022.