

Statistical Comments on “Salivary Iron (Fe) Ion Levels, Serum Markers of Anemia and Caries Activity in Pregnant Women”

Comentários estatísticos sobre “Níveis de íon ferro (Fe) salivar, marcadores séricos de anemia, e atividade de cárie em mulheres grávidas”

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Dear Editor,

We read with great interest a recent article by Costa et al¹ entitled “Salivary iron (Fe) ion levels, serum markers of anemia and caries activity in pregnant women.” In this prospective cohort, the authors aimed to investigate the association between salivary iron (Fe) and serum markers of anemia and the development of caries. In this regard, they assessed serum hemoglobin, ferritin, erythrocyte, serum Fe and salivary Fe levels in 59 women at three clinical times: up to the 16h week of gestational age (T1), in the last trimester of pregnancy (T2), and postpartum (T3). The authors used analysis of variance (ANOVA) or Kruskal-Wallis tests for the comparative analysis of serum hemoglobin, ferritin, erythrocyte, serum Fe, and salivary Fe levels at the three clinical times. Therefore, in this cohort study, they investigated the differences between the levels of some biomarkers of the same pregnant women at different time points using independent tests. Analysis of variance and Kruskal-Wallis tests are used to compare the differences among the means of three or more independent (unrelated) groups,^{2,3} but the groups of the mentioned study are not independent, and the authors investigated some biomarkers of 59 pregnant women at 3 different time points. Therefore, the groups of

this study are completely dependent. After the assessment of the distribution of the numerical variables, the authors must use repeated measures ANOVA or the Friedman test for the comparison of the means of the biomarkers at three clinical times. Taken together, we believe that most of the statistical tests used in this study are inappropriate, and the authors' valuable study could be better used as citable experimental evidence if analyzed with appropriate statistical tests.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this letter.

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