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Letters to the editor

Aminotransferases disorders associated with venous thromboembolic events in patients infected with COVID-19



Dear Editor,

Recently, Amer and his colleagues published an interesting study entitled "Aminotransferases disorders associated with venous thromboembolic events in patients infected with COVID-19" in *Annals of Hepatology* [1]. In this retrospective study, the authors explored the association between venous thromboembolic (VTE) events and elevated aminotransferases (AT) in patients infected with COVID-19. This study provides evidence for the risk of VTE in COVID-19 patients, but the following statistical issues need to be pointed out.

It could be seen from the description in that the standard deviation (SD) of some variables is remarkably greater than the mean, which suggesting that those continuous variables are unlikely to conform to normal distribution or have obvious deviation values. For example, the mean values of D-dimer of the total group (46 patients) was 2914, while the SD values was 5362. Similarly, the mean values of NT-proBNP of the total group (46 patient) was 2388, while the SD values was 5361. Therefore, it is reasonable to suspect that all the continuous variables described in this article do not fully conform to the normal distribution. In this case, it is necessary to test the normality before data analysis, so as to adopt appropriate statistical methods. In addition, another striking issue in this article is about the p-value. Obviously, the alanine aminotransferase (ALT) level in patients with VTE was significantly higher than that in patients without VTE (91.5 ± 71.0 versus 48.9 ± 31.5). However, the p value provided is 0.16, which might seem something strange. Based on the data described in, we recalculated the p value using Stata 11 software, and the result showed that the p value should be 0.0077, less than 0.05. Similarly, the CPK 26 level in patients

with VTE was considerably lower than that in patients without VTE (46.5 ± 19.1 versus 134 ± 83.3). However, the p value provided is 0.079. Our recalculation results show that the P value should be 0.0021, also less than 0.05.

Declaration of funding interests

None.

Conflict of interest

The authors have no conflict of interest to declare.

Reference

- [1] Hamadé A, Woehl B, Talbot M, Bensalah N, Michel P, Obringer G, et al. Aminotransferases disorders associated with venous thromboembolic events in patients infected with COVID-19. *Ann Hepatol* 2020, <http://dx.doi.org/10.1016/j.aohep.2020.10.002>.

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