



## Letters to the editor

**Reply to: Lactate-dehydrogenase associated with mortality in hospitalized patients with COVID-19 in Mexico**


## Response

We would like to thank you for your interest in our publication [1] and for your comments. Firstly, the concerns about the lack of inclusion of obesity as a confounding factor are noted. As it has been stated, obesity has been proven to be a factor of the utmost importance in the prognosis and disease severity in patients with COVID-19. Unfortunately, we have missed some information and did not have sufficient data for us to include body mass index (BMI) as a variable. We acknowledge that including BMI as a confounding variable would have made our analysis more complete and our results more trustworthy. This should probably have been stated as a limitation.

Secondly, attention is put to the stratification of patients by severity. Considering that the primary aim of our paper was to identify serologic factors associated with mortality for the earlier recognition of severe forms of COVID-19 infection, we did not deem it necessary to stratify patients upon arrival. As was mentioned in the discussion, LDH catalyses the conversion of pyruvate to lactate [2]. In patients with severe disease inadequate whole-body oxygen delivery results in a less oxygen extraction from tissues, augmenting LDH formation [3]. Having higher levels of LDH upon arrival, could be an early sign of disease severity and thus be linked with a higher mortality.

The third observation refers to the inclusion of different treatment strategies used in the patients and its relationship with prognosis. Indeed, correct treatment strategies are directly related to the improvement of prognosis. As was asserted in the article, treatments varied widely throughout and within the three Centres, and depended solely on each attendant's criteria. Moreover, it should be remarked that the data presented in the article corresponds to the firsts months of the pandemics in Mexico, when treatments were even less standardised than they are now, resulting in very heterogeneous drug choices and ventilatory techniques. Since our primary aim was to explore the factors present upon arrival at the hospital associated with mortality, without discerning between hospitalisation in a normal ward or in the intensive care unit (ICU). We were not looking for factors associated with the need of ICU care or the use of mechanical ventilation, it is for this reason that the distinction was not made. We thank you again for your interesting comments on our study.

## References

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