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Authors response to: Comment on “Grip strength as a predictor of disease severity in hospitalized COVID-19 patients”

Letter to the editor,—We thank the author for the suggestions,¹ and our response would be as follows. Although this study was conducted only in Turkey,² grip strength measurement is associated with pulmonary/cognitive functions and is already accepted as a vital sign of the neuromusculoskeletal system (also a biomarker) all over the world.^{3,4} In addition, COVID-19 infection is a pandemic that has affected the whole world. Therefore, we believe that our results may be applicable/extrapolated to other countries as well.

Although muscle mass was not measured, grip strength assessment is an important parameter in terms of “probable sarcopenia”, dynapenia and frailty.⁵ Further, longitudinal studies have shown that grip strength (rather than muscle mass assessment) is related with adverse outcomes including falls, fractures and mortality.^{6,7}

On the other hand, although grip strength is affected by acute infection and body structure, muscle mass measurements can also be affected by similar conditions. Nevertheless, measuring the most commonly affected muscle in sarcopenia (i.e. anterior thigh) may be valuable.⁵ Herewith, since we did not have the opportunity to measure muscle mass with a portable ultrasound device under pandemic conditions, only grip strength - which is an easy/cheap measure with proven high clinical importance - was measured.

Although this study is not a follow-up study, we think that the baseline grip strength measurement (at hospital admission) can be important in predicting the patient’s initial health status and evaluating the relationship between hospital stay and disease activity. Additionally, Sajid S¹ also reported that there are other factors affecting grip strength. Indeed, but obesity was included in the analyzes instead of height, weight and body mass index due to collinearity. Of note, obesity is a well-known risk factor for COVID-19 infection as well.² Nevertheless, parameters such as hand size, upper arm circumference and occupation, social status and lifestyle could have also been included in the analyses. Finally, as stated by the author, the fact that grip strength was not measured in each patient at the same time of the day (although this was not technically possible in our study) can - for sure - be counted as another shortcoming.

Conflict of interest

The authors declare no conflicts of interest.

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