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Nutrition

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Letter to the Editor

Re. “Cohort study to evaluate the effect of vitamin D, magnesium, and vitamin B12 in combination on progression to severe outcomes in older patients with coronavirus (COVID-19)” by Tan et al. (2020)



Dear Editor,

I have read the study titled “Cohort study to evaluate the effect of vitamin D, magnesium, and vitamin B12 in combination on progression to severe outcomes in older patients with coronavirus (COVID-19)” by Tan et al. published in *Nutrition* [1]. I would like to congratulate the authors for their successful work, and am glad to read this inspiring research investigating the efficacy of nutrition interventions for patients infected with COVID-19 using a combination of vitamin D, magnesium, and vitamin B12 (DMB treatment) [1]. After my read, I would like to provide some comments regarding this paper.

First, the process of nutrition risk screening and assessment of participants are not mentioned in this paper, although this study focuses on the effect of nutrition support. There is no specific information on whether the nutrition status of study participants was assessed before inclusion, and the nutrition condition of patients in both groups was not presented in Table 1 in the article by Tan et al. or explained in the results section of the original article [1]. Since nutrient deficiencies of vitamin D, magnesium, and vitamin B12 are prevalent in the elderly [2–4], not assessing the different nutrition states of patients could add contamination to the outcome evaluation (i.e., whether better recovery from COVID-19 was the result of DMB treatment or a significant difference in health conditions in the DMB and control groups that lead to the presented outcome). Therefore, a nutrition risk screening and assessment should be conducted to ensure the DMB and control groups are not significantly different for a more accurate investigation on the effect of DMB treatment on COVID-19. The authors should include such information if they have conducted nutrition assessments.

Second, the credibility of the result is not as strong because of the significant difference between the DMB and control groups. As Table 1 by Tan et al. shows, there is a significant difference in age among the DMB and control groups, with patients in the DMB group having a lower age and reported *P*-value of 0.021 [1]. Age is also associated with the survival rates of patients infected with COVID-19 [5], which could further question whether the significant reduction in the proportion of patients with a clinical deterioration requiring advanced support (e.g., oxygen, intensive care unit care, or both) was caused by the DMB treatment or the younger age of the participants in the DMB treatment group. Besides, although the proportion of comorbidities in both groups is not significantly different, the control group has a higher percentage of comorbidities (76.9%) compared with the DMB group (47%), and the *P*-value of 0.057 is close to the boundary value of 0.05. A small sample size might be the issue that led to such baseline observations.

The COVID-19 pandemic has created issues worldwide; thus, conducting a study to investigate treatment for COVID-19 must be challenging already, and I truly admire the authors for their hard work and contribution to achieve better health outcomes. The study by Tan et al. [1] provides enough evidence to support future investigations on this issue, hopefully with more comprehensive study designs (i.e., randomized controlled trials with larger samples).

References

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