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Letter to the Editor

Response to letter to the editor: Rehabilitation for steroid exposed and psychologically influenced COVID-19 survivors

To the editors:

Thanks to Amos et al. for the critical advices on our manuscript "Rehabilitation programs for patients with CORonaVirus Disease 2019: consensus statements of Taiwan Academy of Cardiovascular and Pulmonary Rehabilitation." Indeed, according to an important published guideline,¹ systemic corticosteroid is suggested in mechanically ventilated adults with COVID-19 and ARDS, while it is still not encouraged in these patients without ARDS. However, in the very same guideline,¹ using intermittent boluses of neuromuscular blocking agents (NMBA) over continuous NMBA infusion is suggested to facilitate protective lung ventilation. We agree that patients under systemic corticosteroid or NMBA should be carefully identified, since steroid can exacerbate thick myofilament damage,² thus aggravating ICU acquired weakness. In our consensus statement, ventilated patients were grouped into those with clear or impaired cognitive status. While little could be done for those with impaired cognitive function, we had emphasized rehabilitation activities such as in-bed cycling for lower limbs, elastic band and pulleys use for upper limb resistance training, and various breathing exercises for this group of patients in our article, aiming to reduce the development of ICU acquired weakness in patients exposed to steroid and NMBA.

Another valuable advice from Amos et al. is the concern of the psychological aspects for this group of patients. Increasing amounts of evidences had emerged,³ showing that patients with COVID-19 could combine psychiatric symptoms such as post-traumatic stress disorder

(PTSD), depression, anxiety, insomnia, and obsessive-compulsive behaviors. Although the primary aim of this consensus statement was dealing with the cardiopulmonary and physical aspect of challenges for COVID-19 patients, since this manuscript was written by members of Taiwan Academy of Cardiovascular and Pulmonary Rehabilitation, we still acknowledge that the psychological issues can never be ignored as well, and should be seriously treated under formal psychiatrist consultation. Thanks to Amos et al. for the crucial supplement for this consensus statement.

Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

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<https://doi.org/10.1016/j.jfma.2020.12.012>

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8 December 2020