

Can Electrophysiological Findings Predict Functional Outcomes in Critical illness Neuromyopathy due to COVID-19?

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Dear Editor,

In this article, I want to share my opinions about the publication called “Can Electrophysiological Findings Predict Functional Outcomes in Critical illness Neuromyopathy due to COVID-19?”. In this study, Yıldız (1) stated that the electrophysiological findings of critical illness neuromyopathy in patients diagnosed with coronavirus disease 2019 (COVID-19) provide information about short- and medium-term functional outcomes (1). First of all, I would like to thank the author for this valuable contribution to science. I would like to bring a new perspective to this subject from the perspective of a physiatrist and share my opinions. As we know, COVID-19 is a disease that has created a pandemic all over the world and caused mortality and morbidity. In the early days of the disease, especially chest diseases and infectious diseases physicians focused on this issue. In later periods, it was seen that many systems were negatively affected by this disease, either directly due to COVID-19 or due to complications of COVID-19. Musculoskeletal system involvement and neurological findings are also among the affected systems. Fatigue, myalgia and arthralgia are the most common musculoskeletal symptoms in the acute phase of COVID-19. Post-COVID-19 syndrome refers to a group of signs and symptoms that are present for >12 weeks. The main musculoskeletal symptoms associated with this syndrome are fatigue, arthralgia, myalgia, new-onset back pain, muscle weakness, and poor physical performance. Apart from this, other musculoskeletal symptoms encountered include falls in the elderly, increased mortality rate after hip fracture, decreased bone mineral density and osteoporosis, sarcopenia, rhabdomyolysis,

Guillain-Barre syndrome, muscle denervation atrophy, fibromyalgia, triggering of rheumatological disease, septic arthritis, adhesive capsulitis, myositis, paraparesis due to immobilization, and critical illness neuromyopathy (2). When we look at it from this perspective, we can say that COVID-19 causes many morbidities that concern both physical medicine and rehabilitation physicians and neurologists. Critical illness neuromyopathy is one of these diseases. Critical illness myopathy and polyneuropathy are the main causes of acquired weakness, general weakness, decrease in daily living activities, and chronic motor dysfunction, which can negatively affect the quality of life, generally observed in patients staying in the intensive care unit (3). Although the number of clinical studies evaluating the specific role of early rehabilitation in critical illness neuromyopathy is small, it supports the benefit of an exercise and physiotherapy program to be started in the intensive care unit phase in these patients, even in patients under mechanical ventilation (4). In these respects, in clinical practice, depending on the suitability of the patient's general condition, these patients are seated, stood up and, if appropriate, mobilized while in intensive care unit. Therefore, rehabilitation is very important at every stage of critical illness neuromyopathy, but if early rehabilitation can be applied to these patients, it may positively affect the functional outcome of the patients in the future. In an observational study by Novak et al. (5), it was determined that rehabilitation practices provided improvements in the functional status of patients in critical illness polyneuropathy and myopathy that developed during the intensive care unit period. Additionally,

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it has been observed that the improvement in body functions during rehabilitation decreases as the time from diagnosis to the start of rehabilitation increases. It has been observed that the disabilities of these patients also decrease with early rehabilitation. As a result, in this study, it was recommended that the rehabilitation of patients who developed critical illness neuromyopathy begin as early as possible after diagnosis (5). Yıldız's study (1) is very valuable in showing the importance of electrophysiological findings in predicting the functional status of patients in the future in critical illness neuromyopathy due to COVID-19. Again, as stated by Yıldız (1), not knowing whether the patients went through standard physiotherapy processes constitutes one of the shortcomings of the current study. If we evaluate this situation in the light of the literature, it is not known whether physiotherapy was applied to the patients in the current study, and if so, the exercise type, duration and physical therapy modalities used may have affected the study results. Because physiotherapy practices and exercise therapy are one of the cornerstones of critical illness neuromyopathy treatment. In light of all these results, it is clear that further studies are needed to predict the prognosis and functional outcome of patients with critical illness neuromyopathy. In addition, in future studies, physiotherapy, which is one of the

basic treatments of the disease and one of the most important modifying factors, must be questioned and should not be ignored.

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