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Influence of peripheral muscle strength on the decannulation success rate

Influência da força da musculatura periférica no sucesso da decanulação

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Dear Editor,

We would like to congratulate the authors of the study titled "Influence of peripheral muscle strength on the decannulation success rate", recently published in this journal.[1] This is a very relevant subject for those who care for chronic tracheotomy intensive care patients.

A number of studies in the literature are aimed at the identification of decannulation success or failure indicators and guidance for weaning chronic patients from the ventilator. Martin et al.[2] have shown that chronically ventilated patients are weak and deconditioned and that admission upper-limb strength is inversely related to the time required for mechanical ventilation weaning. Both the findings from this study and those from Lima[1] demonstrate the importance of establishing a specific training protocol for chronic ventilation tracheotomy patients.

To assess the impact of a rehabilitation program on successful weaning of tracheotomy patients from mechanical ventilation, Clini et al.[3] conducted a prospective trial; 48 hours after admission to the intensive care unit (ICU), patients underwent peripheral muscle training schedules with daily increments, 6 days a week. Muscle training in this population was shown to increase the daily life activity score; this score is associated with survival and successful weaning. Notably, the lastissimus dorsi performance on Kendall's test is an independent predictor of improved performance.

Importantly, the study is of an observational and retrospective nature, thus limiting standardized assessment of the variables and physiotherapy provided to each patient. In addition, the study fails to address the underlying disease, mentioning only comorbidities such as diabetes mellitus and sepsis. This fact may have influenced the decannulation failure rates. This is evidenced by the study by Mamary et al.,[4] which assessed factors that influenced chronically ventilated patient outcomes. That study has shown that patients with chronic obstructive pulmonary disease (COPD) had an increased risk of failed weaning due to the limiting systemic conditions that are part of this disease process as well as the influence of the length of the ICU stay.

Therefore, longitudinal trials are warranted to assess these issues and to analyze their influence on the decannulation process. Once again, we highlight the relevance of the discussed study.

Sincerely,
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