AUTHORS' REPLY

Dear authors,

We thank you for the comments on the article titled "Influence of peripheral muscle strength on the decannulation success rate", recently published in this journal.[1] We do agree that the study design (case control study) is disposed to bias and confounding factors as no clear event sequence, such as standardized physiotherapy care, is established.

Therefore, our understanding is that this subject should be better assessed by longitudinal trials, including larger patient samples, in order to provide better evidence for the association between peripheral muscle strength and the decannulation process. However, as this was a short-term and low-cost study, appropriate for small samples, it provides odds ratio results, which usually provide a good approximation to the relative risk for uncommon outcomes.

In this study, several diseases, including diabetes mellitus (DM) and septic complications of the underlying disease, led to the patients' intensive care unit admissions and mechanical ventilation (MV). Although the causes leading to MV were not discussed in this study, no significant intergroup (success or failure) difference was identified during the sample characterization that could have had a direct influence on the decannulation procedure outcome.

The influence of DM and sepsis on the decannulation process was not described in the study report, but their pernicious effects on peripheral muscle structure as assessed by the Medical Research Council (MRC) proposed strength score are presented[2]; these clinical conditions are considered risk factors for the paresis of critically ill patients. According to De Jonghe et al.[3], glycemic changes and sepsis are common during early critical disease phases and are frequently considered as risk factors for intensive care unit-acquired paresis. Van den Berghe et al.[4] suggest that maintaining normal glycemic levels can prevent and mitigate polyneuropathy among critically ill patients. Therefore, we believe that both factors can have a determinant impact on peripheral muscle strength and, consequently, may have contributed to the decannulation process outcome.

Therefore, we would like to thank you for your comments and reiterate that new studies are necessary for a better understanding of the influence of peripheral muscle strength on the outcome of the decannulation process.

Sincerely,

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