

## Author response to letter to the editor “Protocolized weaning from mechanical strategy in COPD: respiratory therapists versus physician directed— who guides best?”

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*Dear Editor,*

We thank to Dr. Erbabacan and colleagues for their interest in our study. We are grateful for the insightful comments to our manuscript and we are happy to respond to their comments as follows.

Duration of mechanical ventilation and weaning are crucial time periods for chronic obstructive pulmonary disease (COPD) patients who are prone to infectious complications of intubation. Physicians aim to shorten the duration of intubation in these patients by using different techniques such as noninvasive ventilation (NIV), weaning protocols and automated modes and a recent review reported that shorter weaning may reduce mortality especially in COPD patients (1,2).

In the present study, we aimed to evaluate the impact of a protocol that was novel for our center, performed by a respiratory therapist (RT). These types of protocols can be administered with different medical teams like nurses and RT's successfully (3,4). Regarding the method of the study, thus the study does not have a randomized controlled design; it is obvious that the groups may not be fully comparable. Therefore we used a Cox regression model in order to adjust for confounding factors. Even if regression models are used the best design to show the effect of an intervention is still to perform a randomized controlled trial so it is a limitation of the study. There are several randomized controlled studies evaluating the effect of protocols on weaning but these are performed on mixed patient populations (5-8). Further randomized controlled

trials are needed for specific patient groups such as COPD.

Our study is described as a cohort but not a prospective study. Prospectively collected data after the implementation of a weaning protocol were compared to the retrospective data when mechanical ventilation and weaning was managed by the physicians in charge without a standard protocol.

Underlying diseases associated with COPD, previous ICU admissions and quality of life might be important determinants of weaning outcomes in COPD patients. Due to the design of our study, it was not possible to collect these data for all patients, especially for the ones evaluated retrospectively.

The criterion for weaning failure in our study was defined as 48 hours of independence from all kinds of mechanical ventilatory support either invasive or noninvasive. During the study period, NIV was used as a rescue therapy in patients when they develop respiratory failure after extubation. Some studies reported decreases in the need for reintubation with the preventive use of NIV in selected patients at risk of developing postextubation respiratory failure, especially in patients becoming hypercapnic during spontaneous breathing trial (9,10). These data resulted with a change in our routine protocol, regarding the preventive use on NIV immediately after extubation in COPD patients.

We agree with Erbabacan and colleagues that further randomized controlled trials testing the impact of mechanical ventilation and weaning protocols including the preventive use of NIV in COPD patients are needed to answer the newly forming question: Does it really matter who guides if it is done by a protocol?

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