Reviewer's report

Title: Predictive value of daily living score in acute respiratory failure of COPD patients requiring invasive mechanical ventilation: a pilot study.

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Reviewer: Pieter Depuydt

Reviewer's report:

In this manuscript, Langlet and co-authors present the outcome of invasively ventilated COPD patients admitted to their ICU between 2008 and 2010. They report weaning failure and mortality in approximately 30% of patients, and observe that only a limited activity of daily living was predictive of the success of weaning. The study of Langlet et al. addresses a very relevant issue, and tries to give insight in a problem that every critical care physician or pulmonologist has to face regularly: what if my patient with severe COPD fails NIV?

As the use of non-invasive ventilation has revolutionized the care of the COPD patient with acute respiratory failure, COPD patients who require intubation present a subset of the sickest patients. Earlier literature, dating from the time before NIV, is not helpful here. As such, the results of this study are pertinent. The study is well conducted and the authors have done great effort to document comorbidity and gravity of underlying illness. The main limitation is the small size, and the monocentric nature of the study, which may limit extrapolation to other centers. The authors rightly admit this in the discussion and are prudent in their conclusions.

Major compulsory revisions:

1. Please provide an abstract, as this was missing from the files for peer review.

2. In my experience, some COPD patients may not be totally weaned from mechanical ventilation, but may be stabilized in an acceptable condition with chronic intermittent ventilation (e.g. nocturnal ventilation with a home ventilator), especially when muscular deconditioning is present. I would be important to know if the hospital of the authors has facilities or a policy (e.g. referral to a tertiary hospital) to provide such care. Similarly, we must know the policy in case of weaning failure and regarding do-not-resuscitate codes.

3. The authors state that nosocomial infection is a risk factor for weaning failure and mortality. This implies a causal relationship, which is however not evident. It can be assumed that patients who fail to wean have an increased duration of mechanical ventilation, require higher levels of sedation etc., and thus have a higher a priori risk to develop nosocomial infection (such as VAP). We can only state that there is an association between weaning failure and nosocomial infection; both weaning failure/mortality and the risk for nosocomial infection may be a consequence of poor status at admission.
Minor essential reviews:

Failure to wean occurs in 30% of patients. This important information should be presented more upfront in the paper e.g. in the results text (and in the abstract), as it is now only shown in the heading of table 1.

It is not clear whether the percentages of readmission apply to the full cohort, or only to the patients surviving their acute episode. Please clarify.

Details about the mode of ventilation should be provided in the methods section instead of the results.

Please provide the full word the first time an abbreviation is used (e.g. ARF, AE-COPD, ...)

The manuscript is overall well written. However, the style is a bit uneven and rough in places: as such it could benefit from grammatical and stylistic review.

e.g. p3 (Methods/Data collection):
'weaning success or failure and its length were noted' Please rephrase and clarify what is meant by 'lenght'

e.g. p9 (Discussion)
"final stage of respiratory insufficiency collapsed pulmonary function parameters" please rephrase
" several limitations which do not permit to come to a definitive conclusion regarding" (to draw a definitive conclusion, to come to a conclusion about)

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests