

PEEP in ICU patients without ARDS in the Netherlands: not a closed case

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Dear editor,

We would like to thank Schultz and colleagues for their interest in our paper and we welcome their considerations concerning our post-hoc analysis comparing Dutch with European ICU ventilation practices.¹

In answer to their questions and concerns: the low incidence of reintubations after unplanned extubations in the Dutch cohort would indeed seem to suggest delayed planned extubations. Unfortunately, our database does not provide sufficiently detailed data to further disprove or support this.

We hypothesised that Dutch ICU patients would have received higher PEEP levels because of the works and teachings of Burkhard Lachmann, which are well known amongst Dutch intensivists. Lachmann suggested that a certain level of PEEP is needed to avoid recurring alveolar collapse with accompanying shear stress.² In our paper, we did not, however, recommend specific PEEP levels.

Furthermore, it is uncertain to what extent the data from the publication by Hemmes *et al.*, a randomised controlled trial in which patients were studied who underwent open abdominal surgery and mechanical ventilation during general anaesthesia, can be extrapolated to ICU patients.³ Analysing our data, a median duration of mechanical ventilation of three days is found in both cohorts, but with

a statistically significantly smaller spread in patients in Dutch ICUs (3 (2-6) vs. 3 (2-8), $p < 0.01$). In this population the association between higher levels of PEEP and longer duration of mechanical ventilation does not seem to be present.

A tendency to extubate patients at a PEEP level of 5 cm H₂O could not be found in Dutch ICU patients from our database. Median PEEP at extubation was 8 cm H₂O with an interquartile range of 5-8.

Mechanical ventilation can be both lifesaving and harmful. It is up to us to find the safest and least harmful modes of ventilation for our patients.

REFERENCES

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