only unuseful, as also suggested by the observational study of Komatsu *et al.*,[1] but are harmful to renal function,[2–4] and a detrimental effect on survival could not be excluded.[4] There is compelling need for further large, high-quality, randomized placebo-controlled trials to confirm these findings and to assess the most appropriate time-point of statin discontinuation before cardiac surgery.

Competing Interests

The authors declare no competing interests.

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Neurocritical Care Needs Predictive Scores That Succeed at Predicting Failure as Well as They Predict Success

To the Editor:

In the August 2017 issue of Anesthesiology, Asehnoune *et al.* report their derivation of a novel bedside scoring system to predict extubation success in the intubated brain-injured patient.[1] Many brain-injured patients are likely exposed to excess ventilated days because they do not meet extubation criteria originally established in general intensive care unit (ICU) populations.[2] Careful consideration is required, however, before routinely utilizing new extubation prognostication scores. Although the VISAGE (visual pursuit, swallowing, age, Glasgow coma scale for extubation) score performs well at predicting extubation success based on favorable neurologic indicators, it does not adequately predict which patients will fail extubation due to neurologic dysfunction.

Recovery of arousal and airway protective reflexes after neurologic injury often is slow, and a subset of patients will benefit from early tracheostomy without an extubation attempt. The VISAGE score poorly discriminates extubation success among patients with low scores. Based on this model, a patient under 40 yr old without visual pursuit or swallowing efforts, and with a Glasgow coma scale less than 10, would have an almost 60% chance of extubation success. Barring a prediction of rapid neurologic improvement or barriers to safe reintubation, we believe that this individual should undergo a trial extubation. We are concerned that adoption of a scoring system with explicit or perceived cut-points would lead to such patients remaining intubated longer than necessary. A similar problem arises from the predictive score introduced in Anesthesiology earlier this year by Godet *et al.*[3] Although their regression-based score has a clear inflection point, fully one third of patients below this score were successfully extubated. At the suggested cut-point, their score falls short of the degree of negative predictive value originally reported for the Rapid Shallow Breathing Index (RSBI) in a general ICU population.[4] The negative predictive value for the VISAGE score at a cut-point of 3 performs even worse.

Timely extubation of all ICU patients, including those with brain injury, helps prevent ventilator-associated complications. Although our colleagues highlight that brain-injured patients can be safely extubated, we caution against rigorously applying these scores due to the possibility of excess mechanical ventilation for patients who score poorly. Extubation failure and reintubation is certainly not without risk and is predictive of worse outcomes, though causality has not been established.[1,5] Further development of scoring models with improved negative predictive values is needed to identify patients who should truly forgo trial extubation. Until these risks are further quantified, and such a tool is developed, the neurocritical care intensivist will necessarily have to tolerate and manage higher reintubation rates than those seen in a general ICU population.

Competing Interests

The authors declare no competing interests.

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In Reply:

We gratefully acknowledge Dr. Patlak *et al.* for his constructive comments on our article.[1] We fully agree with our colleague when he states that protracted ventilation is the main issue in brain-injured patients,[2] because delaying extubation promotes morbidity and healthcare costs. The VISAGE (visual pursuit, swallowing, age, Glasgow coma scale for extubation) score[1] was developed to help the physician in securing the challenging extubation process in neurocritical care patients. The fear of extubation failure is due to the lack of guidelines for extubation in neurologic patients, and there is a clear need for new clinical evidence to help the attending physician. If the VISAGE score performs well at predicting extubation success based on favorable neurologic clinical signs, it is true that its performance is less accurate in patients with a low score. One obvious explanation stems from the fact that neurologic examination varies considerably within the same day in a single patient. Thus, the VISAGE score, as well as the other prediction score recently published in Anesthesiology,[3] add a lot to the field by showing for the first time that a suboptimal level of consciousness and one or two functional aspects of the airway may predict a successful extubation. However, as mentioned by Patlak *et al.*, we need other information for guiding extubation when the value of the VISAGE score is low. Finally, we truly believe that this score is a first step toward improvement of global respiratory management of neurocritical care patients.[4] Even if it is likely that extubation failure rate, as well as delayed extubation, will remain elevated in these patients over the next few years, this should not be considered a fatal flaw.

Competing Interests

The authors declare no competing interests.

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