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LETTER TO THE EDITOR

Diaphragmatic excursion after extubation: a reply

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To the Editor:

We thank Huan and Wang [1] for their interest in our article on diaphragmatic excursion as a predictor of the need for resumption of ventilatory support [2]. Their letter raises important points regarding the potential influence of pain levels and sedative status on diaphragmatic excursion measurements. Below, we address their specific concerns.

While pain scores were not collected in our study, adequate pain management was ensured before ultrasound assessment and during the whole period of stay in the unit. Paracetamol was administered on a regular basis and opioids (primarily nalbuphine) were given only for breakthrough pain.

The authors suggested that sedative drugs used before the weaning trial could affect diaphragmatic function measured 2 h after extubation. Although data on the exact duration of sedation-induced diaphragmatic dysfunction after discontinuing sedation infusions are limited, evidence suggests that diaphragmatic function recovers to within 30% of baseline five minutes after recovery from a propofol bolus [3]. In our study, the sedation protocol during mechanical ventilation primarily involved fentanyl alone or a combination of fentanyl and propofol [4]. Sedation was discontinued before assessing weaning readiness and all patients were adequately conscious and cooperative at the time of the ultrasound measurements.

Finally, it is worth mentioning that our objective was to evaluate the ability of diaphragmatic excursion, regardless of the cause of its dysfunction (if present), to predict failed weaning, whatever the cause of failure was.

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Declarations

Conflict of interest The authors have no relevant financial or non-financial interests to disclose.

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