

Supplementary Table 3. Patient characteristics by post-extubation respiratory support

Variable	Post-extubation respiratory support (N = 319)	Without post-extubation respiratory support (N = 287)	p value
At the day of ICU admission			
Age (y)	69.8 [60.7–76.7]	70.3 [60.0–77.7]	0.74
Sex, male	196 (61.4)	177 (61.7)	> 0.99
Body mass index (kg/m ²)	22.1 [19.8–24.7]	22.6 [19.8–25.4]	0.23
SOFA score	8 [5–11]	8 [6–11]	0.02
Primary reason for intubation			< 0.001
Acute respiratory failure	257 (80.6)	181 (63.1)	
Coma or seizure	23 (7.2)	47 (16.4)	
Shock	9 (2.8)	22 (7.7)	
Cardiac arrest	1 (0.3)	3 (1.0)	
Surgery	10 (3.1)	18 (6.3)	
Others	19 (6.0)	16 (5.6)	
At the day of extubation			
SOFA score	5.0 [3.0–8.0]	6.0 [3.0–8.0]	0.48
Duration of mechanical ventilation, days	4.0 [2.7–6.6]	3.3 [2.1–5.7]	0.003
Richmond Agitation-Sedation Scale	0.0 [-1.0 to 0.0]	0.0 [-1.0 to 0.0]	0.73
Use of vasopressors	87 (27.3)	56 (19.5)	0.03
Ventilator settings before the extubation			< 0.001
Assist-control ventilation	9 (2.8)	6 (2.1)	
Pressure-support ventilation	67 (21.0)	115 (40.1)	
Continuous positive airway pressure	243 (76.2)	166 (57.8)	
Pressure-support level (cmH ₂ O)	5.0 [4.0–7.0]	5.0 [0.0–6.0]	< 0.001
Positive end-expiratory pressure (cmH ₂ O)	5.0 [5.0–6.0]	5.0 [5.0–5.0]	0.001
Tidal volume			
mL	448 [352–555]	424 [336–520]	0.09
mL/kg	7.9 [6.2–9.5]	7.6 [6.1–9.4]	0.22
Respiratory rate (per min)	18 [15–22]	18 [14–23]	0.62
FiO ₂	0.3 [0.3–0.4]	0.3 [0.2–0.3]	< 0.001
PaO ₂ /FiO ₂	274.8 [217.1–342.9]	318.8 [253.6–383.1]	< 0.001
pH	7.5 [7.4–7.5]	7.4 [7.4–7.5]	0.02
PaCO ₂ (mmHg)	37.6 [33.5–42.0]	35.9 [32.2–40.6]	0.02
Hypercapnia (PaCO ₂ > 45 mmHg)	50 (15.7)	32 (11.1)	0.13
Bicarbonate (mmol/L)	26.7 [24.4–29.4]	25.4 [23.4–27.8]	< 0.001
Lactate (mmol/L)	1.5 [1.1–2.3]	1.5 [1.1–2.2]	0.95
At the day of extubation			
RSBI	45.0 [31.0–65.0]	48.0 [33.0–65.5]	0.38
HACOR score	2.0 [0.0–2.0]	0.0 [0.0–2.0]	0.04
ROX index	16.8 [12.5–21.6]	17.8 [14.0–23.8]	0.01
mROX	15.8 [11.2–21.1]	17.2 [12.9–23.4]	0.003

Supplementary Table 3. Continued

Variable	Post-extubation respiratory support (N = 319)	Without post-extubation respiratory support (N = 287)	<i>p</i> value
Outcome			
Extubation failure within 7 days	91 (28.5)	69 (24.0)	0.25
ICU mortality	32 (10.0)	32 (11.1)	0.75
In-hospital mortality	110 (34.5)	105 (36.6)	0.67
ICU length of stay (d)	3.1 [1.2–8.0]	2.3 [1.1–5.1]	0.002
Hospital length of stay (d)	19.9 [10.9–40.8]	25.9 [14.0–49.1]	0.03

Values are presented as median [interquartile range] or frequency (%) as appropriate.

ICU, intensive care unit; SOFA, sequential organ failure assessment; FiO₂, fraction of inspired oxygen; PaO₂, partial arterial oxygen pressure; RSBI, rapid shallow breathing index; HACOR, heart rate, acidosis, consciousness, oxygenation, and respiratory rate; ROX index, ratio of oxygen saturation/FiO₂ to respiratory rate; mROX, modified ROX index (ratio of PaO₂/FiO₂ to respiratory rate).