

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

	Score
Number of attempts > 1	1 ^a
Number of operators > 1	1 ^b
Number of alternative techniques	1 ^c
Cormack-Lehan grade = 1	1
Increased lifting force	1
Laryngeal pressure	1
Adduction of vocal cords	1

eTable 1: Intubation difficulty score. Ranges From 0 to ∞. IDS > 5 indicates difficult intubation.

a: 1 point for each additional attempt

b: 1 point for each additional operator

c: 1 point for each additional alternative technique. These include use of bougie, stylet, laryngeal mask, fibroscopy, change of blade or of laryngoscope.

Two or more serial chest radiographs or computed tomography scans with at least one of the following (one study is sufficient for patients with no underlying pulmonary or cardiac disease):

(i) New or progressive and persistent infiltrates, (ii) consolidation, (iii) cavitation AND at least one of the following:

- (a) fever ($>38^{\circ}\text{C}$) with no other recognised cause,
- (b) leucopaenia (white cell count $<4 \times 10^9$ litre $^{-1}$) or leucocytosis (white cell count $>12 \times 10^9$ l $^{-1}$),
- (c) for adults >70 year old, altered mental status with no other recognised cause;

AND at least two of the following:

- (a) new onset of purulent sputum or change in character of sputum, or increased respiratory secretions, or increased suctioning requirements,
- (b) new onset or worsening cough, or dyspnea, or tachypnoea,
- (c) rales or bronchial breath sounds,
- (d) worsening gas exchange (hypoxaemia, increased oxygen requirement, increased ventilator demand).

eTable 2: Definition of pneumonia according to the US center of disease control.

In-hospital death for index patient	In-hospital death for comparison patient	ICU length of stay for index patient vs. comparison patient	Hospital length of stay for index patient vs. comparison patient	Points for index patient	Points for comparison patient
Yes	Yes	Not used	Not used	0 (tie)	0 (tie)
No	Yes	Not used	Not used	+1 (win)	-1 (lose)
Yes	No	Not used	Not used	-1 (lose)	+1 (win)
No	No	Shorter	Not used	+1 (win)	-1 (lose)
No	No	Longer	Not used	-1 (lose)	+1 (win)
No	No	Same	Shorter	+1 (win)	-1 (lose)
No	No	Same	Longer	-1 (lose)	+1 (win)
No	No	Same	Same	0 (tie)	0 (tie)

eTable 3: Calculation method of the hierarchical endpoint (Finkelstein-Schoenfeld method)

Variable	Intervention	Control
	n=19	n=63
Site of intubation - no. (%)		
Prehospital	4 (21.1)	28 (44.4)
Emergency department	5 (26.3)	24 (38.1)
Intensive care unit	10 (52.6)	11 (17.5)
Cause for intubation - no. (%)^a		
Routine practice	3 (15.8)	58 (92.1)
Acute respiratory distress	13 (68.4)	4 (6.3)
Vomiting	4 (21.1)	1 (1.6)
Seizure	0 (0.0)	0 (0.0)
Shock	0 (0.0)	0 (0.0)
Median IDS score (points)	3 (2-3)	3 (2-5)
Number of attempts - no. (%)	N=16	N=61
1	15 (93.8)	47 (77.0)
2	1 (6.3)	8 (13.1)
3	0 (0.0)	5 (8.2)
4	0 (0.0)	1 (1.6)
Number of operators – no. (%)	N=16	N=62
1	16 (100)	52 (83.9)
2	0 (0.0)	9 (14.5)
3	0 (0.0)	1 (1.6)
Cormack-Lehan score - no. (%)	N=17	N=61
0 (Grade I)	14 (82.4)	34 (55.7)
1 (Grade II)	3 (17.6)	19 (31.1)
2 (Grade III)	0 (0)	7 (11.5)
3 (Grade IV)	0 (0)	1 (1.6)
Increased lifting force on laryngoscope - no. (%)	1 (6.3)	17 (28.3)
Laryngeal external pressure - no. (%)	4 (25.0)	22 (37.3)
Vocal cords open	N=16 14 (87.5)	N=59 49 (83.1)
Number of alternative technics - no. (%)	N=16	N=61
0	15 (93.8)	48 (78.7)
1	1 (6.3)	9 (14.8)
2	0 (0.0)	2 (3.3)
3	0 (0.0)	2 (3.3)

eTable 4: Intubation procedures.

IDS: intubation difficulty score

^a One patient from the intervention group presented both vomiting and respiratory distress and 2 patients from the intervention group presented

Outcome	Intervention N=112	Control N=107	Odds Ratio (95% CI)	Rate ratio (95% CI)	Difference (95% CI) ^a
In-hospital death - no (%)	0 (0.0)	0 (0.0)	NC ^b		NC ^b
Intensive care unit admission - no (%)	43 (38.4)	70 (65.4)	0.23 (0.12 to 0.44)		-29.7% (-41.6% to -17.7%)
Median length of intensive care unit stay (IQR) - hours	0 [0 ; 19]	24 [0 ; 57]		0.37 (0.22 to 0.63)	
Median length of hospital stay (IQR) - hours	21 [10 ; 44]	40 [15 ; 91]		0.71 (0.50 to 1.00)	
Mechanical ventilation - no. (%)	18 (16.1)	63 (58.9)	0.11 (0.05 to 0.22)		-43.4% (-55.1% to -31.7%)
Median length of mechanical ventilation (IQR) - hours	0 [0 ; 0]	6 [0 ; 21]		0.18 (0.09 to 0.34)	
Occurrence of pneumonia - no. (%)	6 (5.4)	16 (15.0)	0.32 (0.12 to 0.86)		-9.6% (-17.5% to -1.7%)
Adverse event from intubation - no (%)	6 (5.4)	16 (15.0)	0.32 (0.12 to 0.86)		-9.6% (-17.5% to -1.7%)
Peripheral oxygen saturation < 90% - no. (%)	2 (33.3)	4 (25.0)			
Dental trauma - no. (%)	0 (0.0)	2 (12.5)			
Vomiting - no. (%)	2 (33.3)	0 (0.0)			
Cardiac arrest - no. (%)	0 (0.0)	0 (0.0)			
Difficult intubation with IDS ≥ 5 - no. (%)	1 (20.0)	14 (87.5)			
Systolic blood pressure < 90 mmHg - no. (%)	2 (33.3)	4 (25.0)			
Esophageal intubation - no. (%)	(0.0)	4 (25.0)			
First pass failure	(n=109) 1 (0.9)	(n=105) 14 (13.3)	0.06 (0.01 à 0.47)		-12.4% (-19.2% à -5.7%)

eTable 5: Secondary outcomes in the per protocol population

All outcomes were truncated at 28 days.

^a Differences were computed with a generalized mixed linear model with the center as random effect.

^b Not calculated

Variable	Intubation n=63 (57.8%)		No intubation n=46 (42.3%)	
Sex				
Male	35 (55.6)		35 (76.1)	
Female	28 (44.4)		11 (23.9)	
Median age (IQR)	38 (289 - 55)		32 (23 - 42)	
Site of inclusion				
Prehospital	31 (49)		11 (24)	
Emergency Department	31 (49)		35 (76)	
Intensive Care Unit	1 (2)		0 (0)	
Heart rate – per min	N=62	86 (22)	N=45	84 (18)
Heart rate > 100 – no. (%)	11 (17.7)		9 (20.0)	
Systolic blood pressure (mmHg)	N=62	117.2 (19.7)	N=44	118.9 (17.9)
Systolic blood pressure ≤ 100 (mmHg)	11 (17.7)		7 (15.9)	
Diastolic blood pressure (mmHg)	N=62	70.6 (14.9)	N=45	70.7 (13.4)
Respiratory rate – per min	N=38	16.9 (4.6)	N=34	16.8 (4.2)
Respiratory rate ≤ 12 per min – no. (%)	6 (15.8)		4 (11.8)	
Median peripheral oxygen saturation (%)	N=62	98 (96- 100)	N=45	97 (95-99)
Median peripheral oxygen saturation < 95% -no (%)	8 (12.9)		9 (20.0)	
Median Glasgow coma scale core	6 (3-7)		7 (6-7)	
Toxin - n (%)				
Alcohol	37 (58.7)		34 (73.9)	
Benzodiazepin	30 (47.6)		12 (26.1)	
Neuroleptic	21 (33.3)		6 (13.0)	
Tricyclic antidepressant	8 (12.7)		1 (2.2)	
Opioid / heroïne	5 (7.9)		3 (6.5)	
Crack / Cocaïne	4 (6.3)		2 (4.3)	
Amphétamines	5 (7.9)		4 (8.7)	
GHB / GBL	7 (11.1)		4 (8.7)	
Other	36 (57.1)		18 (39.1)	

eTable 6: Characteristics of patients intubated in the control group
GHB: gamma-hydroxybutyric acid. GBL: gamma-butyrolactone

eMethods. P Value Calculation

$p - \text{value} = 2 * \left[1 - \phi \left(\left| \frac{\log(\text{WS})}{\hat{\sigma}_{\log(\text{WS})}} \right| \right) \right]$ where ϕ is the cumulative distribution function of the standard normal distribution (WS corresponds to win statistic and is equal to WR or WO, depending of the presented result).