

Supplementary Online Content

Guihard B, Chollet-Xémard C, Lakhnati P. Effect of rocuronium vs succinylcholine on endotracheal intubation success rate among patients undergoing out-of-hospital rapid sequence intubation: a randomized clinical trial. *JAMA*. doi:10.1001/jama.2019.18254

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

26 **Process for obtaining consent**

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29 a)The legal representative was present and the clinical situation of the patient allowed oral
30 information of the relative before intubation. Oral consent from relative was obtained just before
31 intubation and just after intubation; the legal representative signed consent once the patient had
32 been stabilized.

33 b) The legal representative was present but the patient's clinical situation required immediate
34 intubation. Written Consent to continue the study was requested from the legal representative after
35 intubation was performed.

36 c) No relatives were present.

37 1. The Patient was contacted by mail after his hospitalization to ask if he (or she) was opposed to his
38 inclusion.

39 2. If the patient died, a letter was sent to a legal representative.

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41 For 382 patients (31.4%) a relative was present at the moment of intubation. Among these 382
42 relatives, 290 have signed the consent just before inclusion and 92 just after inclusion and
43 intubation.

9 eTable 1. ITT analysis

	No/Total No (%) of patients		Absolute Difference (95% CI) ^a	P-value ^b
	Rocuronium (n = 613)	Succinylcholine (n = 617)		
Primary outcome : successful first pass intubation	456/613(74.4)	489/617 (79.2)	-4.8(-9.1 to ∞)	
Secondary Outcomes				
Pre-specified analyses				
Cormack and Lehane grade				
I	375/610 (61.5)	347/617 (56.2)	5.3 (-0.3 to 10.7)	0.06
II	126/610 (20.7)	173/617 (28.0)	-7.3 (-11.1 to -3.6)	<.001
III	81/610 (13.2)	72/617 (11.7)	1.5 (-2.9 to 6.2)	0.48
IV	28/610 (4.6)	25/617 (4.1)	0.5 (-1.5 to 2.6)	0.60
Intubation Difficulty Score, mean (SD)	4.2 (2.9)	4.1 (2.4)	0.1 (-0.2 to 0.4)	0.48
Intubation Difficulty Score > 5	139/606 (22.9)	130/615 (21.1)	1.8 (-3.2 to 6.8)	0.48
Copenhagen Score				
Excellent	327/580 (56.4)	313/585 (53.5)	2.9 (-0.6 to 6.5)	0.10
Good	205/580 (35.3)	223/585 (38.1)	-2.8 (-6.4 to 0.4)	0.08
Poor	48/580 (8.3)	49/585 (8.4)	-0.1 (-3.0 to 2.9)	0.97
Need for alternative intubation techniques				
Stylet	55/613 (9.0)	51/617 (8.3)	0.7 (-1.9 to 1.9)	0.97
Gum elastic bougie	114/613 (18.6)	107/617 (17.3)	1.3 (-1.2 to 3.8)	0.31
Intubating laryngeal mask airway	10/613 (1.6)	2/613 (0.3)	1.3 (0.5 to 2.4)	0.004
Cricothyrotomy	0/613 (0.0)	1/617 (0.2)	-0.2 (-)	NC
Complications				
Arterial desaturation	56/613 (9.1)	61/617 (9.9)	-0.8 (-4.2 to 2.7)	0.67
Severe Arrhythmia	13/612 (2.1)	26/617 (4.2)	-2.1 (-3.8 to -0.4)	0.01
Cardiac arrest	22/611 (3.6)	13/616 (2.1)	1.5 (-0.2 to 3.3)	0.08
Pulmonary inhalation	19/612 (3.1)	21/617 (3.4)	-0.3 (-1.7 to 1.1)	0.68
Exploratory Analyses				
No. of intubation attempts, mean (SD)	1.4 (0.8)	1.3 (0.6)	0.1 (0.05 to 0.2)	<.001
2 attempts	110/610 (18.0)	97/616 (15.8)	2.2 (-2.3 to 6.8)	0.34
3 attempts	34/610 (5.6)	27/616 (4.4)	1.2 (-0.8 to 3.2)	0.23
4 or more attempts	10/610 (1.6)	3/616 (0.5)	1.1 (0.2 to 2.0)	0.01
Intubation failure under direct laryngoscopy	11/613 (1.8)	4/617 (0.7)	1.1 (0.2 to 2.3)	0.01
Time of prehospital care, minutes, median (IQR)	55 (39 – 80)	55 (38 – 78)	-2.2 (-6.9 to 2.5)	0.36
Death during prehospital care	6/610 (1.0)	3/616 (0.5)	0.5 (-0.4 to 1.3)	0.26
Complications				
Number of complications per patient, mean (SD)	0.3 (0.8)	0.4 (0.9)	-0.1 (-0.2 to -0.05)	0.04
At least one life-threatening complication	116/610 (19.0)	150/616 (24.3)	-5.3 (-10.7 to 0.01)	0.05
Severe cardiovascular collapse	39/612 (6.4)	62/616 (10.1)	-3.7 (-6.8 to -0.3)	0.03
Accidental Extubation	1/611 (0.2)	4/616 (0.7)	-0.5 (-0.1 to 0.03)	0.06

10 ^aThe estimated difference between the groups was calculated with a 2-sided 95% CI using a Generalized Estimated Equation model, in
11 which center was specified as the clustering factor .

12 ^b Not corrected for multiple comparisons.

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14 eTable2. Subgroup analyses for the primary outcome.

	N (%) of patients		Absolute Difference (1-sided 97.5% CI) ^a	p-value for interaction
	Rocuronium	Succinylcholine		
Subgroup analyses				
Reason for intubation				
Coma due to neurological disease	236/313 (75.4)	239/304 (78.6)	-3.2 (-8.5 to ∞)	0.24
Coma due to self-poisoning	78/107 (72.9)	97/124 (78.2)	-5.3 (-12.3 to ∞)	
Acute respiratory failure	76/101 (75.2)	63/71 (88.7)	-13.5 (-21.3 to ∞)	
Trauma	39/51 (76.5)	40/52 (76.9)	-0.4 (-13.8 to ∞)	
Shock	7/8 (87.5)	8/9 (88.9)	-1.4 (-30.7 to ∞)	
Others	19/30 (63.3)	42/56 (75.0)	-11.7 (-43.0 to ∞)	
Patient Position				
Lying on the ground	116/161 (72.1)	145/187 (77.5)	-3.4 (-11.6 to ∞)	0.87
Lying on a stretcher	247/324 (76.2)	244/307 (79.5)	-3.3 (-10.0 to ∞)	
Lying on a bed	81/112 (72.3)	90/110 (81.8)	-9.5 (-21.1 to ∞)	
Other	11/13 (84.6)	10/12 (83.3)	1.3 (-30.7 to ∞)	

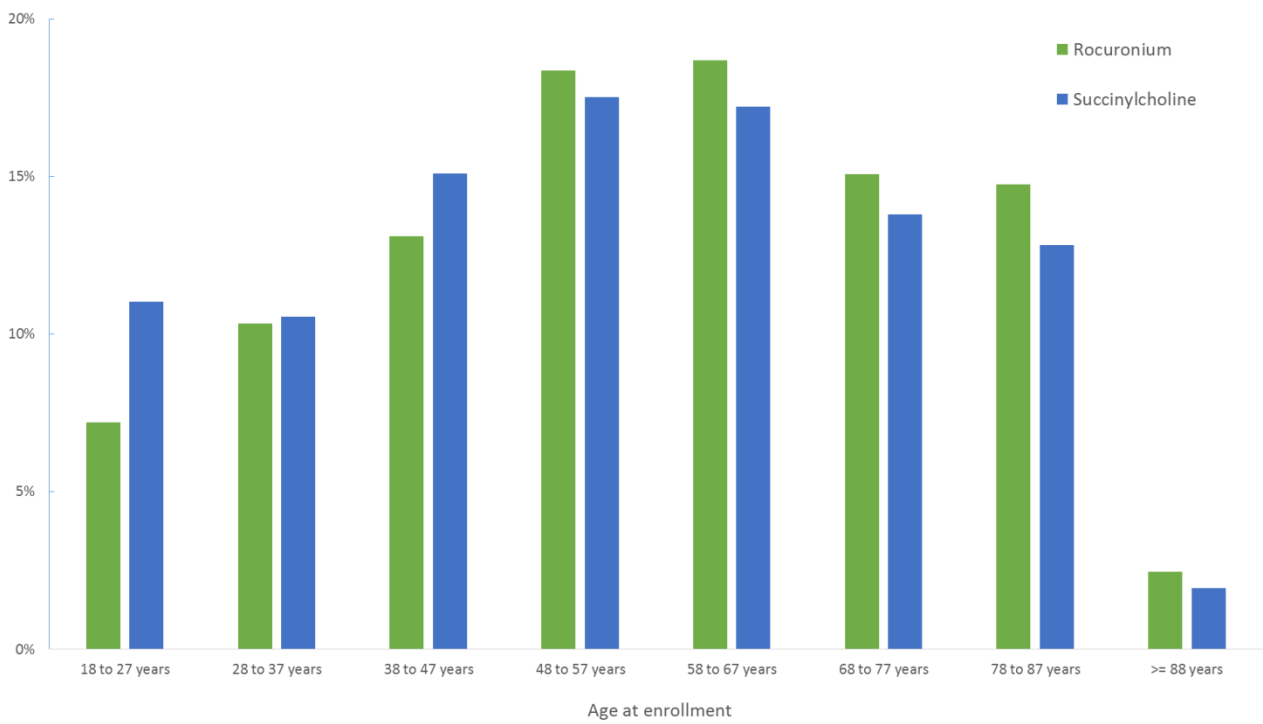
15 ^aThe estimated difference between the groups was calculated with a 1-sided 97.5% CI using a Generalized Estimated Equation model,
 16 in which center was specified as the clustering factor. The margin for non-inferiority was set at -7%. A lower bound of the CI that did
 17 not exceed this margin indicated non-inferiority.

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20 eFigure1. Randomized patients age distribution.

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