



A conference that is for us and by us

Emergency Medicine Pharmacotherapy with Resuscitation (EMPowerRx) Conference





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We Will Roc You (Literally)

Pros & Cons of Rocuronium for RSI

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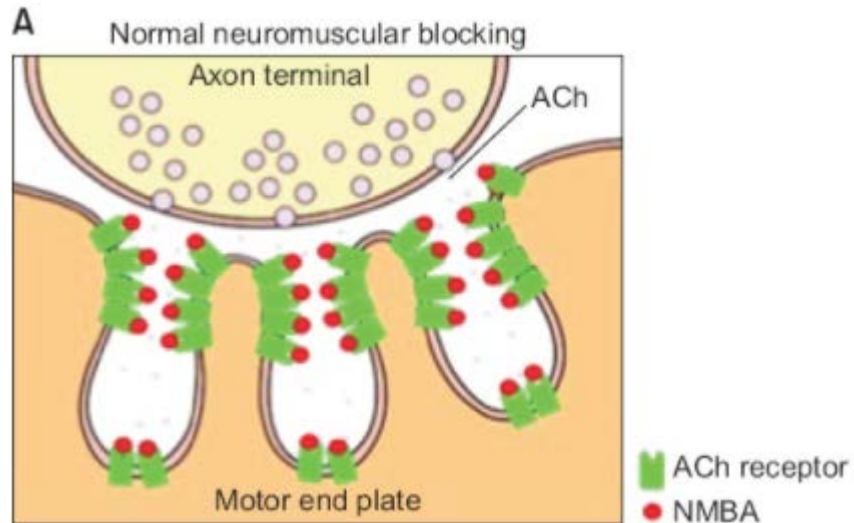
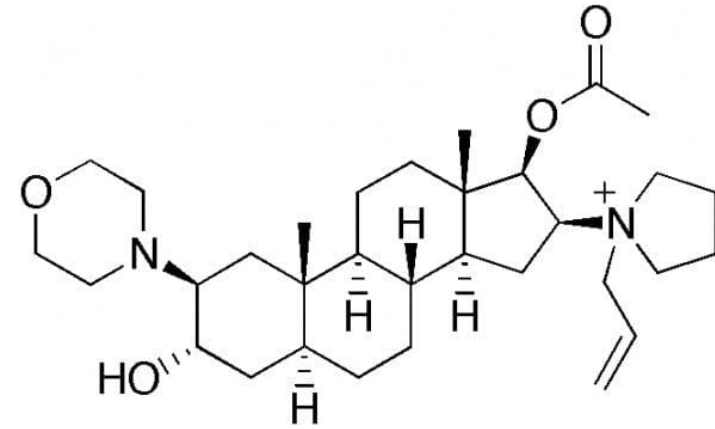
Haley Fox, PharmD

PGY2 Emergency Medicine Resident

Froedtert & the Medical College of Wisconsin

Rocuronium (ROC)

- Introduced in 1994
- Nondepolarizing paralytic agent
- Competitive antagonist at ACh receptor



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Dose
0.6 – 1.2 mg/kg

Onset
~45 – 120 sec


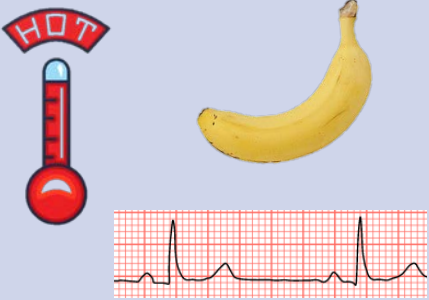
Duration
30 – 90 min

Metabolism
Liver
No active metabolites



Pro: Clinical

Safety

Contraindications

Rocuronium (ROC)	Succinylcholine (SUX)
	

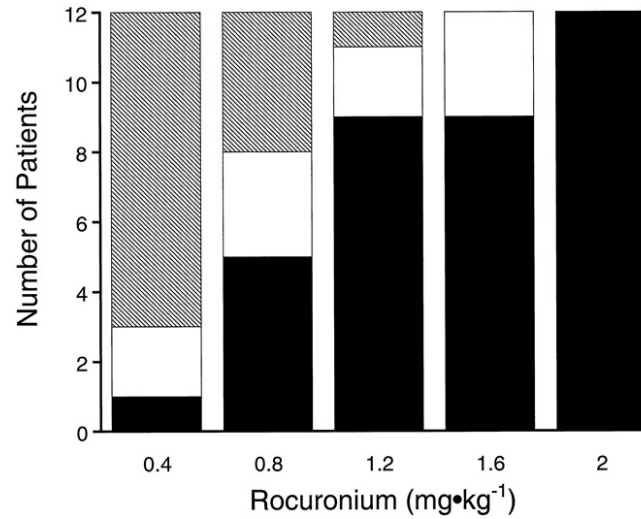
Adverse Effects

	
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Anaesthesia. 2017 Jun;72(6):765-777.

Efficacy

Similar intubating conditions

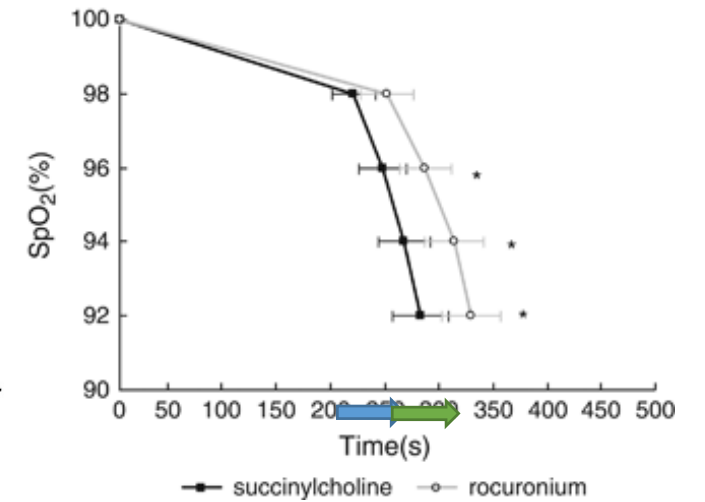


Intubated Conditions @ 40 seconds

- Excellent
- Good
- Poor

Anesth Analg. 2000 Jan;90(1):175-9.

Longer Safe Apnea Time (SAT)



283 s (S) 329 s (R)

46 s difference!

Acta Anaesthesiol Scand. 2011 Feb;55(2):203-8.

Pro: Logistical

Rocuronium (ROC)



Succinylcholine (SUX)



MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	
				1	2	3	1	2	3	4	5	6	7				1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12	
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19	
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26	
25	26	27	28	29	30	31	29	30						27	28	29	30	31			

[ROC] 10 mg/mL

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14

[SUX] 20 mg/mL

Rocuronium Bromide. Package insert. Pfizer Canada ULC; 2019.

Succinylcholine Chloride. Package insert. Sandoz Inc; 2010.

Cons: Clinical

Slower onset (?)

- Onset: 53, 45 and 36.4, seconds, respectively

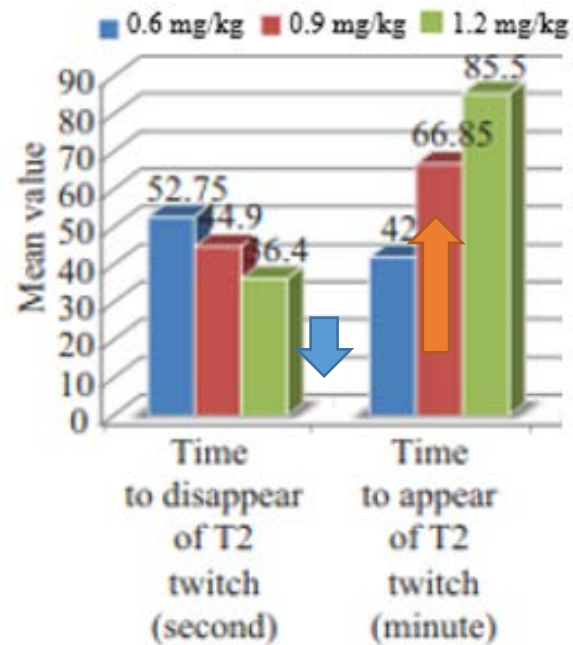


Figure-2: Comparison of onset and duration of action among the groups

Longer duration

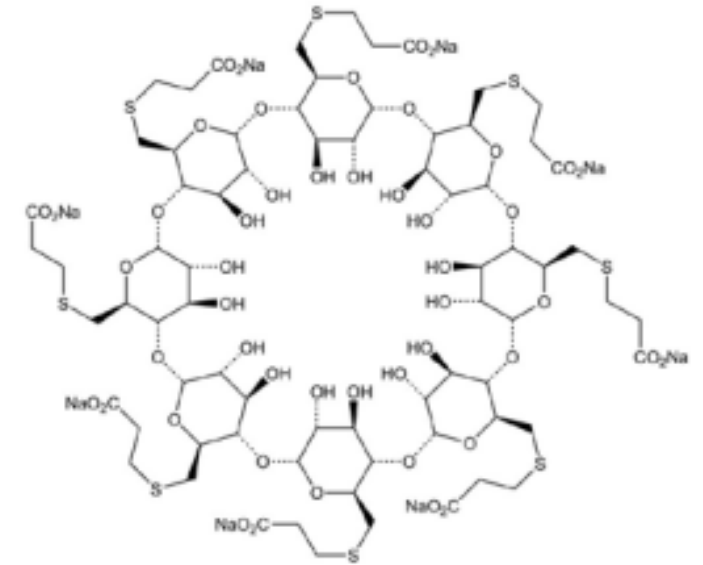
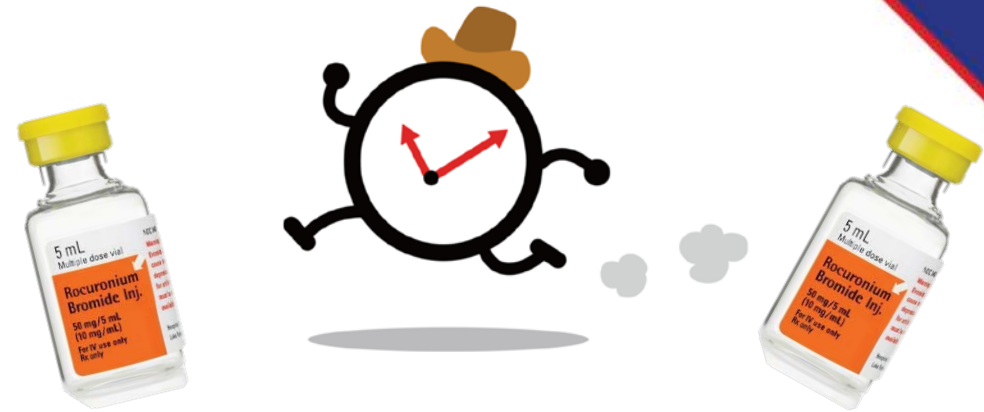
- Duration: 42, 67, 85 minutes, respectively
 - More time to establish safe airway while decreasing aspiration risk
 - Higher rate of awareness with paralysis compared to SUX (4.7% vs 2.5%)
 - Be sure to adequately sedate through paralysis!



Ann Emerg Med. 2021 May;77(5):532-544.
Int J of Contemp Med Res. 2018 Feb;5(1):23193-915X.

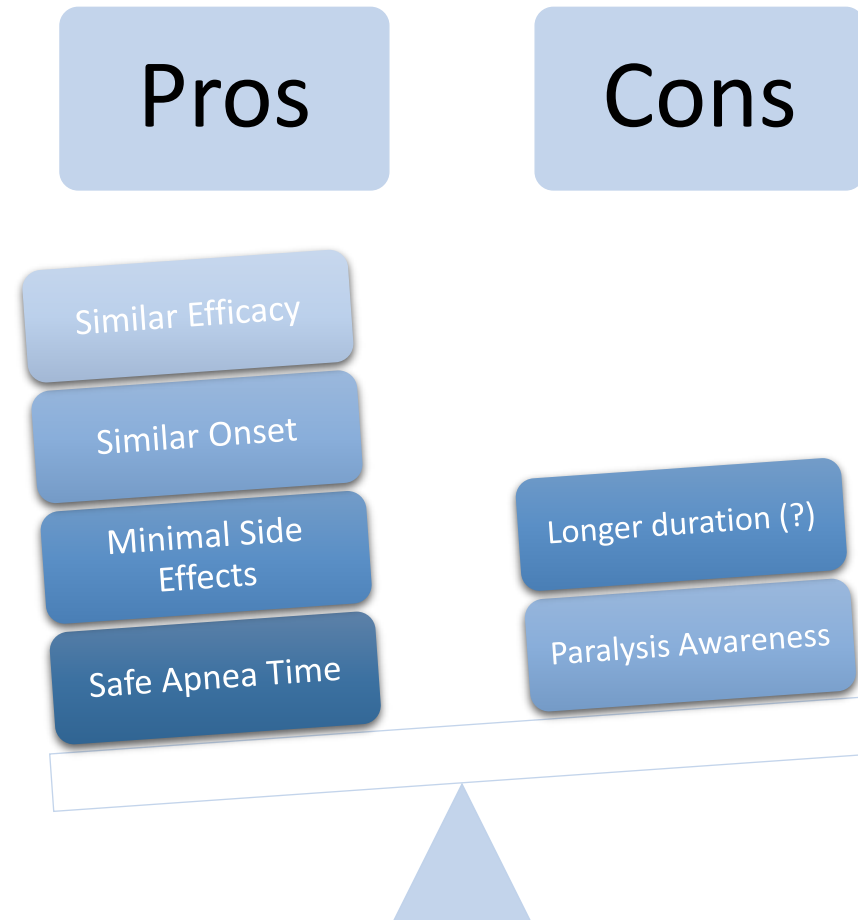
Cons: Logistical

- May have to draw up more than 1 vial
- Reversal agent (sugammadex) is expensive, not widely available
 - \$50-70 per mL (100 mg/mL)
 - 2-16 mg/kg



Bridion (sugammadex sodium). Package Insert. Merck Sharp & Dohme Limited; 2015.

Conclusion





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The End!

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