ANESTHARDCORE

ÚVOD U SEKCE

JAN BLÁHA

KLINIKA ANESTEZIOLOGIE, RESUSCITACE A INTENZIVNÍ MEDICÍNY

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Kam se to
pořád dívá?


Čas podání relaxace!


Na nástup
účinku relaxace!


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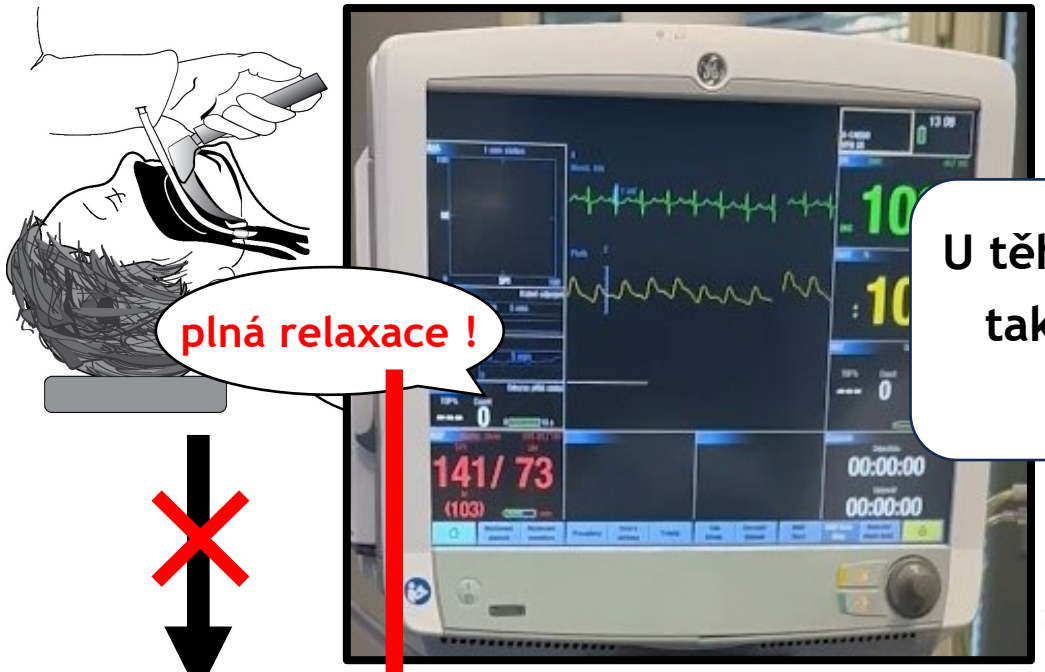
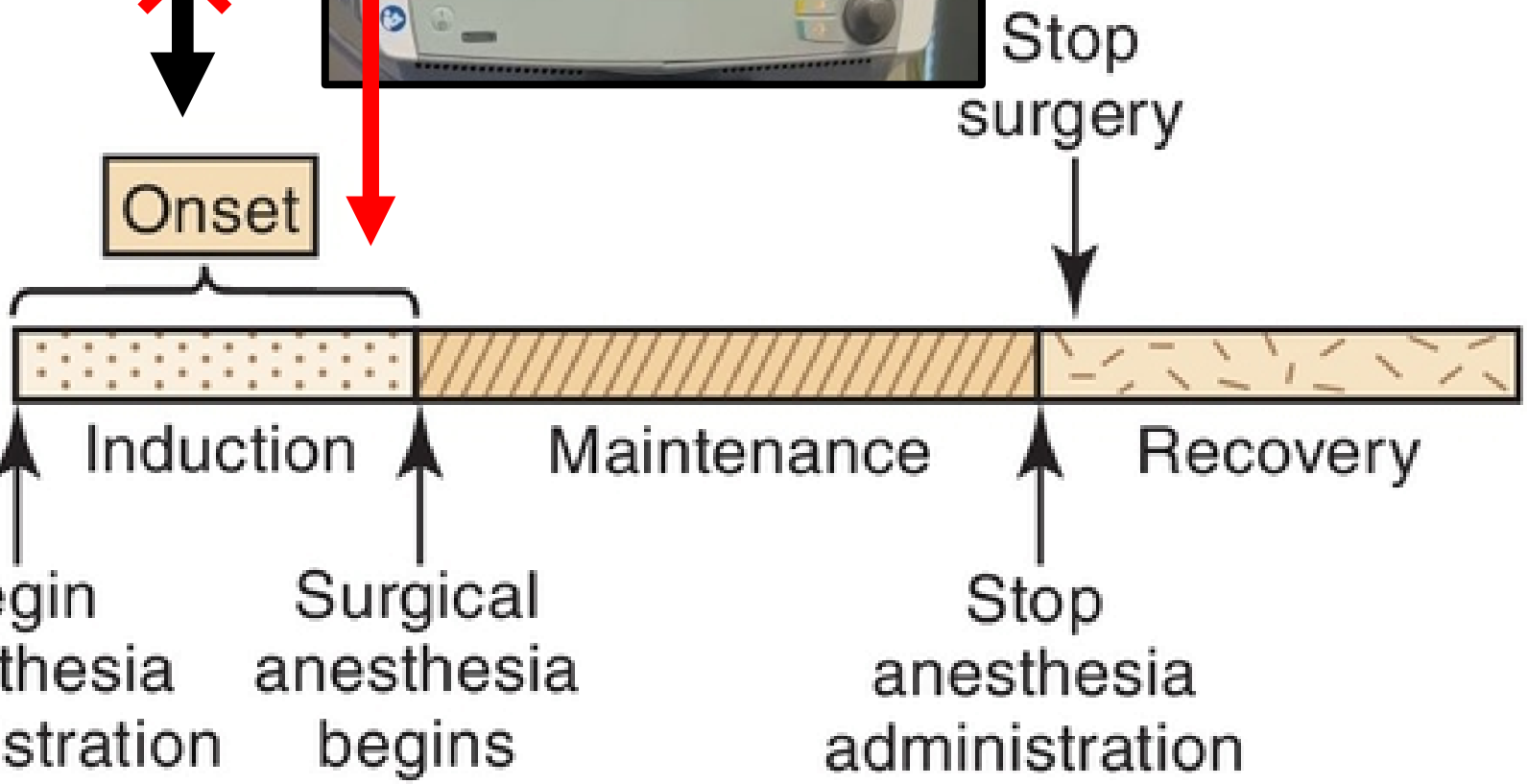
Na nástup
účinku relaxace!



plná relaxace !

U těhotné je 10x vyšší riziko obtížné intubace, tak si musíme vytvořit optimální podmínky, a ne nedostatečné!



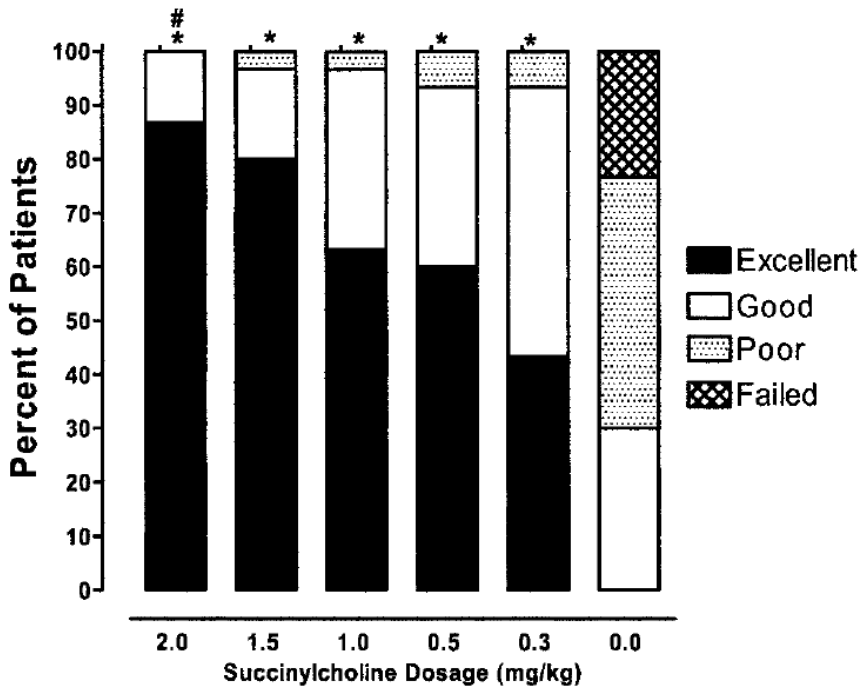


Figure 1. Intubating conditions with different doses of succinylcholine (n = 30 in. each group). The incidence of excellent intubating conditions was significantly more frequent ($^*P < 0.001$) in patients receiving succinylcholine than in those of the control group and in the 2.0 mg/kg succinylcholine group ($^{\#}P < 0.05$) than in the 0.3 mg/kg succinylcholine group (Kruskal-Wallis test for multiple comparisons).

Table 3. Onset Times and Durations of Neuromuscular Block

Succinylcholine dose (mg/kg)	Onset time(s)	Duration of block (min)	n
0.3	72 ± 30	4.4 ± 1.4	13
0.5	68 ± 44	5.2 ± 1.8	27
1.0	53 ± 23	5.9 ± 1.9†	30
1.5	56 ± 31	7.2 ± 2*	30
2.0	52 ± 21	7.5 ± 1.7*	30

Values are means ± SD.
*$P < 0.01$ *versus* succinylcholine 0.3, 0.5, and 1.0 mg/kg groups; †$P < 0.05$ *versus* succinylcholine 0.3 mg/kg group.

Doba nástupu účinku i čas do intubace jsou na dávce závislé !

Naguib M et al. Anesth Analg 2006;102:151–5

TABLE 24-1 COMMON WEIGHT SCALARS

Name	Equations
Ideal body weight	Male: 50 kg + 2.3 kg for each 2.54 cm (1 in) over 152 cm (5 ft) Female: 45.5 kg + 2.3 kg for each 2.54 cm (1 in) over 152 cm (5 ft)
Lean body mass	Male: $1.1 \times TBW - 128 \times (TBW \div Ht)^2$ Female: $1.07 \times TBW - 148 \times (TBW \div Ht)^2$
Fat free mass[35]	Male: $(9.27 \times 10^3 \times TBW) \div (6.68 \times 10^3 + 216 \times BMI)$ Female: $(9.27 \times 10^3 \times TBW) \div (8.78 \times 10^3 + 244 \times BMI)$
Pharmacokinetic mass[36,37]	$52 \div [1 + (196.4 \times e^{-0.025\ TBW} - 53.66) \div 100]$ (fentanyl only)
Corrected body weight[38,39]	IBW + 0.4* (IBW – FFM)

BMI, Body mass index; *FFM*, fat-free mass; *Ht*, height in centimeters; *IBW*, ideal body weight; *LBM*, lean body mass; *MFFM*, modified fat-free mass; *TBW*, total body weight in kg.
*The dose/kg using IBW, TBW, or FFM in an obese person are all less than the dose/kg using TBW in a nonobese patient.

TABLE 24-2 DOSING WEIGHTS BASED ON VARIOUS DOSING SCALARS

	176-cm (6-ft) Male	
	68 kg (BMI = 22)	185 kg (BMI = 66)
Dosing Scalar	Dosing Weight (kg)	Dosing Weight (kg)
Total body weight (TBW)	68	185
Ideal body weight (IBW)	71	71
Lean body mass (LBM)	55	62
Fat-free mass (FFM)	55	87
Corrrected body weight (CBW)	68	115

MI, Body mass index (kg/m2)

Table 2.1 Utilization of total body weight (TBW), lean body weight (LBW) or ideal body weight (IBW) to calculate dosing schemes in morbidly obese patients

Drug	Recommended dosing	References[a]
Propofol	Induction: IBW Induction: LBW assessed by BIA Maintenance: TBW or IBW + 0.4 excess weight	Kirby. *Anaesthesia* 1987; 42:1125–1126 Ingrande. *Anesth Analg* 2011; 113:57–62 Servin. *Anesthesiology* 1993; 78:657–665 Albertin. *Br J Anaesth* 2007; 98:66–75
Thiopental	7.5 mg/kg IBW TBW	Buckley. *Can J Anaesth* 1994; 41:R94–R100 Jung. *Anesthesiology* 1982; 56:269–274
Midazolam	TBW for initial dose IBW for continuous dose	Greenblatt. *Anesthesiology* 1984; 61:27–35 Reves. *Anesthesiology* 1985; 62:310–324
Vecoronium	IBW	Weinstein. *Anesth Analg* 1988; 67:1149–1153
Cisatracurium	TBW IBW	Kirkegaard-Nielsen. *Anesth Analg* 1996; 83:1076–1080 Leykin. *Anesth Analg* 2004; 99:1090–1094
Rocuronium	IBW	Leykin. *Anesth Analg* 2004; 99:1086–1089
Succinylcholine	TBW	Bentley. *Anesthesiology* 1982; 57:48–49
Neostigmine	TBW	Kirkegaard-Nielsen. *Can J Anaesth* 1998; 45:39–41
Suggamadex	IBW + 40% excess weight	Van Lancker. *Anaesthesia* 2011; 66:721–725
Alfentanil	IBW or corrected weight TBW	Bentley. *Anesth Analg* 1983; 62:245–262 Salihoglu. *EJA* 2002; 19:125–128 Maitre. *Anesthesiology* 1987; 66:3–12
Fentanyl	TBW Corrected weight = IBW + (0.4x excess weight) pharmacokinetic mass = $52/[1 + (196.4 \times e^{-0.025kg} - 53.66)/100]$	Bentley. *Anesth Analg* 1981; 60:548–551 Salihoglu. *EJA* 2002; 19:125–128 Shibutani. *Anesthesiology* 2004;101: 603–613
Sufentanil	TBW Corrected weight BMI >40	Schwartz. *Anesth Analg* 1991; 73:790–793 Slepchenko. *Anesthesiology* 2003; 98:65–73
Remifentanil	LBM (James equation) LBM (Janmahasatian equation)	Egan. *Anesthesiology* 1998; 89:562–573 La Colla. *Clin Pharmacokinet* 2010; 49:131–139
Morphine	IBW	Choi. *Obes Surg* 2000; 10:154–159
Paracetamol	IBW	Lee. *J Clin Pharmacol* 1981; 21: 284–287

[a] First author, journal abbreviation, year of publication, volume, pages

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ORIGINAL ARTICLE

ELSEVIER
www.obstetanesthesia.com

Surgical conditions with rocuronium versus suxamethonium in cesarean section: a randomized trial

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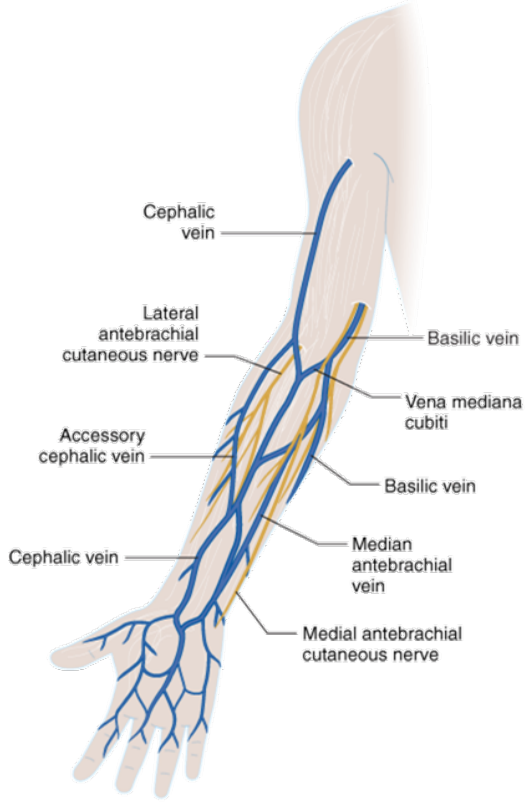
Čas nástupu účinku sukcinylu je alespoň 50-60 sec!

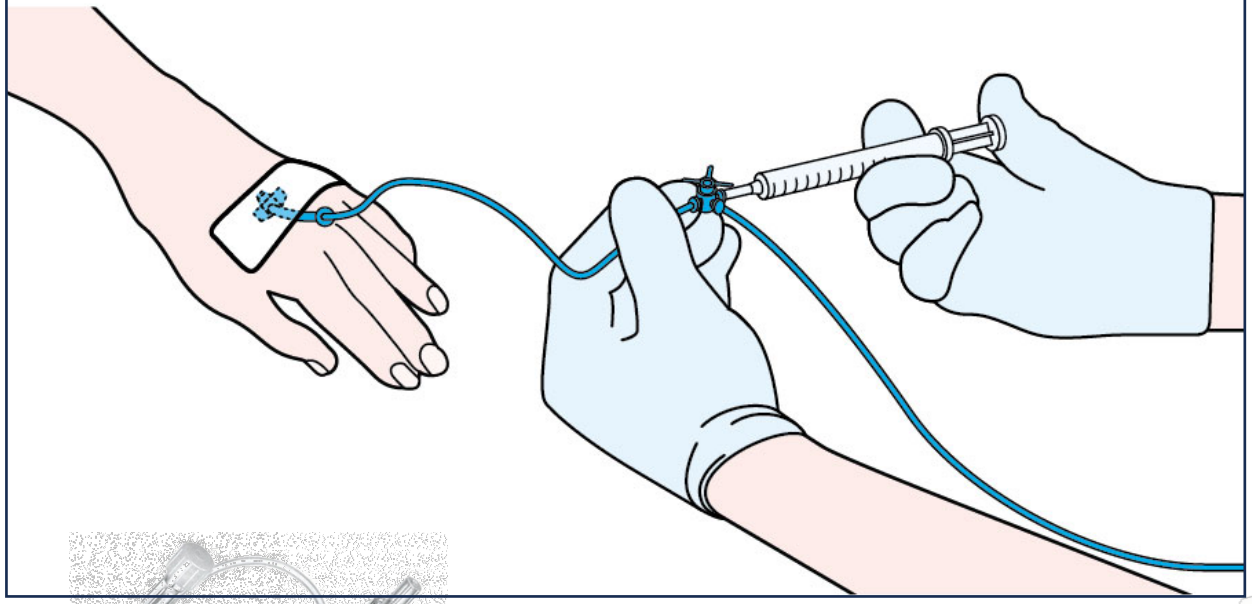
Table 2 Times from induction of anesthesia to end of surgery; and induction characteristics.

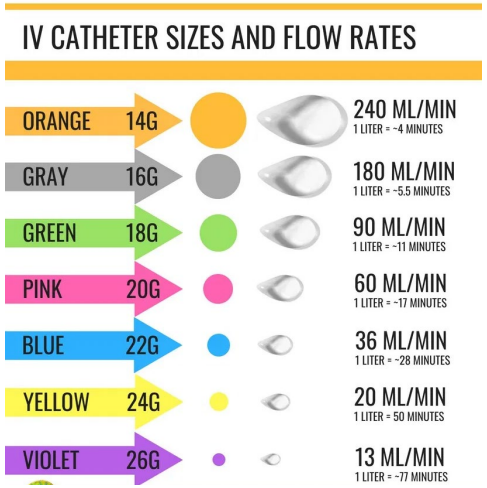
	Rocuronium group		Suxamethonium group		*Difference in means*	*P-value*
	Mean	*Median*	*mean*	*median*		
Induction – delivery interval (s)	268.4 (72.9)	265 (223–330)	275.6 (63.4)	267 (239–400)	−7.2 (−39.5 to 19.3)	0.62
Induction – intubation interval (s)	105.8 (33.7)	108 (77–134)	67.6 (32.1)	63 (50–123)	38.2 (24.4 to 52.0)	<0.001
Incision – delivery interval (s)	146.6 (68.3)	130 (99–179)	196.2 (50.7)	201 (167–277)	−49.7 (−74.8 to −24.4)	0.0002
Intubation – incision interval (min)	15.8 (6.9)	15 (4–43)	11.7 (6.4)	10 (3–29)	4.1 (0.4 to 7.8)	0.061
Length of surgery (min)	39.3 (8.9)	39 (27–53)	39.4 (9.6)	38 (26–54)	0.1 (−4.0 to 3.8)	0.976
End of surgery to extubation (min)	5.2 (4.6)	4 (0–13)	8.8 (5.8)	8 (2–19)	−3.5 (−5.8 to 1.4)	0.002
SRSD (points)	3.73 (0.53)	4 (3–5)	2.77 (0.55)	3 (2–4)	1.0 (−0.01 to 0.20)	<0.001
Blood loss (mL)	533 (76)	500 (500–600)	538 (98)	500 (500–650)	−5 (−38 to 28)	0.859
Thiopental (mg/kg)	4.7 (0.16)	4.7 (4.5–5.1)	4.7 (0.21)	4.7 (4.5–5.3)		0.471
Muscle relaxant dose (mL/kg)	0.092 (0.01)	0.093 (0.090–0.106)	0.095 (0.00)	0.094 (0.09–0.106)		0.072
Muscle relaxant dose (mg/kg)	0.55 (0.05)	0.56 (0.54–0.65)	0.95 (0.04)	0.94 (0.9–0.11)		0.177

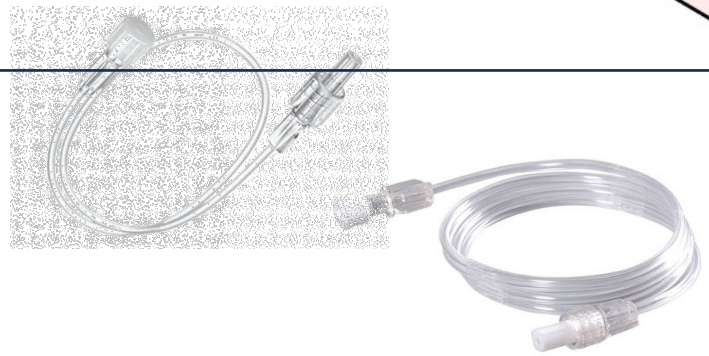
Data are presented as mean (SD) or median (range). Difference between the groups is expressed as median (95% confidence interval). SRSD: Surgical rating scale for delivery.



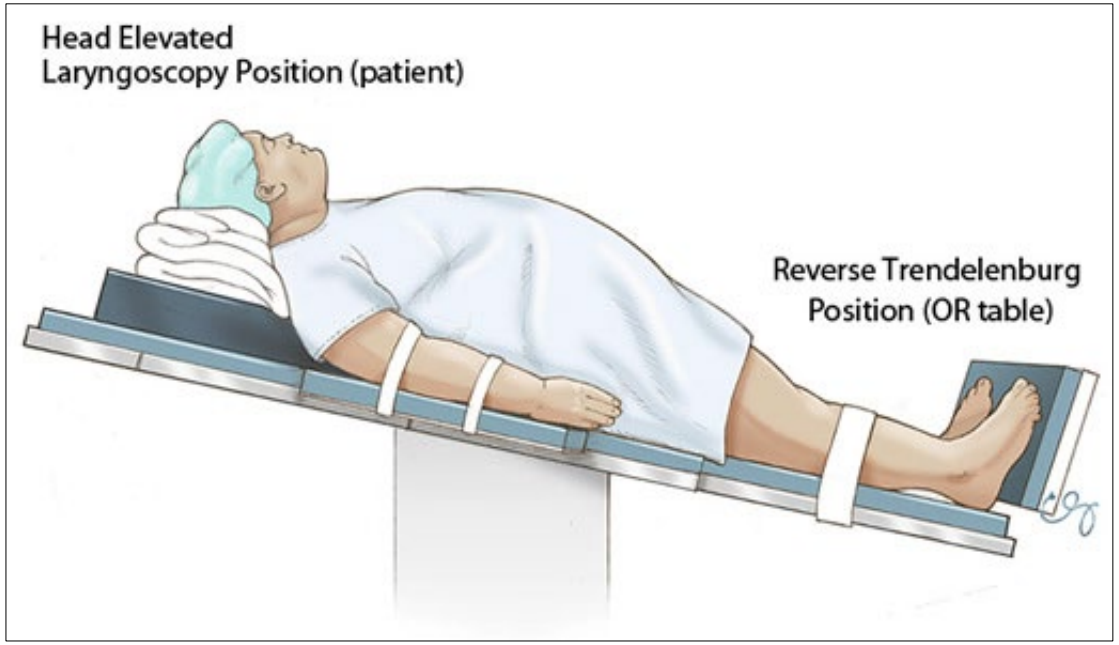
Doba nástupu účinku myorelaxancia záleží ale i na způsobu aplikace !!

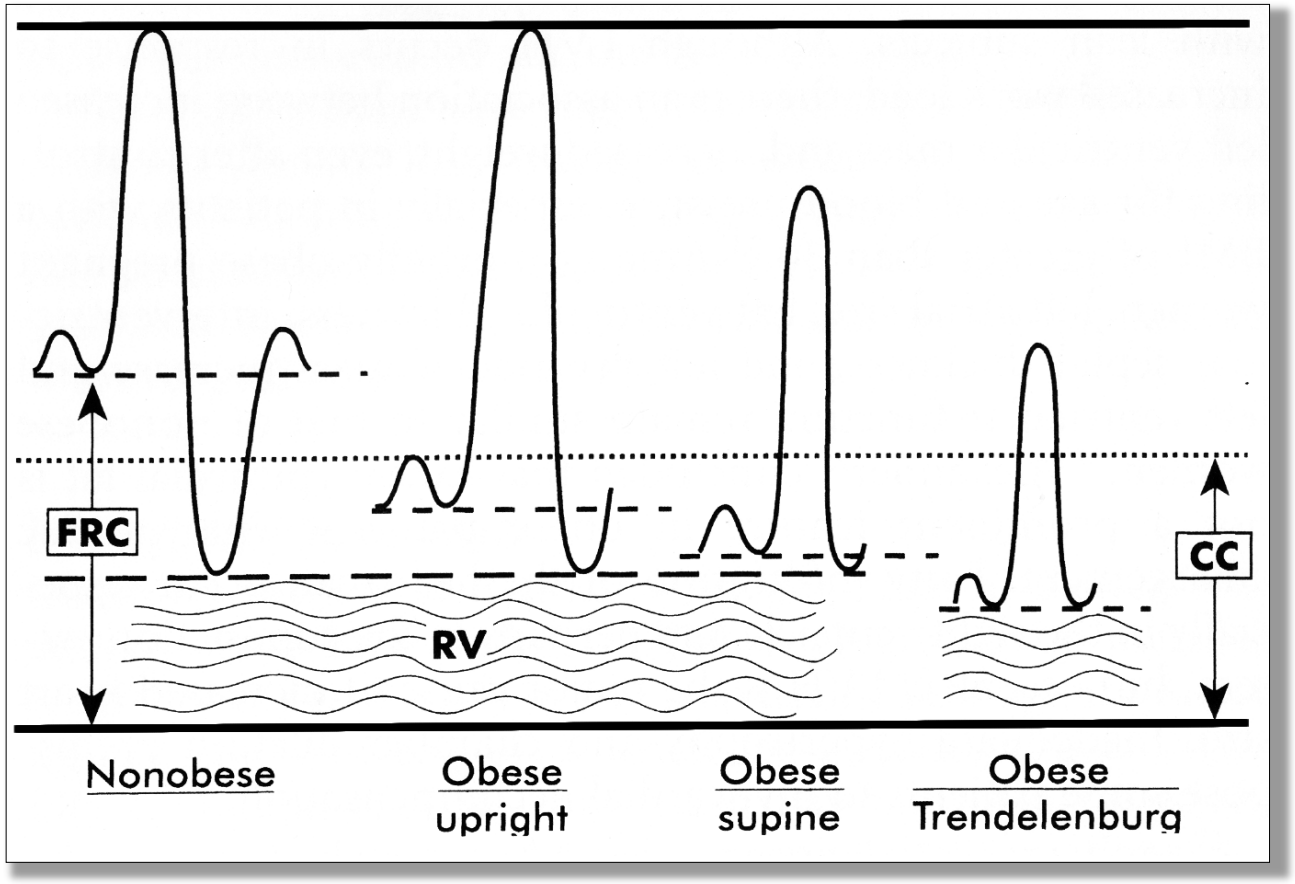






EFFECT OF POSITION ON LUNG VOLUMES





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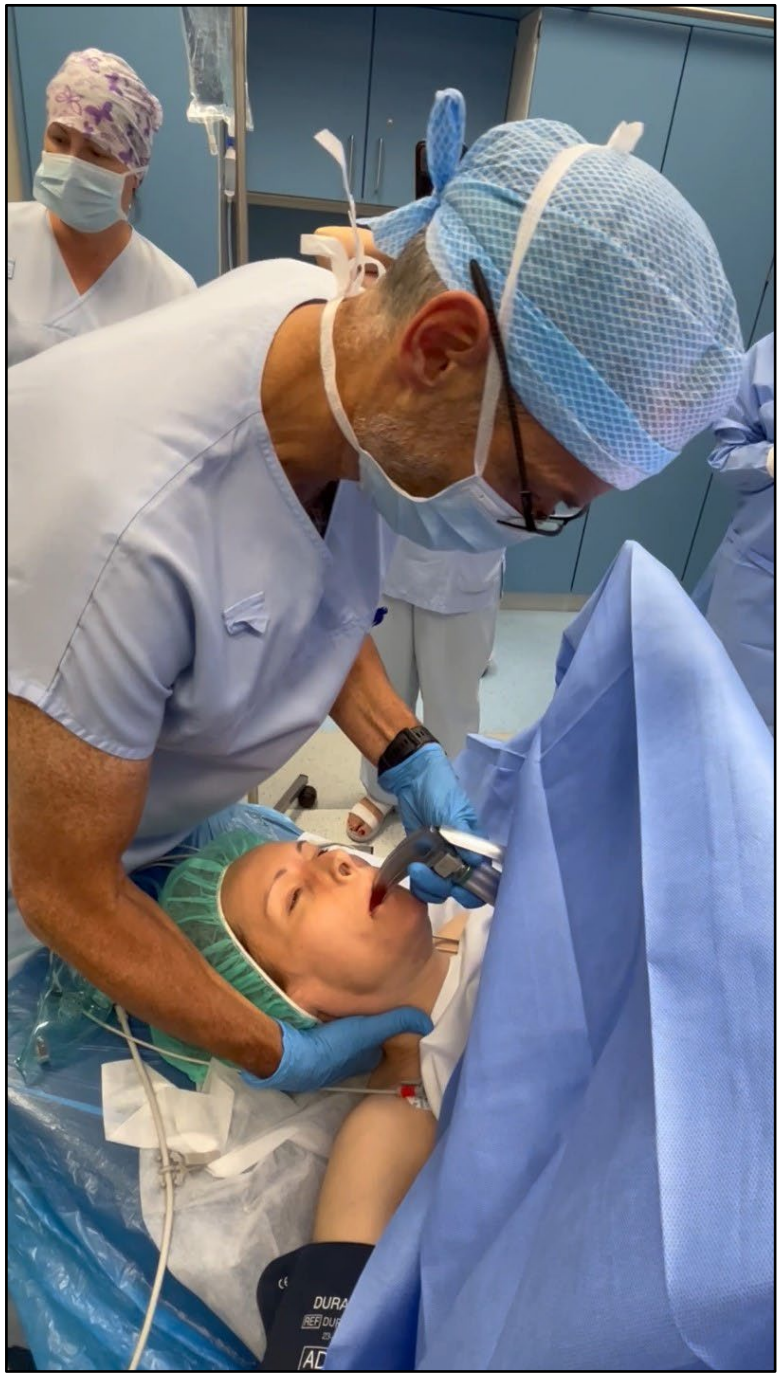

THE LANCET

Preliminary Communications

CRICOID PRESSURE TO CONTROL REGURGITATION OF STOMACH CONTENTS DURING INDUCTION OF ANÆSTHESIA

WHEN the contents of stomach or œsophagus gain access to the air-passages during anæsthesia the consequences are disastrous. In spite of modern anæsthetic techniques—or sometimes, regrettably, because of them—regurgitation is still a considerable hazard during the induction of anæsthesia, particularly for operative obstetrics and emergency general surgery.[1–8]

By a simple manœuvre during induction of anæsthesia, regurgitation of gastric or œsophageal contents can be controlled until intubation with a cuffed endotracheal tube is completed. The same manœuvre may also be used to prevent inflation of the stomach (a potent cause of regurgitation) resulting from positive-pressure ventilation

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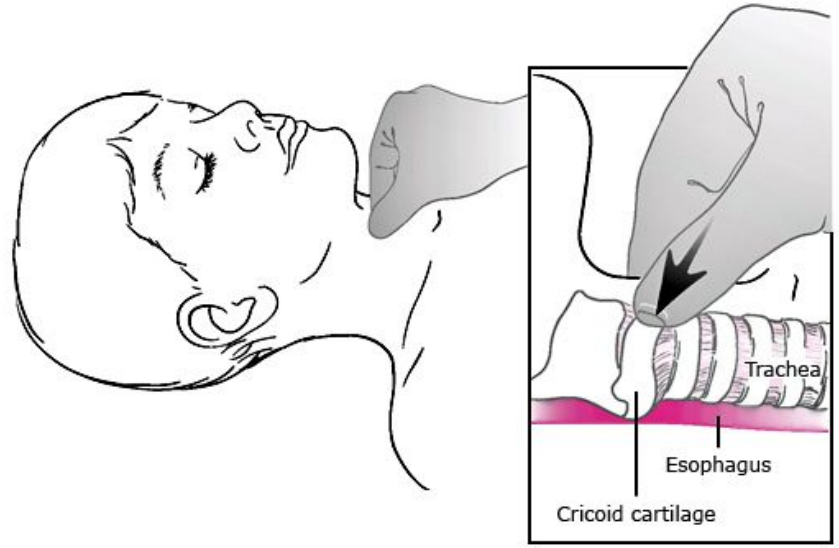
Teorie je jasná…



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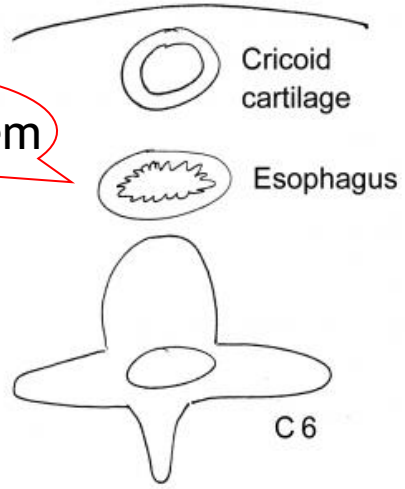

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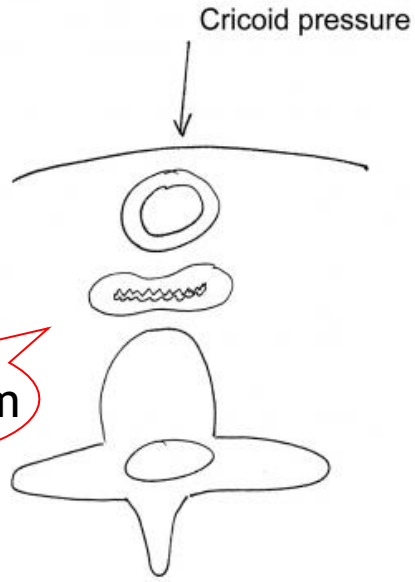


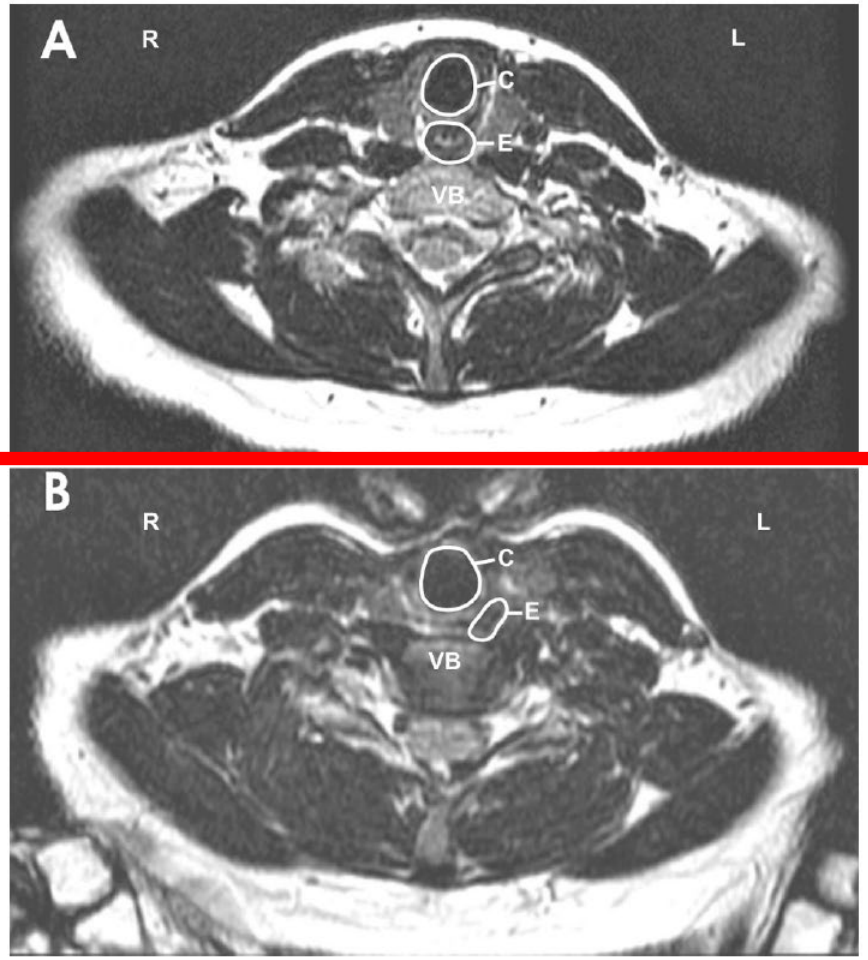
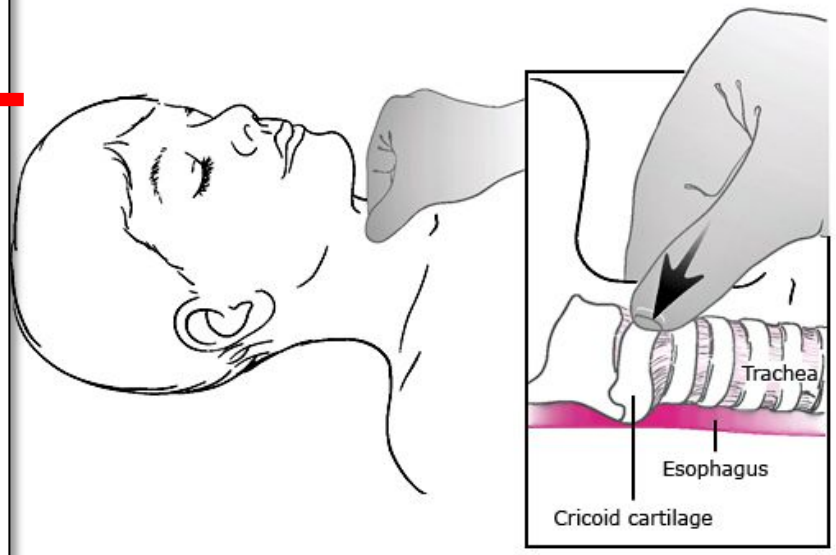


Fig. 3. (*A*) Magnetic resonance image of the neck without cricoid pressure. (*B*) Magnetic resonance image of the same subject demonstrating 12.1 mm of lateral esophageal displacement to the left with application of cricoid pressure. *C* = cricoid cartilage, *E* = esophagus, *VB* = vertebral body.



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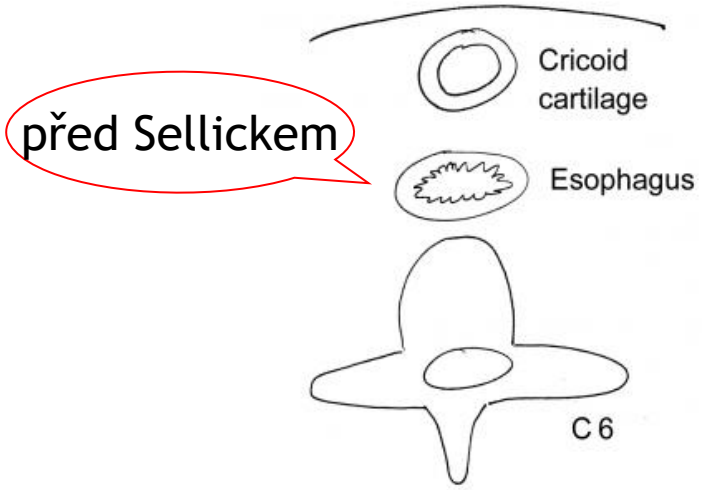
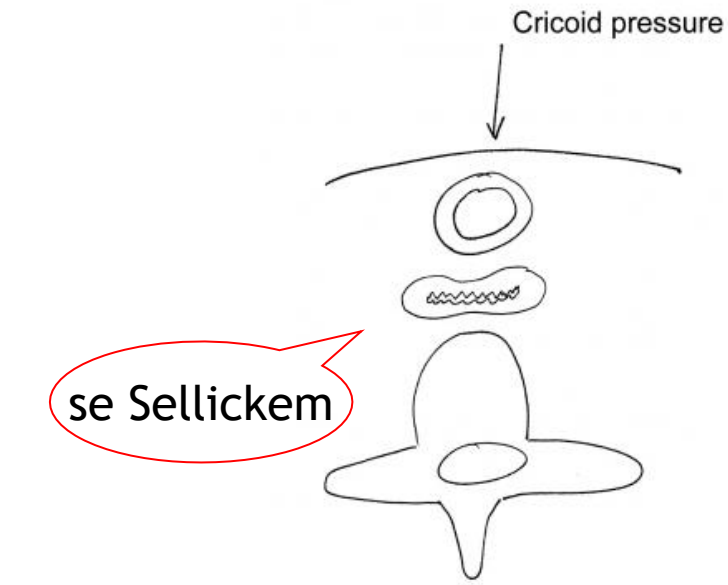




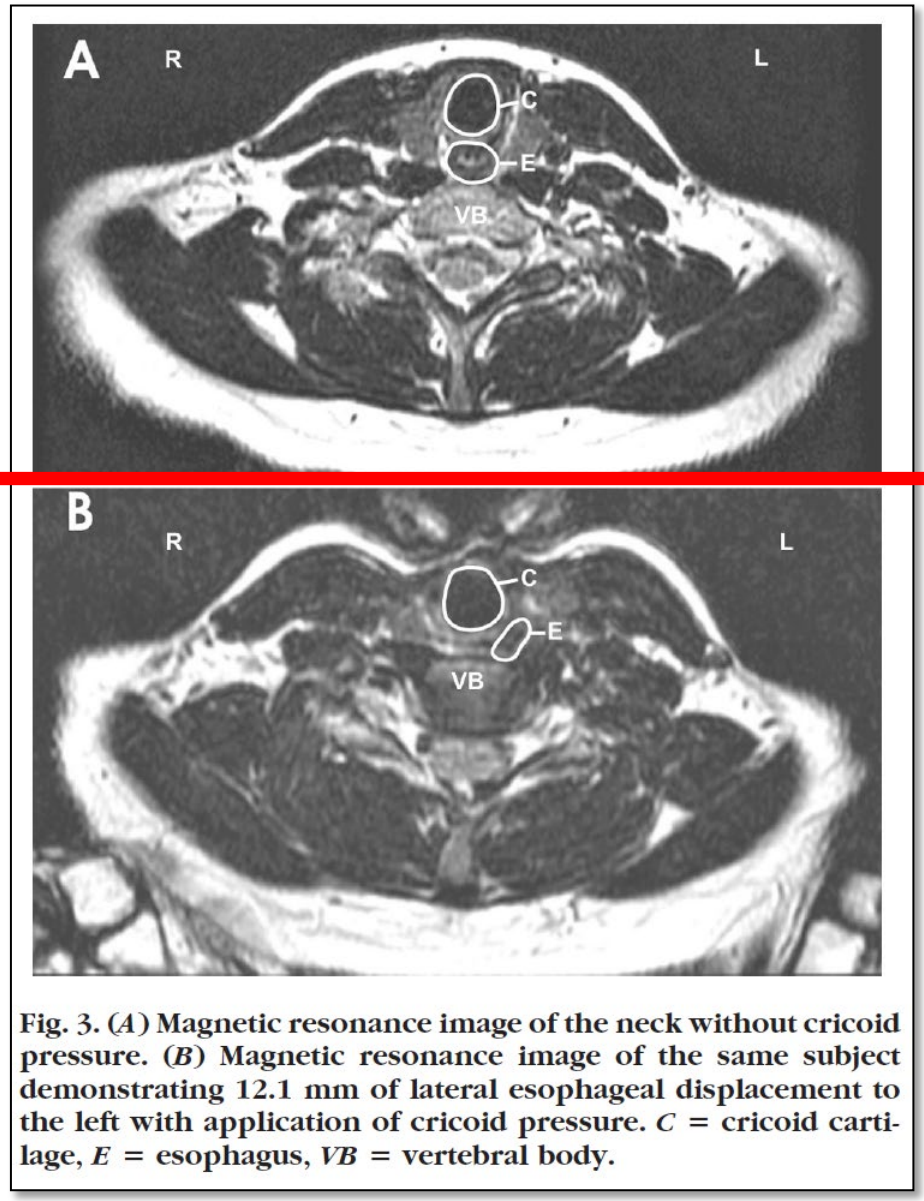
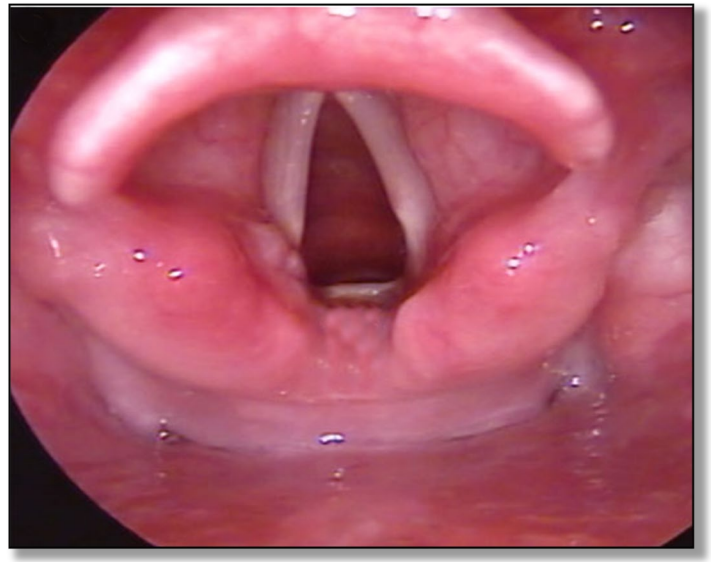


Fig. 3. (*A*) Magnetic resonance image of the neck without cricoid pressure. (*B*) Magnetic resonance image of the same subject demonstrating 12.1 mm of lateral esophageal displacement to the left with application of cricoid pressure. *C* = cricoid cartilage, *E* = esophagus, *VB* = vertebral body.



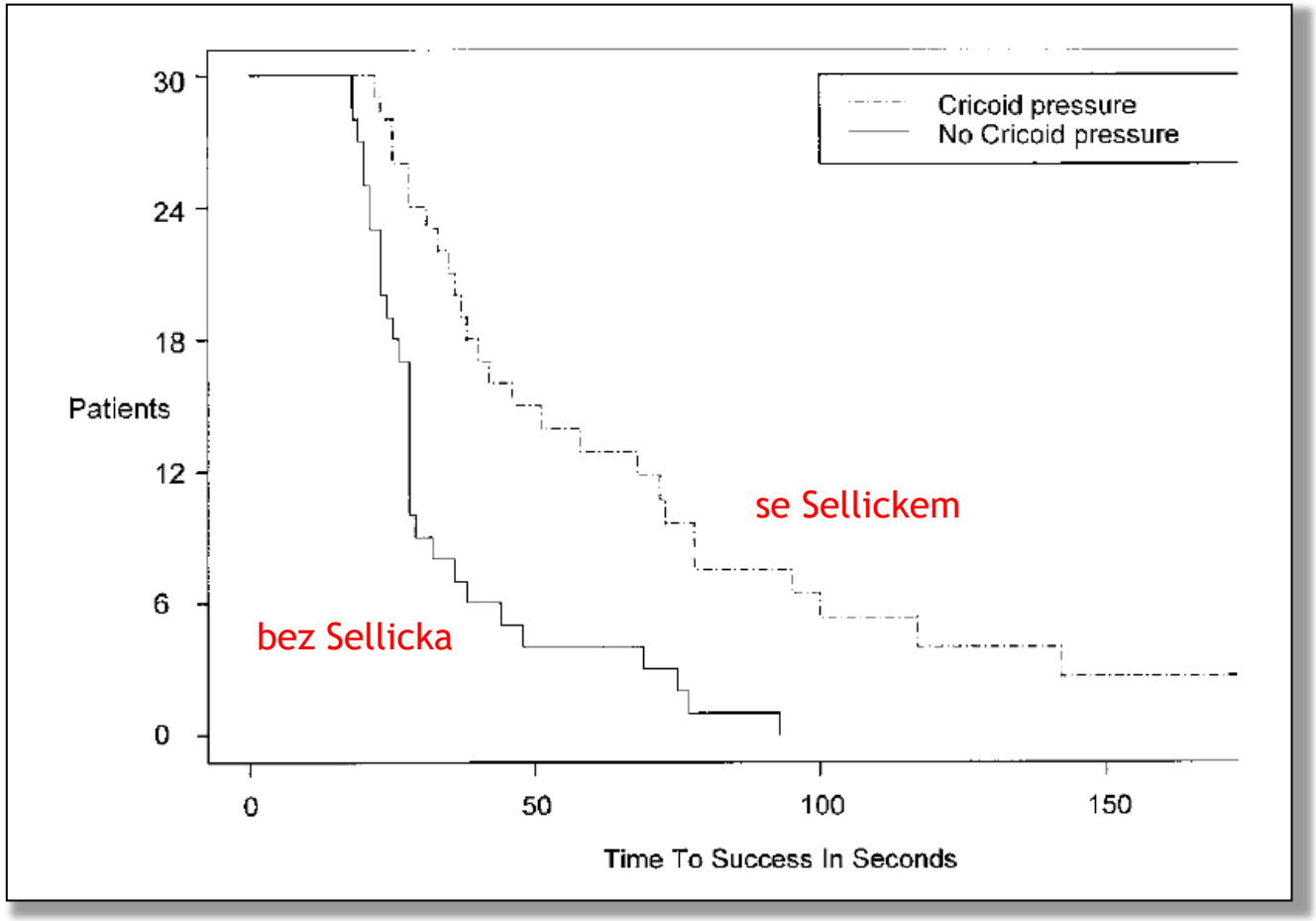
Smith KJ et al. Anesthesiology 2003; 99:60-4

Rice et al. Anesth Analg 2009;109:1546-52

Haslam et al. Anaesthesia 2005; 60: 41-47

Effect of Cricoid Pressure on the Success of Endotracheal Intubation with a Lightwand

R. Eric Hodgson, M.B., Ch.B.(Hons.), F.C.A.(S.A.)(Crit. Care), P. Dean Gopalan, M.B., Ch.B., F.C.A.(S.A.),* Richard C. Burrows, M.B., Ch.B., F.C.A.(S.A.)(Crit. Care),† Khangelani Zuma, M.Sc.‡*



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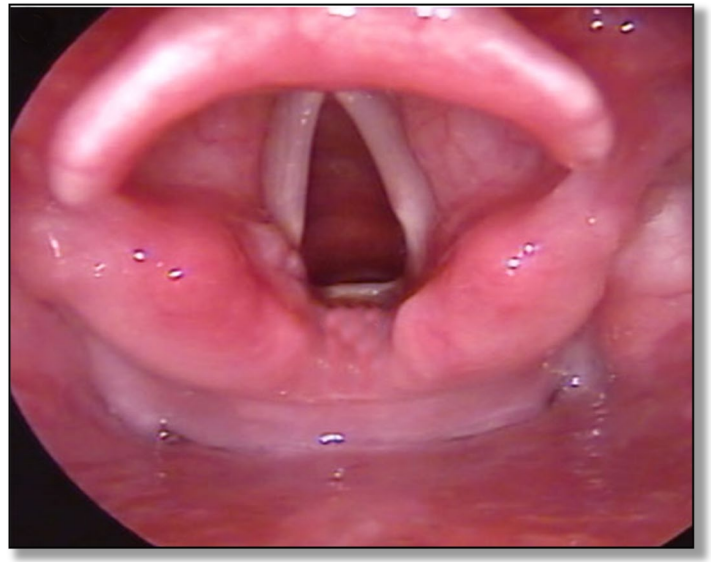

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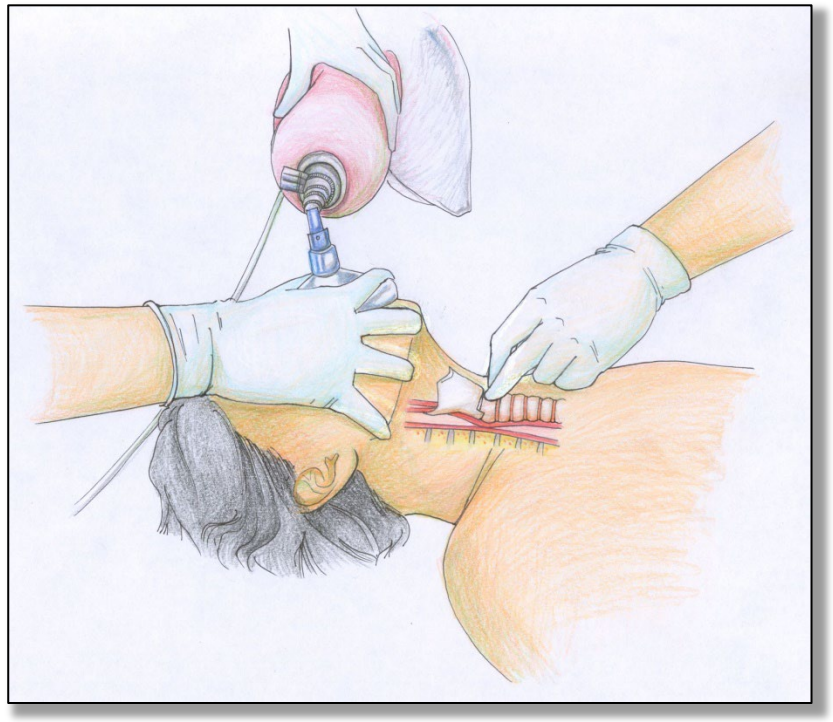
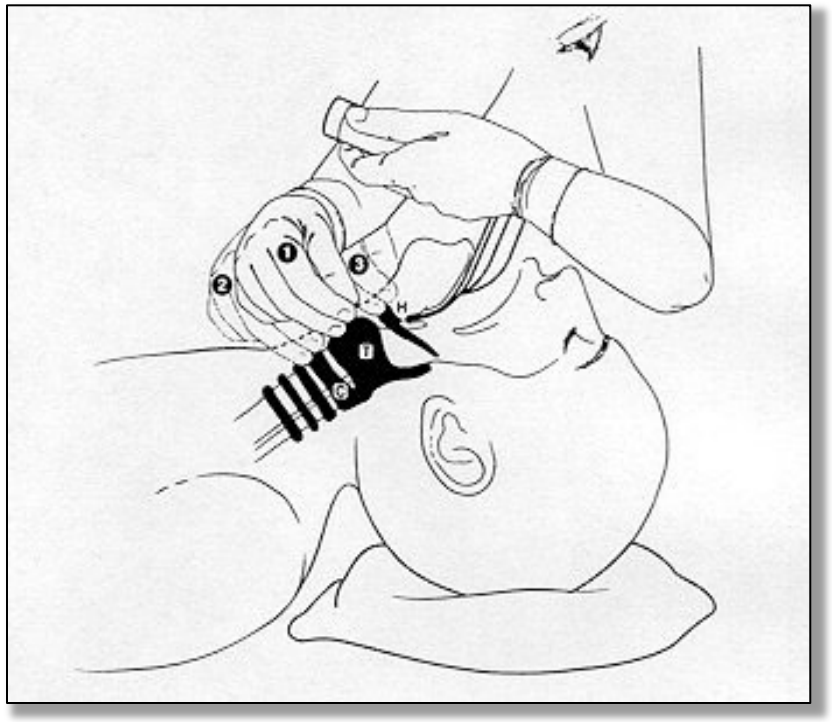
Sellick's Maneuver



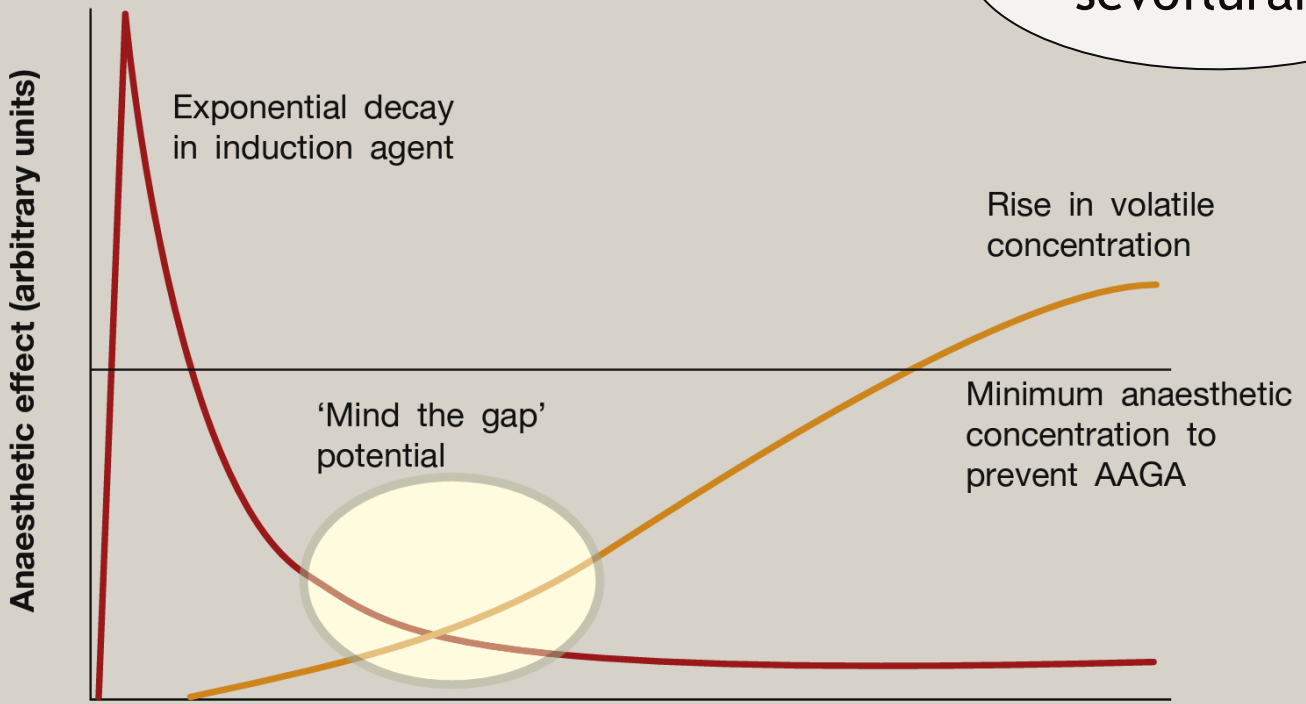
"BURP"

Backward, Upward, Rightward Pressure



V 90 % případů dosáhneme nejlepšího "výhledu" když zatlačíme na štítnou chrupavku, ne na krikoidální!

Depth of anaesthesia ‘gap’



A hned pustit sevofluran !

Dean Ch. RoyalCollegeofAnaesthetistsCPDMatrix:1A02,1E06,2A03

Prodýchávání maskou u sekce?

A PROČ NE?

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