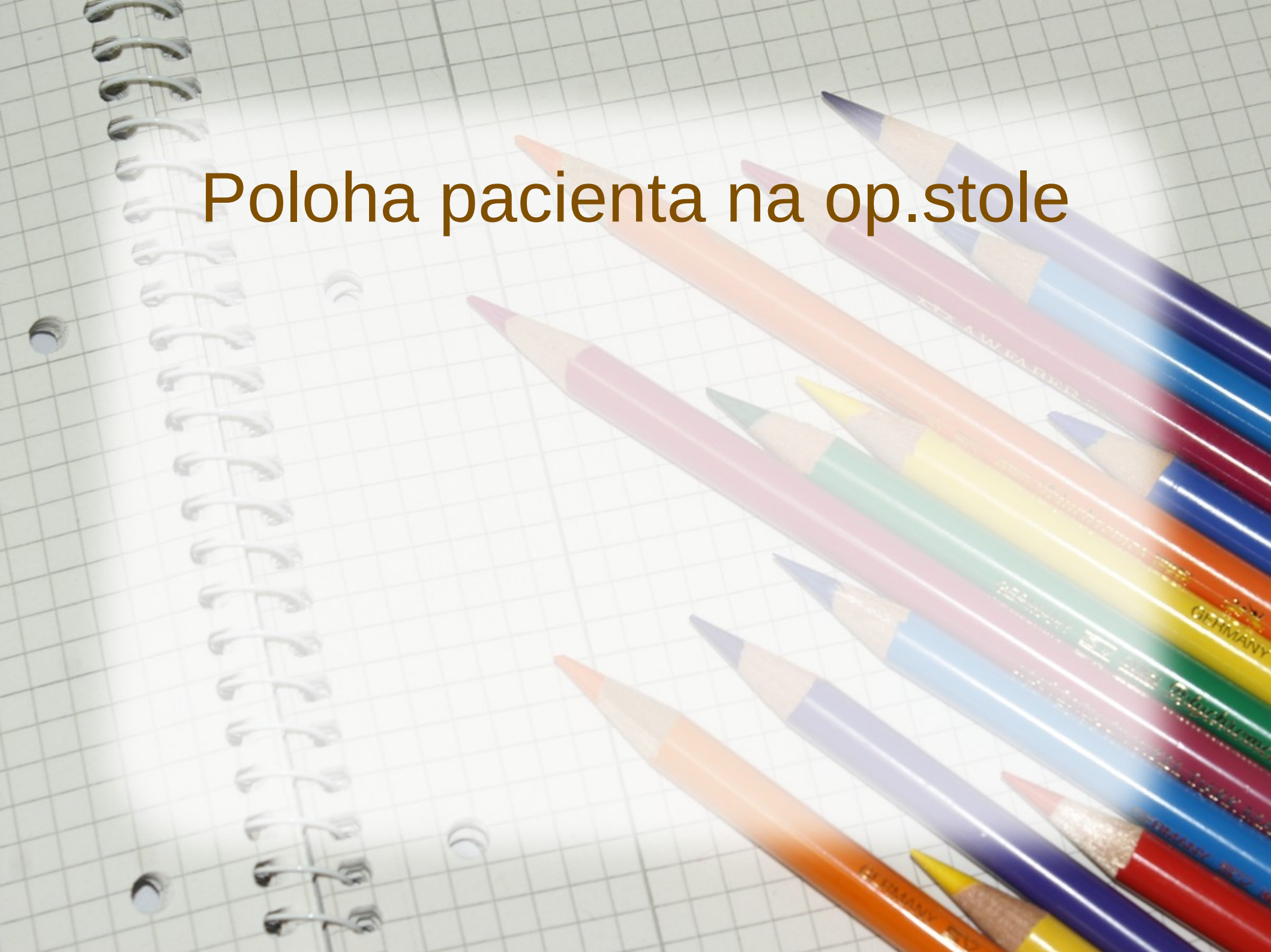
Poloha pacienta na op.stole



Nejčastější poranění nervů při anestezii

Nerve	Number of Claims (n =670)	Percent of Total-
Ulnar	190	28
Brachial plexus	137	20
Lumbosacral nerve	105	16
Spinal cord	84	13
Sciatic	34	5
Median	28	4
Radial	18	3
Femoral	15	2
Other single nerves	43	6
Multiple nerves	16	2
Total	670	100

Rizika polohování

Poranění nervu je druhou nejčastější příčinou (16%) pojistného plnění v US.

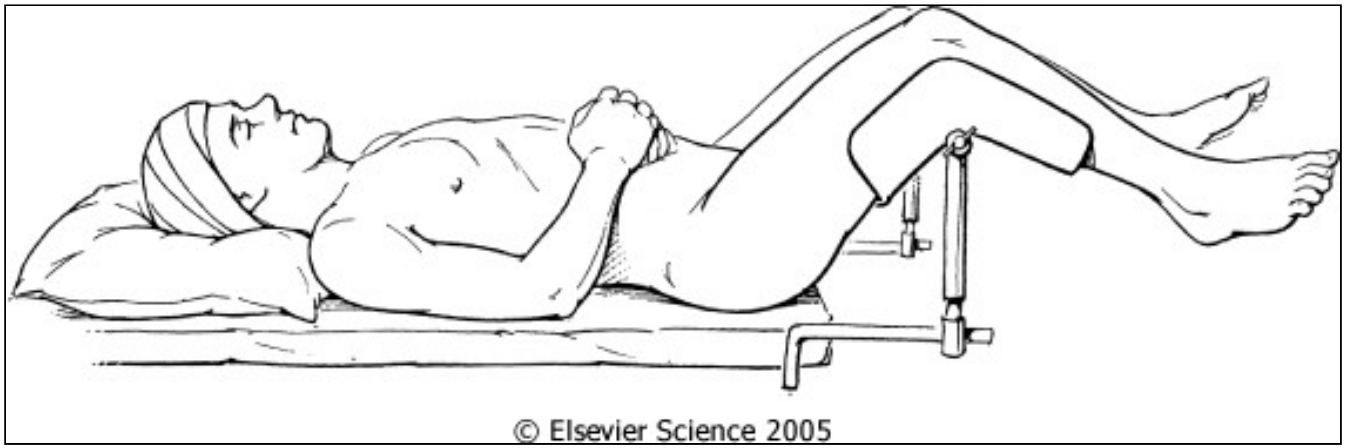
Pořadí: Ulnární n.; brachial plexus, lumbosacral nerve roots, spinal cord.

Postoperative ulnar nerve deficits

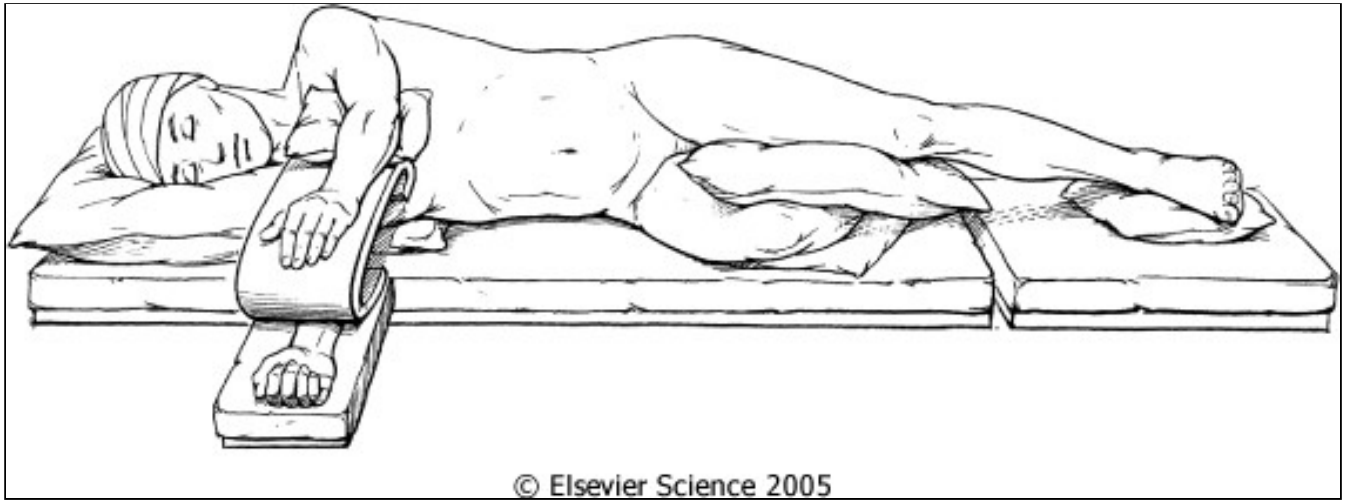
Brachial plexus - sternotomie

Risk factors: prolonged surgery, very thin body habitus, and recent cigarette smoking.

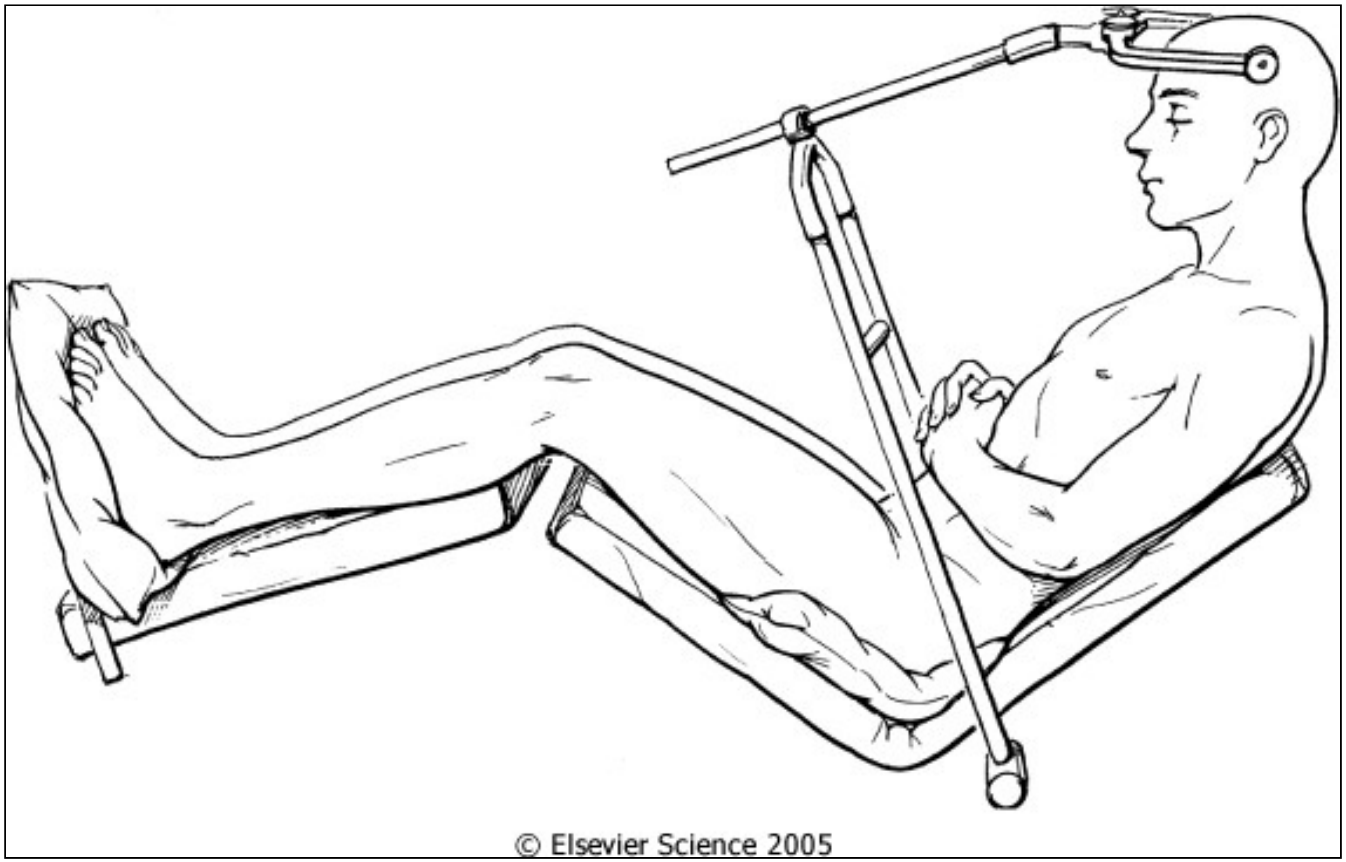
Infarction or ischemia of one or both optic n. leading to blindness after massive hemorrhage, hypotension, and anemia.



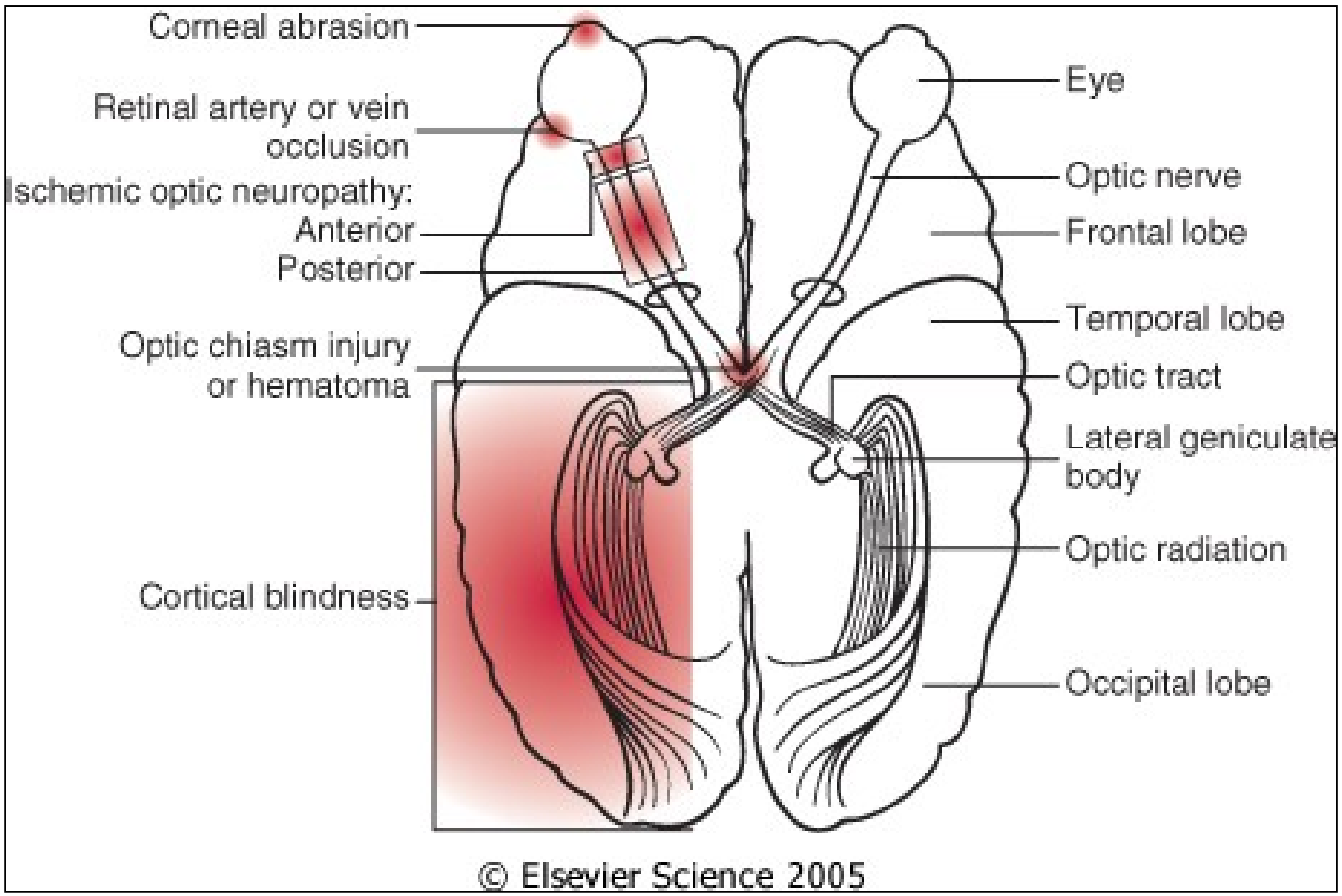
hip flexion for endoscopic procedures such as transurethral resection of the prostate. (Adapted Martin JT. Lithotomy positions. In Martin JT, Warner MA [eds]: Positioning in Anesthesia and Surgery, 3rd ed. Philadelphia, WB Saunc



ition; axillary roll, which supports the chest to free the axilla; and one type of leg positioning. (Adapted from Day LJ: Unusual positions: Orthopedics: Surgical aspects. In Martin JT [ed]: Positioning in Anesthesia and Surgery, 2nd ed



hanging the relationship of the pinion head holder to the torso. The arms must be supported (not shown) so that the weight of the arm does not stretch the brachial plexus. The buttock area is padded. (Adapted from Martin JT: The



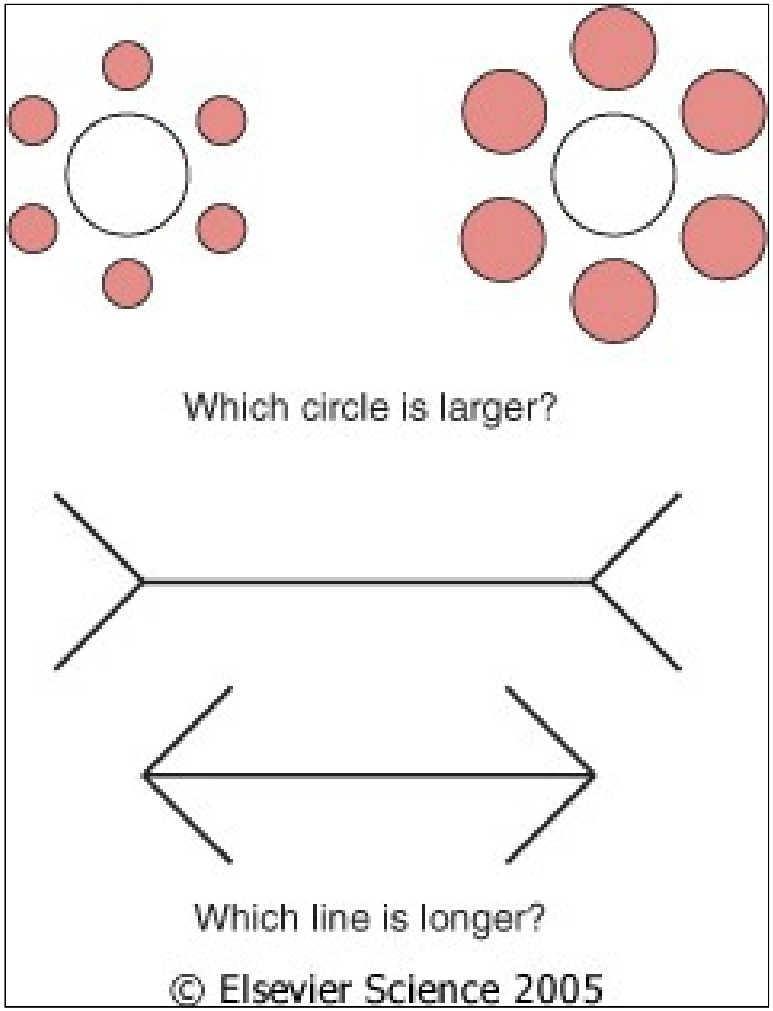
artery occlusion. Ischemic optic neuropathy is caused by infarction of the optic nerve. Injuries to the optic chiasm can occur during pituitary surgery, and cortical blindness can occur after some cardiac and neurosurgical procedures

Monitorace pacienta

monere, "to warn"

systematicky kontrolovat

..použitím smyslů a elektronických zařízení opakovaně nebo kontinuálně měřit proměnné anestezovaného pacienta.



ear smaller, and vice versa. The lines appear to be different sizes because we use straight-line perspective to estimate size and distance. This illusion reportedly does not work in cultures where straight lines are not used. Therefor

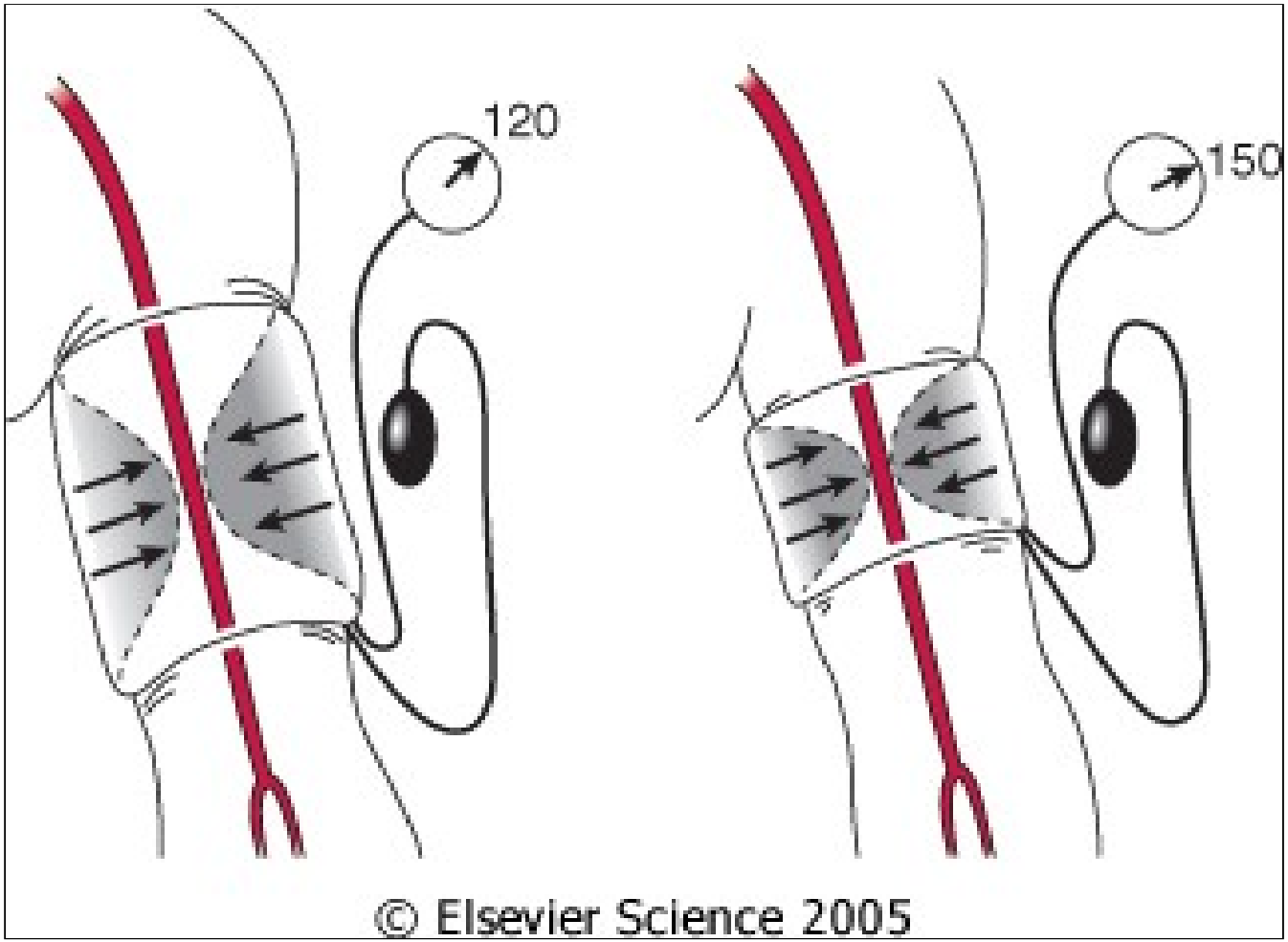
Fonendoskop

při anestezii okamžitě dostupný.
ventilační problém (bronchospasmus)

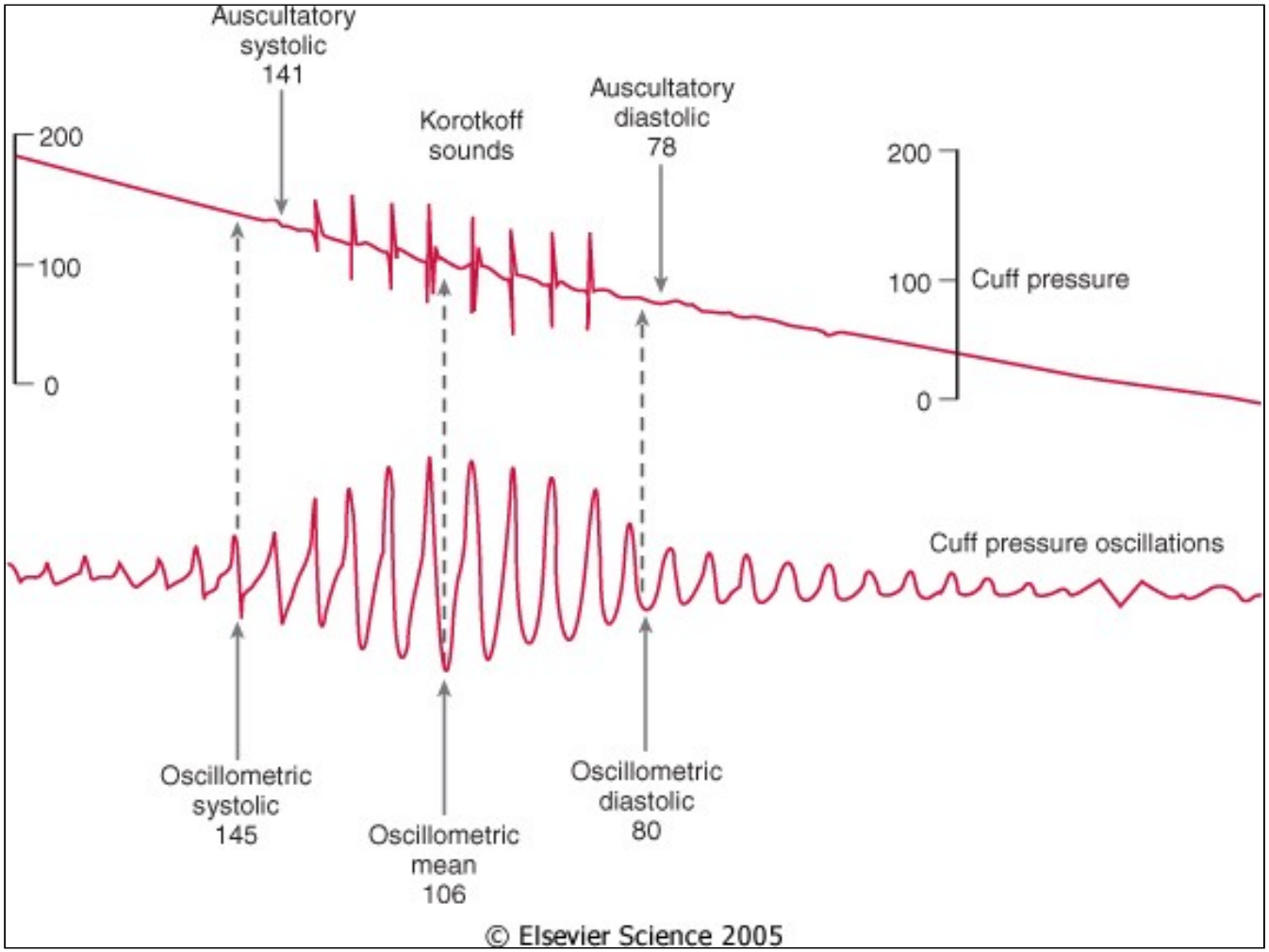
SpO2, EtCO2 a EKG detekují problém snadněji než kontinuální poslech.

Monitorace fonendoskopem - není-li dostupná elektronická monitorace.

Princip měření NIBP



ff size on manual blood pressure measurement. An inappropriately small blood pressure cuff yields erroneously high values for blood pressure because the pressure within the cuff is incompletely transmitted to the underlying artery



rresponds to the point of maximal oscillations, and diastolic pressure is measured when the oscillations become attenuated. Note the correspondence between these measurements and the Korotkoff sounds that determine auscul

NIBP

komplikace :

bolest

Petechie

Otok končetiny

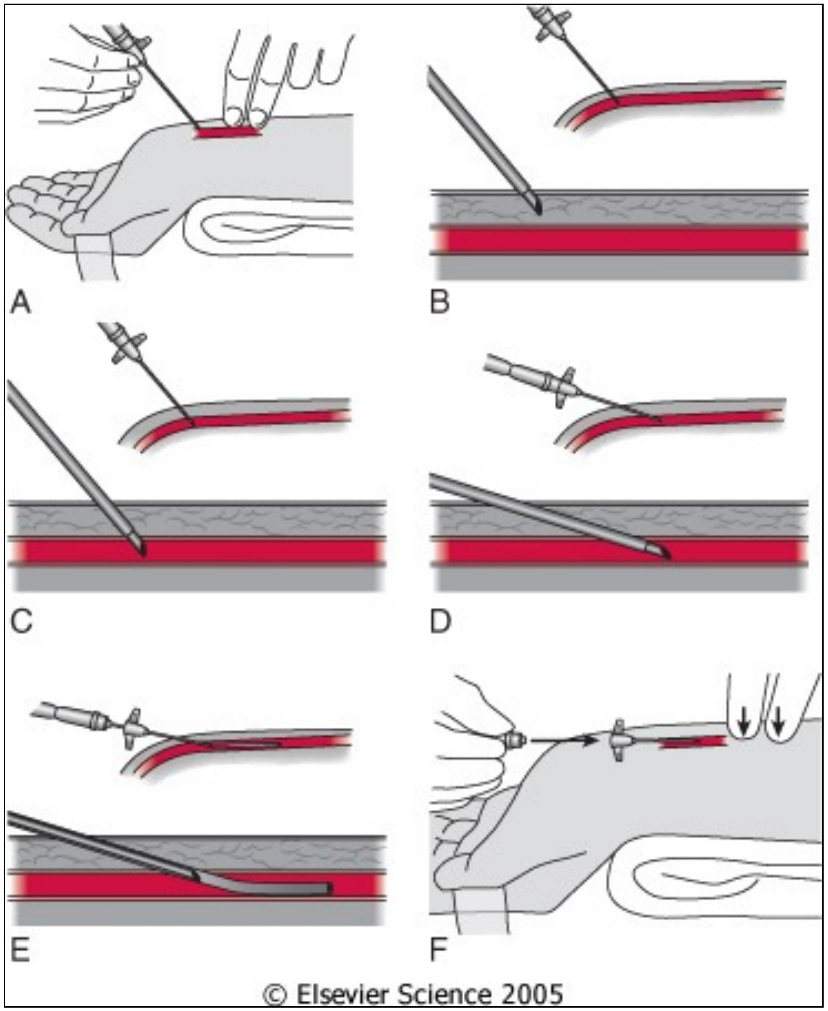
Venous stasis, thrombophlebitis

Peripheral neuropathy

Compartment syndrome

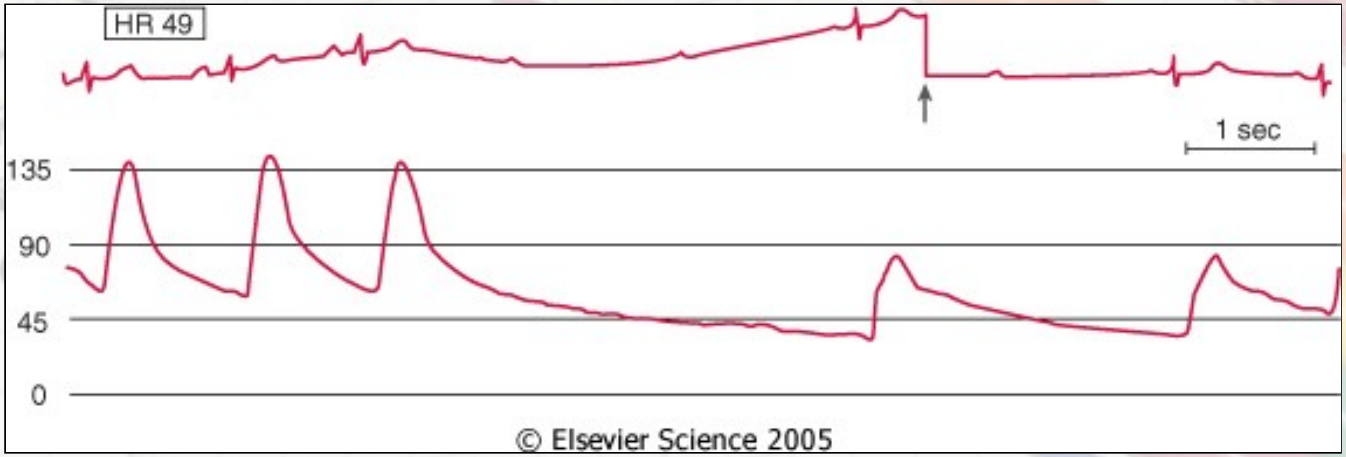
IBP, kanylace arterie

- Continuous, real-time blood pressure monitoring
- Planned pharmacologic or mechanical cardiovascular manipulation
- Repeated blood sampling
- Failure of indirect arterial blood pressure measurement
- Supplementary diagnostic information from the arterial waveform



needle tip into the artery is identified by the flash of arterial blood in the needle hub reservoir. D, The needle-catheter assembly is advanced at a lower angle to ensure entry of the catheter tip into the vessel. E, If blood flow contin

srdeční akce: 49/minutu



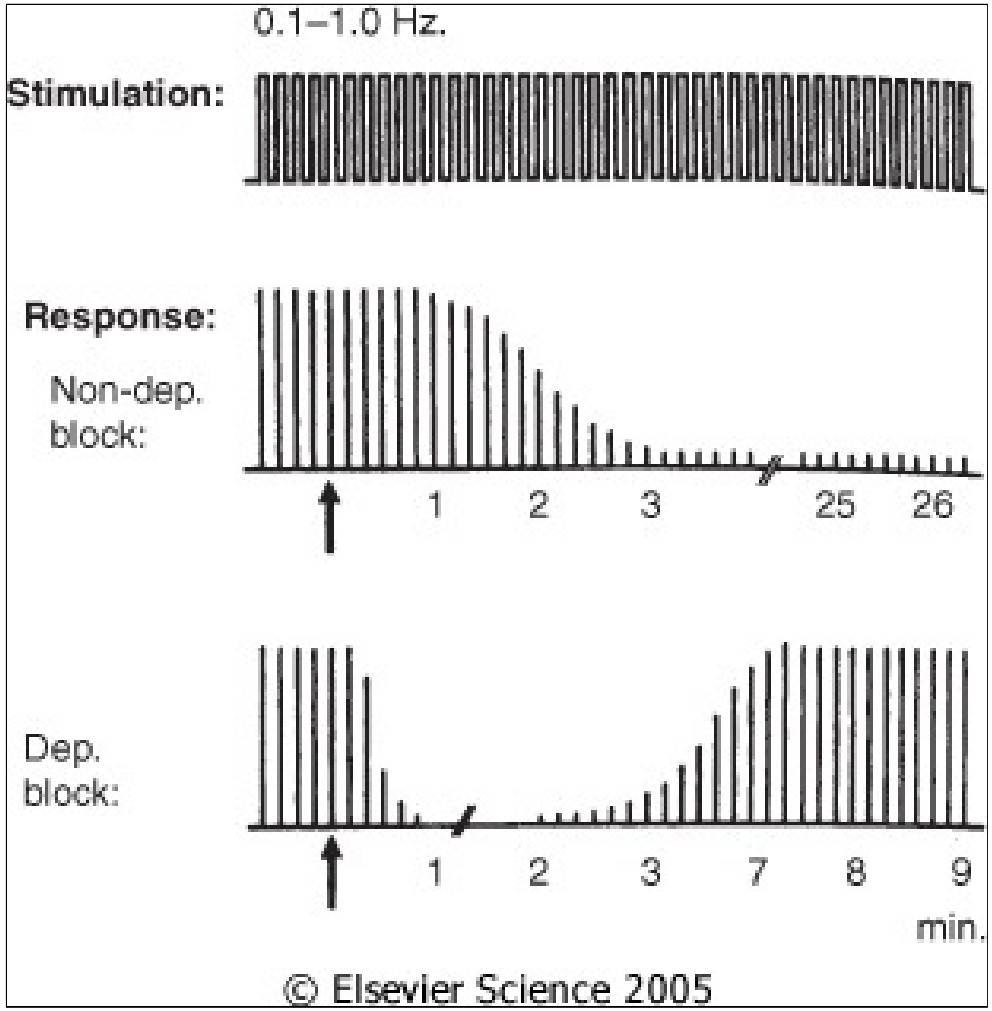
erial blood pressure traces reveals complete heart block and a 4-second period of asystole, whereas the digital display reports an HR of 49 beats/min. Note that the ECG filter (arrow) corrects the baseline drift so that the trace ren

Monitorace nervosvalové blokády

- single-twitch
- train-of-four (TOF)
- tetanic, post-tetanic count (PTC)
- double-burst stimulation (DBS)

Single-twitch

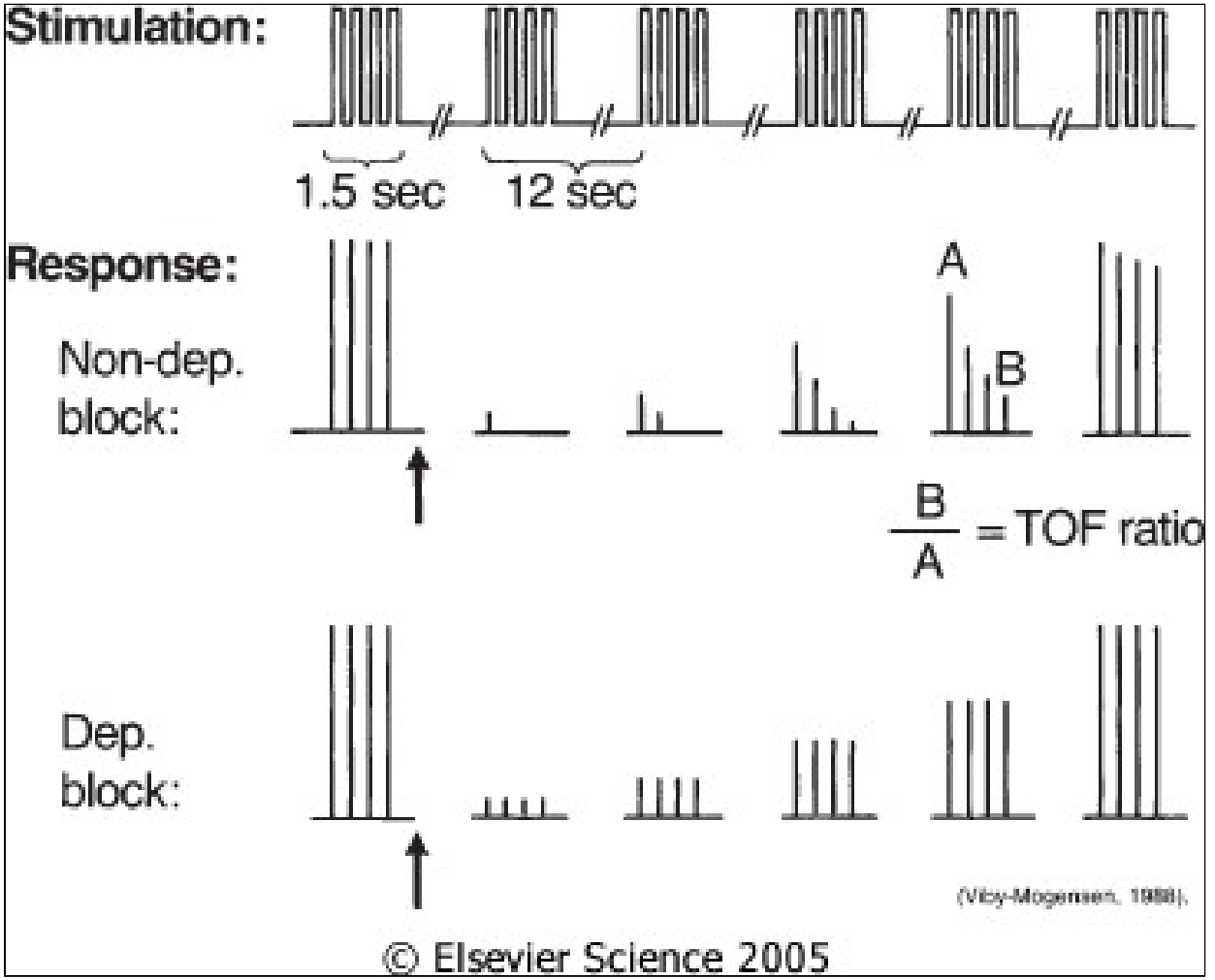
1Hz .. 0,1Hz, kontinuálně



erve stimulation (at frequencies of 0.1 to 1.0 Hz) after injection of nondepolarizing (Non-dep) and depolarizing (Dep) neuromuscular blocking drugs (arrows). Note that except for the difference in time factors, no differences in the st

TOF

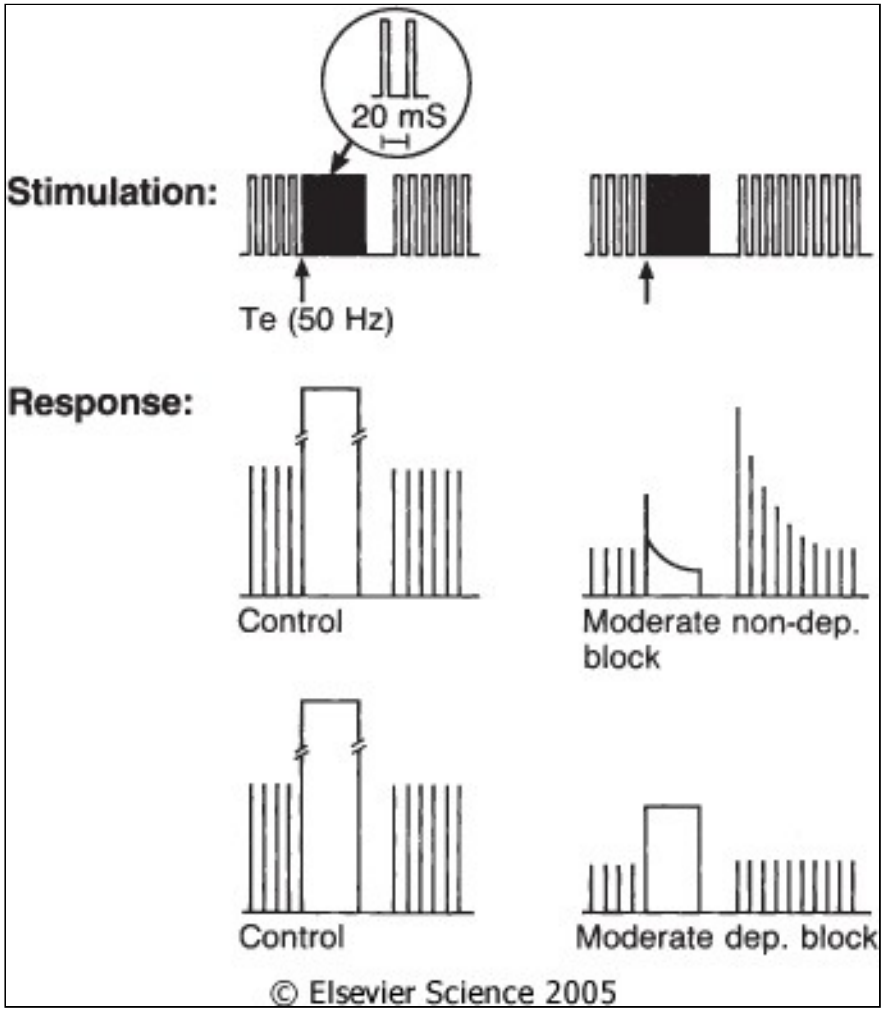
- 4 stimuly á 0,5s (2Hz)



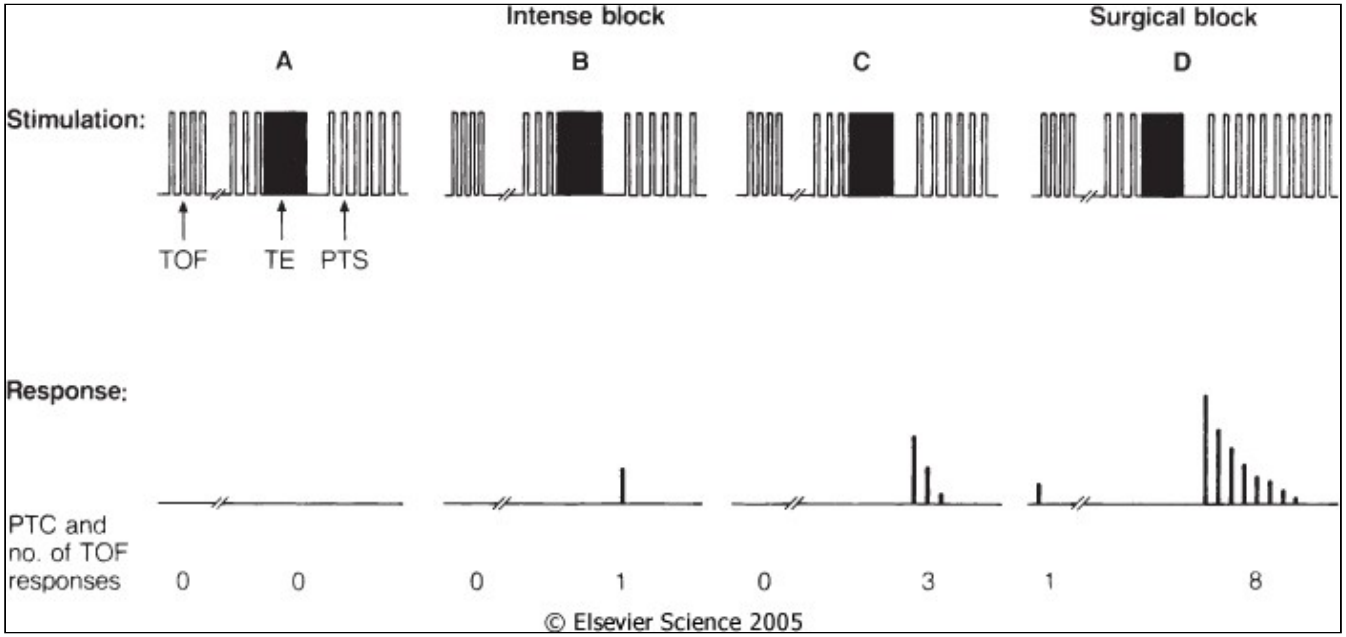
39-2 Pattern of electrical stimulation and evoked muscle responses to TOF nerve stimulation before and after injection of nondepolarizing (Non-dep) and depolarizing (Dep) neuromuscular blocking drugs (arrows).

Tetanická stimulace

- bolestivá; 50Hz na 5s



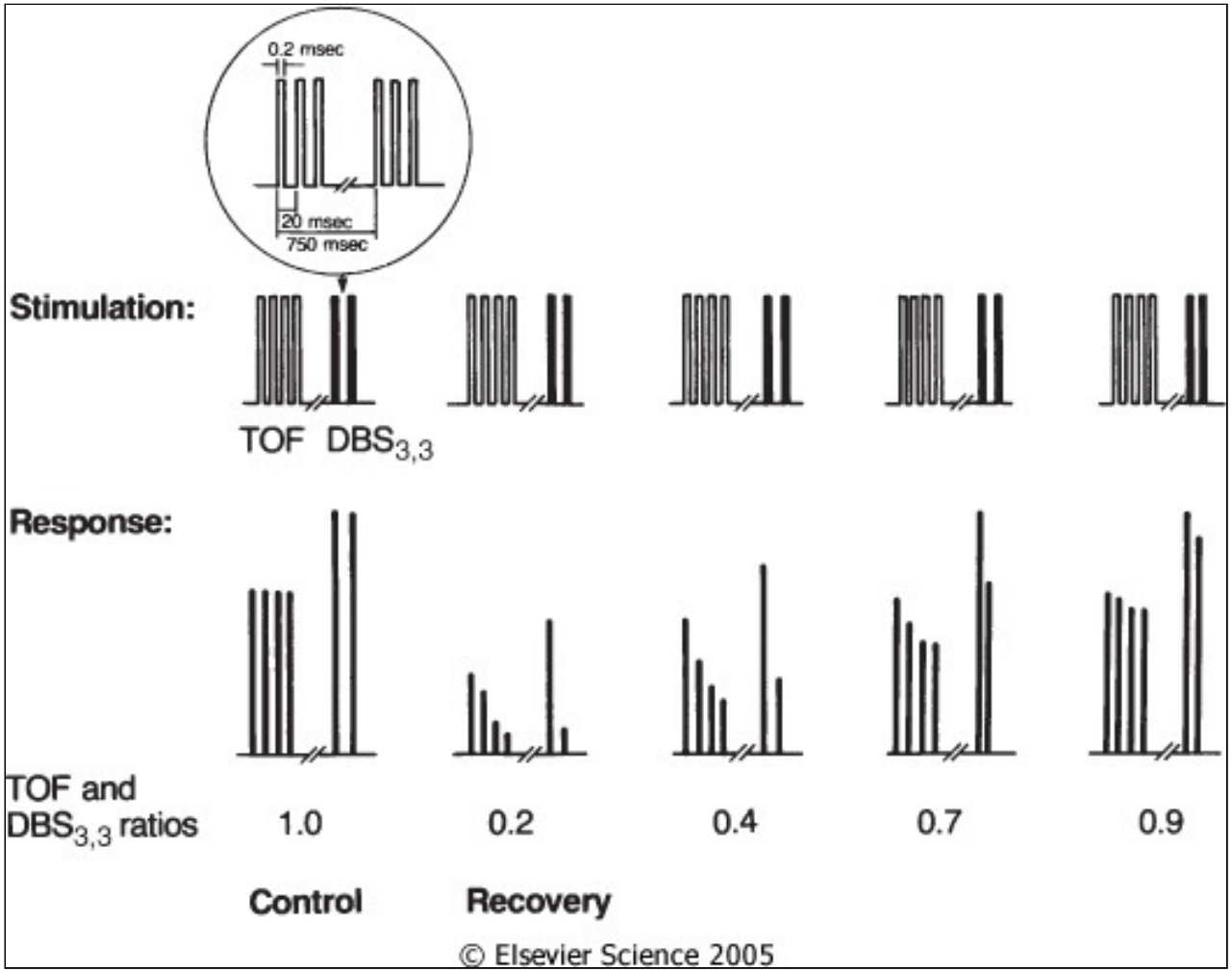
tion was applied before injection of neuromuscular blocking drugs and during moderate nondepolarizing and depolarizing blocks. Note fade in the response to tetanic stimulation, plus post-tetanic facilitation of transmission during



uring very intense blockade of the peripheral muscles (A), no response to any of the forms of stimulation occurs. During less pronounced blockade (B and C), there is still no response to stimulation, but post-tetanic facilitation of tra

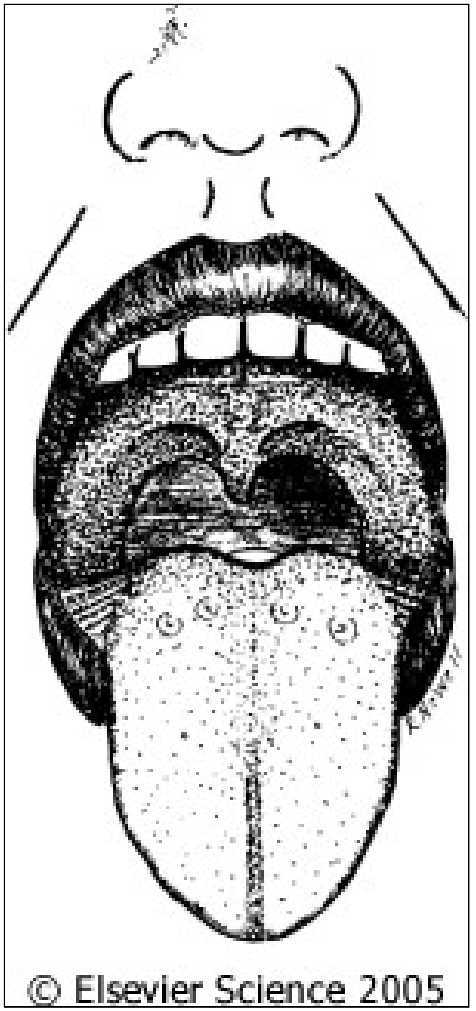
Double-burst stimulation

- 2 krátké sekvence 50-Hz tetanické stimulace, odděleny pauzou 750 ms
- nerelaxovaný sval – 2 stejně silné kontrakce
- částečné relaxovaný sval – 2. je slabší



nic bursts, DBS3,3) before injection of muscle relaxants (control) and during recovery from nondepolarizing neuromuscular blockade. TOF ratio is the amplitude of the fourth response to TOF divided by the amplitude of the first res

Airway management



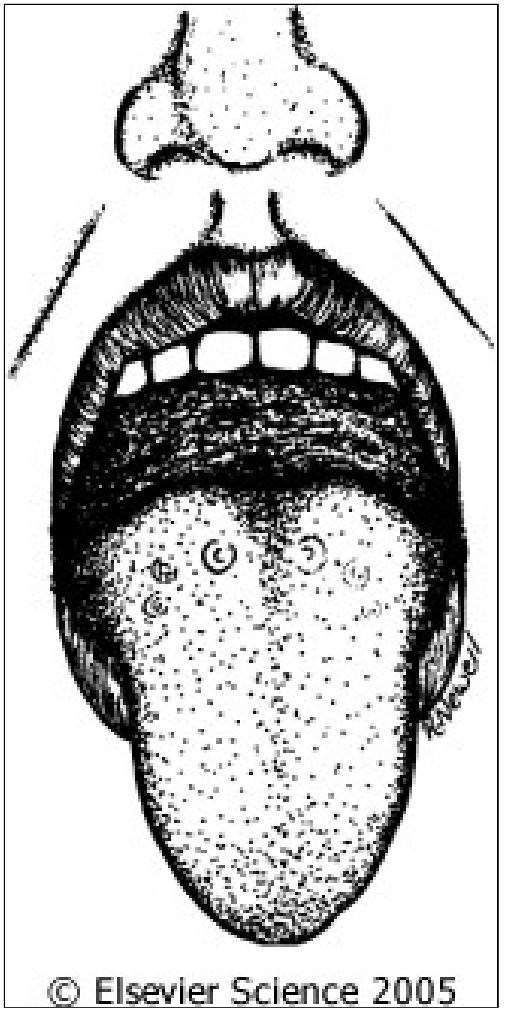
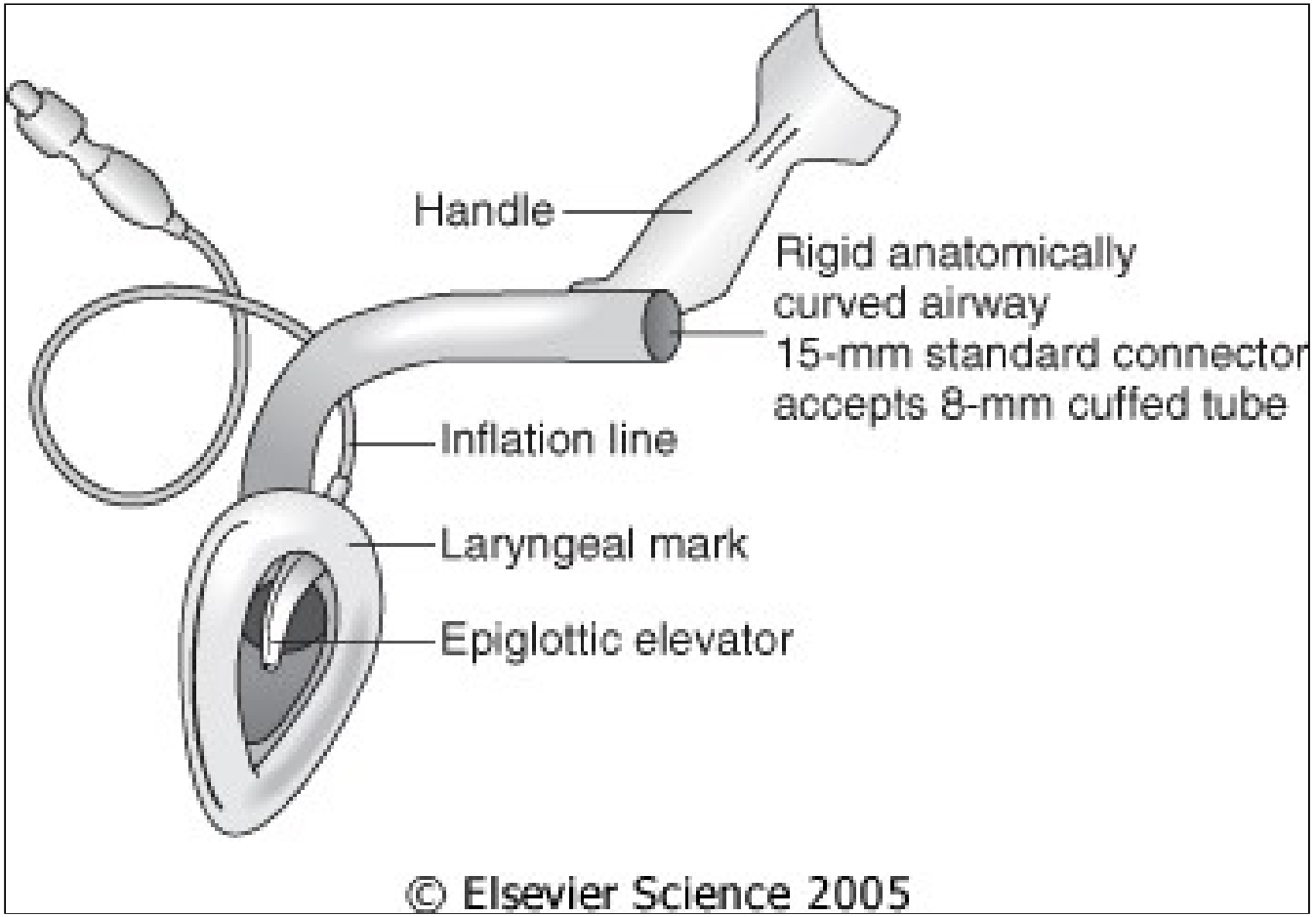


Figure 42-4 Technique for holding the mask with one hand. An effort should be made to avoid excessive pressure on the soft tissues of the neck.

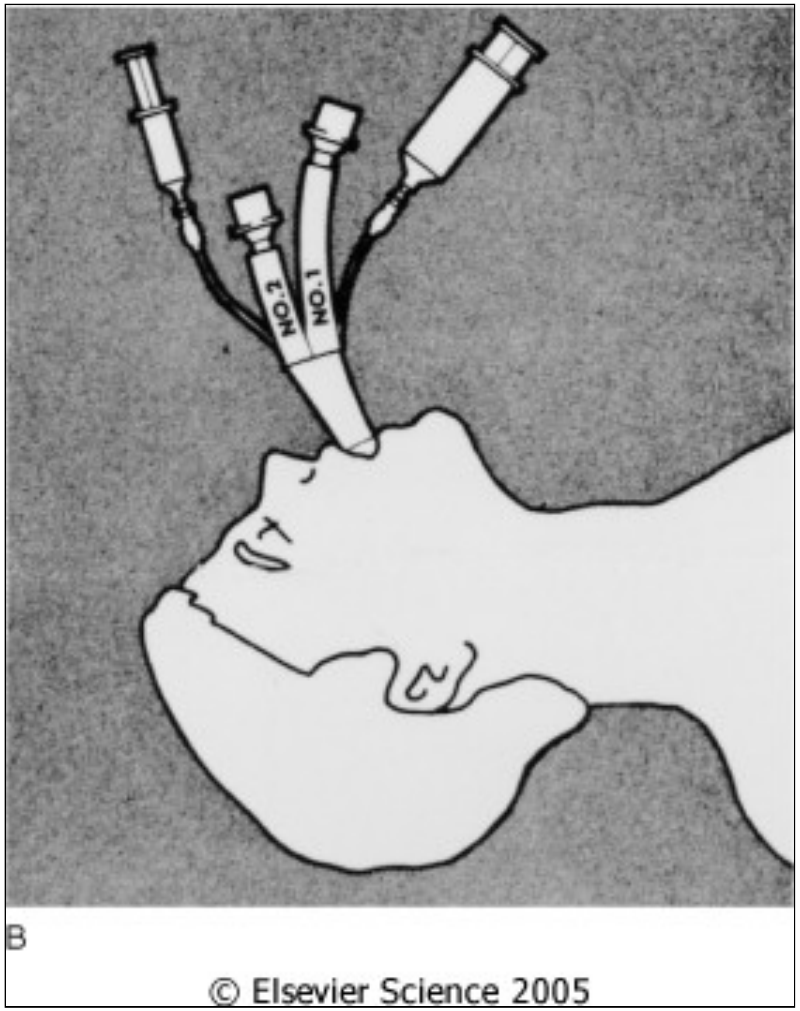
Figure 42-6 Technique for holding the mask with two hands.



igure 42-11 Intubating laryngeal mask airway (ILMA), illustrating the rigid curve and handle. Notice the different window compared with a standard LMA. (Courtesy of LMA North America, Inc., San Diego, CA.)

A

d. The printed ring is aligned with the teeth. B, The pharyngeal cuff is inflated with 100 mL of air, and the distal cuff is inflated with 15 mL. C, Ventilation is begun through the longer no. 1 tube because placement is usually in the es



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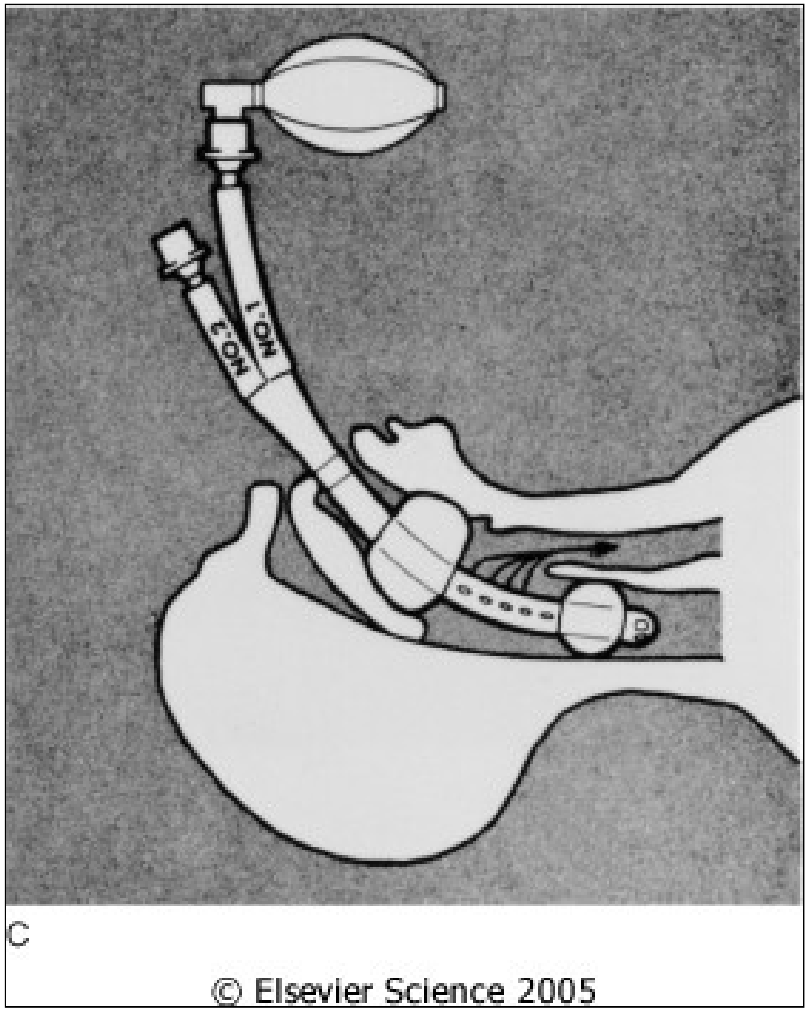

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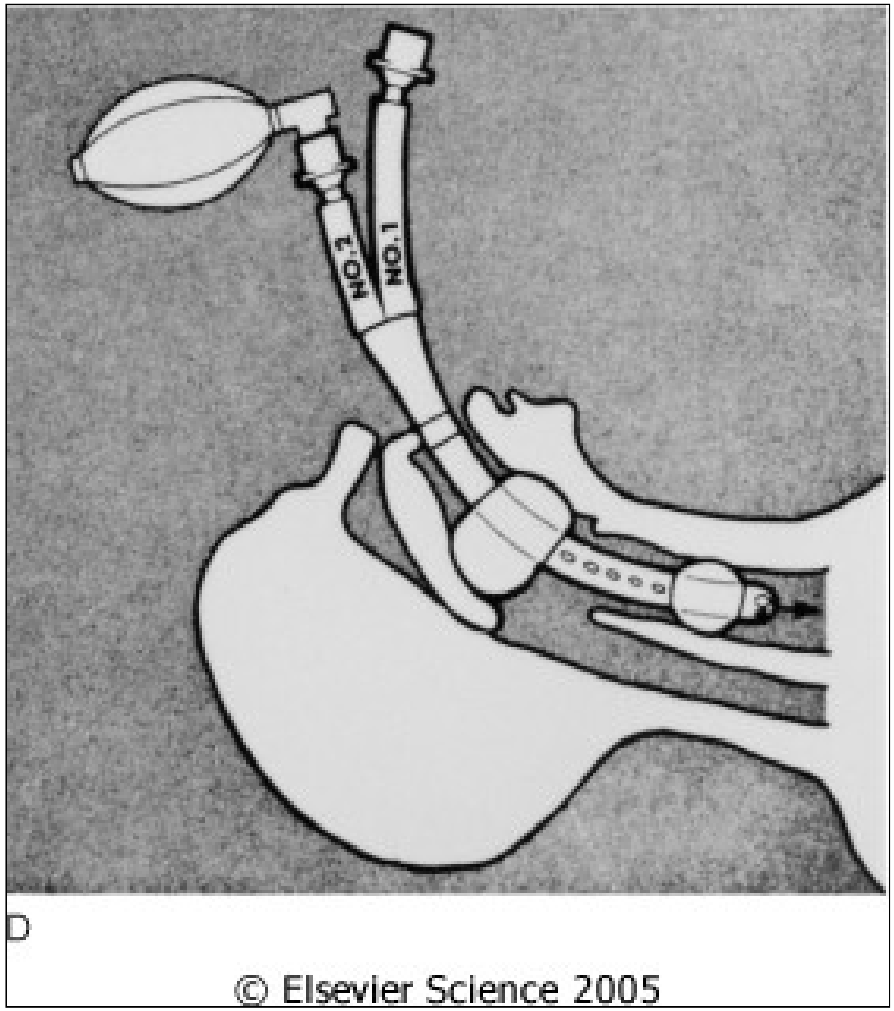

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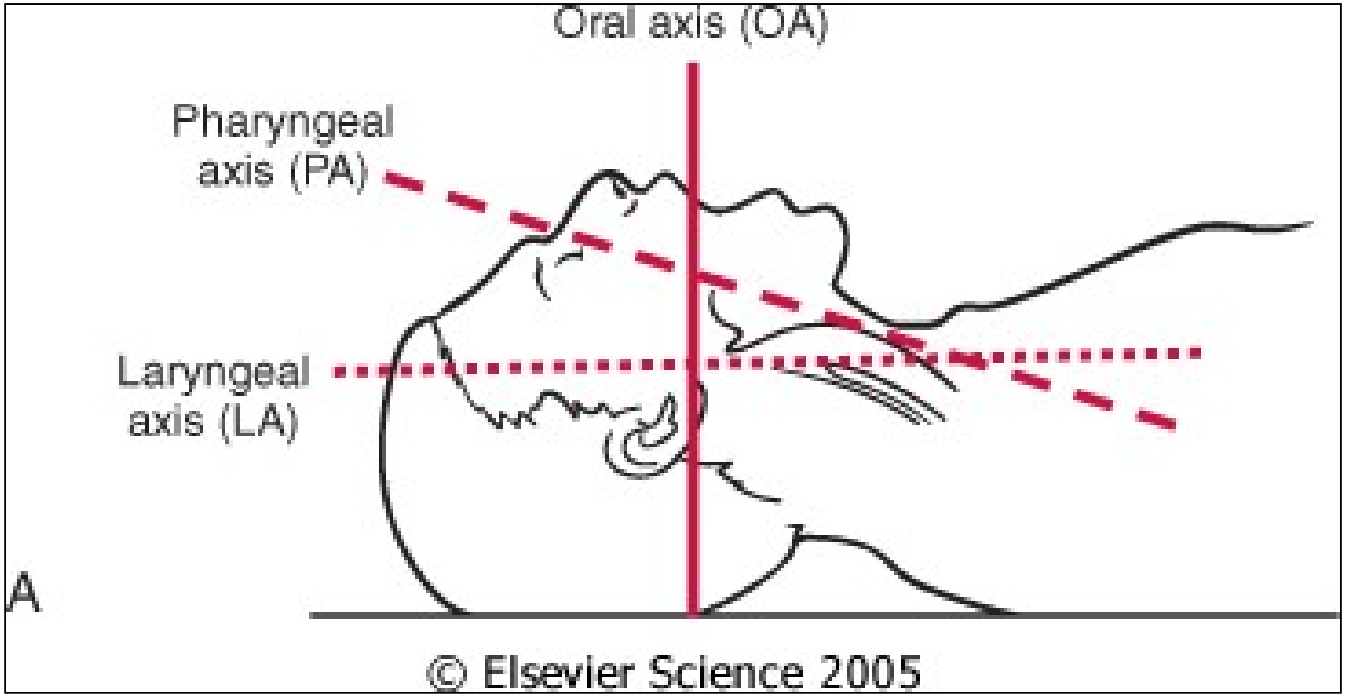
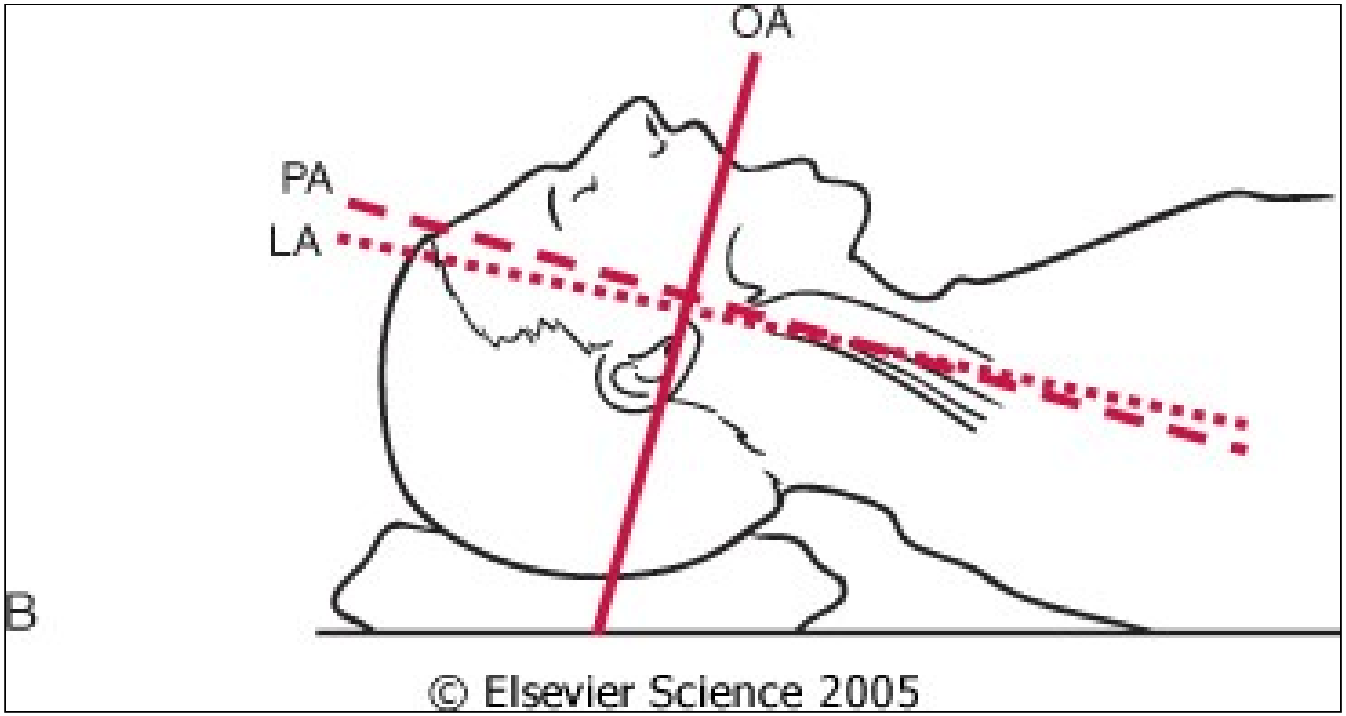
Poloha hlavy a krku při OTI



uires alignment of the oral, pharyngeal, and laryngeal axes. B, Elevation of the head about 10 cm with pads below the occiput and with the shoulders remaining on the table aligns the laryngeal and pharyngeal axes. C, Subsequen



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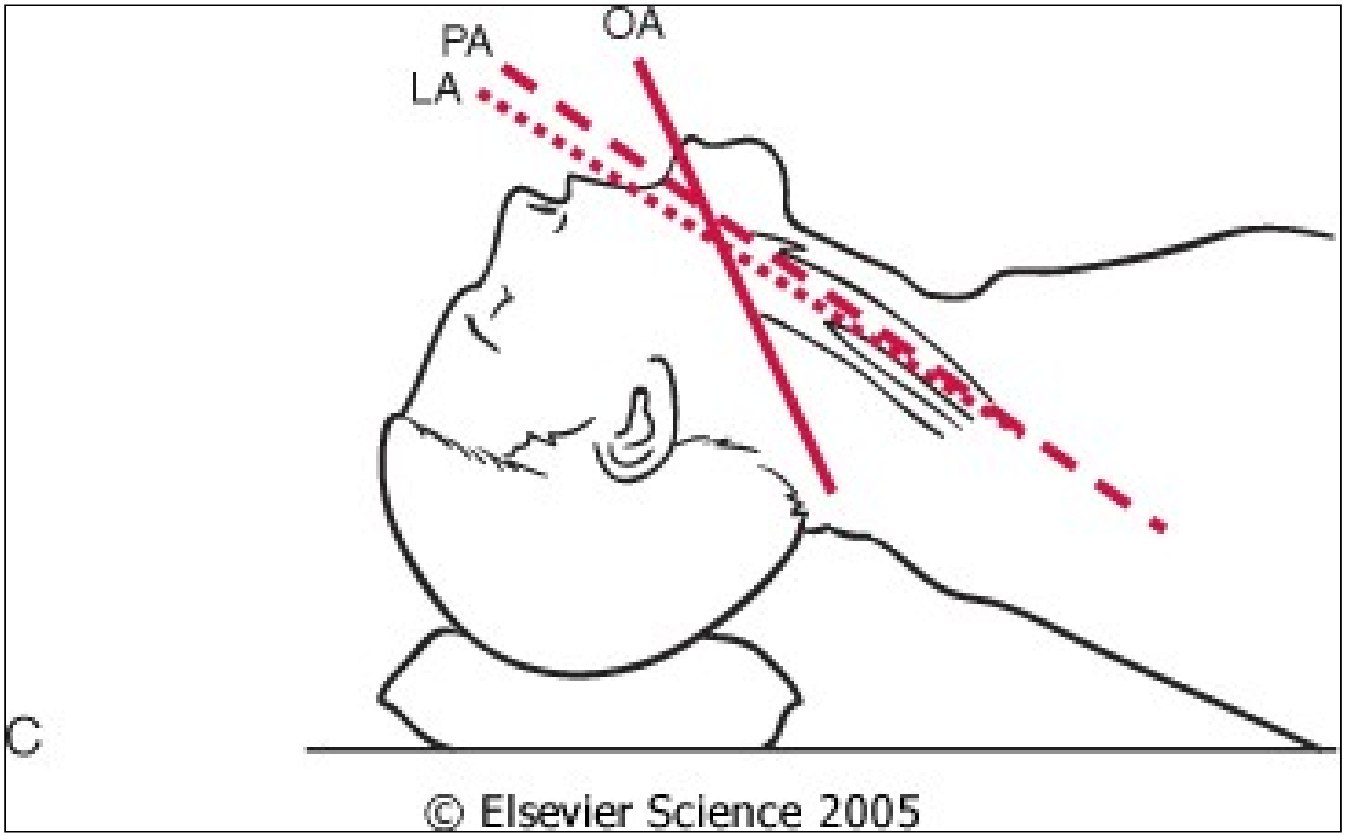

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Velikosti Trach.rourek

Age	Internal Diameter (mm)	External Diameter (mm)*	French Unit	Distance Inserted from Lips for Tip Placement in the Midtrachea (cm)†
Premature	2,5	3,3	10	10
Term newborn	3	4.0-4.2	12	11
1-6 mo	3,5	4.7-4.8	14	11
6-12 mo	4	5.3-5.6	16	12
2 yr	4,5	6.0-6.3	18	13
4 yr	5	6.7-7.0	20	14
6 yr	5,5	7.3-7.6	22	15-16
8 yr	6	8.0-8.2	24	16-17
10 yr	6,5	8.7-9.3	26	17-18
12 yr	7,0	9.3.2010	28-30	18-22
≥14 yr	7.0 (females)	9.3.2010	28-30	20-24
	8.0 (males)	10.7-11.3	32-34	

Techniky intubace při vědomí

intubace s přímou laryngoskopií

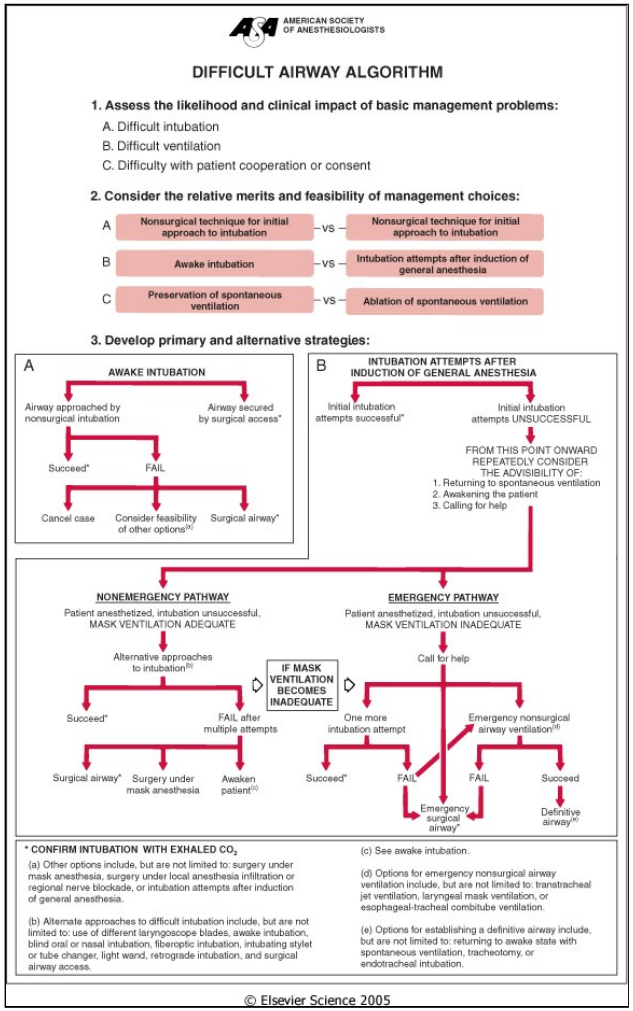
intubace s nepřímou laryngoskopií

intubace ústy naslepo

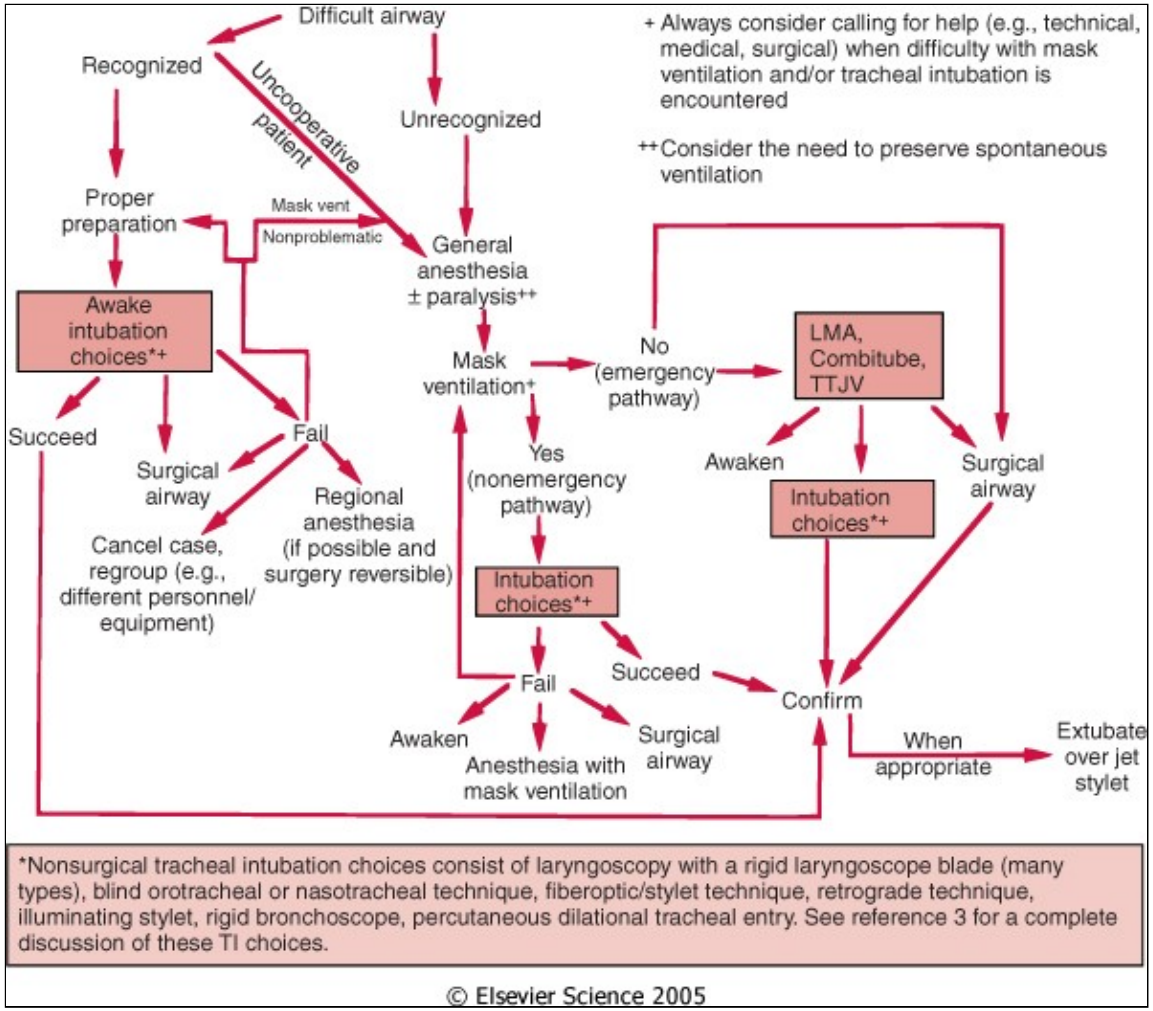
intubace nosem naslepo

retrográdní intubace

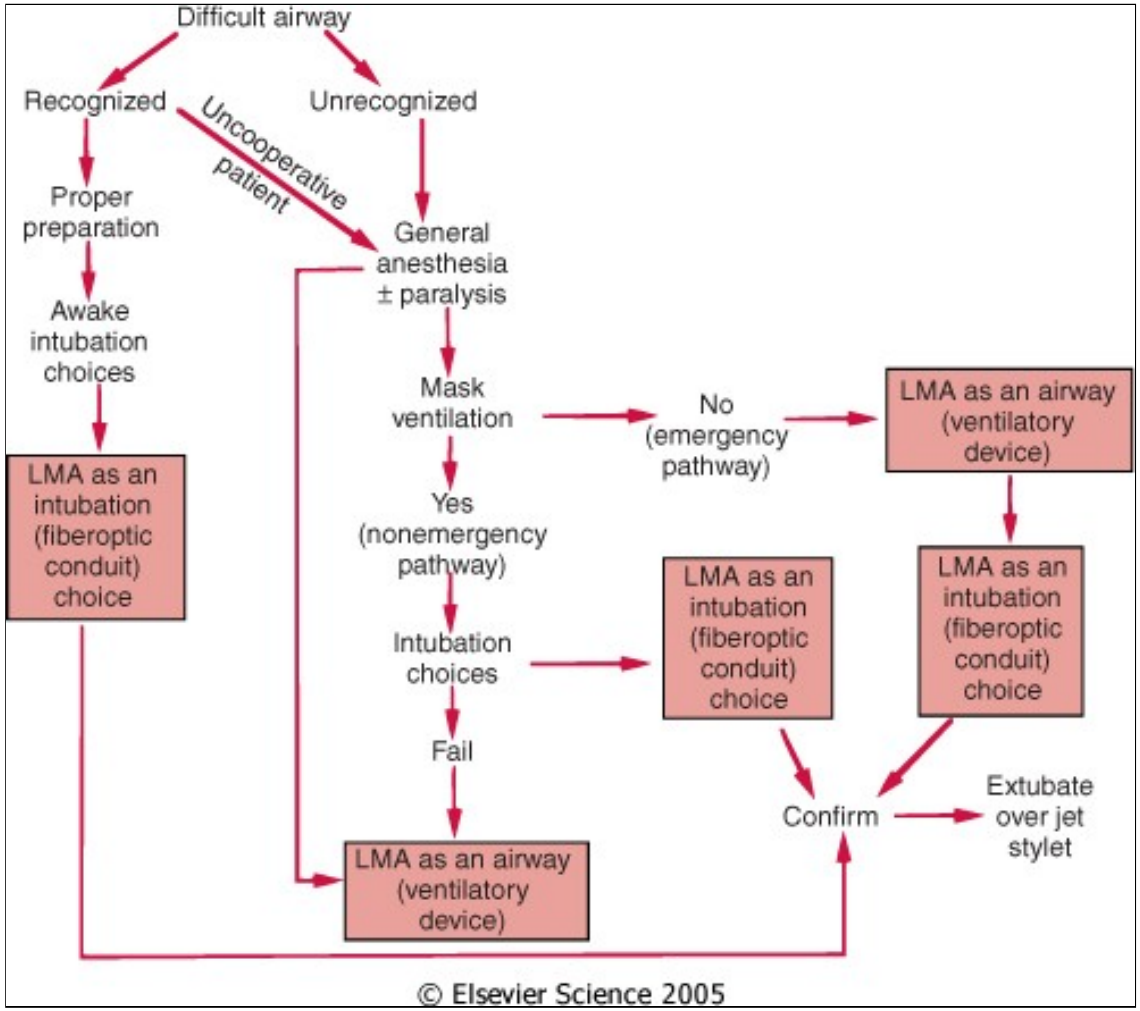
po bronchoskopu



ASA Task Force on Guidelines for Difficult Airway Management. (Adapted from American Society of Anesthesiologists Task Force on Management of the Difficult Airway: Practice guidelines for the management of the difficult airwa



ontaneous ventilation; *, nonsurgical tracheal intubation choices consist of laryngoscopy with a rigid laryngoscope blade (many types), blind orotracheal or nasotracheal intubation, fiberoptic or stylet technique, retrograde techniqu



e laryngeal mask airway (LMA) in the American Society of Anesthesiologists (ASA) Difficult Airway Algorithm. (Adapted from Benumof JL: Laryngeal mask airway and the ASA difficult airway algorithm. Anesthesiology 84:686, 1996.

Závěr

- Preoxygenovat všechny = získat několik minut navíc.
- Vyšetřit všechny = odhlalit některé
- Několik malých abnormalit může vést až k difficult airway
- Předpokládej nemožnost ventilace / intubace
- Měj plán dříve než vznikne problém.
- Připrav všechny pomůcky
- Po úvodu nejprve ventiluj, pak relaxuj.

Závěr

- Lepší je intubace při vědomí nežli hypoxie.
- Extenze krku a předsunutí čelisti posune jazylku dopředu a zvedne epiglotis.
- Pokud dolní řezáky lze zakousnout nad horní ret, vysunutí mandibuly může pomoci při intubaci.
- Vizualizace glotis při vědomí není v anestezii garantována.
- Nepřítomnost leaku po vyfouknutí balónku - glotic/subglotic edém.