XI congresso nazionale

simeu

ROMA 24-26 MAGGIO 2018

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Azienda Ospedaliera di Padova
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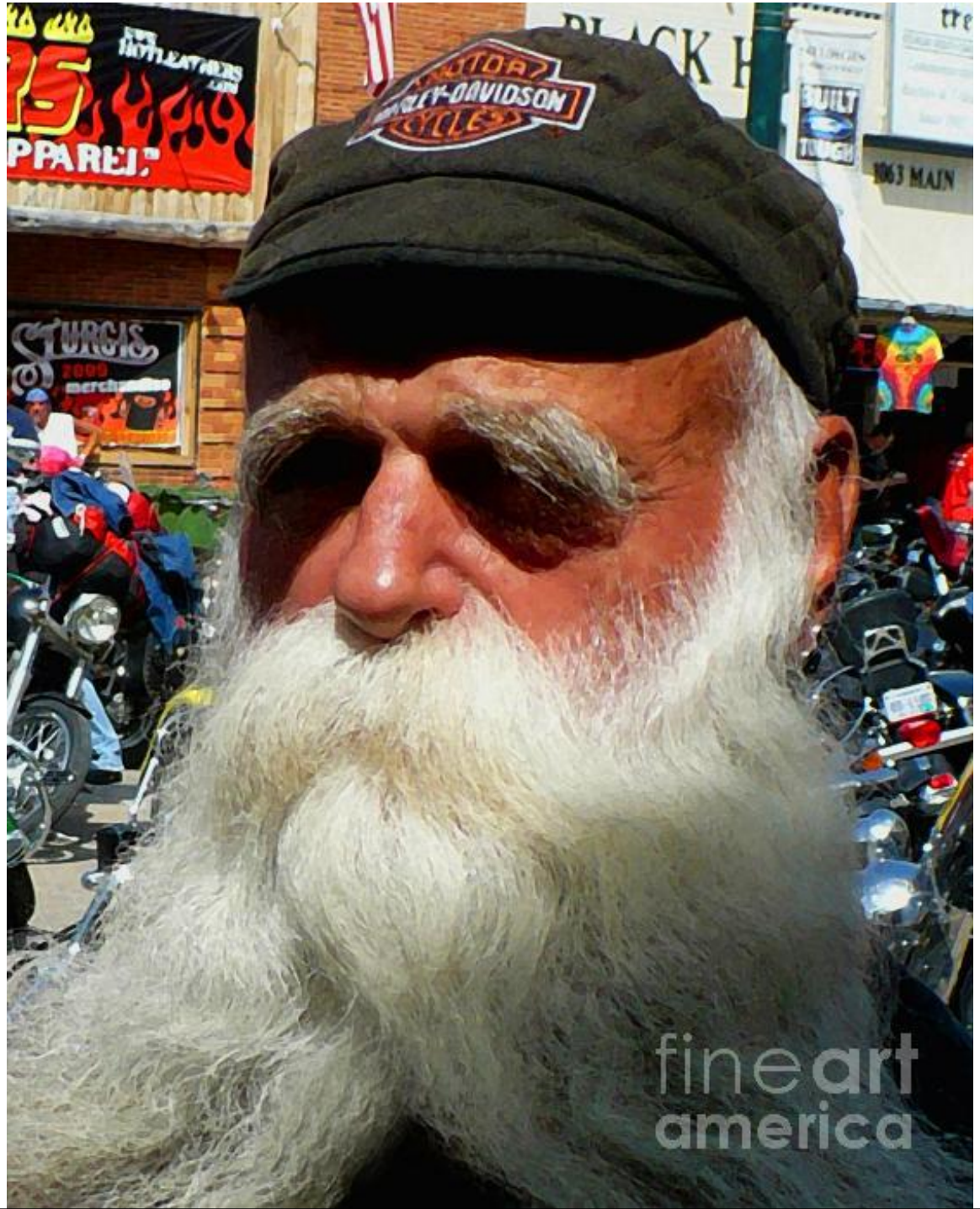
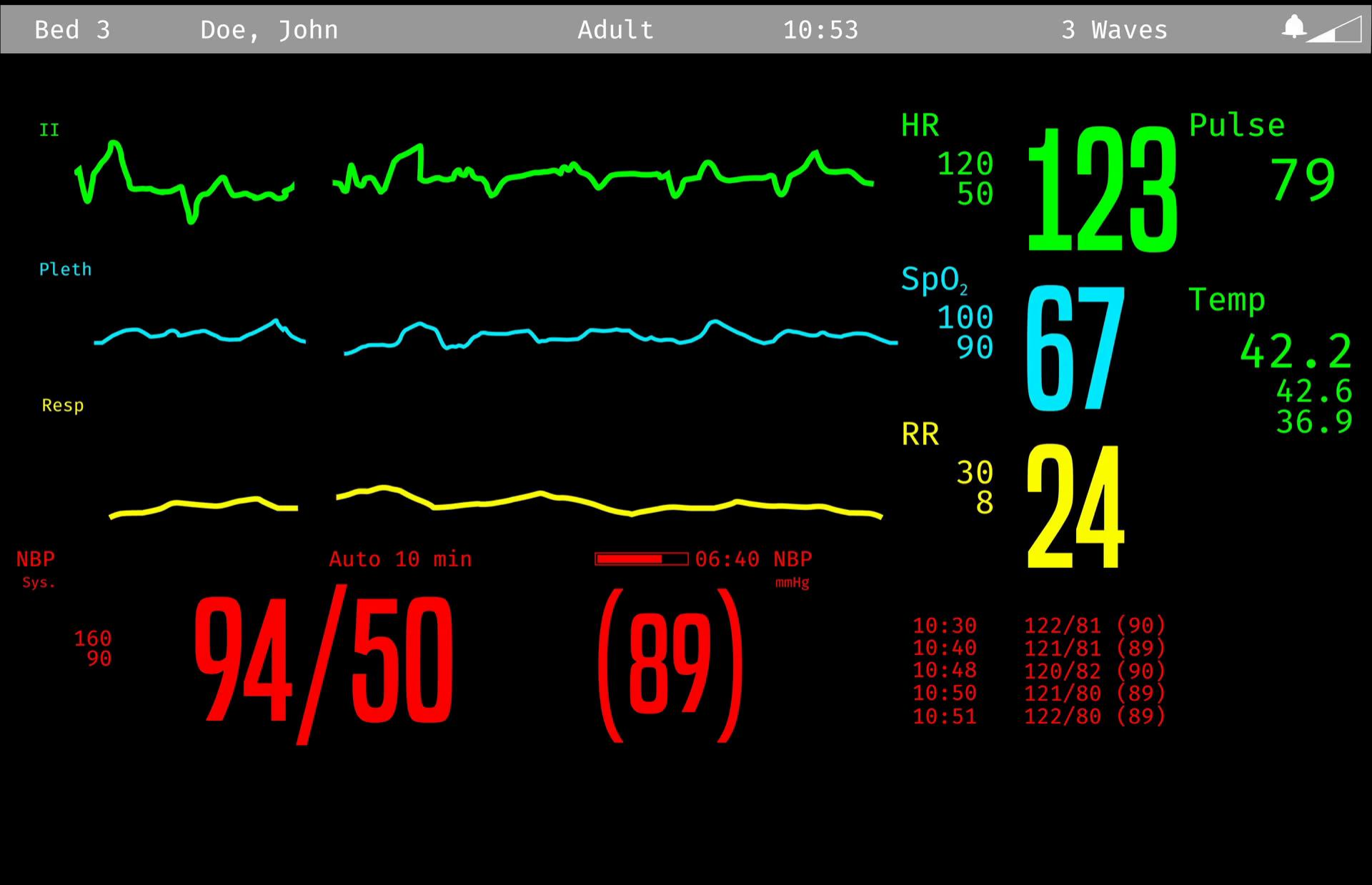
RESUSCITATE BEFORE YOU INTUBATE

Strategie per l'ottimizzazione di ossigenazione ed emodinamica prima dell'intubazione


fine art
america


Bed 3
Doe, John
Adult
10:53
3 Waves
II
Pleth
Resp
HR
120
50
123
Pulse
79
SpO2
100
90
67
Temp
42.2
42.6
36.9
RR
30
8
24
NBP
Sys.
160
90
Auto 10 min
06:40 NBP
mmHg
94/50
(89)
10:30 122/81 (90)
10:40 121/81 (89)
10:48 120/82 (90)
10:50 121/80 (89)
10:51 122/80 (89)

Anaesthesia 2014

Editorial

The myth of the difficult airway: airway management revisited

Contents lists available at ScienceDirect

Resuscitation

journal homepage: www.elsevier.com/locate/resuscitation

Clinical paper

Incidence and factors associated with cardiac arrest complicating emergency airway management☆

A
[a] D
[b] D
[c] Dickson Institute for Health Studies, Carolinas HealthCare System, University of Mississippi Medical Center, Jackson, MS, United States
[d] Department of Emergency Medicine, University of Mississippi Medical Center, Jackson, MS, United States

Peri-intubation CA was observed in 17/410 (4.2%; 95% CI: 2.6–6.6%). All but one patient had valid CA onset documented.

There was no difference in major comorbid factors between the two groups. Pre-intubation hemodynamic and oximetry variables were associated with peri-intubation CA. Patients with peri-intubation CA exhibited lower SBP and higher SI prior to intubation. They also had a higher rate of pre-intubation hypotension and oxygen saturation < 92%. CA occurred in 9/74 (12%; 95% CI: 6–22%) patients suffering hypotension within 30 min of RSI which was different from 8/300 (3%; 95% CI: 1–5%) patients without pre-RSI hypotension ($p < 0.002$). CA occurred in 3/38 (8%; 95% CI: 2–22%) patients with SBP < 90 immediately prior to RSI.

- *HYPOTENSION*
- *HYPOXEMIA*
- *PH*

- *HYPOTENSION*
- *HYPOXEMIA*
- *PH*

HYPOTENSION

- PAS ≤ 90 mmHg
- Shock Index: FC/PAS (> 0.9)

Anesthesiology
82:367–376, 1995

J. B. Lippincott Company, Philadelphia

Death and Other Complications of Emergency Airway Management in Critically Ill Adults

A Prospective Investigation of 297 Tracheal Intubations

David E. Schwartz, M.D., Michael A. Matthay, M.D.,† Neal H. Cohen, M.D.‡*

vasopressors to support systolic blood pressure. Patients with systolic hypotension were more likely to die after intubation than were normotensive patients ($P < 0.001$). There was no relationship between supervision by an attending physician and the occurrence of complications.

HYPOTENSION

- Adeguato precarico
  - Accessi venosi funzionanti
  - Liquidi in infusione
  - Adeguato monitoraggio emodinamico
- Vasopressori
  - preferire molecole con funzione anche inotropa
- Induzione congrua

ADRENALINA

- Azione alfa e beta
- Rapida insorgenza
- 5-10 mcg in bolo ev


100 mL
Viaflex™ Container
0.9% SODIUM CHLORIDE
Injection, USP


B-D
10
9
8
7
6
5
4
3
2
1

ETILEFRINA

- Azione alfa e beta
- Rapida insorgenza
- 1 mg in bolo ev

INDUZIONE

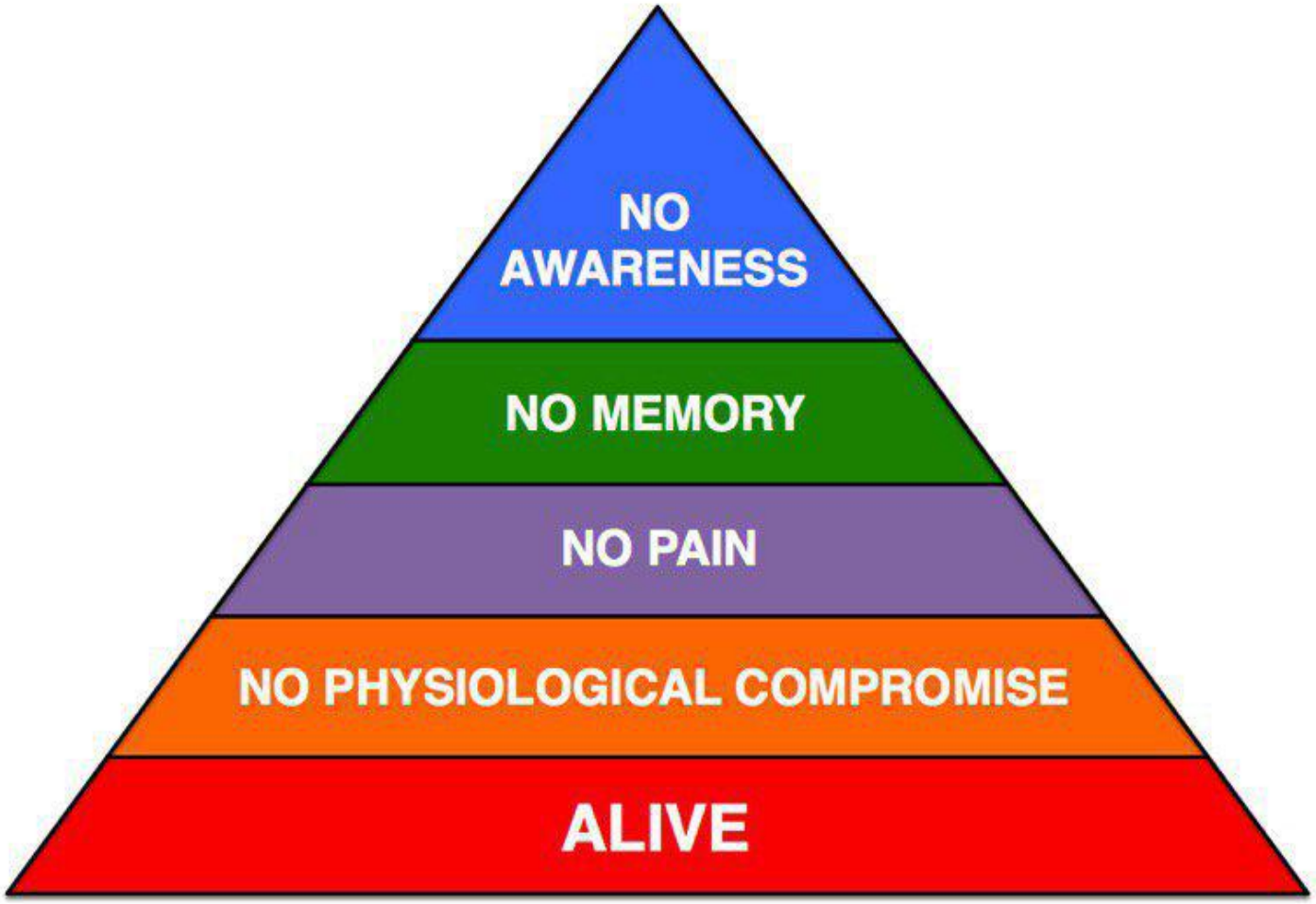

NO AWARENESS
NO MEMORY
NO PAIN
NO PHYSIOLOGICAL COMPROMISE
ALIVE


Image courtesy of Cliff Reid
BD
KETAMINE
ESMERON
ROCKETamine

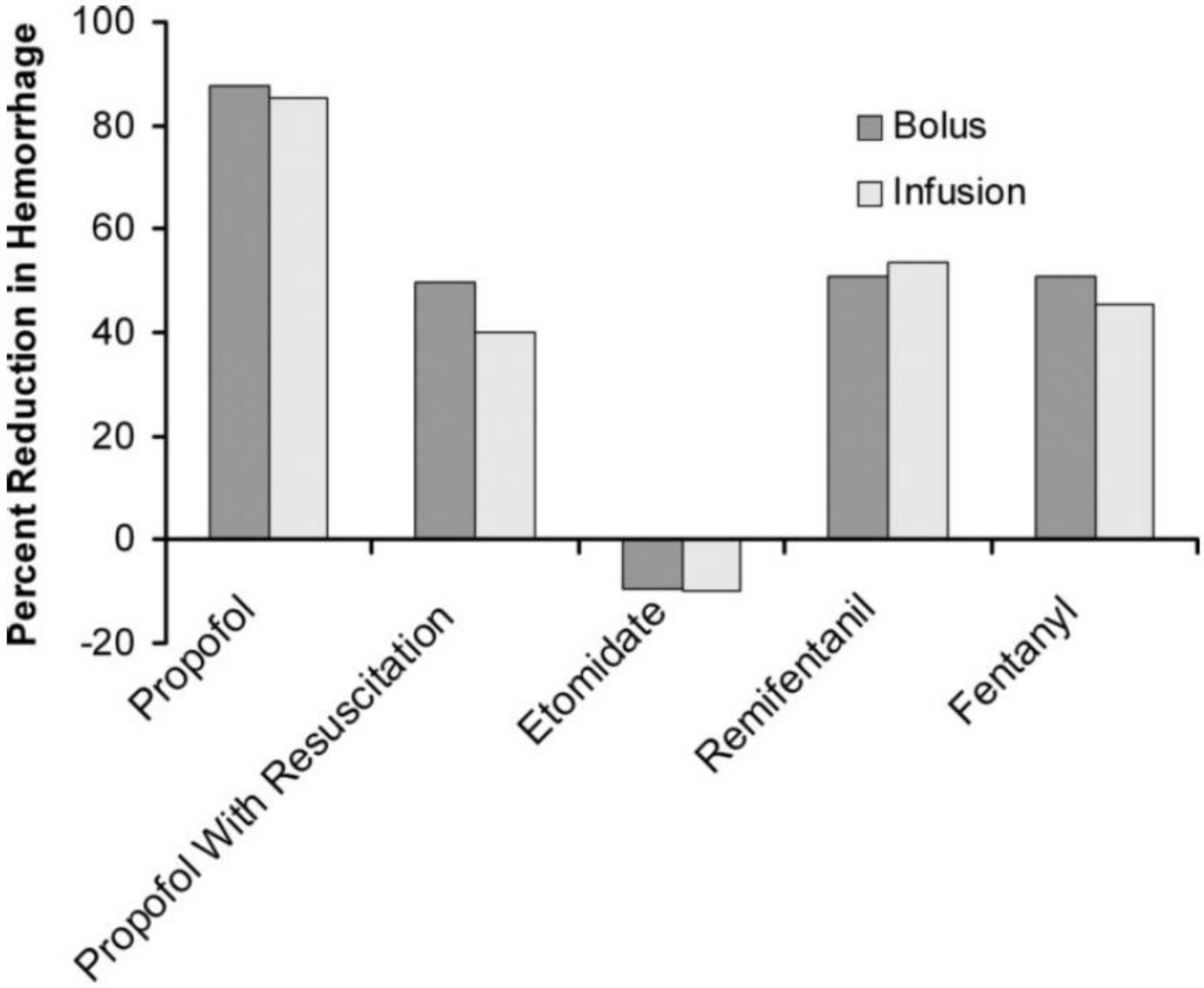
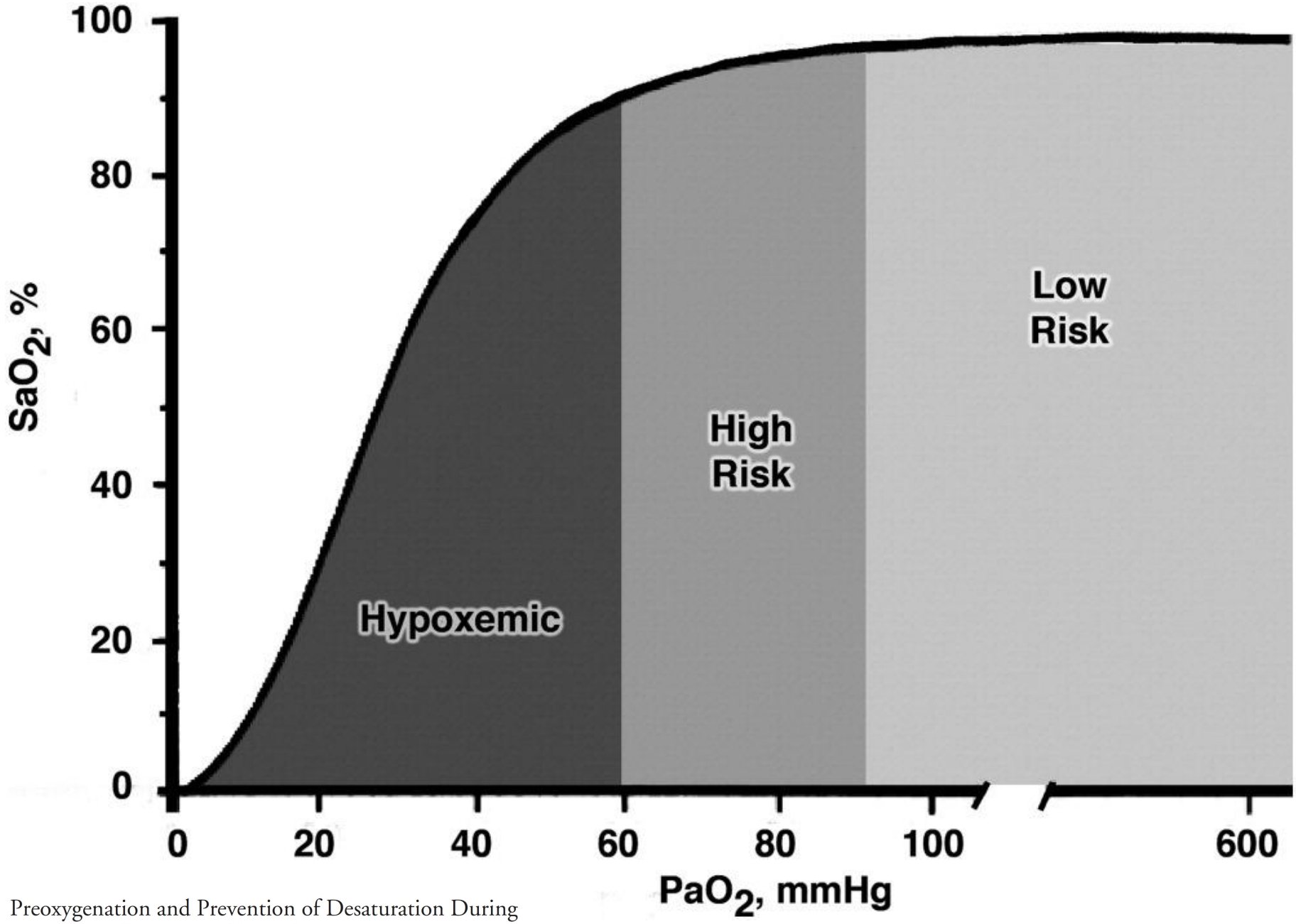


Fig. 1. The reduction in the dose to achieve a given drug effect in animals with hemorrhage, compared to control animals, based on simulations using the pharmacokinetic/pharmacodynamic models described in references 3–7. Anesthesiology 2004; 101:568–70

AUMENTA IL CURARO

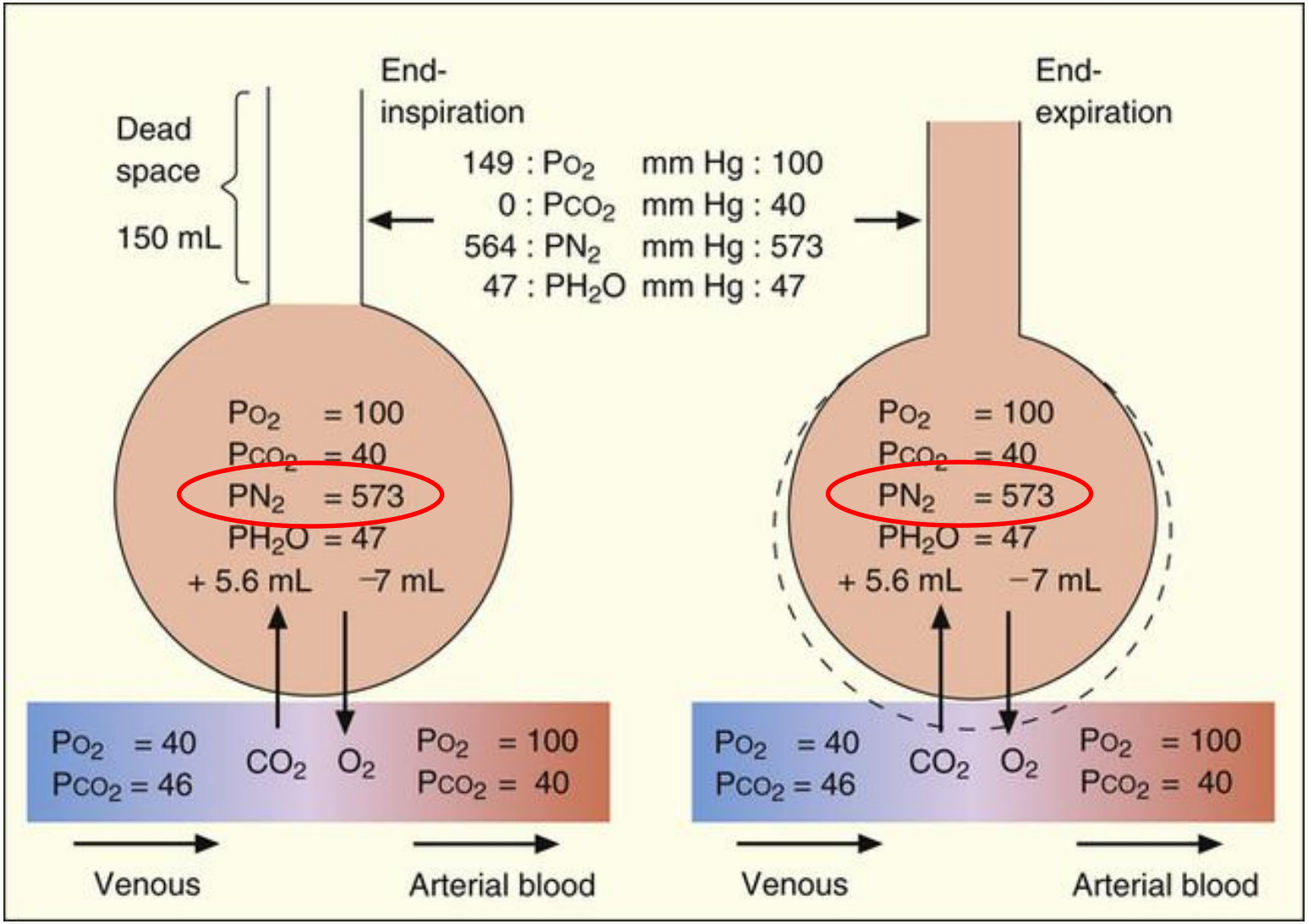
RIDUCI L'INDUTTORE

- HYPOTENSION
- HYPOXEMIA
- PH



Preoxygenation and Prevention of Desaturation During Emergency Airway Management

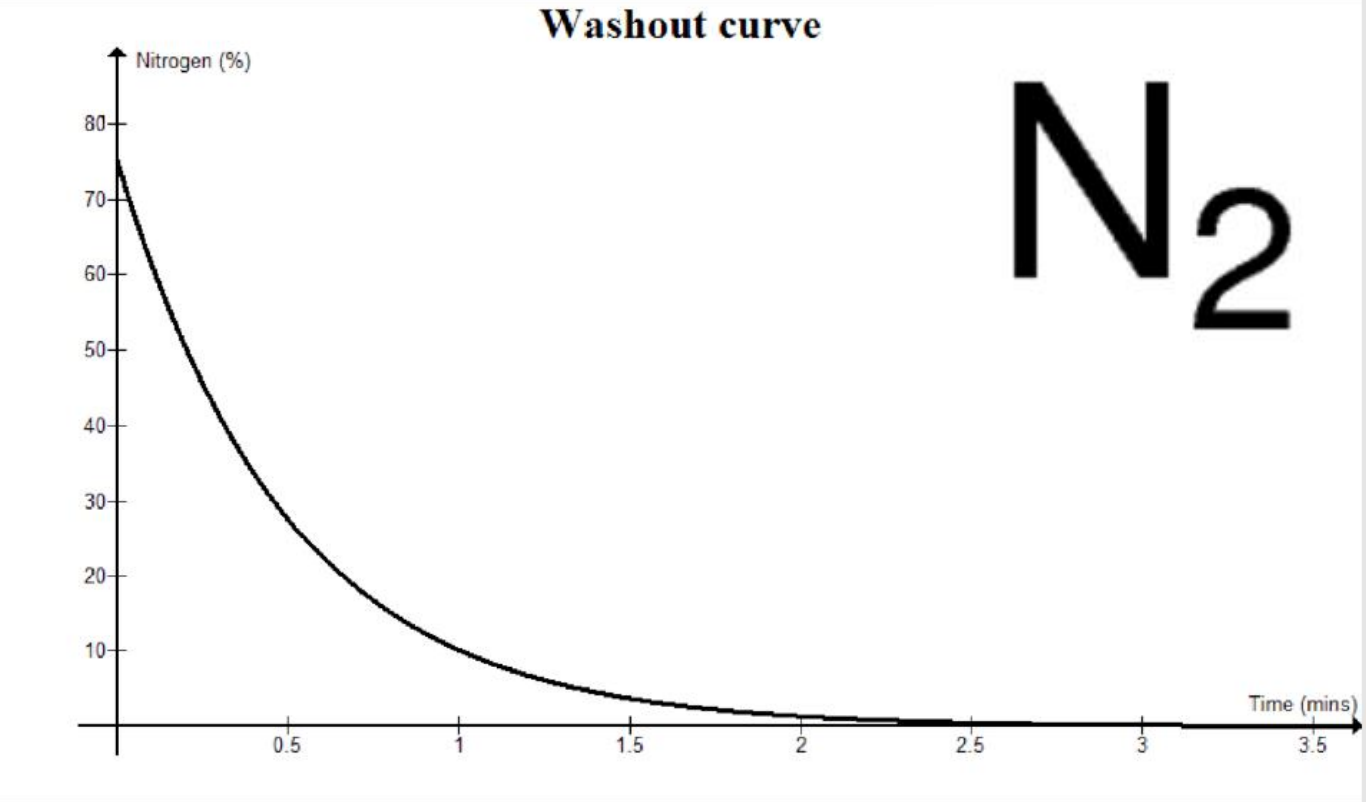
Scott D. Weingart, MD, Richard M. Levitan, MD



Constituent	Inhaled Air	Exhaled Air
Oxygen	20.9%	16%
Carbon dioxide	0.03%	4.0%
Water vapour	Variable	Variable but more than in inhaled air
Nitrogen	78.1%	78.1%
Noble gases	0.94%	0.94%

Time Constants

The nitrogen wash-out curve corresponds to the formula $y = a.e^{-kt}$.



Breathing system

The breathing system employed during pre-oxygenation should be taken into consideration. When using a circle system it is necessary to ensure an oxygen flow greater than minute ventilation (MV); i.e. at least 6 L/min in the 70 kg patient, in order to maintain 100% oxygen within the circuit. Higher flows (15 L/min) are required if vital capacity breaths, rather than tidal breathing, are taking place (due to the increased MV). With a Mapleson D breathing system (Bain circuit) high oxygen flows (2-3 x MV) are required to prevent rebreathing of expired nitrogen and carbon dioxide.

15 + 15

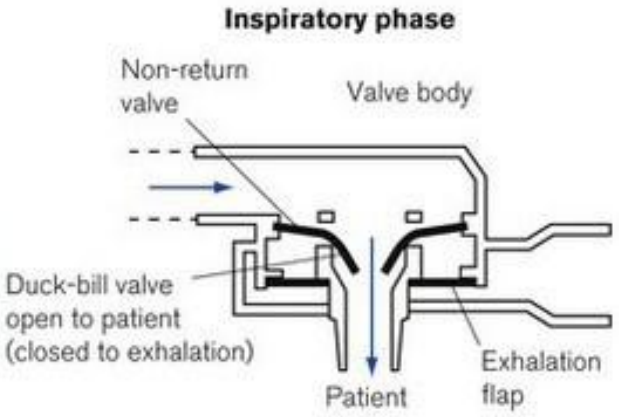
MASCHERA FACCIALE @ 15 LT/MIN

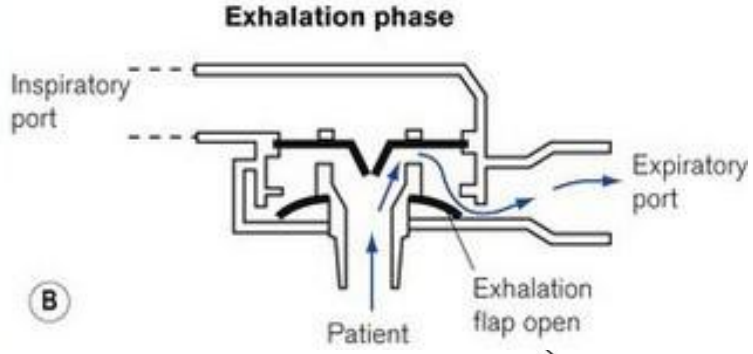
+

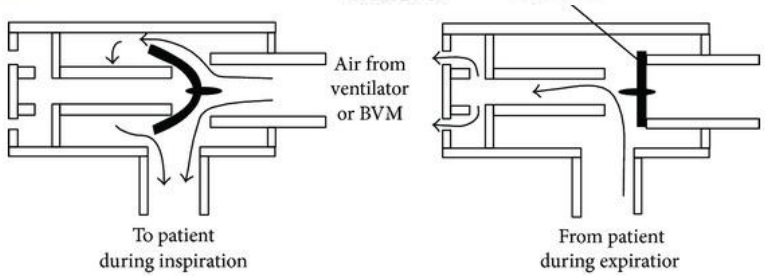
OCCHIALINI @ 15 LT/MIN


Ambu

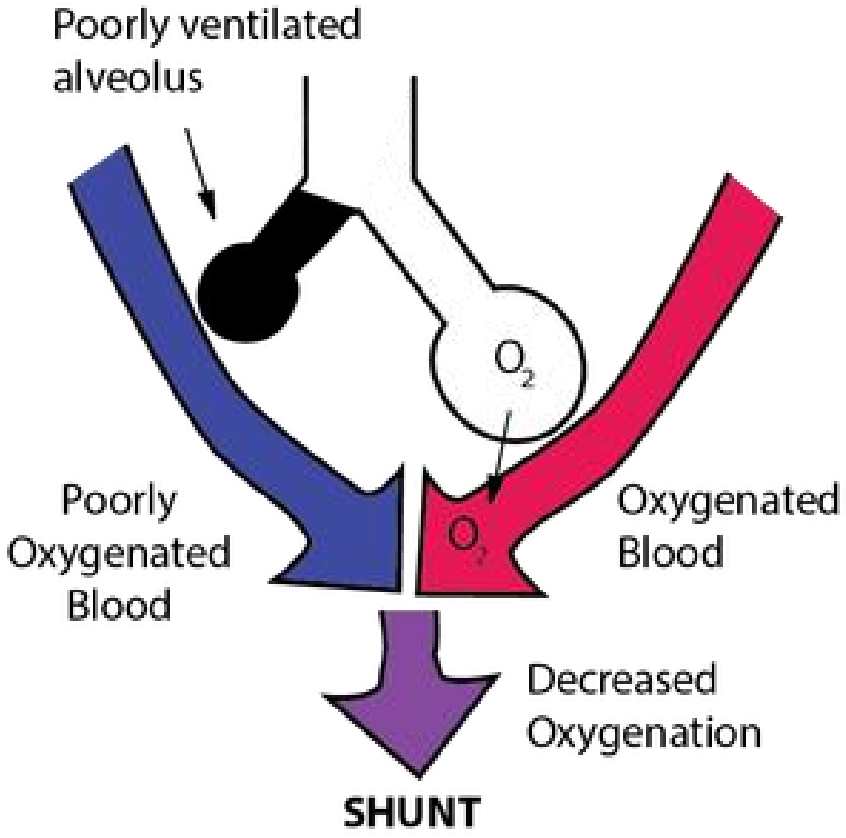

A

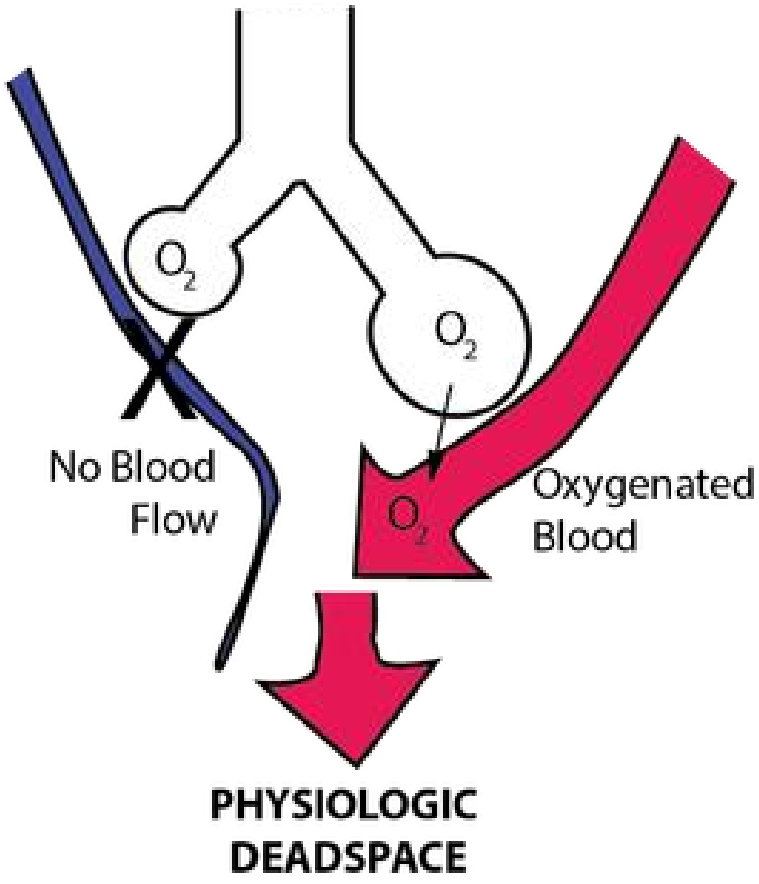

Inspiratory phase
Non-return valve
Valve body
Duck-bill valve open to patient (closed to exhalation)
Patient
Exhalation flap


Exhalation phase
Inspiratory port
Expiratory port
B
Exhalation flap open
Patient


Air from ventilator or BVM
To patient during inspiration
From patient during expiratior

(b)


Poorly ventilated alveolus
O_2
Poorly Oxygenated Blood
O_2
Oxygenated Blood
Decreased Oxygenation
SHUNT


O_2
O_2
No Blood Flow
O_2
Oxygenated Blood
PHYSIOLOGIC DEADSPACE

Acad Emerg Med. 2017 Aug 9. doi: 10.1111/acem.13274. [Epub ahead of print]

EmergeNcy Department use of Apneic Oxygenation versus usual care during rapid sequence intubation: A randomized controlled trial (The ENDAO Trial).

Caputo N[1], Azan B[1], Domingues R[1], Donner L[1], Fenig M[1], Fields D[1], Fraser R[1], Hosford K[1], Iuorio R[1], Kanter M[1], McCarty M[1], Parry T[1], Raja A[1], Ryan M[1], Williams B[1], Sharma H[1], Singer D[1], Shields C[1], Scott S[1], West JR[1]; Lincoln Airway Group.

⊕ Author information

Abstract

OBJECTIVES: Desaturation leading to hypoxemia may occur during rapid sequence intubation (RSI). Apneic oxygenation (AO) was developed to prevent the occurrence of oxygen desaturation during the apnea period. The purpose of this study was to determine if the application of AO increases the average lowest oxygen saturation during RSI when compared to usual care (UC) in the emergency setting.

METHODS: A randomized controlled trial was conducted at an academic, urban, level 1 trauma center. All patients requiring intubation were included. Exclusion criteria were patients in cardiac or traumatic arrest or if pre-oxygenation was not performed. An observer, blinded to study outcomes and who was not involved in the procedure recorded all times, while all saturations were recorded in real time by monitors on a secured server. Two hundred patients were allocated to receive apneic oxygenation (n=100) or usual care (n=100) by pre-determined randomization in a 1:1 ratio.

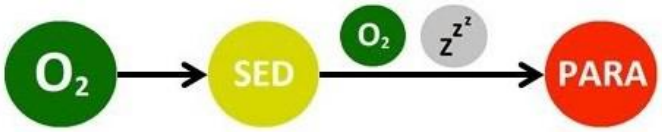
RESULTS: Two-hundred and six patients were enrolled. There was no difference in lowest mean oxygen saturation between the two groups (92, 95% CI 91 to 93 in AO vs. 93, 95% CI 92 to 94 in UC, p=0.11).

CONCLUSION: There was no difference in lowest mean oxygen saturation between the two groups. The application of AO during RSI did not prevent desaturation of patients in this study population.


DSI

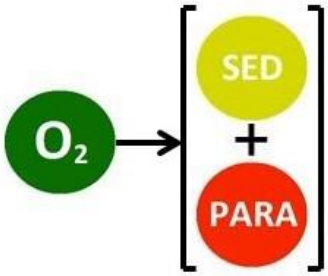
Traditional

Controlled



Rapid

Aspiration Risk



Delayed

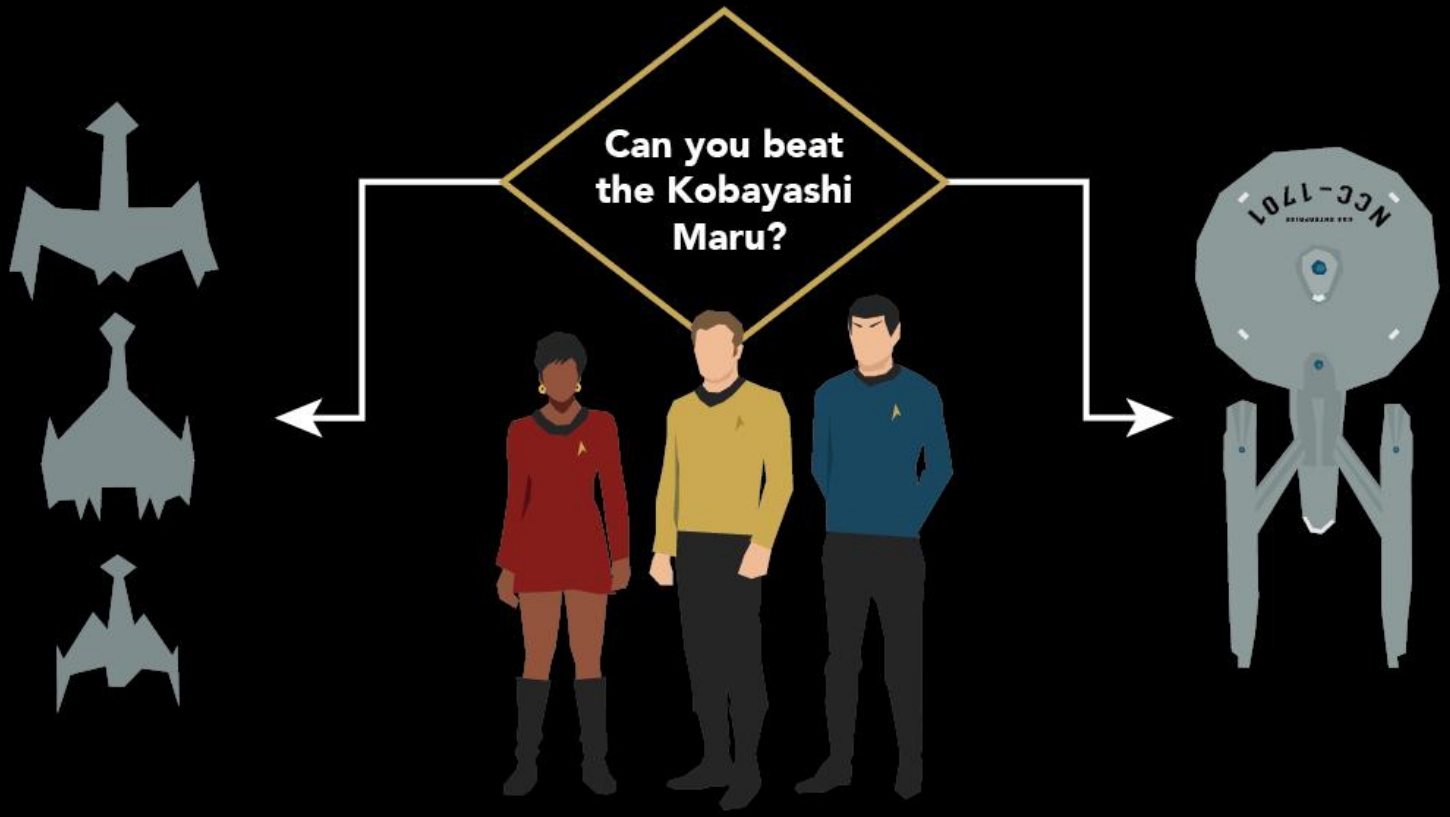
Agitation

Awake

Difficult Airway

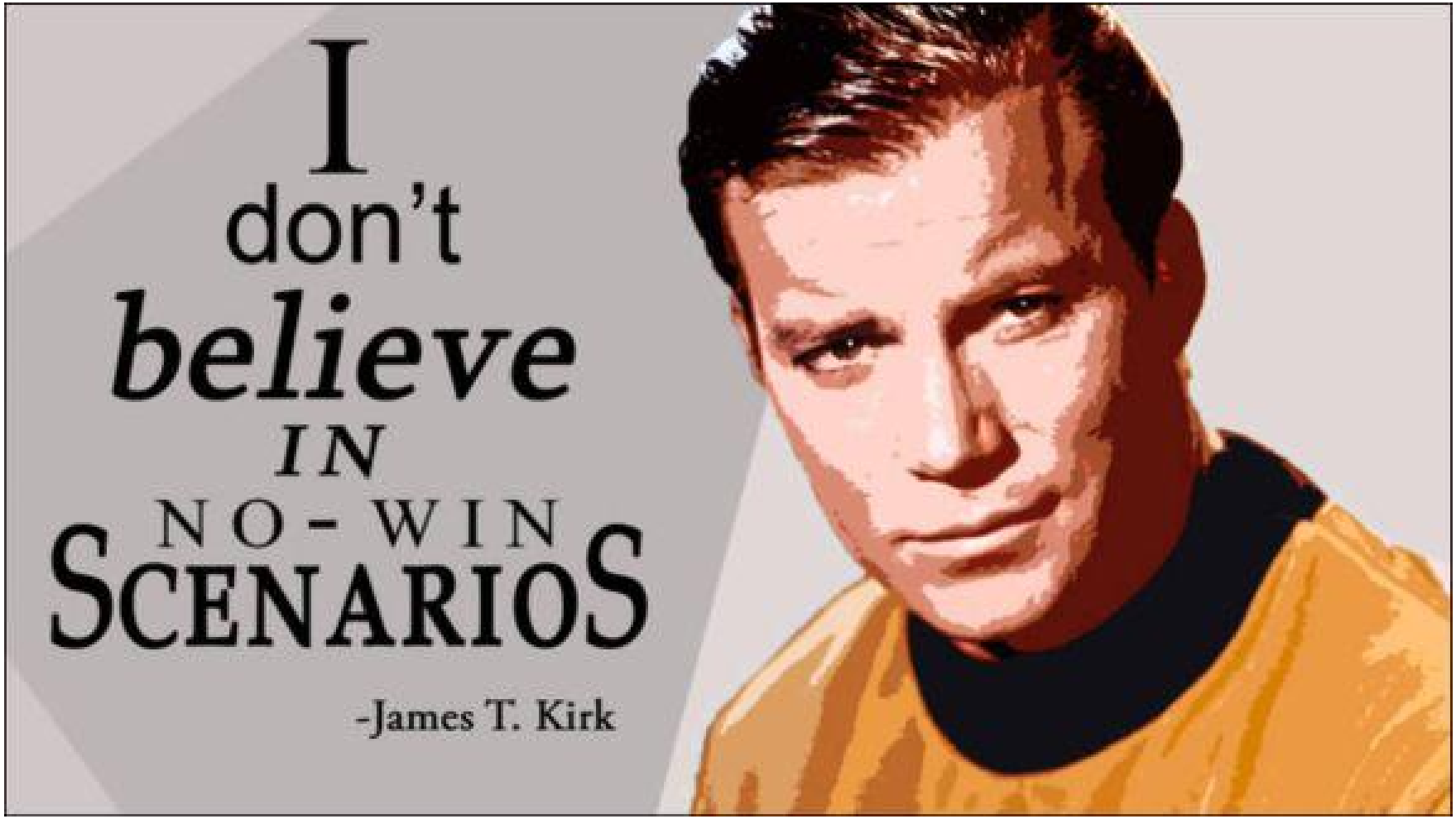
KETAMINA 2 MG/KG EV LENTA

- HYPOTENSION
- HYPOXEMIA
- PH


Can you beat the Kobayashi Maru?
NCC-1701

CERCA DI EVITARE L'INTUBAZIO

MASSIMIZZA LA CHANCE DI SUCCESSO DELLA PRIMA LARINGOSCOPIA



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