Intubation difficile
Articles de l'année

ABEL Benjamin Interne DESAR 4ème année

LECLERCQ Julien Interne DESAR 2ème année

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SOMMAIRE

I. Introduction

I. 1. Quelques rappels

- Définition objective de l'intubation difficile ?
- **<u>Définition française</u>** : Une intubation est difficile lorsqu'elle nécessite plus de deux laryngoscopies et/ou la mise en œuvre d'une technique alternative, après optimisation de la position de la tête, avec ou sans manipulation laryngée externe.

CrossMark

Intubation difficile et extubation en anesthésie chez l'adulte☆

Olivier Langeron [1], Jean-Louis Bourgain [2], Daniel Francon [3], Julien Amour [4], Christophe Baillard [5], Gaëlle Bouroche [6], Madeleine Chollet-Rivier [7], François Lenfant [8], Benoît Plaud [9], Patrick Schoettker [7], Dominique Fletcher [10], Lionel Velly [11], Karine Nouette-Gaulain [12]

Grades of Difficult Laryngoscopy:

Grade I: Most of glottis is seen

Grade II: Only posterior portion of glottis can be seen

Grade III: Only tip of epiglottis may be seen (ASA Task Force "difficult.")

Grade IV: Neither epiglottis nor glottis can be seen, only soft palate (ASA Task Force "difficult.")

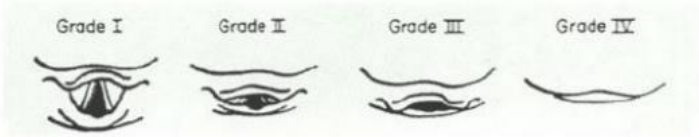
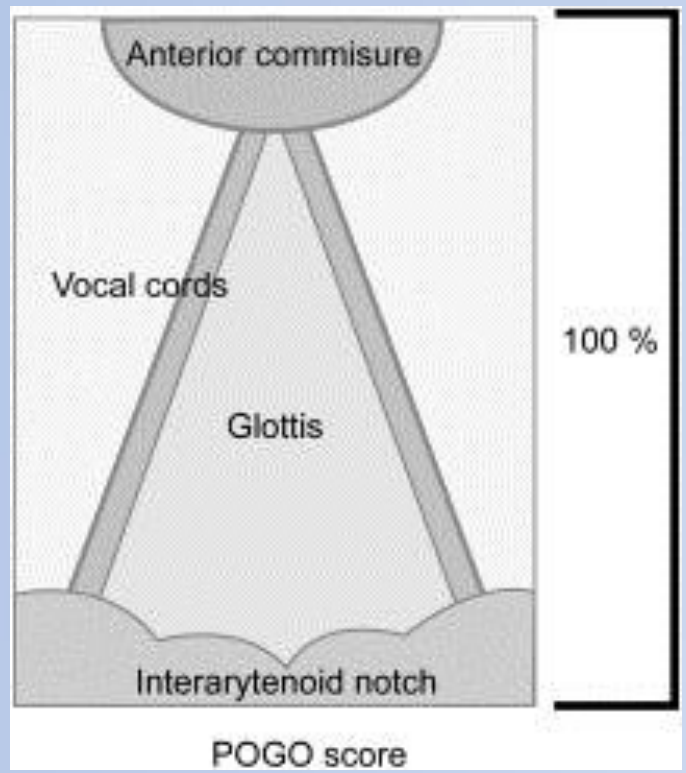
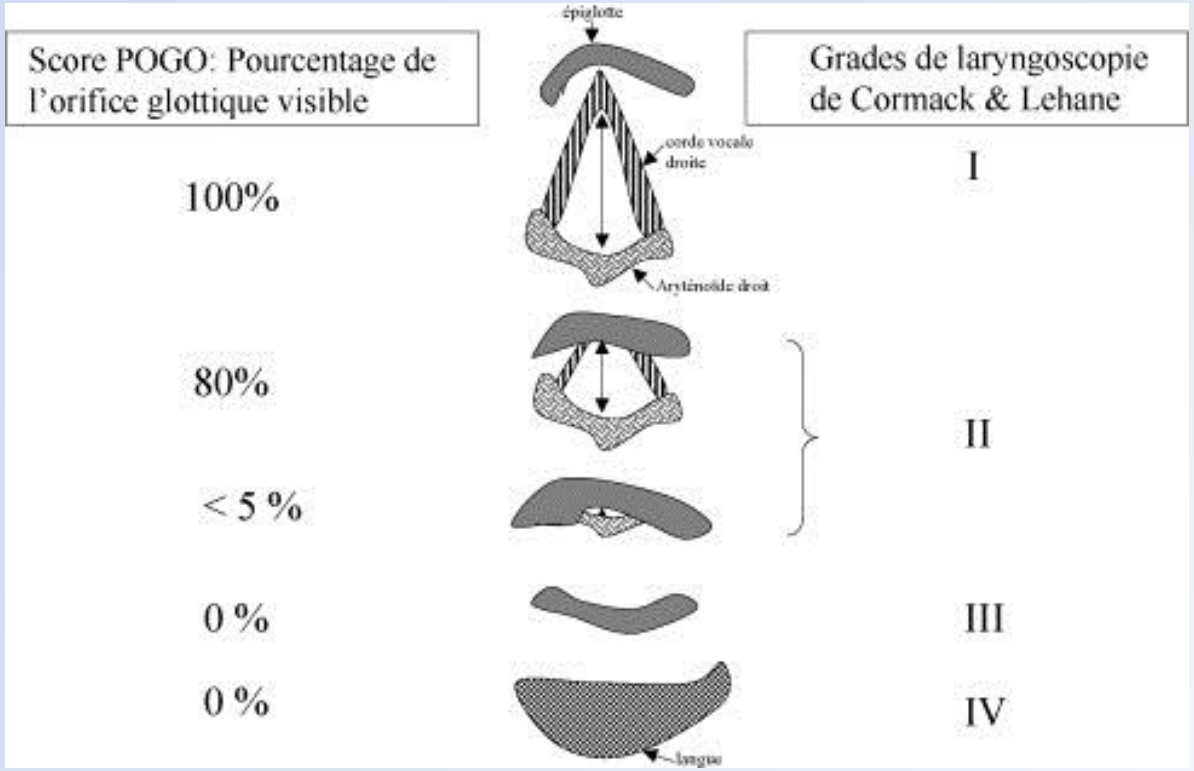


Fig. 2: Cormack and Lehane Classification

POGO score

- Percentage Of Glottic Opening score
- Score décrit lors de l'usage d'un vidéo laryngoscope





I. 2. Intubation difficile, faisons-nous mieux qu'avant?

ANESTHESIOLOGY

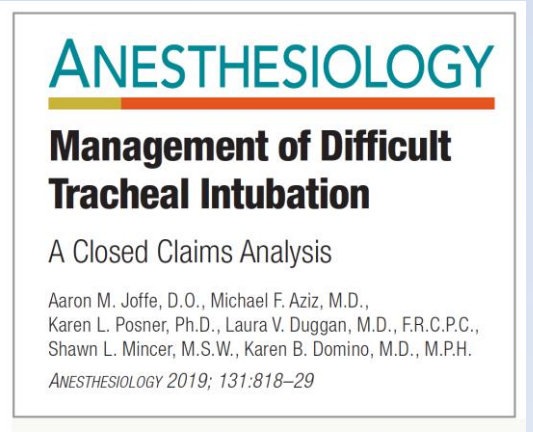
Management of Difficult Tracheal Intubation

A Closed Claims Analysis

Aaron M. Joffe, D.O., Michael F. Aziz, M.D.,
Karen L. Posner, Ph.D., Laura V. Duggan, M.D., F.R.C.P.C.,
Shawn L. Mincer, M.S.W., Karen B. Domino, M.D., M.P.H.

ANESTHESIOLOGY 2019; 131:818–29

I. 2. Intubation difficile, faisons-nous mieux qu'avant?



- Base de données de « Anesthesia Closed Claims Project »
- Comparaison des différentes plaintes en lien avec l'intubation difficile
- 2000 à 2012 (n=102) VS 1993 à 1999 (n=93)

Table 1. Patient and Case Characteristics

	1993 to 1999, n (% of 93)	2000 to 2012, n (% of 102)	Odds Ratio (95% CI)	*P* Value
Male				0.063
ASA Physical Status III to V (n = 178)	36 (47%)		78 (76%)	< 0.001
Emergency (n = 187)	19 (22%)		37 (37%)	0.025
Pediatric				1.000*
Age in yr: mean ± SD				0.325
Age > 65 yr				0.851
Obese (n = 151)	44 (62%)	54 (68%)	0.79 (0.40 to 1.53)	0.499
Primary anesthetic				0.092*
General	83 (89%)	82 (80%)	2.02 (0.89 to 4.6)	
Regional	2 (2%)	0 (0%)	NA	
Monitored anesthesia care	3 (3%)	8 (8%)	0.392 (0.101 to 1.52)	
None	4 (4%)	11 (11%)	0.372 (0.114 to 1.21)	
Combined general + regional	1 (1%)	1 (1%)	1.10 (0.068 to 17.8)	
Procedures				0.042*
General surgery	24 (26%)	16 (16%)	1.87 (0.92 to 3.79)	
Orthopedics	21 (23%)	9 (9%)	3.01 (1.30 to 7.0)	
Head, neck, ear, nose, and throat	20 (22%)	25 (25%)	0.84 (0.43 to 1.65)	
Vascular/cardiothoracic	10 (11%)	16 (16%)	0.65 (0.278 to 1.51)	
Neurologic/spine	5 (5%)	10 (10%)	0.52 (0.172 to 1.59)	
Cesarean delivery	2 (2%)	3 (3%)	0.73 (0.118 to 4.4)	
Gynecology/urology			0.63 (0.221 to 1.82)	
Other†			0.389 (0.133 to 1.14)	
Location of difficult airway event	83 (89%)	79 (77%)		0.035
Perioperative	10 (11%)	23 (23%)	2.42 (1.08 to 5.398)	
Outside location			0.41 (0.185 to 0.92)	

Total N = 195 unless otherwise indicated. Claims with missing data excluded. Percentages may sum to greater than or less than 100% due to rounding. *P* values by chi-square or Fisher exact test for proportions and *t* test for age. Odds ratios based on 1993 to 1999 as the indicator and 2000 to 2012 as the reference category.

**P* values by Fisher exact test with Monte Carlo significance using 10,000 sampled tables. †Other procedures included ventilator management (n = 6), resuscitation (n = 8), place/change arterial or central venous catheter (n = 2), eye (n = 1), and endoscopy (n = 1).

ASA, American Society of Anesthesiologists; NA, odds ratio undefined.

Outcomes

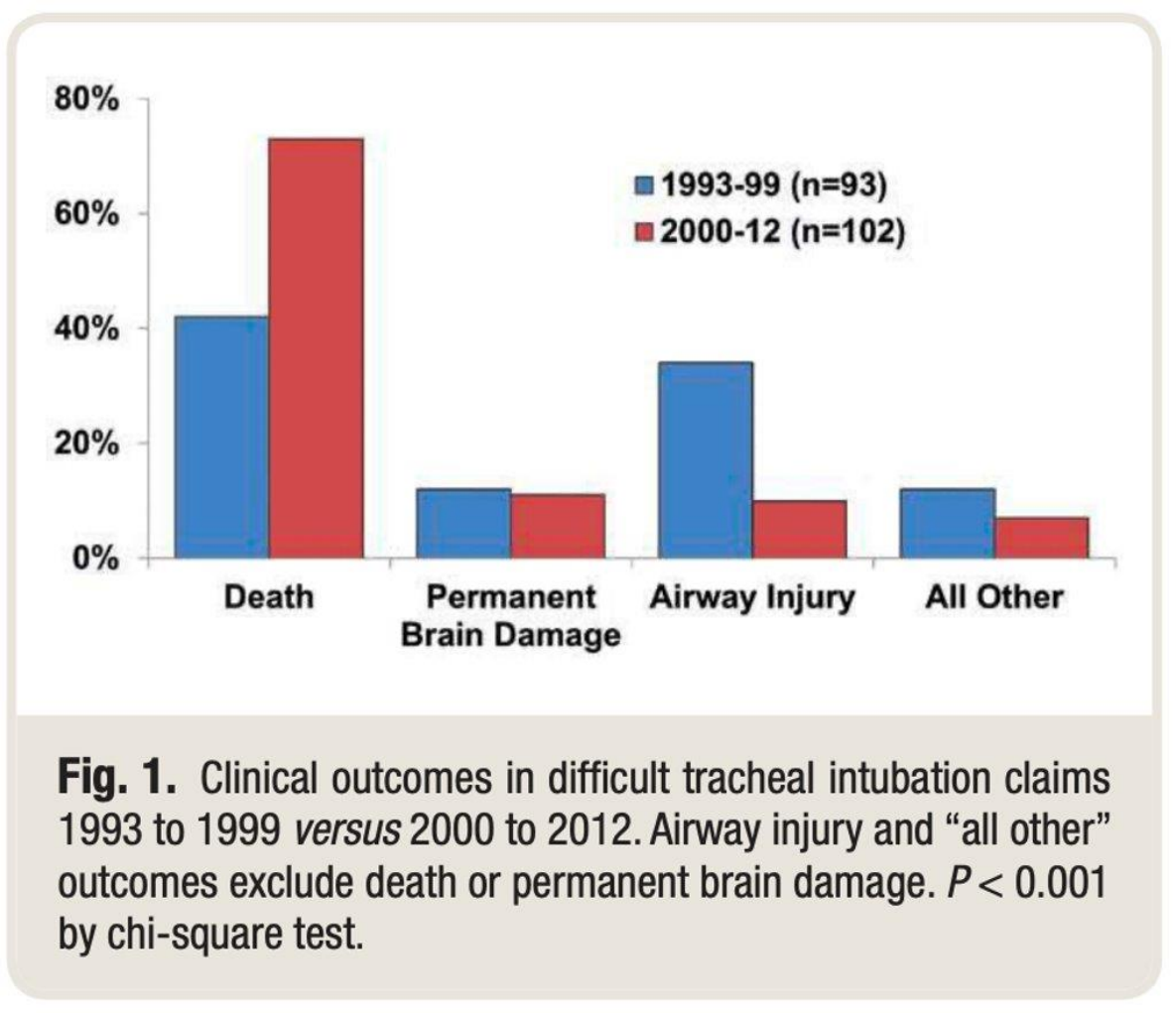


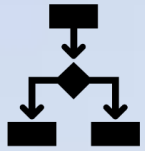
Fig. 1. Clinical outcomes in difficult tracheal intubation claims 1993 to 1999 *versus* 2000 to 2012. Airway injury and "all other" outcomes exclude death or permanent brain damage. $P < 0.001$ by chi-square test.

Limites

- Biais de sélection
- Biais rétrospectif : Etude rétrospective

=> Avec une incidence d'échec d'intubation d'environ 1,3/10 000 et une incidence de dommage cérébraux/décès de 1/180 000 procédures, difficile de réaliser une étude randomisée contrôlée…

Deficiencies in clinical judgment occurred in the majority of recent claims (73%; n = 71 of 97) that could be adequately assessed in our study. Our study is not unique in this finding.[5,12–15] In the Danish Anesthesia Database, of emergency surgical airway procedures over a 6-yr study period, nontechnical skills were judged satisfactory in only 37%.[12]



A lack of adequate planning for intubation difficulty or failure contributed to the injuries in our study.

DON'T WORRY

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Perseveration, defined as the consistent application of any airway management technique or tool in three or more attempts without deviation or change, or the return to a technique or tool that was previously unsuccessful, was noted in a quarter of 2000 to 2012 claims (table 3).

Our study also illustrated that poor outcomes after failed tracheal intubation may occur despite adherence to practice guidelines.

EDITORIAL VIEWS

Current Difficult Airway Management—Not Good Enough!

Takashi Asai, M.D., Ph.D., David Hillman, M.D.

"It is time for us to lift standards in crisis management for airway difficulties through a more rigorous approach to training, certification, and equipment availability…"

Anesthesiology 2019; 131:774-6

- Editorial publié dans la revue Anesthesiology en octobre 2019
- Reprend le travail de Joffe & Al vu précédemment

II. Articles de l’année

II. 1. Facteurs cliniques prédictifs d'une intubation difficile ?

JAMA | The Rational Clinical Examination

Will This Patient Be Difficult to Intubate?

The Rational Clinical Examination Systematic Review

Michael E. Detsky, MD, MSHP; Naheed Jivraj, MBBS, MSc; Neill K. Adhikari, MDCM, MSc; Jan O. Friedrich, MD, MSc, DPhil; Ruxandra Pinto, PhD; David L. Simel, MD; Duminda N. Wijeysundera, MD, PhD; Damon C. Scales, MD, PhD

JAMA. 2019; 321(5):493-503

JAMA | The Rational Clinical Examination

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- Revue systématique de la littérature canadienne, publiée dans le JAMA en février 2019
- De 1946 à Juin 2018, 62 études de haute qualité méthodologique (N = 33 559 patients)
- **Objectifs** : identifier les facteurs de risques cliniques les plus à même de prédire une intubation difficile
- **Bases de données** : MEDLINE(1946-2018), EMBASE(1947-2018)
- 2 investigateurs

Table 2. Summary of Diagnostic Accuracy for Clinical Tests of Difficult Intubation Evaluated in 3 or More Studies

Predictor	Type of Analysis	No. of Patients	No. of Studies	Threshold	Sensitivity (95% CI)	Specificity (95% CI)		
Risk factor: snoring[33-35]	Bivariate	3866	3	History of snoring	0.43 (0.34-0.53)	0.87 (0.71-0.9		
Clinical Tests								
Upper lip bite test grading classification								
Class 3[15,36-47]	Bivariate	5005	13	Inability of lower incisors to reach lower border of upper lip	0.60 (0.42-0		22)	0.42 (0.27-0.65)
Class 2 or 3[15,33,36-50]	Bivariate	8091	17	Inability of lower incisors to reach upper li or vermilion border of upper lip			)	0.42 (0.30-0.59)
Wilson score[51-58]	Bivariate	6520	8	≥2 used by 7 studies; ≥3 used by 1				0.60 (0.44-0.82)
Hyomental distance (measured in neutral position)[18,42,59]	Univariate	1245	3	Ra				0.84 (0.73-0.96)
Retrognathia[25,34,35,40,42]	Univariate	4017						0.85 (0.76-0.94)
Impaired mandibular protrusion[25,35,53,60-63]	Bivariate						5 (2.1-15)	0.78 (0.54-1.1)
Ratio of height to thyromental distance[36,40,44,47,48,54]						(0.67-0.95)	5.2 (1.9-14)	0.36 (0.25-0.52)
Impaired neck mobility[23,25,26,]					0.51)	0.93 (0.85-0.97)	4.2 (1.9-9.5)	0.77 (0.60-0.99)
Sternomental distance[20,33,40,43,]					0.41 (0.27-0.57)	0.90 (0.83-0.94)	4.1 (2.7-6.1)	0.65 (0.52-0.82)
Modified Mallampati score[15,16,18,23,25,26,] 49-57,59,60,62-66,69-84					0.55 (0.48-0.62)	0.87 (0.81-0.91)	4.1 (3.0-5.6)	0.52 (0.45-0.60)
Impaired mouth opening[20,25,33,35,40,43,4] 63,64,73,75,76			18	Interincisor gap <2-5 cm	0.36 (0.20-0.56)	0.90 (0.80-0.95)	3.6 (2.1-6.1)	0.71 (0.55-0.92)
Thyromental distance[18,23,25,33,40,43,45-] 63-66,69-73,75,76,85	Bivariate	10596	26	Range, <4-<7 cm	0.45 (0.36-0.55)	0.86 (0.80-0.91)	3.3 (2.4-4.4)	0.63 (0.55-0.73)
Palm print[23,26,86,87]	Univariate	695	4	Based on scoring system from each article	0.77 (0.22-0.98)	0.84 (0.55-0.96)	3.0 (1.9-4.7)	0.28 (0.08-0.97)

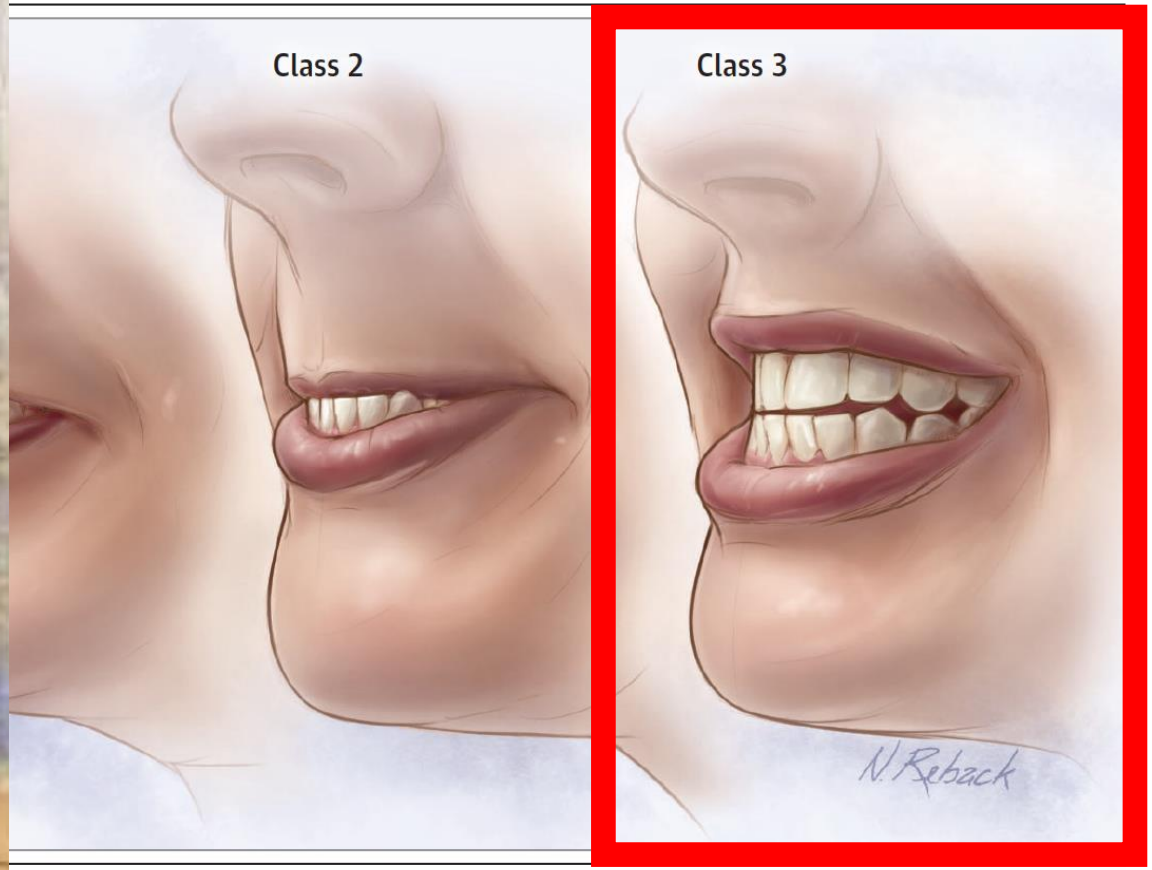
Abbreviation: LR, likelihood ratio.

[a] Measured from the angle of the jaw to the tip of the chin.

14 (8.9-22)

« A history of difficult intubation (2 studies) was the risk factor most predictive for a difficult intubation (positive LR range, 16-19; negative LRrange,0.72-0.82) »

Le test de morsure de la lèvre supérieur



pper lip
the lower
, the lower

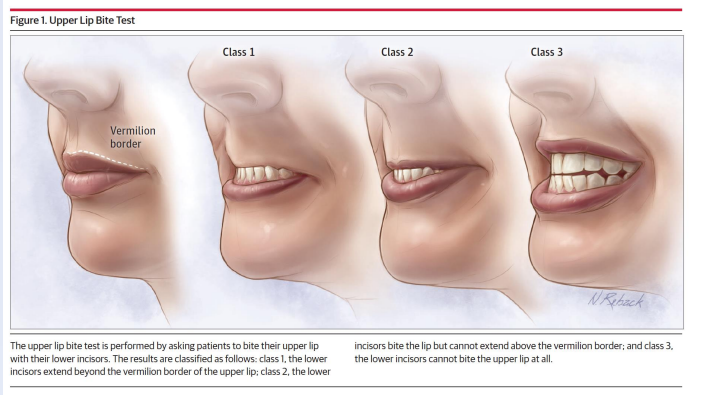
incisors bite the lip but cannot extend above the vermilion border; and class 3, the lower incisors cannot bite the upper lip at all.

Le test de morsure de la lèvre supérieur

- Evalue la protrusion mandibulaire
- Ressort dans cette étude comme une véritable piste à exploiter :

  (13 studies; positive LR, 14 [95%CI, 8.9-22])
- A contrario, un patient de classe 1 :

  negative LR, 0.42 [95% CI,0.30-0.59])
- Incidence intubation difficile dans la population générale : ≃ 10%
- Si classe 3 => jusqu'à 60% IOT difficile!



Autre

Figure 2. Measurements for Thyromental, Sternomental, and Hyomental Distances

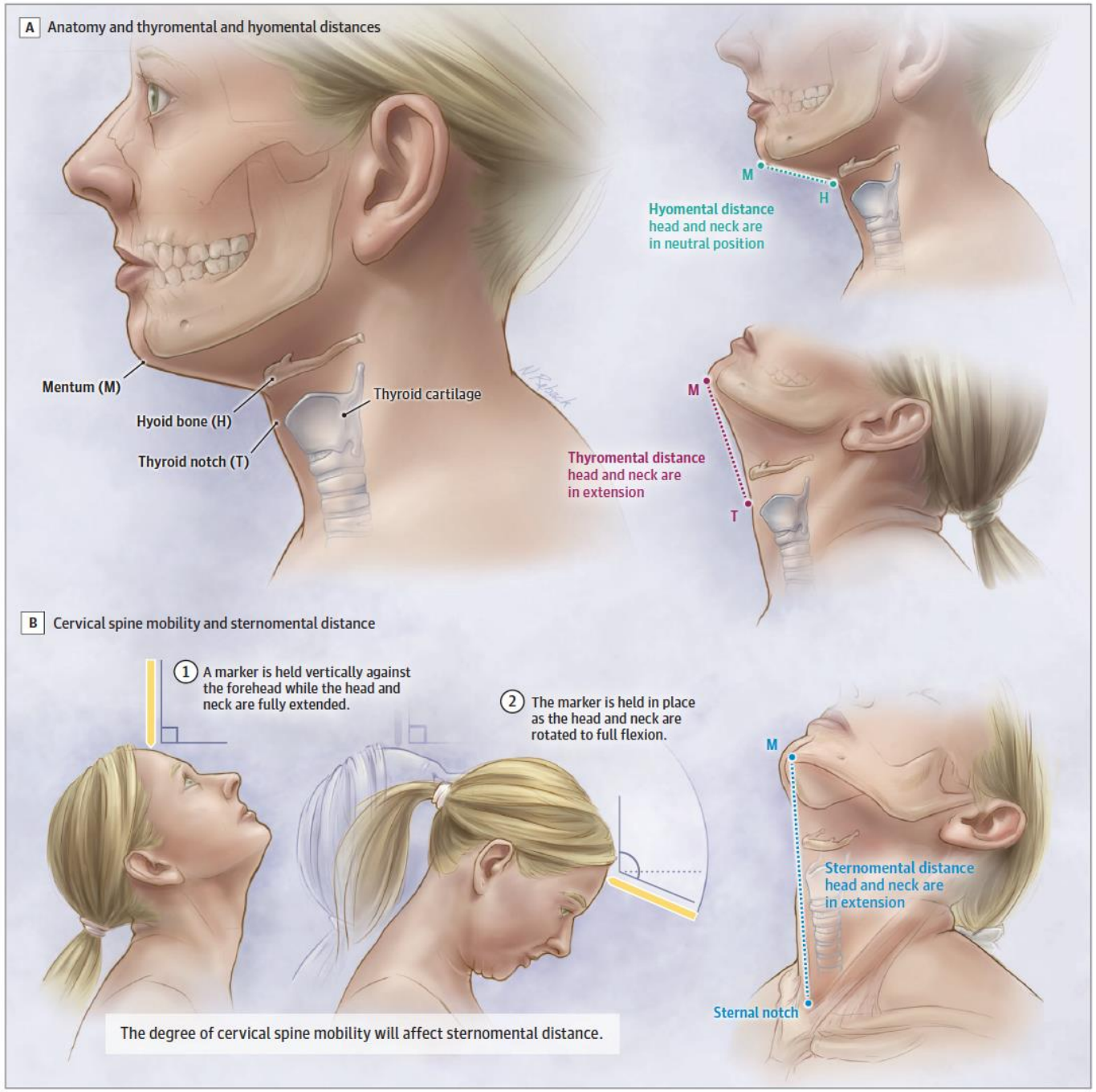


Figure 3. M

Table 1. Wilso

Parameter
Weight, kg
Cervical spine
Impaired jaw
Retrognathia
Prominent inc

- Distan

JAMA | The Rational Clinical Examination

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Limites :

- Variabilité dans la définition de l'intubation difficile : grade de C&L et nombre de tentatives étant les définitions les plus courantes
- Mobilité cervicale, rétrognathie, score de Wilson : évaluation subjective…
- Etudes réalisées au bloc opératoire
- Pas d'analyse multivariée

II. 2. Oxygénation apnéique

Respiration and Sleep Medicine

Section Editor: **David Hillman**

High-Flow Nasal Oxygen Improves Safe Apnea Time in Morbidly Obese Patients Undergoing General Anesthesia: A Randomized Controlled Trial

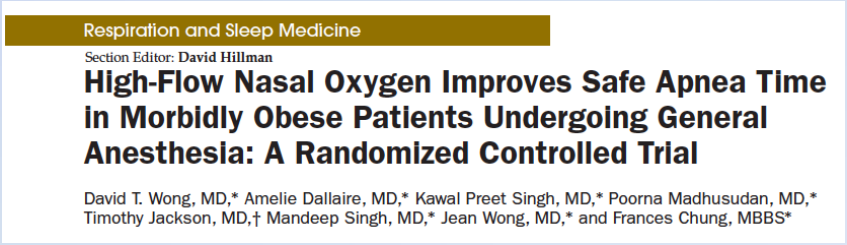
David T. Wong, MD,* Amelie Dallaire, MD,* Kawal Preet Singh, MD,* Poorna Madhusudan, MD,* Timothy Jackson, MD,† Mandeep Singh, MD,* Jean Wong, MD,* and Frances Chung, MBBS*

IARS

International Anesthesia Research Society

Anesth Analg 2019;129:1130–6

II. 2. Oxygénation apnéique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- Etude randomisée contrôlée simple aveugle
- Publiée dans « Anesthesia & Analgesia », journal phare de l'IARS en 2019
- **<u>Objectif principal</u>** : Comparer le « safe apnea time » entre OPTIFLOW et oxygénation apnéique au masque facial durant l'induction en chirurgie bariatrique.

IARS
International Anesthesia Research Society

II. 2

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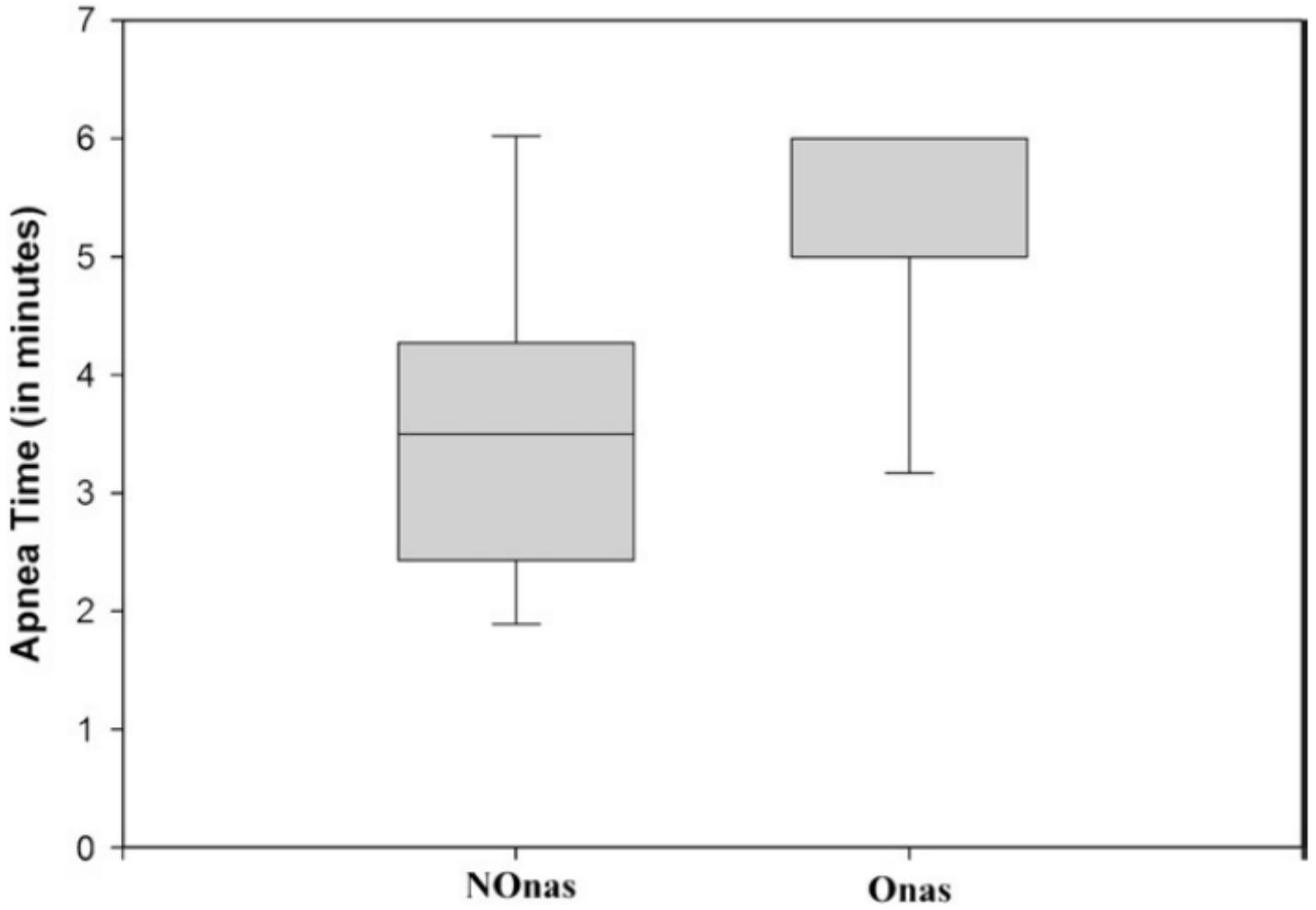


Fig. 1 Box and whisker plot comparison of oxygen saturation (SpO_2) ≥95% time in the nasal oxygen administration (O_{nas}) and non-nasal oxygen (NO_{nas}) groups. Boxes=means and standard deviations of the data for each group. Whiskers=range of data.

II. 2. Oxygénation apnéique

Figure 2. Adapted Ring-Adair-Elwyn (RAE) tube secured fo delivery to the left buccal space.

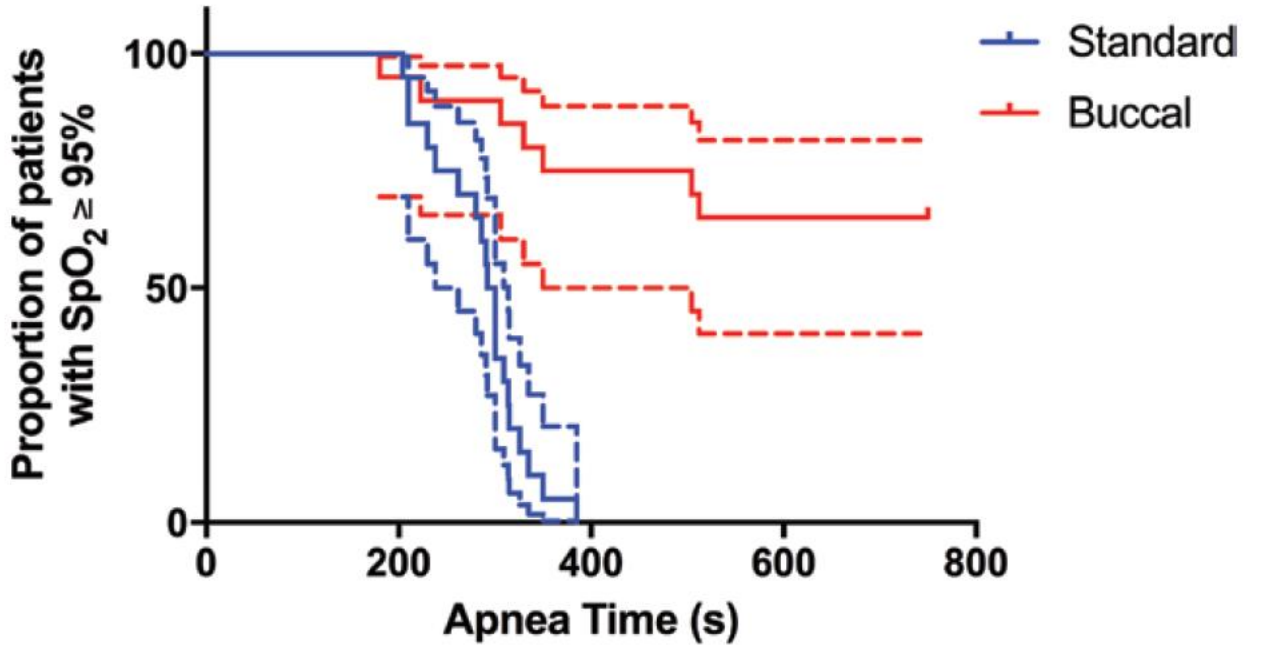


Figure 4. Proportion of patients with $Spo_2 \geq 95\%$ during 750 s apnea (95% confidence bands shown with dashed lines). Hazard ratio for $Spo_2 < 95\%$ 0.159, 95% confidence interval 0.044–0.226, $P < .0001$.

Flow chart

- Recrutement patients entre aout 2017 et mars 2018
- 45 patients randomisés
- 40 patients analysés

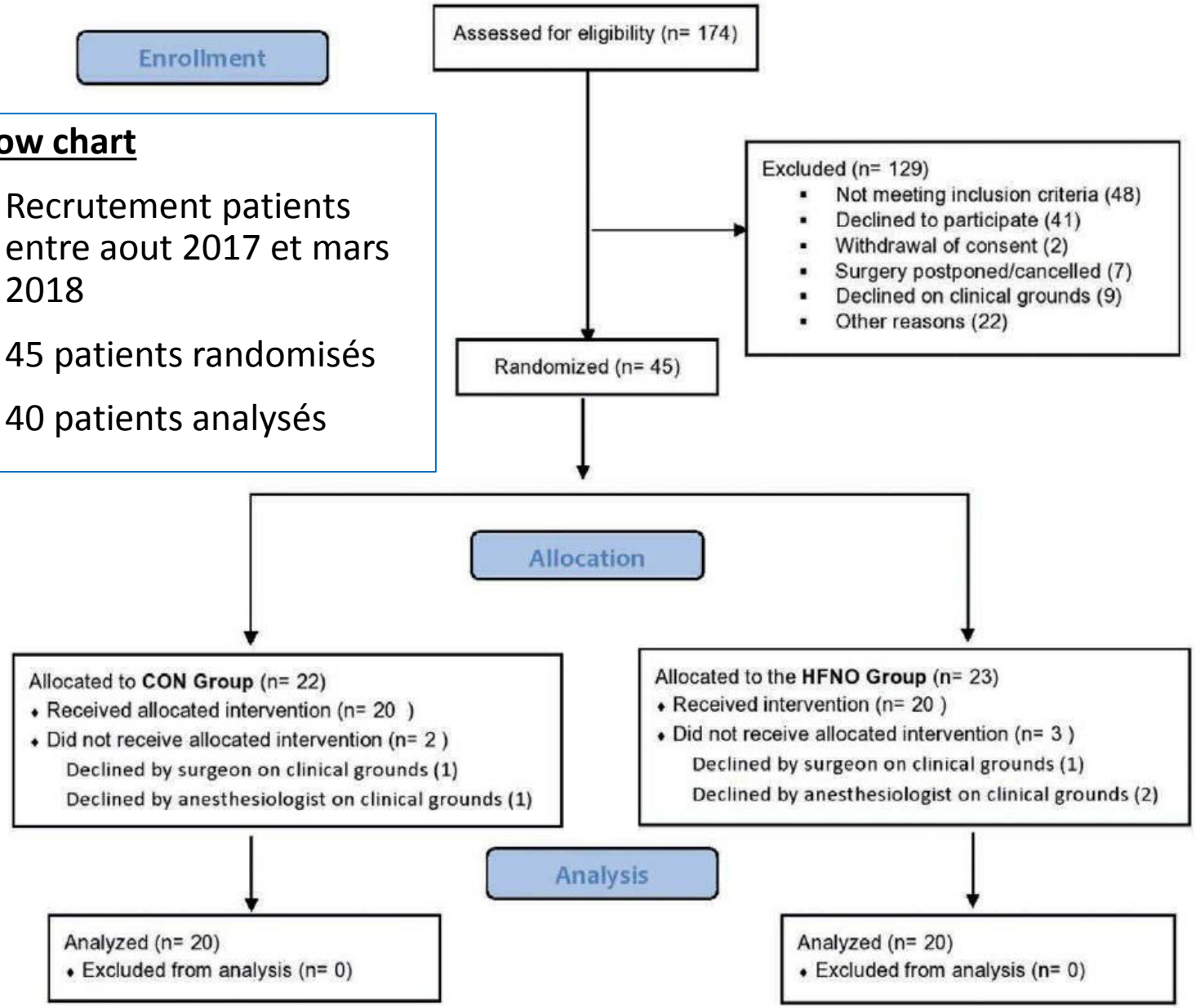


Figure. Consolidated Standards of Reporting Trials diagram. Con indicates control group; HFNO, high-flow nasal oxygenation group.

Critères inclusion :

- 18 ans,
- IMC > 40

Critères exclusion :

- Comorbidités sévères,
- VA difficile,
- RGO,
- obstruction nasale

Déroulement :

1. Pré 02 3mn 40L/mn 100% // Masque facial EtO2 > 85%
2. Induction dAIVOC + rocuronium
3. 2mn après rocu → vidéolaryngo. Exclusion des C3/4. Durant apnée augmentation débit OF 60L/mn.
4. On attend Sp02 < 95% ou 6mn max

Table 2. Study Outcomes: Safe Apnea Time, Minimum Spo_2, Plateau $ETco_2$, and Time to Regain Baseline Spo_2

	Control Group (n = 20)	High-Flow Nasal Oxygenation Group (n = 20)		
Safe apnea time (s)	185.5 ± 53.0	261.4 ± 77.7	75.9 (33.3–118.5)	
Minimum Spo_2 (%)	87.9 ± 4.7	90.9 ± 3.5	3.1 (0.4–5.7)	
Plateau $ETco_2$ (mm Hg)	38.8 ± 2.5	37.9 ± 3.0		
Time to regain baseline Spo_2 (s)	49.6 ± 20.8	37.3 ± 6.8	−12.3 (−22.2 to −2.4)	.016

Values represent mean ± SD.
Control group: facemask oxygenation.
Abbreviations: CI, confidence interval; $ETco_2$, end-tidal carbon dioxide; Spo_2, oxygen saturation measured by pulse oximetry.

TIME… IS LIFE !

Papier séduisant mais… limites importantes

- Etude monocentrique ; Simple aveugle
- Faible nombre de patients inclus (40); nombreux patients exclus
- Utilisation grade de Cormack en vidéolaryngoscopie…
- Patients Cormack III ou IV exclus de l'étude
- Biais de sélection : Environs 80% des patients sont des femmes or SAOS par exemple prédominant chez les hommes
- Chirurgie bariatrique uniquement

II. 3. Elaboration d'une stratégie

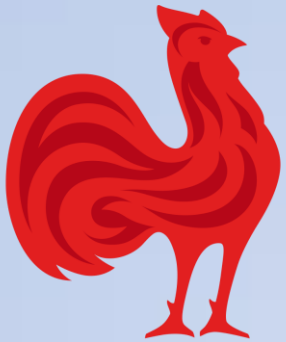
British Journal of Anaesthesia, ■ (■): 1–10 (2018)
doi: 10.1016/j.bja.2018.09.021
Advance Access Publication Date: xxx
Clinical Investigation

Prospective validation of a new airway management algorithm and predictive features of intubation difficulty

F. Cook[1], D. Lobo[1], M. Martin[1], N. Imbert[1,3], H. Grati[1], N. Daami[1], C. Cherait[1], N.-E. Saïdi[1], K. Abbay[1], J. Jaubert[1], K. Younsi[1], S. Bensaid[1], B. Ait-Mamar[1], V. Slavov[1], R. Mounier[1], P. Goater[2], S. Bloc[1,3], J. Catineau[1], K. Abdelhafidh[2], H. Haouache[2] and G. Dhonneur[2,3,*]

[1]Department of Intensive Care Medicine, Henri Mondor University Hospital, Créteil, France, [2]Curie Cancer Institutes of Paris, Paris, France and [3]Paris 12 School of Medicine, Créteil, France

COCORICO !



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[1]Department of Intensive Care Medicine, Henri Mondor University Hospital, Créteil, France, [2]Curie Cancer Institutes of Paris, Paris, France and [3]Paris 12 School of Medicine, Créteil, France

- Etude prospective française (Hôpital Henri MONDOR)
- Menée de janvier 2015 à juillet 2017
- Etude réalisée dans le but de valider la sécurité d'un nouvel algorithme pour l'intubation

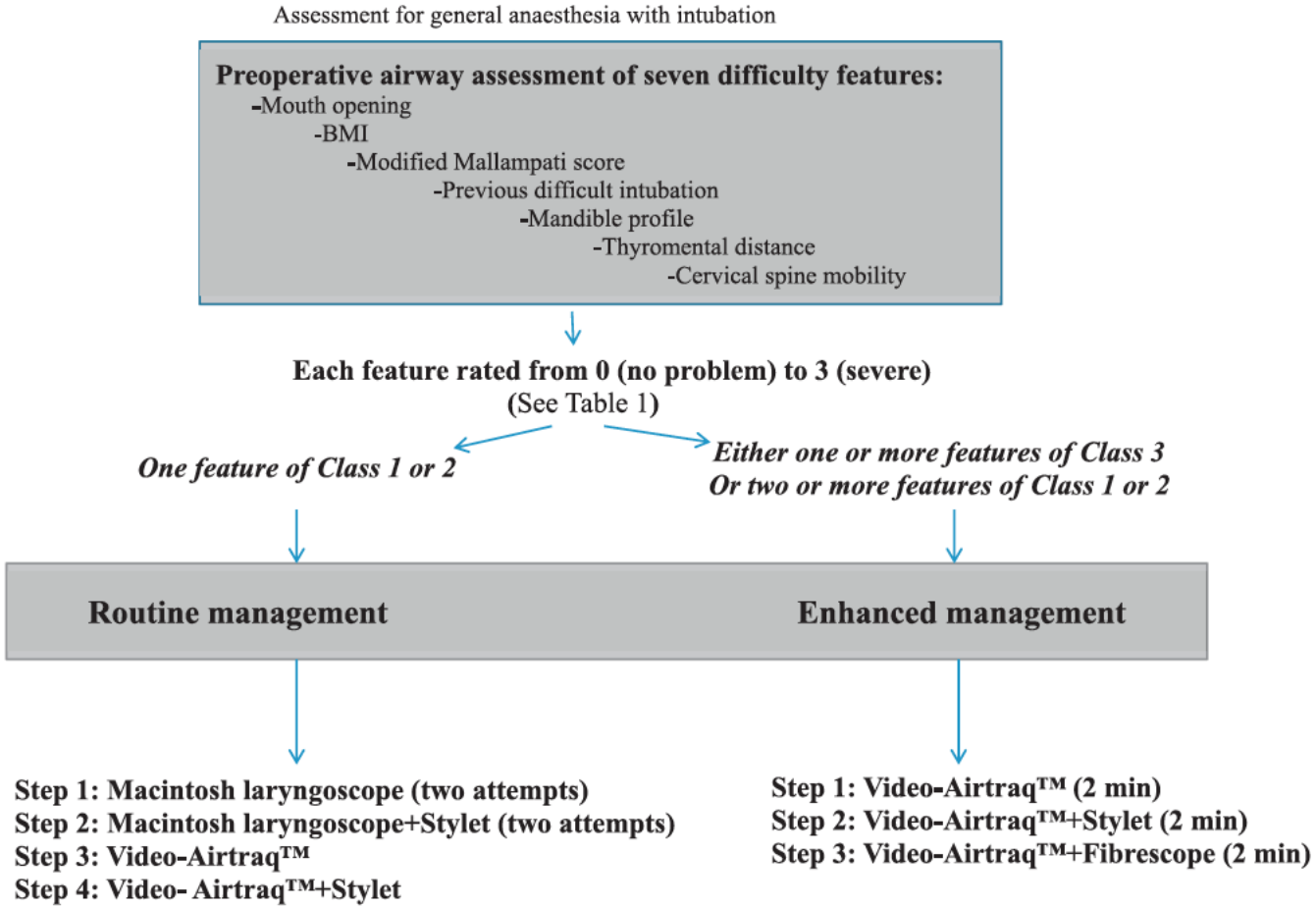

Fig 1. Decision tree. Selection of patients and management strategies.

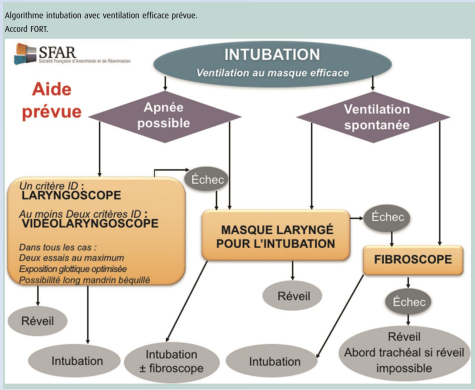

Table 1 Strategy for rating seven assessed airway features

Ranks	Class 0	Class 1	Class 2	Class 3
Features	No problem	Relevant difficult direct laryngoscopy to severe problems		
Mouth opening (cm) or inter-incisor gap	>5 >3 Fingers	5–4 3 Fingers	4–3 2 Fingers	3–2 Thumb
BMI (kg m^{-2})	<25	25–30	31–40	>40
Modified Mallampati (grade)	1	2	3	4
Previous difficult intubation	None	Failed direct laryngoscopy	Macintosh laryngoscope+ Stylet failure	Previous awake intubation
Mandible profile	Normal	Slightly erased	Clearly erased upper lip bite test positive	Retrognatia upper lip bite test negative
Thyromental distance (cm)	>7 >4 Fingers	7–5 4 Fingers	5–3 3 Fingers	< 3 2 Fingers
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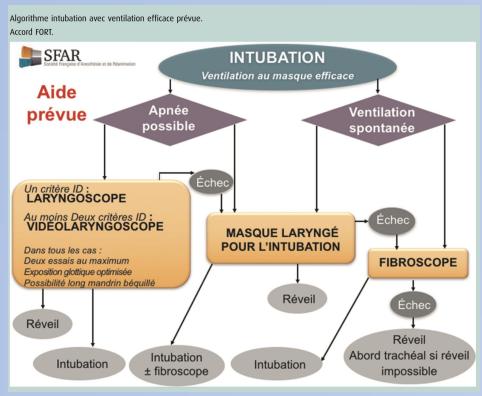

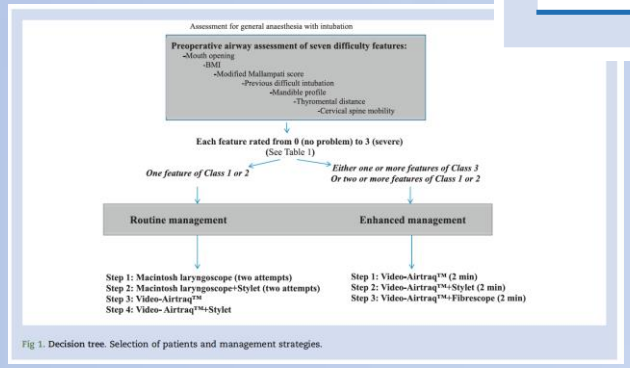

Fig 1. **Decision tree**. Selection of patients and management strategies.

Table 1 Strategy for rating seven assessed airway features

Ranks	Class 0	Class 1	Class 2	Class 3
Features	No problem	Relevant difficult direct laryngoscopy to severe problems		
Mouth opening (cm) or inter-incisor gap	>5 >3 Fingers	5–4 3 Fingers	4–3 2 Fingers	3–2 Thumb
BMI (kg m^{-2})	<25	25–30	31–40	>40
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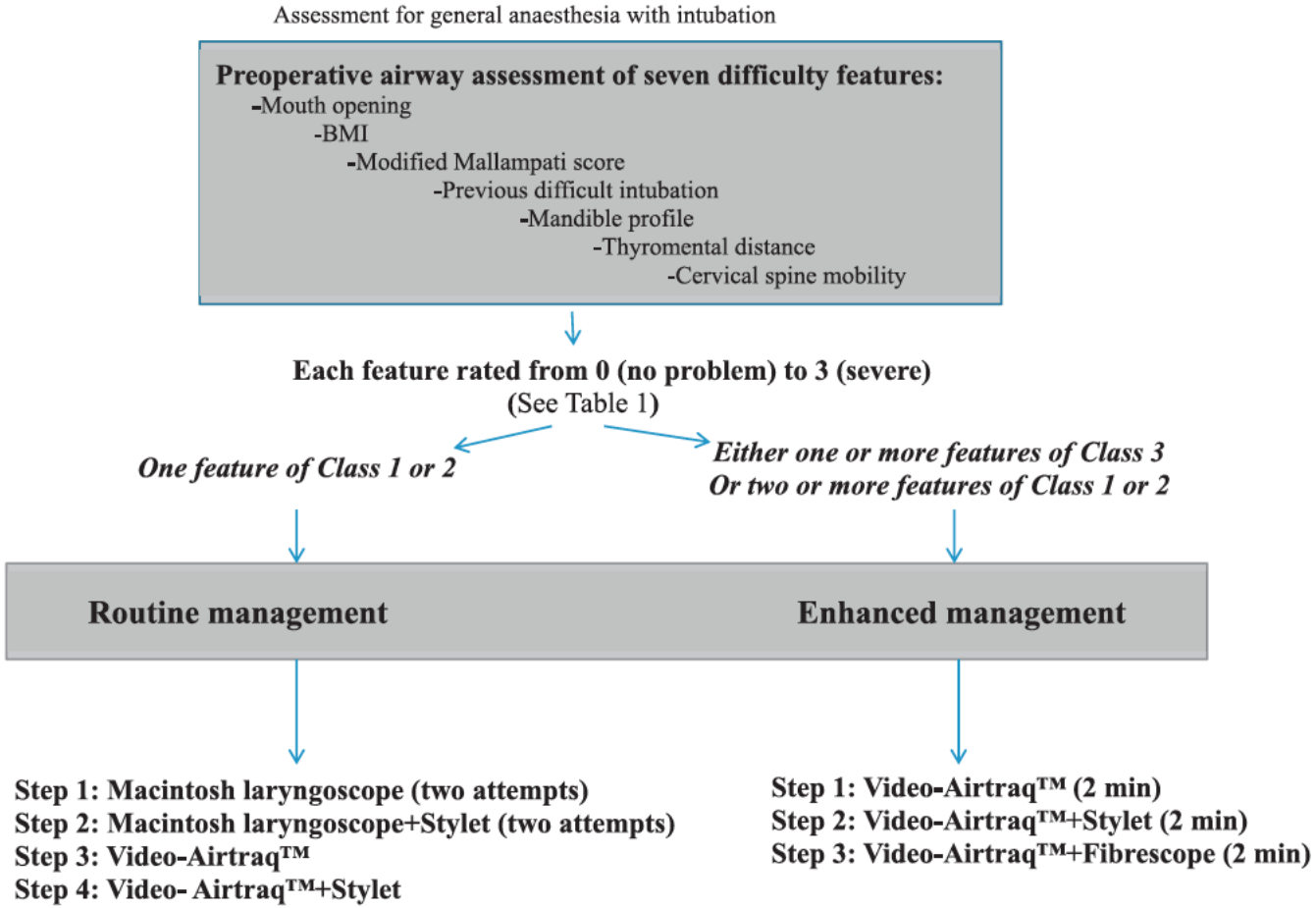

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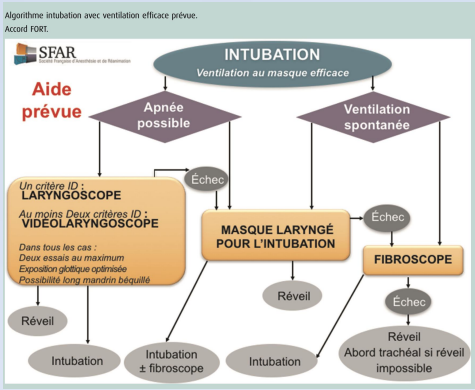

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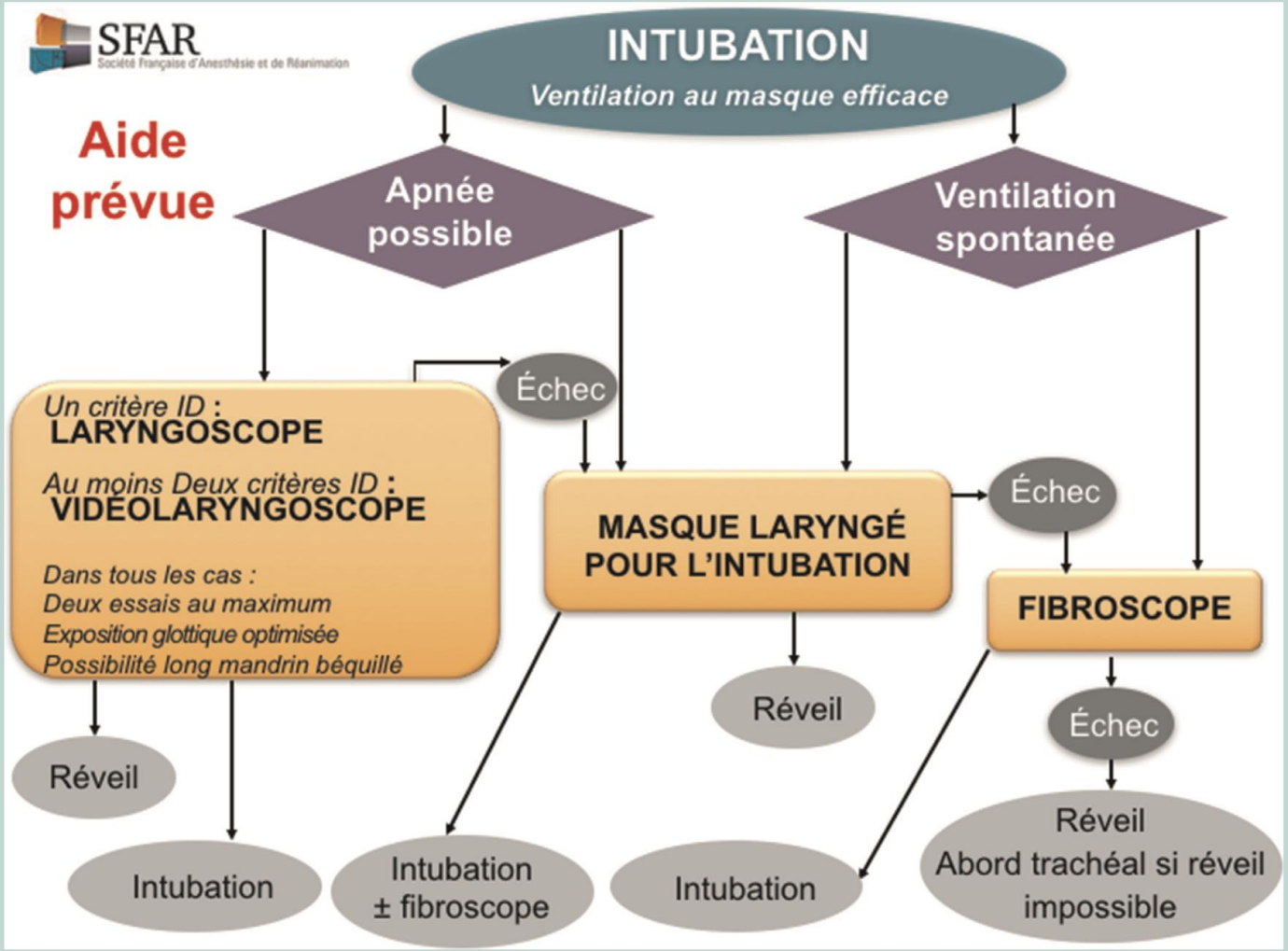
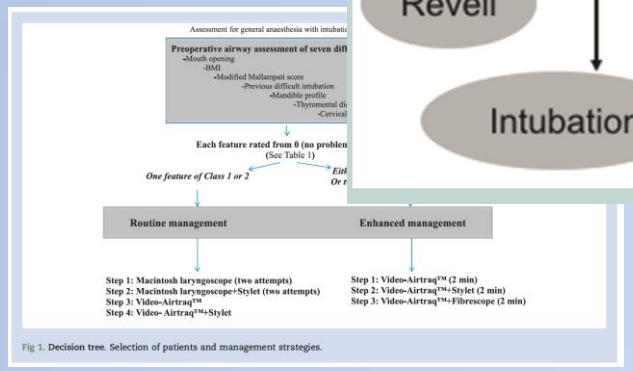
Algorithme intubation avec ventilation efficace prévue.

Accord FORT.





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Résultats

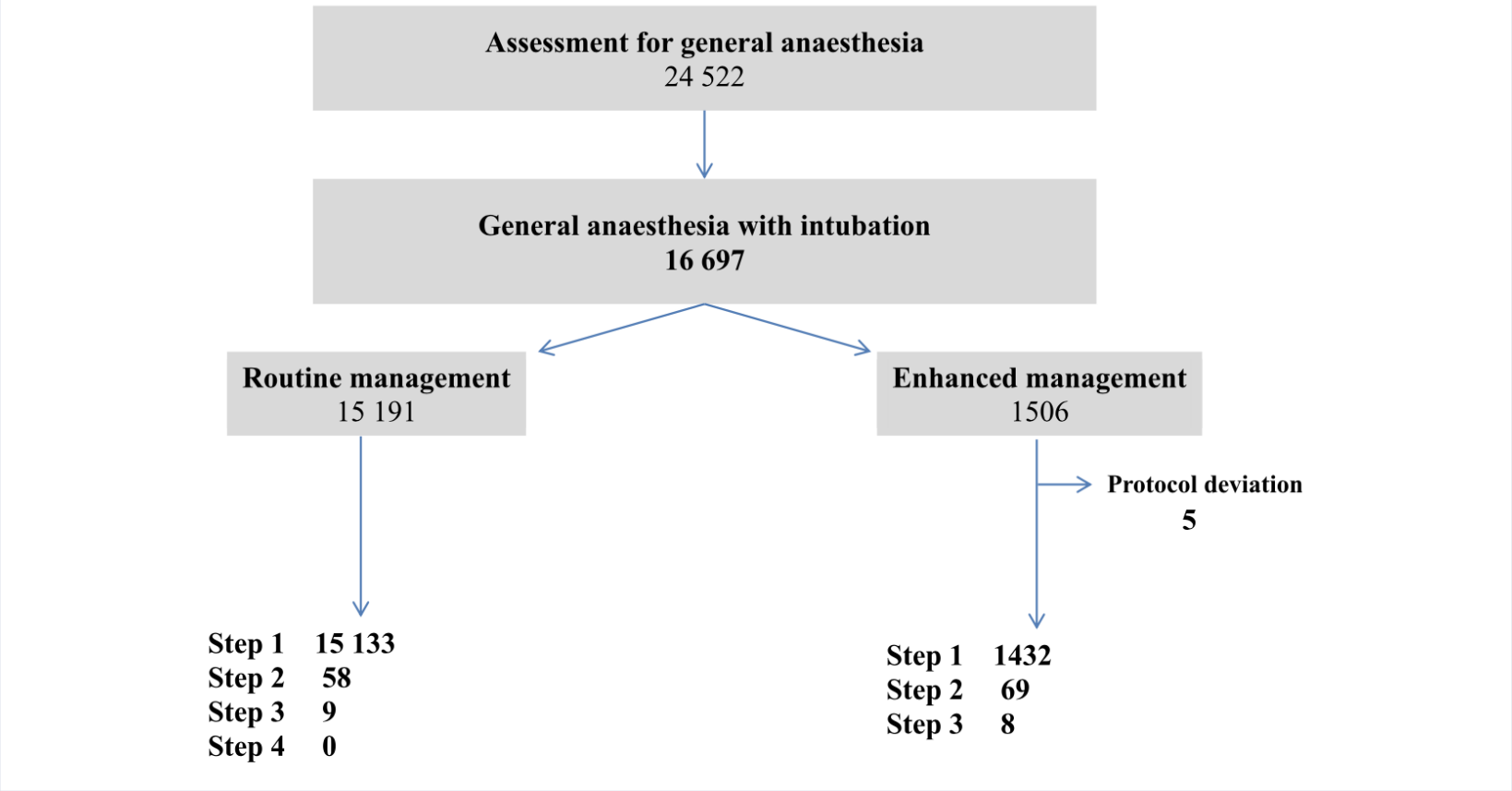

Fig 2. **Flowchart**. Outcome and management strategies.

Résultats

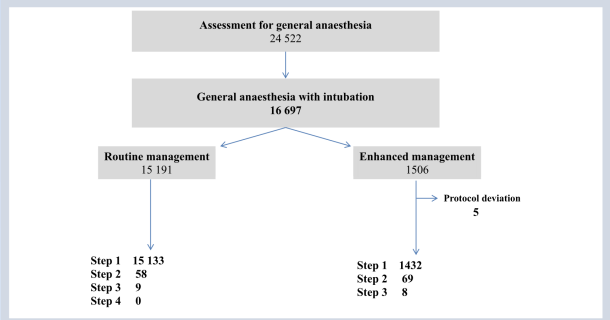

Fig 2. **Flowchart**. Outcome and management strategies.

- 24 522 patients évalués => 16 697 intubés sous anesthésie générale
- Aucun échec d'intubation
- 0,8% de reprise au masque facial pour désaturation
- Aucun cas de ventilation au masque facial impossible
- Aucun CICO
- Petite ouverture de bouche et diminution de la mobilité du rachis cervical étaient les 2 principaux facteurs de risque d'intubation difficile à l'Airtraq™

Limites

- Praticiens entrainés
- Patients sélectionnés :
  - Exclusion des patients porteurs de modification anatomiques des VAS
  - Exclusion des patients présentant un saignement des VAS
  - Exclusion des traumatisés faciaux ou du rachis
  - Exclusion des patients obstétricaux ou pédiatriques
  - Aucun patient ne présentant de trouble de la déglutition
- Protocole en vigueur depuis 3ans dans le centre de l'étude

Discussion

« Nouvel algorithme » : en réalité, application stricte des recommandations :

- Évaluation clinique attentive
- Élaboration d'une stratégie adaptée
- Matériel disponible en salle
- Chirurgiens disponibles en cas de CICO

=> Malgré toutes ces précautions, persistance de "mauvaises surprises"

IV. Intubation vigile sous fibroscopie

QUIZZ

- Vous devez endormir sans urgence un patient avec une OB < 1cm. Une intubation vigile sous fibroscopie s'impose. Quel est votre protocole ?

A. simple AL ORL
B. sédation associée à une AL ORL
C. ni AL ORL ni sédation
D. Vous privilégiez les hypnotiques tels que le midazolam ou le propofol
E. Vous privilégiez les opioïdes tels que le rémifentanil en AIVOC

Awake Fiberoptic Intubation Protocols in the Operating Room for Anticipated Difficult Airway: A Systematic Review and Meta-analysis of Randomized Controlled Trials

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Alessandro Putzu, MD,§ Carmine D. Votta, MD,* Massimiliano Sorbello, MD,‖
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Anesth Analg 2019;128-971-80

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- Méta analyse et revue systématique de la littérature
- 37 études randomisées contrôlées dont 15 inclues dans une méta-analyse ; 2045 patients au total
- *Bases de données* : PubMed, BioMed Central, Embase, and the Cochrane Central Register of Clinical Trials
- 5 investigateurs
- Objectif principal : taux de succès et décès
- Objectif secondaire : évènements indésirables majeurs

Critères d'inclusion :

- Intubation vigile sous fibro pour toute chirurgie
- Essais randomisés comparant les différents protocoles entrepris lors d'une intubation vigile sous fibro
- Patients adultes avec IOT difficile prévue

Critères d’exclusion :

- Etudes hors bloc opératoire
- Comparaison intubation vigile fibro VS autre technique
- Simulation

<u>Résultats objectifs principal et secondaire</u> :

- Echec d'intubation 12 / 2045 (0.59%)
- Evènements indésirables sévères 7 / 2045 (0.34%), pas de décès, pas de complications irréversibles
- Pas de différence significative au niveau des taux de réussite avec les différentes sédations (propofol, dexmédétomidine, benzodiazépines, opioïdes, benzodiazépine + opioïdes, sévoflurane)
- Intubation vigile sous fibroscopie = SECURITE

Pour les amateurs du DEXDOR®…

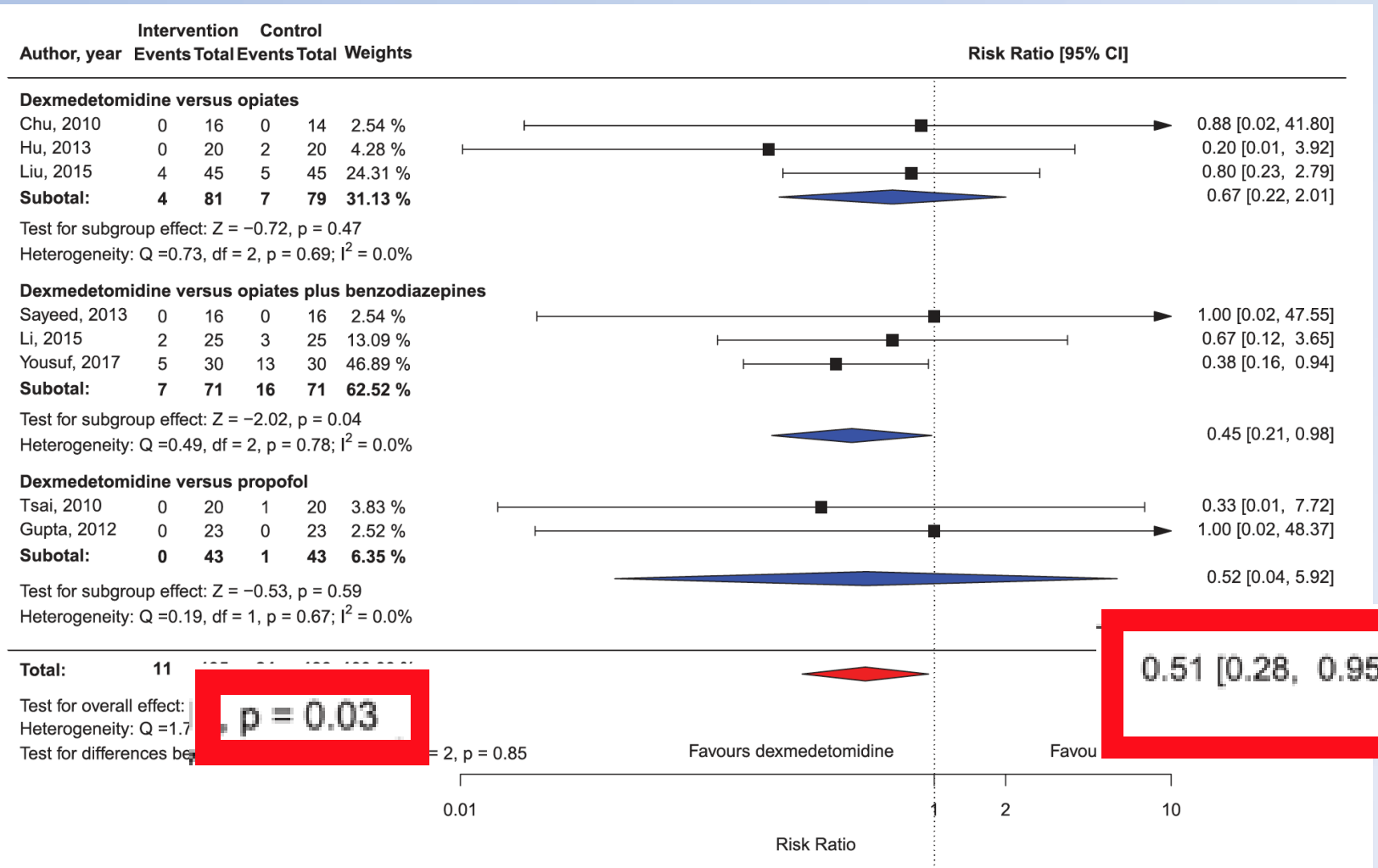

Figure 1. Forest plot for occurrence of desaturation episodes during awake fiberoptic intubation according to sedation protocol. Dexmedetomidine is compared to sedation protocols based on opiates, opiates plus benzodiazepines, or propofol. df indicates degrees of freedom.

Attention tout de même aux épisodes de BRADYCARDIE régulièrement mis en évidence dans les études…

Propofol VS Rémifentanil

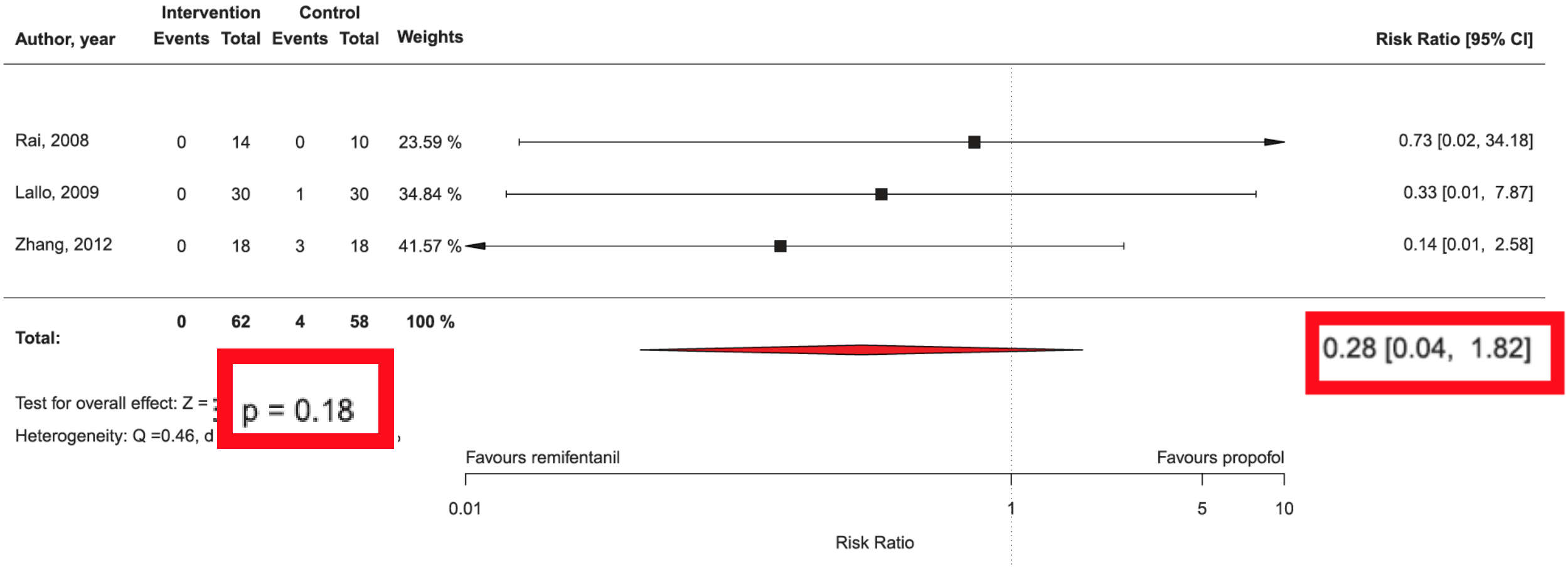

Figure 2. Forest plot for occurrence of desaturation episodes during awake fiberoptic intubation with sedation protocols based on remifentanil versus propofol. df indicates degrees of freedom.

Sevoflurane VS propofol

Moins d'apnée oui mais au prix d'une pollution environementale plus importante..?

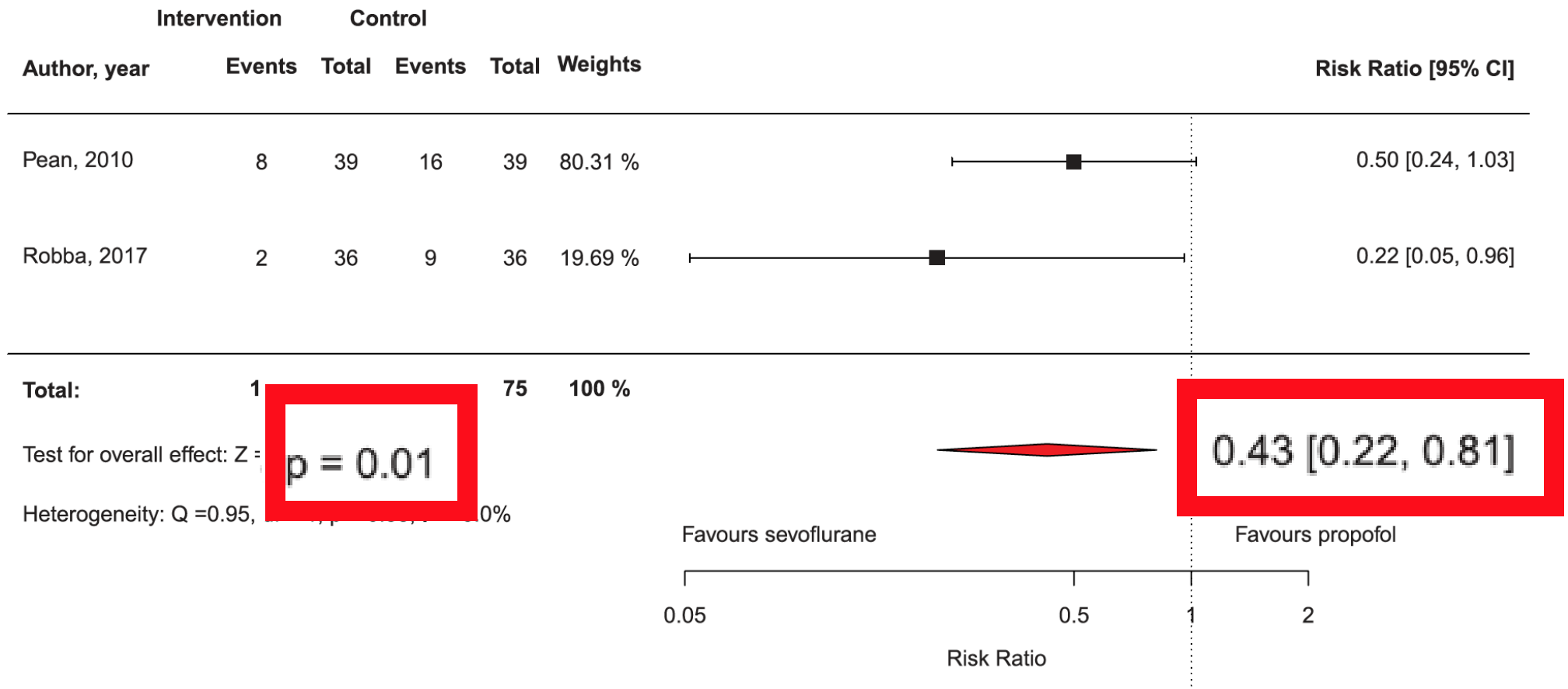

Figure 3. Forest plot for occurrence of apnea episodes during awake fiberoptic intubation with sedation protocols based on sevoflurane versus propofol. df indicates degrees of freedom.

Limites

- Pas de synthèse possible – hétérogénéité trop importante
- Méta-analyse uniquement sur 15 études
- Nécessité d'études prospectives randomisées
- Pas d'étude sur la kétamine (hypnotique régulièrement utilisé dans les sédations vigiles avec conservation d'une VS)

CICO = Can’t intubate, can’t oxygenate

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Improving communication, teamwork, and action during a “cannot intubate cannot oxygenate (CICO)” emergency: employing CICO as a cognitive aid mnemonic

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- Article canadien
- CICO = Situation rare mais dramatique
- Proposition d’aide mnémotechnique
- Améliorer la confiance de l'équipe et la communication

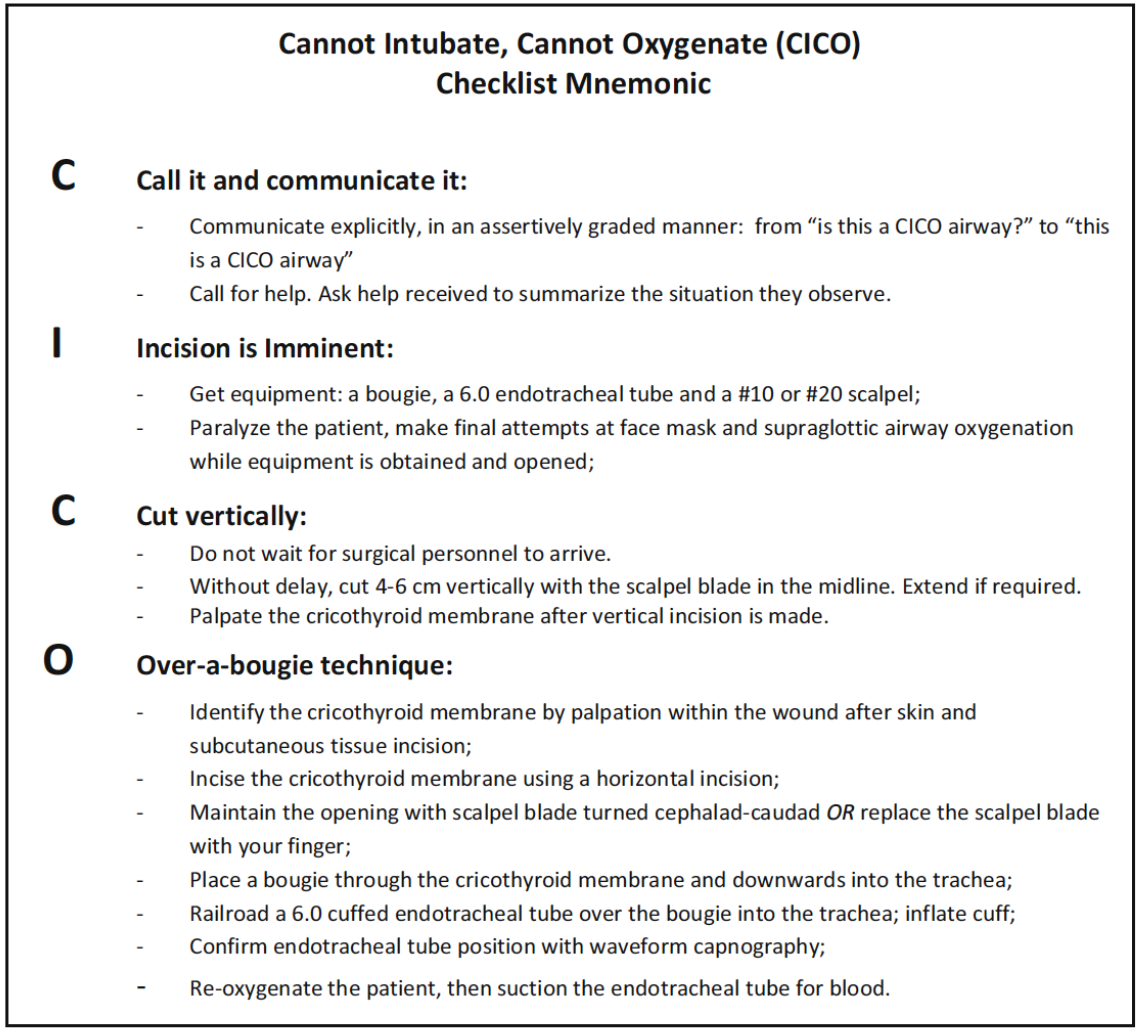
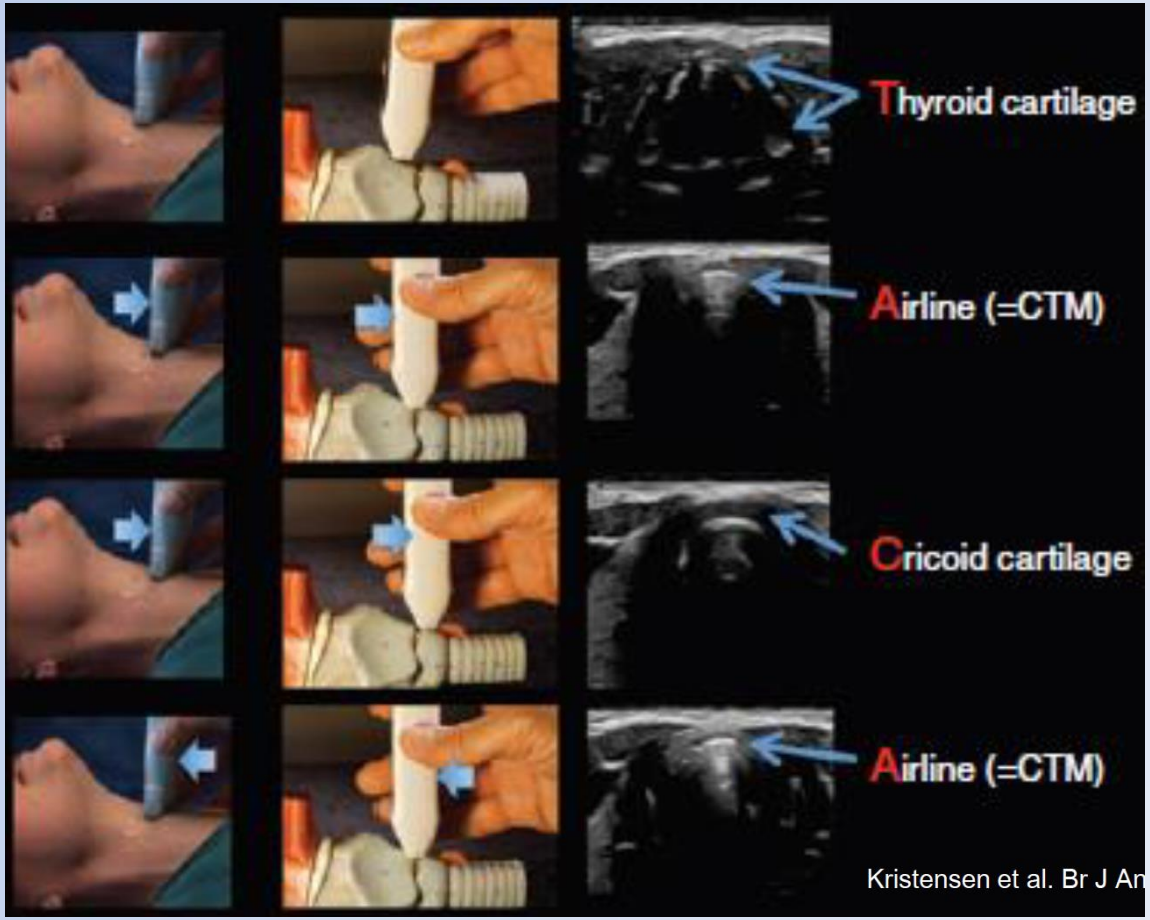


Figure Cannot intubate, cannot oxygenate (CICO) checklist mnemonic
Aide-mémoire mnémotechnique « Impossible d'intuber, impossible d'oxygéner (CICO) »

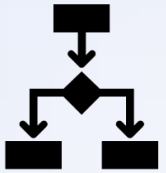
Cricothyroidotomy / ultrasound



III. Conclusion

- Intubation difficile : une réalité qui nous concerne tous
- Anticiper : IDENTIFIER et PLANIFIER
- Gagner du temps : Oxygénation apnéique et matériel en salle
- Faire face aux situations rares : CICO et cricothyroïdotomie

TIME IS LIFE



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KEEP CALM
AND
PREPARE FOR CRICOTHYROIDOTOMY

Questions?