

Supplementary Appendix

Videolaryngoscopy versus fiberoptic bronchoscope for awake intubation

-A systematic review and Meta-analysis of randomised controlled trials

The PubMed search strategy	page 2
Supplementary Table S1	page 3
Supplementary Table S2	page 4
Supplementary Figure S1	page 5
Supplementary Figure S2	page 6
Supplementary Figure S3	page 7
Supplementary Figure S4	page 8
Supplementary Figure S5	page 9
Supplementary Figure S6	page 10

The PubMed search strategy

(awake[Title/Abstract]) AND (((((((((((((((BERCI[Title/Abstract]) OR "Storz DCI"[Title/Abstract]) OR "Venner APA") OR "TruView PCD"[Title/Abstract]) OR "Pentax AWS"[Title/Abstract]) OR "Airway Scope"[Title/Abstract]) OR Airtraq[Title/Abstract]) OR C-MAC[Title/Abstract]) OR Glidescope[Title/Abstract]) OR McGrath[Title/Abstract]) OR "King Vision"[Title/Abstract]) OR (((videolaryngoscope[Title/Abstract]) OR "airway scope"[Title/Abstract]) OR video laryngoscopy[Title/Abstract]) OR videolaryngoscopy[Title/Abstract])) AND (((((((((((groups[Title/Abstract])) OR (trial[Title/Abstract])) OR (randomly[Title/Abstract])) OR (drug therapy[MeSH Subheading])) OR (placebo[Title/Abstract])) OR (randomized[Title/Abstract])) OR (controlled clinical trial[Publication Type])) OR ("Randomized Controlled Trial"[Publication Type])) NOT (((animals[MeSH Terms])) NOT (((animals[MeSH Terms])) AND (humans[MeSH Terms])))) NOT (((("simulation study"[Title/Abstract]) OR "retrospective study"[Title/Abstract]) OR "observational study"[Title/Abstract]) OR cadaver[Title/Abstract]) OR mannequin[Title/Abstract]) OR manikin[Title/Abstract])) NOT (((neonate[Title/Abstract]) OR infant[Title/Abstract]) OR pediatric[Title/Abstract]) OR children[Title/Abstract]))

Table S1 Description of the Risk of Bias for the Six Included Studies.

Domains	Description
Random sequence generation	All six studies clearly described the methods for the generation of randomized sequences, one study had unclear methods for the generation of randomized sequences (Authors of one study was contacted for detailed method of randomization. ²¹).
Allocation concealment	Four studies used nontransparent envelopes or other method to conceal the allocation, ^{17 21-23} two did not conceal the allocation, and the other two did not mention whether allocation concealment was used. ^{16 24}
Blinding of participants, personnel, and outcome assessment	Although no study used blinded method, the authors judged that the outcome would not be likely to be influenced as the patients were under emergent setting and not aware of their grouping and it seemed impossible in most studies.
Incomplete outcome data	One study excluded 9 patients with unbalanced number in two groups which may bias or distort the conclusion of this study. ²³ No missing data was reported in other studies.
Selective reporting	The published studies reported all expected outcomes.
Other bias	The study appeared to be free of other sources of bias.

Table S2 GRADE for all outcomes

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	VL AND FOB	Control	Relative (95% CI)	Absolute		
Overall success rate												
6	RCTs	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	221/222 (99.5%)	223/224 (99.6%)	RR 1 (0.98 to 1.02)	0 fewer per 1000 (from 20 fewer to 20 more)	HIGH	CRITICAL
								100%		0 fewer per 1000 (from 20 fewer to 20 more)		
Overall success rate-nasal												
2	RCTs	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	104/104 (100%)	104/104 (100%)	RR 1 (0.97 to 1.03)	0 fewer per 1000 (from 30 fewer to 30 more)	HIGH	CRITICAL
								100%		0 fewer per 1000 (from 30 fewer to 30 more)		
Overall success rate-oral												
4	RCTs	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	117/118 (99.2%)	119/120 (99.2%)	RR 1 (0.96 to 1.04)	0 fewer per 1000 (from 40 fewer to 40 more)	HIGH	CRITICAL
								100%		0 fewer per 1000 (from 40 fewer to 40 more)		
First-attempt success rate												
4	RCTs	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	98/125 (78.4%)	97/127 (76.4%)	RR 1.03 (0.9 to 1.17)	23 more per 1000 (from 76 fewer to 130 more)	HIGH	IMPORTANT
								76.4%		23 more per 1000 (from 76 fewer to 130 more)		
Duration of intubation (Better indicated by lower values)												
6	RCTs	no serious risk of bias	very serious ¹	no serious indirectness	no serious imprecision	none	192	196	-	MD 40.43 lower (60.98 to 19.88 lower)	LOW	IMPORTANT
Rate of low oxygen saturation (SpO₂<90%)												
5	RCTs	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	none	7/165 (4.2%)	16/168 (9.5%)	RR 0.47 (0.21 to 1.06)	50 fewer per 1000 (from 75 fewer to 6 more)	MODERATE	IMPORTANT
								8%		42 fewer per 1000 (from 63 fewer to 5 more)		
Rate of sore throat												
3	RCTs	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	none	18/83 (21.7%)	18/84 (21.4%)	RR 1.02 (0.59 to 1.77)	4 more per 1000 (from 88 fewer to 165 more)	MODERATE	NOT IMPORTANT
								16%		3 more per 1000 (from 66 fewer to 123 more)		

¹ very high heterogeneity; ² very few studies included.

Abbreviations: RCTs; randomized controlled trials.

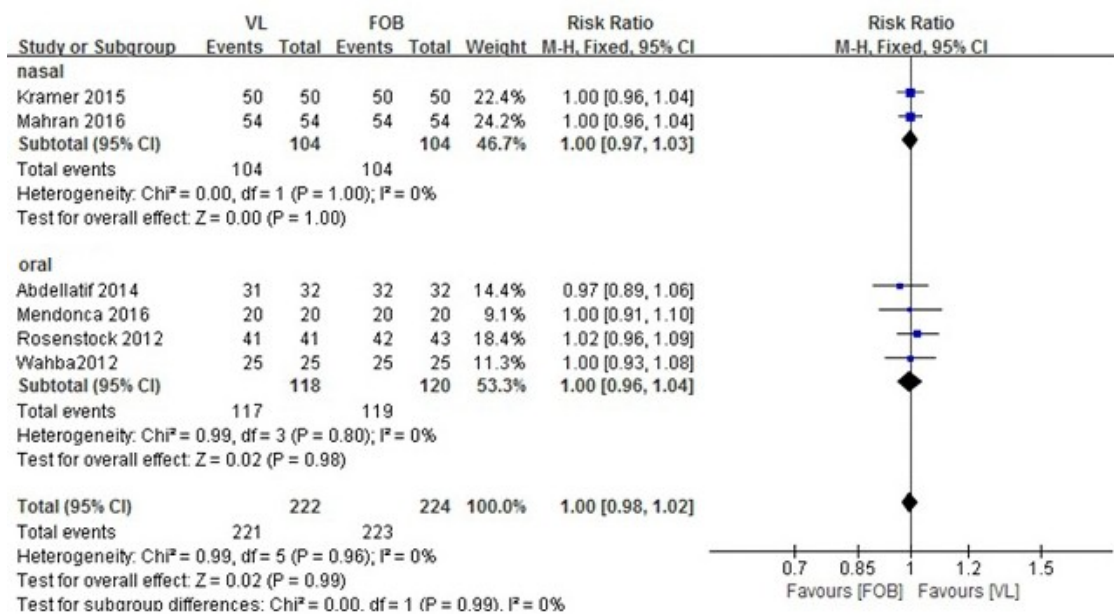


Figure S1 VL vs. FOB for overall success rate based on different way of intubation.

Abbreviations: VL, videolaryngoscopy; FOB, fiberoptic bronchoscope.

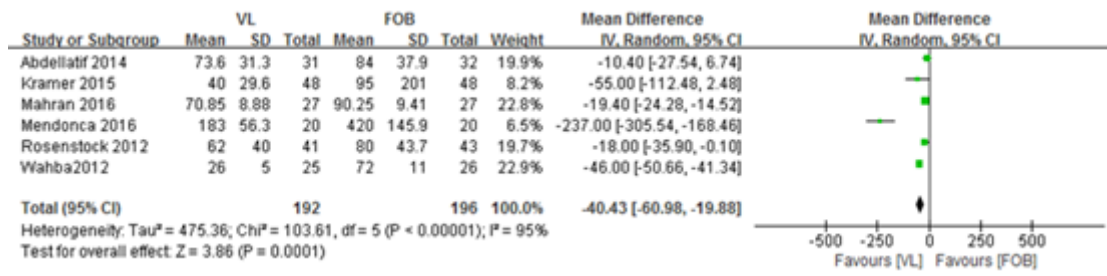


Figure S2 VL vs. FOB for intubation time.

Abbreviations: VL, videolaryngoscopy; FOB, fiberoptic bronchoscope

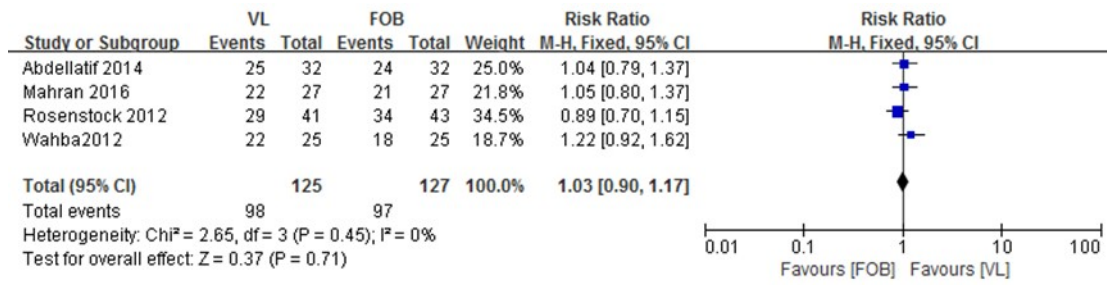


Figure S3 VL vs. FOB for first-attempt success rate.

Abbreviations: VL, videolaryngoscopy; FOB, fiberoptic bronchoscope.

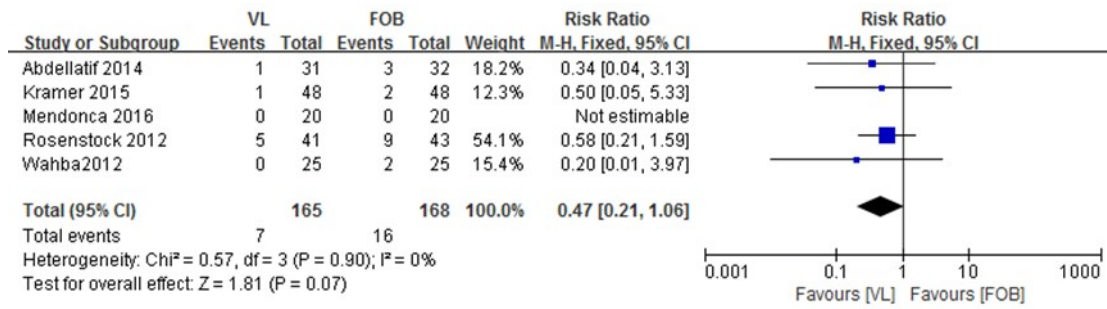


Figure S4 VL vs. FOB for rate of low oxygen saturation ($SpO_2 < 90\%$).

Abbreviations: VL, videolaryngoscopy; FOB, fiberoptic bronchoscope.

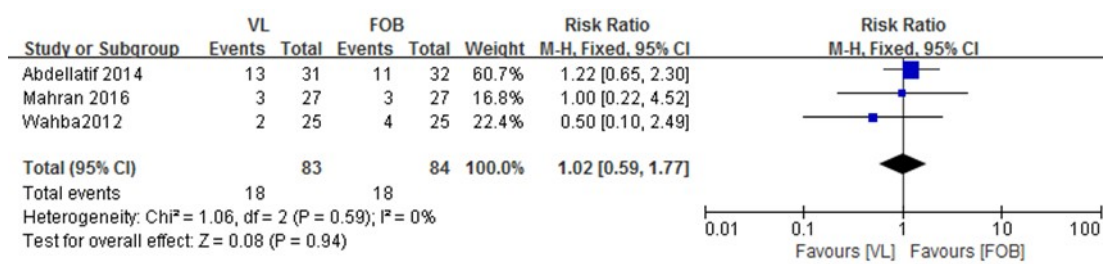


Figure S5 VL vs. FOB for rate of sore throat.

Abbreviations: VL, videolaryngoscopy; FOB, fiberoptic bronchoscope.

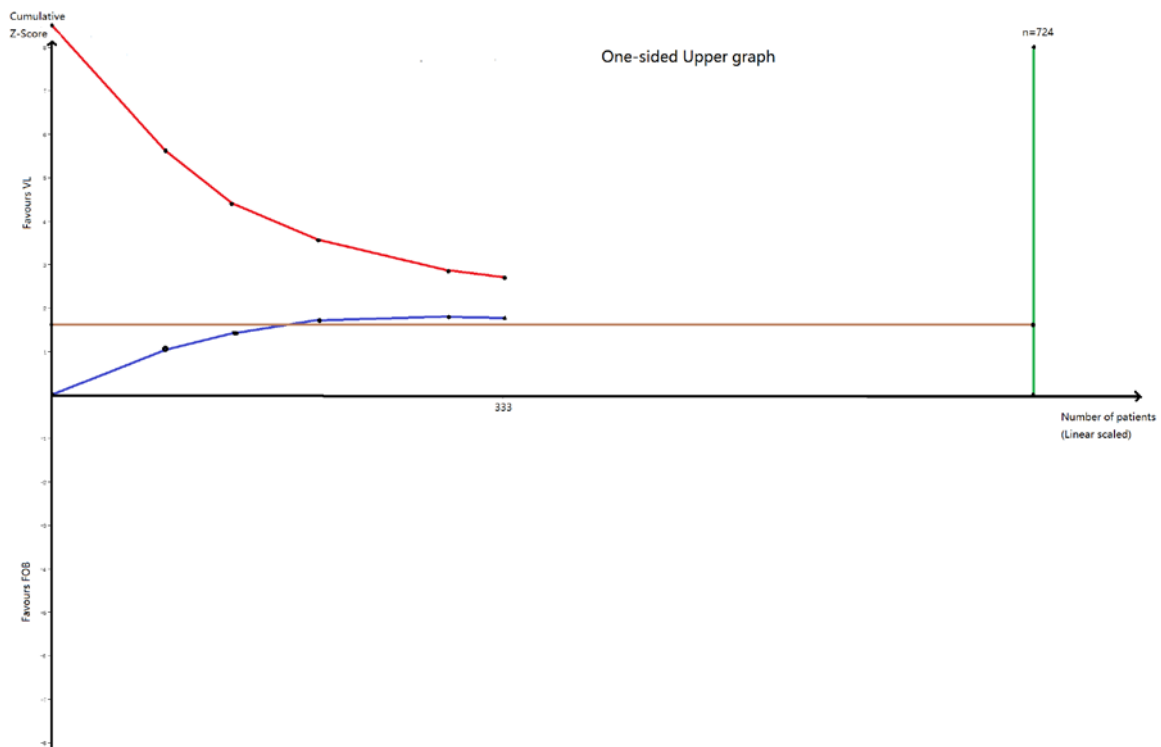


Figure S6: Sequential test sketch in TSA for rate of low oxygen saturation ($SpO_2 < 90\%$). Abbreviations: VL, videolaryngoscopy; FOB, fiberoptic bronchoscope.