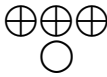


Supplementary File-5. “GRADE” evidence level classification tables for the studies.

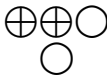
Question: In adult patients undergoing rapid sequence intubation in the emergency department, does the choice of preoxygenation technique (noninvasive mechanical ventilation or conventional techniques) affect the incidence of severe hypoxemia?

Certainty assessment							N° of patients		Effect		Certainty	Importance
N° of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	[Face Mask]	[NIMV]	Relative (95% CI)	Absolute (95% CI)		

Severe Hypoxia

3	randomised trials	not serious	not serious	serious ^a	not serious	none	42/750 (5.6%)	98/765 (12.8%)	OR 0.40 (0.28 to 0.58)	73 fewer per 1.000 (from 89 fewer to 50 fewer)	 Moderate ^a	
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Lowest SPO2

2	randomised trials	not serious	not serious	serious ^a	serious ^b	none	672	682	-	MD 6.76 higher (2.28 lower to 15.81 higher)	 Low ^{a,b}	
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CI: confidence interval; **MD:** mean difference; **OR:** odds ratio

Explanations

- a. A wide confidence interval is present.

Question: Is there a difference in oxygenation success (in terms of the incidence of severe hypoxia) between *HFNO* and *face mask* preoxygenation during rapid sequence intubation in the emergency department?.

Certainty assessment							Nº of patients		Effect		Certainty	Importance
Nº of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	[Face Mask]	[HFNO]	Relative (95% CI)	Absolute (95% CI)		

Severe Hypoxia

1	randomised trials	serious	not serious	not serious	serious ^a	none	7/89 (7.9%)	2/95 (2.1%)	OR 0.25 (0.05 to 1.25)	16 fewer per 1.000 (from 20 fewer to 5 more)	⊕⊕○○ Low ^a	
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Lowest SPO2

1	randomised trials	serious ^a	serious ^b	not serious	serious ^a	none	89	95	-	MD 2 higher (0.69 lower to 4.69 higher)	⊕○○○ Very low ^{a,b}	
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CI: confidence interval; **MD:** mean difference; **OR:** odds ratio

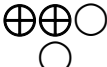
Explanations

- a. A wide confidence interval is present.
- b. There is only one study conducted on this topic.

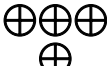
Question: Does the use of a gum elastic bougie during intubation in the emergency department, compared to standard intubation (with or without a stylet), increase first-pass intubation success and affect intubation time?

Certainty assessment							Nº of patients		Effect		Certainty	Importance
Nº of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	[Gum Elastic Bougie]	[standard intubation]	Relative (95% CI)	Absolute (95% CI)		

First-pass intubation success

10	randomised trials	serious	serious ^a	not serious	not serious	none	1113/1283 (86.7%)	1028/1262 (81.5%)	OR 2.34 (1.14 to 4.80)	97 more per 1.000 (from 19 more to 140 more)	 Low ^a	
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Intubation time

8	randomised trials	not serious	not serious	not serious	not serious	none	1292	1279	-	MD 3.7 higher (1.02 higher to 6.38 higher)	 High	
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Question: In adult patients who are hypotensive or at high risk of hypotension in the emergency department, does the administration of a push-dose vasopressor (such as phenylephrine, epinephrine, etc.) in addition to standard treatments during or immediately before rapid sequence intubation reduce the incidence of hypotension and improve clinical outcomes?

Certainty assessment							Nº of patients		Effect		Certainty	Importance
Nº of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	[Push Dose Vasopressor]	[Placebo or infusion vasopressor]	Relative (95% CI)	Absolute (95% CI)		

Systolic Blood Pressure

7	non-randomised studies	very serious	not serious	serious ^a	not serious	none					 Very low ^a	
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Adverse Effect

10	non-randomised studies	very serious ^a	not serious	serious ^a	not serious	none					 Very low ^a	
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CI: confidence interval

Explanations

a. All studies do not have a comparison group.

Question: Is the use of ketamine during rapid sequence intubation in the emergency department a safe option for adult patients who are at risk of increased intracranial pressure?

Certainty assessment							Nº of patients		Effect		Certainty	Importance
Nº of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	[Ketamine]	[Others]	Relative (95% CI)	Absolute (95% CI)		

ICP by using direct catheterization

6	randomised trials	very serious	serious ^a	very serious	serious ^b	none	56	58	-	MD 0.78 lower (1.87 lower to 0.31 higher)	⊕○○○ ○ Very low ^{a,b}	
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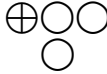
CPP by using direct catheterization

6	randomised trials	very serious	serious ^a	very serious	serious ^b	none	56	58	-	MD 1.07 lower (7.95 lower to 5.8 higher)	⊕○○○ ○ Very low ^{a,b}	
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ICP measurement in LP procedure

2	randomised trials	very serious	not serious	very serious	serious	none					⊕○○○ ○ Very low	
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Poor clinical outcome or ICP increase in observational studies

11	non-randomised studies	very serious	not serious	serious	not serious	none	No study has reported that ketamine use is associated with an extra ICP increase or poor clinical outcome	 Very low	
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CI: confidence interval; **MD:** mean difference

Explanations

- a. Although the I² value was 40% for ICP outcome and 83% for CCP outcome, it was reported that there was no statistically significant difference in the majority of studies in terms of these outcomes.
- b. The confidence intervals of the effect sizes were wide.