

CQ 9-4 成人敗血症患者の人工呼吸管理において高 PEEP 設定を行うか？

検索データベース

- MEDLINE (PubMed/Ovid)
- CENTRAL
- 医学中央雑誌
- その他 ()

検索式とヒット数

PubMed search strategy (検索日 2019 年 5 月 26 日)

#1	("Respiratory Insufficiency"[mesh] OR "Respiratory Insufficiency"[tiab] OR "Positive-Pressure Respiration"[mesh] OR "Positive-Pressure Respiration"[tiab] OR "Ventilators, Mechanical"[mesh] OR "Ventilators, Mechanical"[tiab] OR "Lung Diseases"[mesh] OR "Lung Diseases"[tiab] OR "Respiration Disorders"[mesh] OR "Respiration Disorders"[tiab] OR "positive pressure ventilation"[tiab] OR "continuous positive airway pressure"[tiab] OR "CPAP ventilation"[tiab] OR "biphasic continuous positive airway pressure"[tiab] OR "nasal continuous positive airway pressure"[tiab] OR "bilevel continuous positive airway pressure"[tiab]) AND ("open lung"[tiab] OR "positive end expiratory	1769
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	<p>pressure"[tiab] OR PEEP[tiab]) AND (randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab] NOT (animals [mh] NOT humans [mh]))</p>	
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CENTRAL search strategy (検索日 2019年5月26日)

#1	<p>("Respiratory Insufficiency"[mesh] OR "Respiratory Insufficiency"[tiab] OR "Positive-Pressure Respiration"[mesh] OR "Positive-Pressure Respiration"[tiab] OR "Ventilators, Mechanical"[mesh] OR "Ventilators, Mechanical"[tiab] OR "Lung Diseases"[mesh] OR "Lung Diseases"[tiab] OR "Respiration Disorders"[mesh] OR "Respiration Disorders"[tiab] OR "positive pressure ventilation"[tiab] OR "continuous positive airway pressure"[tiab] OR "CPAP ventilation"[tiab] OR "biphasic continuous positive airway pressure"[tiab] OR "nasal continuous positive airway pressure"[tiab] OR</p>	2267
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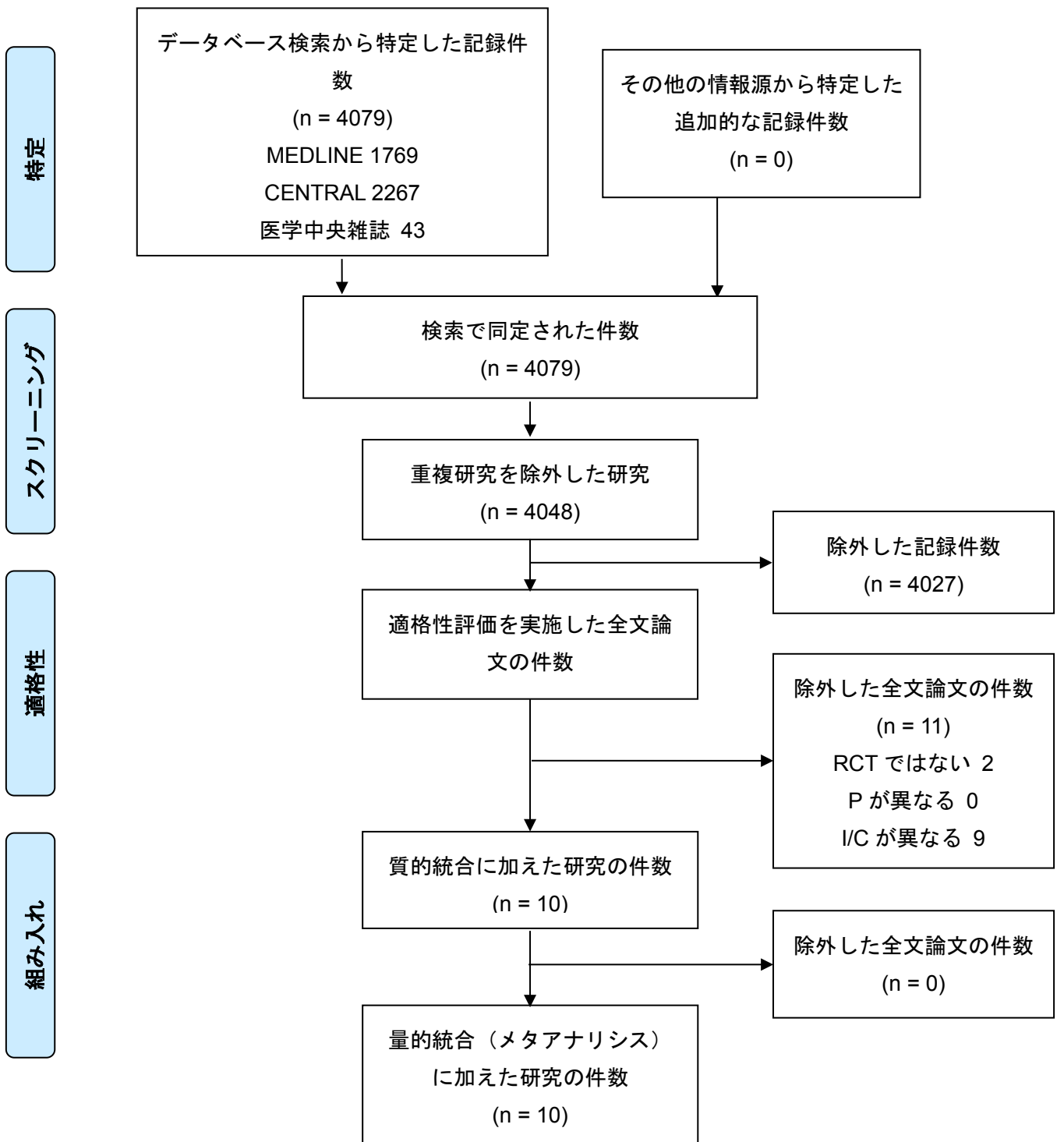
	<p>“bilevel continuous positive airway pressure”[tiab]) AND (“open lung”[tiab] OR “positive end expiratory pressure”[tiab] OR PEEP[tiab]) AND (randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab] NOT (animals [mh] NOT humans [mh]))</p>	
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医学中央雑誌 search strategy(検索日 2019年5月26日)

#1	<p>(((((呼吸不全/TH or 呼吸不全/TA)) and (PT=会議録除く)) or (((陽圧呼吸/TH or 陽圧呼吸/TA)) and (PT=会議録除く)) or (((人工呼吸器/TH or 人工呼吸器/TA)) and (PT=会議録除く)) or (((肺疾患/TH or 肺疾患/TA)) and (PT=会議録除く)) or (((呼吸障害/TH or 呼吸障害/TA)) and (PT=会議録除く))) and (((("open lung"/TA) and (PT=会議録除く)) or ((呼気終末陽圧 /TA) and (PT=会議録除く)) or ((PEEP/TA) and (PT=会議録除 く))) and (ランダム化比較試験/TH or 準ランダム化比較試験 /TH or ランダム化/AL or 無作為化/AL or 比較試験/AL or 臨</p>	43
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	床試験/AL or プラセボ/AL or 対照/AL or コントロール/AL or 臨床研究/AL)	
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PRISMA フロー図



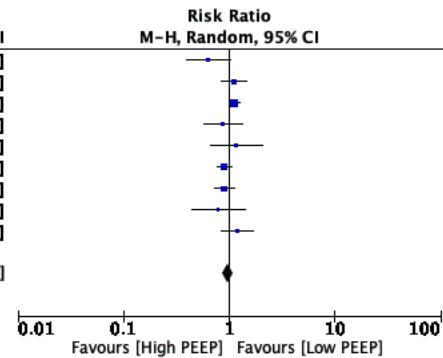
Risk of bias summary

	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Amato 1998	+	+	?	?	+	+	?
Brower 2004	+	+	?	?	+	+	?
Cavalcanti 2017	+	+	-	?	+	+	-
Kacmarek 2016	+	+	?	?	+	+	-
Koutsoukou 2006	?	?	?	?	+	+	?
Manzano 2008	+	+	?	?	+	+	?
Meade 2008	+	+	?	?	+	+	?
Mercat 2008	+	+	-	+	+	+	?
Pepe 1984	+	+	?	?	+	+	?
Villar 2006	+	+	?	?	+	+	?

Forrest plot

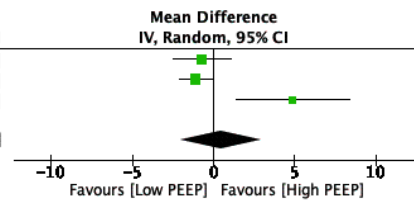
Outcome 1: mortality

Study or Subgroup	High PEEP		Low PEEP		Weight	Risk Ratio M-H, Random, 95% CI
	Events	Total	Events	Total		
Amato 1998	13	29	17	24	5.0%	0.63 [0.39, 1.02]
Brower 2004	76	276	68	273	11.3%	1.11 [0.83, 1.46]
Cavalcanti 2017	277	501	251	509	25.5%	1.12 [1.00, 1.26]
Kacmarek 2016	28	99	33	101	6.2%	0.87 [0.57, 1.32]
Manzano 2008	19	64	16	63	3.7%	1.17 [0.66, 2.06]
Meade 2008	173	475	205	508	21.0%	0.90 [0.77, 1.06]
Mercat 2008	107	385	119	382	15.4%	0.89 [0.72, 1.11]
Pepe 1984	13	44	18	48	3.5%	0.79 [0.44, 1.41]
Villar 2006	32	50	24	45	8.5%	1.20 [0.85, 1.69]
Total (95% CI)	1923		1953		100.0%	0.98 [0.88, 1.10]
Total events	738		751			
Heterogeneity: Tau² = 0.01; Chi² = 12.74, df = 8 (P = 0.12); I² = 37%						
Test for overall effect: Z = 0.29 (P = 0.77)						



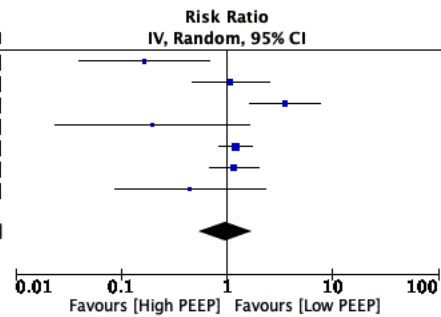
Outcome 2: ventilation free days

Study or Subgroup	High PEEP			Low PEEP			Weight	Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
Brower 2004	13.8	10.6	276	14.5	10.4	273	35.8%	-0.70 [-2.46, 1.06]
Cavalcanti 2017	5.3	8	501	6.4	8.6	509	40.7%	-1.10 [-2.12, -0.08]
Villar 2006	10.9	9.4	50	6	7.9	45	23.4%	4.90 [1.42, 8.38]
Total (95% CI)	827			827			100.0%	0.45 [-2.02, 2.92]
Heterogeneity: Tau² = 3.64; Chi² = 10.51, df = 2 (P = 0.005); I² = 81%								
Test for overall effect: Z = 0.36 (P = 0.72)								



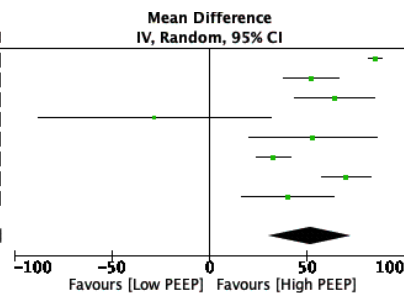
Outcome 3: barotrauma

Study or Subgroup	High PEEP		Low PEEP		Weight	Risk Ratio IV, Random, 95% CI
	Events	Total	Events	Total		
Amato 1998	2	29	10	24	9.9%	0.17 [0.04, 0.68]
Brower 2004	11	276	10	273	16.3%	1.09 [0.47, 2.52]
Cavalcanti 2017	28	501	8	509	17.1%	3.56 [1.64, 7.73]
Manzano 2008	1	64	5	63	5.7%	0.20 [0.02, 1.64]
Meade 2008	53	475	47	508	22.6%	1.21 [0.83, 1.75]
Mercat 2008	26	385	22	382	20.3%	1.17 [0.68, 2.03]
Villar 2006	2	50	4	45	8.1%	0.45 [0.09, 2.34]
Total (95% CI)	1780		1804		100.0%	0.97 [0.55, 1.72]
Total events	123		106			
Heterogeneity: Tau² = 0.34; Chi² = 19.23, df = 6 (P = 0.004); I² = 69%						
Test for overall effect: Z = 0.10 (P = 0.92)						



Outcome 4: P/F ratio

Study or Subgroup	High PEEP			Low PEEP			Weight	Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
Amato 1998	220	7	29	135	6	24	14.7%	85.00 [81.50, 88.50]
Brower 2004	220	89	244	168	66	230	13.9%	52.00 [37.95, 66.05]
Kacmarek 2016	212.5	84.4	90	148.3	54.9	98	12.9%	64.20 [43.65, 84.75]
Koutsoukou 2006	409	65	11	437	74	10	6.7%	-28.00 [-87.83, 31.83]
Manzano 2008	362	101	64	309	86	63	10.9%	53.00 [20.39, 85.61]
Meade 2008	196.8	60.6	337	164.1	63.5	395	14.4%	32.70 [23.70, 41.70]
Mercat 2008	245	98	385	175	81	382	14.0%	70.00 [57.28, 82.72]
Villar 2006	174	61	50	134	57	45	12.4%	40.00 [16.27, 63.73]
Total (95% CI)	1210			1247			100.0%	51.45 [30.55, 72.36]
Heterogeneity: Tau² = 768.89; Chi² = 149.56, df = 7 (P < 0.00001); I² = 95%								
Test for overall effect: Z = 4.82 (P < 0.00001)								



Outcome 5: cardiac insufficiency

