

Supplementary Material

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Supplementary material 1. Search strategies. PUBMED, EMBASE and Cochrane

PUBMED Ovid MEDLINE(R) ALL <1946 to Febrero 5, 2024>		
Nº	Query	Results
#1	intensive care.ti,ab,kw.	198437
#2	critical care/	61628
#3	1 or 2	232460
#4	ards.ti,ab,kw.	20064
#5	respiratory distress syndrome.ti,ab,kw.	36896
#6	4 or 5	42339
#7	artificial ventilation.ti,ab,kw.	3069
#8	mechanical ventilation.ti,ab,kw.	60689
#9	artificial respiration/	57645
#10	7 or 8 or 9	97994
#11	3 and 6	7708
#12	10 and 11	3080
#13	electrical impedance tomograph*.ti,ab,kw.	2304
#14	12 and 13	22
#15	limit 14 to yr="2010 -Current"	20
#16	limit 15 to humans	12

EMBASE		
Nº	Query	Results
1	'intensive care'/exp	932.676
2	respiratory distress syndrome'/exp	108.383
3	#1 AND #2	40.496
4	artificial ventilation':ti,ab,kw	4.918
5	mechanical ventilation':ti,ab,kw	100.350
6	assisted ventilation'/exp	253.963
7	#4 OR #5 OR #6	323.903
8	#3 AND #7	26.275
9	electrical impedance tomograph*':ti,ab,kw	2.952
10	electrical AND impedance AND tomograph	185
11	#9 OR #10	3.049
12	#8 AND #11	394
13	#8 AND #11 AND [humans]/lim	322

COCHRANE		
Nº	Query	Results
1	intensive care:ti,ab,kw	40.981
2	MeSH descriptor: [Critical Care] explode all trees	3.065
3	#1 OR #2	41.502
4	MeSH descriptor: [Respiratory Distress Syndrome] explode all trees	3.564
5	ards:ti,ab,kw	2.739
6	#4 OR #5	5.211
7	#3 AND #6	1.489
8	MeSH descriptor: [Respiration, Artificial] explode all trees	9.352

9	artificial ventilation:ti,ab,kw	10.956
10	mechanical ventilation:ti,ab,kw	14367
11	#8 OR #9 OR #10	23.637
12	#7 AND #11	1015
13	electrical impedance tomograph*:ti,ab,kw	354
14	#12 AND #13	12

Supplementary table 2. Studies excluded after full-text screening: Reasons for exclusion.

Author/ year	Reference	Reason for exclusion
Gibot 2021	Gibot S, Conrad M, Courte G, Cravoisy A. Positive End-Expiratory Pressure Setting in COVID-19-Related Acute Respiratory Distress Syndrome: Comparison Between Electrical Impedance Tomography, PEEP/FiO2 Tables, and Transpulmonary Pressure. <i>Front Med (Lausanne)</i> . 2021;22(8):720920.	Design: case series. No control group. Design pre-test, post-test.
Caetano 2023	Caetano DS, Morais CC, Leite WS, Lins RAC, Medeiros KJ, Cornejo RA, de Andrade AD, Campos SL, Brandão DC. Electrical Impedance Tomographic Mapping of Hypoventilated Lung Areas in Intubated Patients With COVID-19. <i>Respir Care</i> . 2023 Jun;68(6):773-776.	Brief article. No control group. Objective: patterns are compared.
Jonkman 2023	Jonkman AH, Alcala GC, Pavlovsky B, Roca O, Spadaro S, Scaramuzzo G, Chen L, Dianti J, Sousa MLA, Sklar MC, Piraino T, Ge H, Chen GQ, Zhou JX, Li J, Goligher EC, Costa E, Mancebo J, Mauri T, Amato M, Brochard LJ; Pleural Pressure Working Group (PLUG). Lung Recruitment Assessed by Electrical Impedance Tomography (RECRUIT): A Multicenter Study of COVID-19 acute respiratory distress syndrome. <i>Am J Respir Crit Care Med</i> . 2023; 1;208(1):25-38.	No control group. The objective is to measure the range of recruitability, and the effects of PEEP, in order to select the optimal PEEP.
Somhorst 2022	Somhorst P, van der Zee P, Endeman H, Gommers D. PEEP-FiO2 table versus EIT to titrate PEEP in mechanically ventilated patients with COVID-19-related ARDS. <i>Crit Care</i> . 2022 Sep 12;26(1):272.	No control group. The objective is to select the initial PEEP titration.

Supplementary table 3. Reasons for exclusion of studies from the SR of Sangsvorn et al.

Study	Year	Reason for exclusion
Eronia et al	2017	No control group was identified. This was a feasibility study aimed at testing the feasibility of setting PEEP with EIT to prevent lung de-recruitment following a recruitment maneuver.
Heines et al	2019	Clinical implementation study of the EIT, describing the experience in a single center.
Scaramuzzo et al	2020	The objective was to compare the physiologic effects of PEEP guided by EIT versus transpulmonary pressure in patients with ADRS.
Gibot et al	2021	Case series design. No control group was identified.
Becher et al	2021	This study was excluded because the objective differs from the research question and there is no control group.
Di Pierro et al	2022	This analysis was focused on EIT titration performed in patients Covid -ARDS versus No Covid -ARDS undergoing V-V ECMO support
Somhorst et al	2022	The objective is to select the initial PEEP titration and is limited to covid-19 patients.
Liu et al	2022	The population and comparator group do not answer our research question. The objective was to compare the respiratory mechanics in mechanical ventilated ARDS patients with or without COPD.
Jonkman et al	2023	The objective of this study differs from our research question. No data can be extracted from the control group.