

Prevalence and impact on weaning of pleural effusion at the time of liberation from mechanical ventilation: a multicentre prospective observational study

Martin Dres, MD, Damien Roux, MD, PhD, Tâi Pham, MD, Alexandra Beurton, MD, Jean-Damien

Ricard, MD PhD, Muriel Fartoukh, MD, PhD, Alexandre Demoule, MD, PhD

Supplemental Digital Content

Supplemental Digital Content – Tables

Table SDC1: Detailed description of primary and associated diagnoses

Table SDC2: Outcomes according to the measured volume of pleural effusion

Table SDC3: Outcomes according to the presence of large pleural effusion vs. no pleural effusions

Tables

Table SDC1. Detailed description of primary and associated diagnoses

Variables	All patients n=136	None or small PE n=118	Moderate to large PE n=18	p
Demographic data				
Males, <i>n</i> (%)	75 (55)	63 (53)	12 (67)	0.29
Age, <i>years</i>	64 (54-74)	64 (52-73)	64 (58-76)	0.22
Body Mass Index, <i>kg/m²</i>	24 (21-28)	24 (21-29)	23 (22-26)	0.40
Echocardiography findings upon ICU admission*, <i>n</i>				
Left ejection fraction, %	60 (40-60)	57 (40-60)	60 (45-60)	0.24
Left ejection fraction < 45%, <i>n</i> (%)	27 (34)	23 (19)	4 (22)	1.00
Structural cardiopathy, <i>n</i> (%)	26 (19)	23 (34)	3 (23)	0.39
Significant valvular disease, <i>n</i> (%)	21 (15)	18 (27)	3 (23)	0.71
Reason for mechanical ventilation, <i>n</i> (%)				
<i>Acute respiratory failure</i>	69 (51)	63 (53)	6 (33)	0.13
Community acquired pneumonia	45 (33)	41 (35)	4 (22)	
Cardiogenic pulmonary edema	9 (7)	7 (6)	2 (11)	
Hypercapnic acute respiratory failure	15 (11)	15 (11)	0 (0)	
<i>Shock</i>				
Septic/haemorrhagic	31 (23)	23 (19)	8 (44)	0.03
Cardiogenic	6 (4)	6 (4)	0 (0)	
<i>Coma</i>	20 (15)	17 (14)	3 (17)	0.73
<i>Cardiac arrest</i>	2 (1)	2 (1)	0 (0)	1.00
<i>Post-surgery</i>	8 (6)	7 (6)	1 (6)	1.00
Associated diagnosis, <i>n</i> (%)				
Urosepsis	9	6 (5)	3 (17)	0.09
Peritonitis	19	16 (14)	3 (17)	0.72
Meningitis	1	1 (1)	0 (0)	1.00
Post-surgery	23	19 (16)	4 (22)	0.51
Abdominal	17	14 (12)	3 (17)	
Thoracic	4	3 (3)	1 (6)	
Cardiac	2	2 (2)	0 (0)	
Pancreatitis	4	3 (3)	1 (6)	0.44
Sepsis	89	74 (63)	15 (83)	0.11
Ascites	13	9 (8)	4 (22)	0.07
Coma	33	27 (23)	6 (33)	0.38
Neurologic	11	9 (8)	2 (11)	
Hypercapnic	16	14 (12)	2 (11)	
Hepatic	6	4 (3)	2 (11)	

Continuous data are expressed as median (interquartile range) and categorical data are expressed as number of events (percentages).

PE, Pleural effusion; ICU, Intensive care unit.

*Data available for 80 patients upon ICU admission.

Table SDC2. Outcomes according to the measured volume of pleural effusion

Outcomes	PE<500 mL	PE>500 mL	p
	n=109	n=27	
SBT success, <i>n (%)</i>	74 (68)	17 (63)	0.65
SBT failure, <i>n (%)</i>	35 (32)	10 (37)	0.65
Extubation failure, <i>n (%)</i>	11 (10)	1 (4)	0.29
MV duration after SBT, <i>days</i>	0 (0-1)	0 (0-1)	0.96
Total duration of MV, <i>days</i>	7 (3-13)	7 (4-14)	0.73
ICU length of stay, <i>days</i>	11 (6-18)	14 (8-18)	0.27

Continuous data are expressed as median (interquartile range) and categorical data are expressed as number of events (percentages).

PE, pleural effusion; SBT, spontaneous breathing trial; MV, mechanical ventilation; ICU, intensive care unit.

Table SDC3. Outcomes according to the presence of large pleural effusion (vs. None)

Outcomes	None PE	Large PE	p
	n=85	n=6	
SBT success, <i>n (%)</i>	58 (68)	3 (50)	0.39
MV duration after SBT, <i>days</i>	0 (0-1)	2 (0-10)	0.03*
Total duration of MV, <i>days</i>	6 (3-10)	7 (6-24)	0.31
ICU length of stay, <i>days</i>	10 (5-16)	17 (13-39)	0.03*

Continuous data are expressed as median (interquartile range) and categorical data are expressed as number of events (percentages).

PE, pleural effusion; SBT, spontaneous breathing trial; MV, mechanical ventilation; ICU, intensive care unit.

*After exclusion of an outlier (a patient in the large PE group had a duration of ICU stay of 59 days and a total duration of mechanical ventilation of 56 days), difference was no longer significant.