

Supplemental additional data Table S1

Conversion from Venovenous to Venoarterial Extracorporeal Membrane Oxygenation in Adults

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Table S1: Demographic and admission data

Patient group submitted to venovenous extracorporeal membrane oxygenation (ECMO) that were converted to venoarterial ECMO after at least six hours from start of extracorporeal life support. The four patients marked in *italic* were not included in the detailed analyses of RVF and LVF. The indications for conversion in these subjects were unknown (n=2), increased intracranial pressure (n=1), and pulmonary oedema due to a mitral valve prolapse (n=1).

Pat no.	Age years	Sex	BW kg	Diagnosis	Trnsp on ECMO	pH	pCO2 kPa	pO2 kPa	SaO2 %	Hgb g/L	Lact mmol/L	PIP cmH2O	PEEP cmH2O	Vt mL	MAP mmHg	SAPS 3	RESP	SOFA in	SOFA circ	No. vasoactive drugs	VIS	Vasoactive drug/s used
1	19	f	55	ARDS trauma/ postop	yes	7.34	8.3	9.5	94	104	0.6	HFOV	HFOV	HFOV	100	63	-2	9	3	1	90	Nor
2	47	m	85	Oesophagus ca	yes	7.27	12	6.2	70	101	1.1	HFOV	HFOV	HFOV	71	72	-5	12	4	1	10	Nor
3	57	m	96	Pneumoccal pneu	yes	7.37	8.5	6.8	72	146	2.1	42	18	750		66	0	11	4	1	31	Nor
4	57	f	88	Wegener granulomatosis	no	7.47	4.9	7.1	87	107	3	51	10	447	111	61	-7	7	0	0	0	
5	30	f	68	Pneumonia unspec	yes	7.43	6	7.4	90	81	1.7	HFOV	HFOV	HFOV	90	68	-4	9	3	1	4,4	Nor
6	53	m	65	Stone lung, ca	no	7.36	6.6	6.7	84	106	2.3	28	5	570	65	67	-6	13	0	1	12,3	Dopa
7	62	m	74	Trauma bilat fem fract	no	7.18	8.2	3.2	35	144	6.2	37	14	636	68	58	-7	13	3	1	6,3	Nor
8	33	f	73	Aspiration	no	7.34	8.7	6.7	88	120	1.2	44	16	288	74	69	-3	8	0	1		Dobu
9	44	f	58	Amyloidosis, resp fail	yes	7.32	7.5	10.3	88	98	1.3	30	11	341	63	78	-10	10	3	1	9,2	Nor
10	46	f	72	Hypoxemia psot liverTX	yes	7.40	6.1	5.5	71	103	0.9	16	6	600	62	68	1	10	0	0	0	
11	47	m	65	ARDS non-trauma	yes	7.23	15.8	7.0	76	120	2.4	55	12	410	95	92	-3	8	0	0	0	Nor
12	66	m	78	ARDS non-trauma	yes	7.26	6.9	9.8	96	114	2.3	34	16	460	90	79	-5	11	3	1	3	Nor
13	60	m	95	Pneumonia bact	yes	7.11	8.1	4.4	83	110	19	30	7	580		88	-3	12	3	1	13	Nor
14	57	m	80	Pneumonia bact	yes	7.35	5.9	11.4	96	113	2.0	45	20	620	80	82	-3	16	4	1	38	Nor
15	51	m	82	Pneumonia virus	yes	7.32	8	7.3	70	104	2.4	33	20	540	60	60	4	8	3	1	4	Nor
16	27	f	77	Pneumonia virus	yes	7.31	4.6	6.9	65	101	5.6	37	20	400	77	62	6	9	3	1	9,4	Nor
17	57	m	79	Aspiration	yes	7.20	8.8	7.7	88	115	1.1	33	15	480	80	78	1	6	0	0	0	
18	22	m	77	Pneumonia virus	yes	7.23	9.4	7.2	80	120	1.0	48	20	510	87	68	3	11	3	1		Nor
19	49	m	93	Pneumonia virus	yes	7.29	5.2	8.4	86	110	2.2	29	17	700	102	60	3	8	0	0	0	
20	60	m	83	Pneumonia bact	yes	7.23	7.8	5.2	71	118	2.3	31	8	499	78	82	-1	14	3	1	5,6	Nor

21	51	m	65	Aspiration	yes	7.15	8.9	7.6	91	95	8.8	35	20	252	65	74	-3	14	4	1		Nor
22	68	f	50	Pneumonia bact	yes	7.26	7.2	5.3	66	128	3.7	25	14	550	61	74	1	13	4	2	25	Nor, (+Epi boluses)
23	33	m	86	Pneumonia bact	yes	6.97	23.1	11.8	93	115	2.6	51	20	370	81	70	-4	12	4	2	46	Nor, Epi
24	22	m	60	Aspiration	no	6.76	12.5	6.8	69	145	6.3	37	14	330	55	65	-6	13	0	1	15,6	Nor
25	39	f	90	Pneumonia bact	yes	7.32	8.1	15.1	98	98	1.8	HFOV	HFOV	HFOV	83	70	0	8	2	1	1,85	Dobu
26	63	m	120	Pneumonia bact	yes	7.15	8	6.7	78	120	7.3	37	15	864	55	67	0	12	4	1	35	Nor
27	24	m	120	ARDS trauma/ postop	yes	7.42	12.1	7.0	84	98	1.0	38	18	290	70	50	-8	9	3	1	5	Nor
28	19	m	86	Pneumonia bact	yes	7.30	6.6	4.3	61,6	118	4.3	36	12	663	80	72	6	12	4	2	51	Nor, Mil
29	53	m	75	Pneumonia bact	no	7.18	7.3	7.4	86	111	2.4	34	16	390	80	97	1	16	4	1	38	Nor
30	77	m	86	Pneumonia bact	yes	7.39	6.7	6.8	80	105	2.0	28	8	524	60	78	-3	5	0	0	0	
31	74	f	63	Sepsis	no	7.18	7.4	6.9	83	117	4.3	31	14	230	60	100	-7	13	4	1	60	Nor
32	56	m	74	Pneumonia bact	yes	7.40	5.7	7.3	86	126	1.6	28	15		70	60	5	8	3	1	10	Nor
33	32	f	71	Pneumonia virus	yes	7.35	5.2	5.8	77	105	3.1	28	19	470	70	80	-1	14	4	2	53	Nor, (+Epi boluses)
34	64	m	70	Sepsis	yes	7.23	7.6	8.5	74	96		36	12	427	80	80	-4	14	3	1	10	Nor
35	67	m	71	Pneumonia bact	yes	7.47	4.3	4.9	74	99	2.1	28	12	90	85	68	1	12	3	1	43	Nor
36	32	m	95	ARDS non-trauma	yes	7.44	5.4	6.2	84	79	2.2	36	11	690	76	68	-4	11	4	1	11	Nor
37	36	f	50	ARDS non-trauma	yes	7.16	9.3	6.6	82	99	1.4	35	12	300	65	78	-4	13	4	1	12	Nor
38	59	m	76	Pneumonia bact	yes	7.13	8.6	5.4	75	141	3.4	33	12	564	60	83	-8	14	4	2	70	Nor, Epi
39	58	f	70	ARDS non-trauma	yes	7.19	8.3	9.1	88	127	12.7	29	11	280		91	-6	14	4	1	60	Nor
40	78	m	81	Pneumonia bact	yes	7.31	6.9	5.4	75	86	1.8	23	12	500	70	72	1	7	4	1	6,6	Nor
41	68	m	75	Sepsis	yes	7.08	11	8.8	91	123	5.6	32	16	470	65	96	-1	16	4	1	40	Nor
42	47	f	90	Pneumonia bact	yes	7.30	6.9	8.5	86	108	2.0	36	20	564	67	66	4	9	4	2	35	Nor
43	48	f	70	Pneumococcla sepsis	no	7.18	8.1	9.5	84	99	10.2	35	15	395	61	99	3	16	4	1	70	Nor
44	56	m	85	ARDS non-trauma	yes	7.16	8.6	11.1	93	89	0.9	42	10	360	80	82	0	12	4	3	9,3	Nor, (+Epi ?), Mil
45	67	m	74	Pulmonary edema	yes	7.20	5.3	6.0	75	119	2.0	34	14	674	56	74	-2	12	4	1	60	Nor
46	39	f	65	Pneumonia bact	yes	7.33	5.2	7.3	84	111	4.5	36	22	346	55	80	-3	16	4	2	92	Nor, Mil

Abbreviations: ARDS, acute respiratory distress syndrome; bact., bacterial; ca, cancer; fract, skeletal fracture; resp fail, respiratory failure; TX, transplant; f, female; m, male; BW, body weight; Lact, plasma lactate; FiO2, fraction inspired oxygen; PIP, peak inspiratory pressure; PEEP, positive end-expiratory pressure; Vt, tidal volume; HFOV, high frequency oscillation ventilation; MAP, mean arterial blood pressure; Hgb, hemoglobin concentration; SAPS-3, Simplified Acute Physiology Score revision 3; SOFA in, Sequential Organ Failure Assessment score at admission; SOFA circ, SOFA score for circulatory domain; VIS, vasoactive inotropic score; Nor, norepinephrine; Dopa, dopamine; Dobu, dobutamine; Epi, epinephrine; Mil, milrinone

Supplemental additional data Table S2

Conversion from Venovenous to Venoarterial Extracorporeal Membrane Oxygenation in Adults

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Table S2: Data and outcome after conversion from venovenous to venoarterial extracorporeal membrane oxygenation

Variables and findings at time of conversion from venovenous to venoarterial ECMO in 46 patients. The four patients marked in italic were not included in the detailed analyses of RVF and LVF. The indications for conversion in these subjects were unknown

Pat no.	pH	SaO2	Lact	PIP				PEEP	Vt	MAP	SAVE	SOFac	SOFA	SOFA	ECHO	No.	Death on
		SpO2 %	mmol/L	FiO2 %	cmH2O	cmH2O	mL	mmHg	onv	delta		circ	w. RVF	e drugs	VIS	ECMO	
1	7.52	66	0.8	4 L/min oxygen					56	-8	10	1	3	yes	1	6	
2	7.29	97	1.1	40	28	5	68	73	-6	12	0	4	yes	2	10	yes	
3	7.32	53	4.8	60	22	5	278	51	-7	15	4	4	yes	1	14	yes	
4	7.24	89	0.9	50	25	1	242	45	-10	13	6	4	yes	3	15	yes	
5	7.59	77	1.1	50	24	2	18	69	-4	11	2	3	yes	1	1.1	yes	
6	7.53	87	1.1	100	25	4	330	53	-9	11	-2	0	yes	0	0	yes	
7	7.42	94	2.0	60	15	0	320	76	-10	16	3	4	yes	2	14.5	yes	
8	7.43	78	1.2	40	21	5	8	66	-6	8	0	0	yes	0	0		
9	7.41	70	1.4	50	25	4	73	67	-7	14	4	4	yes	3	12		
10	7.27	90	1.1	50	16	3	260	75	-10	13	3	3	yes	2	9		
11	7.40	72	1.3	50	20	1	70	79	-5	14	6	0	yes	1	2	yes	
12	7.45	76	1.7	80	25	9	114	73	-10	14	3	4	yes	1	10	yes	
13	7.39	82	0.7	50	23	10	405	61	-7	12	0	3	yes	2	8	yes	
14	7.31	89	2.0	60	34	14	309	66	-10	16	0	4	no	3	34		
15	7.43	71	1.1	60	21	6	45	77	-3	9	1	0	no	1	Isopr	yes	
16	7.31	73	1.6	50	12	1	41	64	-3	13	4	4	yes	2	83		
17	7.31	80	2.0	60	26	5	86	59	-6	15	9	4	yes	1	32	yes	
18	7.25	58	0.8	100	25	0	100	81	-1	12	1	4	yes	2	28.5		
19	7.41	70	1.4	70	18	1	184	65	-4	17	9	4	yes	1	17		
20	7.28	59	6.3	60	26	8	100	64	-5	15	1	4	no	3	24		
21	7.28	72	7.6	50	20	10	20	58	-9	15	1	4	yes	2	21		
22	7.31	95	4.5	50	28	8	545	70	-12	14	1	4	yes	2	52	yes	
23	7.36	68	1.6	50	24	3	54	75	-13	16	4	3	yes	1	9	yes	
24	7.40	97	7.1	90	23	5	200	54	-4	17	4	4	no	3	61		
25	7.35	72	1.2	50	23	9	49	70	-9	14	6	4	yes	2	21	yes	
26	7.27	87	1.8	100	32	12	418	90	-13	15	3	4	no	1	24		
27	7.41	64	1.7	40	22	6	37	64	-8	15	6	3	yes	1	1	yes	
28	7.39	83	2.3	40	23	5	47	71	-1	13	1	0	no	0	0		
29	7.38	62	2.9	60	30	8	134	55	-10	16	0	4	yes	2	35	yes	
30	7.32	61	6.2	80	33	7	117	90	-16	17	12	4	yes	1	15	yes	
31	7.35	92	8.6	60	27	10	234	68	-20	20	7	4	no	3	92	yes	
32	7.37	81	3.3	70	25	12	391	69	-5	14	6	4	no	1	27		
33	7.44	90	1.7	No ventilation				66	-4	19	5	3	yes	1	5	yes	
34	7.43	87	3.2	60	29	5	122	84	-19	17	3	3	yes	2	16	yes	
35	7.36	82	1.9	60	26	9	419	69	-11	17	5	3	yes	2	15		

36	7.37	76	2.1	80	34	6	200	71	-7	14	3	4	yes	1	14	yes
37	7.42	96	0.7	50	21	5	63	71	-7	14	1	3	yes	1	2	yes
38	7.38	77	1.5	100	28	8	317	63	-11	17	3	4	yes	1	20	yes
39	7.26	90	14.2	60	26	7	357	54	-12	19	5	4	no	2	96	yes
40	7.40	81	4.2	50	20	6	670	55	-14	17	10	4	yes	2	27	yes
41	7.37	82	1.3	50	25	7	134	55	-11	18	2	4	yes	1	13	
42	7.38	82	1.2	80	22	8	165	70	-12	14	5	4	no	1	27	yes
43	7.29	77	6.8	50	25	15	42	64	-7	18	2	4	no	3	24	yes
44	7.39	86	1.4	60	27	7	64	72	-8	12	0	4	yes	2	30	
45	7.39	89	2.8	60	25	10	298	62	-6	17	5	4	no	2	22	
46	7.32	71	3.8	80	28	9	128	63	-10	18	2	4	no	2	38	yes

Abbreviations: Lact, plasma lactate; FiO2, fraction inspired oxygen; PIP, peak inspiratory pressure; PEEP, positive end-expiratory pressure; Vt, tidal volume; MAP, mean arterial blood pressure; Hgb, hemoglobin concentration; SAVE, Survival After Venoarterial ECMO score; SOFA conv, Sequential Organ Failure Assessment score at time of conversion; SOFA delta, difference between SOFA score at admission and SOFA score at conversion (positive digit indicates worsening of organ failures, and *vice versa* ; SOFA-c, SOFA score for circulatory domain; ECHO, echocardiography; VIS, vasoactive inotropic score