

Supplementary Table S2: Detailed clinical characteristics and outcome of transplanted COVID-19 ARDS patients (n=19).

	#1	#2	#3	#4	#5	#6	#7	#8	#9
Age	44	55	54	57	61	54	49	64	56
Gender	female	Male	Male	Male	Male	Male	Male	Male	Male
Length of MV until LTx (days)	52	29	55	57	50	39	41	28	30
Length of ECMO support until LTx (days)	45	23	47	46	43	27	41	17	2
History of septic episodes on ICU	No	No	No	No	No	No	No	No	No
CT findings	bilateral consolidations, signs of lung necrosis	bilateral consolidations, bilateral pneumothoraces, left sided pleural effusion, right-sided traction bronchiectasis	bilateral consolidations, signs of pulmonary embolism, bilateral pleural effusion	bilateral consolidations with pleural effusions	bilateral consolidations, left-sided pleural effusion, right-sided hemorrhage	bilateral pleural effusions, traction bronchiectasis	bilateral consolidations with pleural effusion	bilateral consolidations, multiple aerobronchogram and pleural effusions	bilateral consolidations with aerobronchogram and signs of fibrotic remodeling
Pneumothorax requiring chest tube insertion	No	Yes	No	Yes	No	No	No	No	No
Pulmonary haemorrhage	Yes	Yes	No	Yes	Yes	No	No	No	no
Lung compliance at time of listing (mL/cm H ₂ O)	2.6	9.7	8.3	7.5	6.8	11.1	N/A	0.8	12.4
Reason for failure of native lung recovery	Bilateral large necrotic areas in the parenchyma, nearly complete absence of alveolar ventilation, no clinical improvement despite >6 weeks ECMO support + >7 weeks MV	Recurrent pneumo,- and hemothoraces	Severe pulmonary embolism in combination with multiresistant antimicrobial colonization and no clinical improvement despite >6 weeks ECMO support + >7 weeks MV	Recurrent pneumo,- and hemothoraces , no clinical improvement despite >6 weeks ECMO support + >8 weeks MV	Recurrent hemothoraces, no clinical improvement despite >6 weeks ECMO support + >7 weeks MV	Increasing circulatory and respiratory instability, no clinical improvement despite >3 weeks ECMO support and >5 weeks MV	No clinical and radiological improvement despite >5 weeks ECMO support + MV, continuously increasing pulmonary arterial pressures during ICU stay and evidence of encapsulated pleural effusions	nearly complete absence of alveolar ventilation, increasing hemodynamic instability while fully dependent on ECMO support, fully consolidated lungs with evidence of encapsulated pleural effusions in chest CT	Severe bilateral consolidations and evidence of irreversible fibrotic changes affecting all lobes
Maximum AKI stage during ICU stay	no AKI	3	no AKI	3	no AKI	no AKI	no AKI	no AKI	no AKI
AKI stage at time of listing	no AKI	3	no AKI	3	no AKI	no AKI	no AKI	no AKI	no AKI
Type of LTx	Bilateral, no size reduction	Bilateral, no size reduction	Trilobar (right upper + right lower + left upper lobe)	Bilateral, size-reduced (without middle lobe + lingula)	Bilateral, size-reduced (without middle lobe + lingula)	Bilateral, no size reduction	Bilateral, no size reduction	Bilateral, no size reduction	Bilateral, no size reduction
Postop ECMO prolongation	Yes	no	Yes	No	No	No	No	Yes	No
Time until able to dangle at bedside (days)	24	8	19	18	Not reached	12	5	5	6
Time until able to stand with help (days)	36	25	96	49	Not reached	23	7	20	22
Length of ICU stay	63	55	98	80	Not reached	37	12	32	27
Length of overall hospital stay	108	68	134	Not reached	Not reached	68	54	40	57
Major postoperative complications	hemothorax → revision, CIP, candida encephalitis	CIP, temporary atrial fibrillation, secondary sclerosing cholangitis	reperfusion edema, wound infection, coagulation dysfunction, temporary hemofiltration, CIP, subdural hematoma	CIP, hemothorax → revision, renal replacement therapy, secondary sclerosing cholangitis	CIP, secondary sclerosing cholangitis	CIP, wound infection, temporary renal replacement therapy	CIP, thrombosis of the subclavian and ulnar artery, gastrointestinal hemorrhage	CIP, hemothorax → revision, renal replacement therapy, secondary sclerosing cholangitis	CIP, phrenic nerve lesion palsy → diaphragm plication
Discharged from hospital	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Follow up (days)	450	300	147	154	66	207	189	180	162
Alive / dead (cause of death)	alive	alive	dead (subdural hematoma)	dead (liver failure)	dead (liver failure)	alive	alive	alive	alive

MV= mechanical ventilation; ECMO = extracorporeal membrane oxygenation; ICU = intensive care unit; CT = computed tomography; AKI = acute kidney injury; N/A = not applicable; CIP = critical illness polyneuropathy;

	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19
Age	46	64	58	34	61	56	53	47	62	57
Gender	Female	Male	Male	Female	Male	Male	Male	Male	Male	Male
Length of MV until LTx (days)	52	60	50	46	51	38	76	38	47	82
Length of ECMO support until LTx	52	23	8	45	43	29	66	36	34	59
History of septic episodes on ICU	Yes	No	Yes	No	Yes	No	No	Yes	Yes	No
CT findings	bilateral consolidations with pneumothoraces	bilateral consolidations with signs of fibrotic remodeling affecting all lobes	bilateral consolidations with traction bronchiectasis and pleural effusions	bilateral consolidations with distinct areobronchogram and pleural effusion	bilateral consolidations with pleural effusions, areobronchogram, traction bronchiectasis	bilateral consolidations, traction bronchiectasis, bilateral pleural effusions	bilateral consolidations with areobronchogram	bilateral consolidations, right-sided pneumothorax	bilateral consolidations with pneumothoraces, in situ thrombosis	bilateral consolidations with areobronchogram and pleural effusions, traction bronchiectasis
Pneumothorax requiring chest tube insertion	yes	no	no	No	No	No	Yes	Yes	No	No
Pulmonary haemorrhage	No	no	No	no	No	No	Yes	No	No	no
Lung compliance at time of listing (mL/cm H ₂ O)	6.0	7.9	33.3	4.8	12.6	5.3	N/A	27.9	13.7	8.8
Reason for failure of native lung recovery	Recurrent pneumothoraces, no clinical improvement despite >7 weeks ECMO support + MV	Severe bilateral consolidations and evidence of irreversible fibrotic changes of the lungs, no clinical improvement despite >3 weeks ECMO support and >8 weeks MV	Evidence of severe traction bronchiectasis in combination with encapsulated pleural effusions, prolonged MV >7 weeks + no respiratory improvement on ECMO support	no clinical improvement despite >6 weeks ECMO support + MV	no clinical improvement despite >6 weeks ECMO support + MV	no clinical improvement despite >4 weeks ECMO support + >5 weeks MV	Recurrent pneumo-, and hemothoraces, no clinical improvement despite >9 weeks ECMO support + >10 weeks MV	Recurrent pneumothoraces, no clinical improvement despite >5 weeks ECMO support + MV	no clinical improvement despite >4 weeks ECMO support + >6 weeks MV	no clinical improvement despite >8 weeks ECMO support + >11 weeks MV
Maximum AKI stage during ICU stay	no AKI	3	no AKI	no AKI	no AKI	no AKI	no AKI	no AKI	no AKI	3
AKI stage at time of listing	no AKI	3	no AKI	no AKI	no AKI	no AKI	no AKI	no AKI	no AKI	3
Type of LTx	Bilateral, no size reduction	Bilateral, no size reduction	Bilateral, no size reduction	Bilateral, size-reduced (without middle lobe + lingula)	Bilateral, size-reduced (without middle lobe + lingula)	Bilateral, no size reduction	Bilateral, no size reduction	Bilateral, no size reduction	Bilateral, size-reduced (without middle lobe + lingula)	Bilateral, no size reduction
Postop ECMO prolongation	Yes	No	No	No	Yes	No	Yes	No	No	No
Time until able to dangle at bedside (days)	13	12	7	10	6	8	44	11	10	14
Time until able to stand with help (days)	Not reached	55	20	20	26	16	Not reached	Not reached	15	Not reached
Length of ICU stay	90	Not reached	25	25	27	37	Still admitted	34	30	Still admitted
Length of overall hospital stay	Not reached	Not reached	49	64	Still admitted	50	Still admitted	Not reached	70	Still admitted
Major postoperative complications	CIP, intermittent atrial fibrillation, multiple venous thrombosis, secondary sclerosing cholangitis	CIP, renal insufficiency with replacement therapy required, bacterial pneumonia, secondary sclerosing cholangitis	CIP, jugular vein thrombosis, secondary sclerosing cholangitis, SIADH	CIP, posterior reversible encephalopathy syndrom, secondary sclerosing cholangitis	Pneumothorax → drainage, renal insufficiency, secondary sclerosing cholangitis	right side hemothorax → revision, CIP, temporary renal failure	hemothorax → revision, choledocholithiasis with repeat endoscopic intervention, esophageal perforation, CIP	CIP, secondary sclerosing cholangitis, temporary renal replacement therapy	CIP, abdominal hematoma, wound infection	hemothorax → multiple revisions, wound infection
Discharged from hospital	No	no	Yes	yes	no	yes	No	No	No	no
Follow up (days)	154	111	133	115	105	93	85	65	69	47
Alive / dead (cause of death)	alive	dead (multi-organ failure)	alive	alive	alive	alive	alive	dead (liver failure)	alive	alive

MV= mechanical ventilation; ECMO = extracorporeal membrane oxygenation; ICU = intensive care unit; CT = computed tomography; N/A = not applicable; AKI = acute kidney injury; CIP = critical illness polyneuropathy; SIADH = syndrome of inappropriate antidiuretic hormone secretion