

Table S2 Preoperational imagological, laboratory findings and diagnosis of COVID-19 of the cohort

Variable	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Patient 7	Patient 8	Patient 9	Patient 10	Patient 11	Patient 12	Patient 13
Abnormalities on chest CT	Acute aortic dissection, Stanford A type, suspected pneumonia	Acute aortic dissection, Stanford A type; CAD with PCI, suspected pneumonia	Acute aortic dissection, Stanford A type, suspected pneumonia	Generally normal	Acute aortic dissection, Stanford II type, postoperative changes, suspected pneumonia	Periaortic contrast agent filling (3.3*6.9cm), postoperative changes	Generally normal	Dilated ascending aorta, suspected pneumonia	All cardiac chambers enlargement, suspected pneumonia	Cardiomegaly	Postoperative changes	No CT	No CT
LVEF (%)	65	50	60	65	65	50	77	60	14	20	54	56	60
White blood cell ($\times 10^9$ cells per L)	14.76	12	14.2	16.99	3.36	3.5	10.43	4.62	12.01	9.94	4.65	7.36	26.63
Lymphocyte ($\times 10^9$ cells per L)	0.96	0.8	0.67	0.76	1.2	0.88	2.1	1.65	2.7	2.1	2.04	4.55	7.67
Platelet ($\times 10^9$ cells per L)	41	224	95	157	112	181	322	294	455	164	172	218	327
Procalcitonin (ng/mL)	–	–	–	–	0.24	–	<0.13	<0.13	<0.13	<0.13	–	–	0.31
ALT (U/L)	34	53	772	29	42	15	50	20	21	13	8	47	19
AST (U/L)	44	24	648	48	24	18	22	13	33	13	15	91	56
LDH (U/L)	750	196	1362	186	302	361	184	168	164	324	–	–	509
hsTNI (ng/L)	67.7	11.4	425.0	1.6	4.5	–	23.9	3	5.3	17.4	–	–	–
CK (U/L)	117	66	78	33	65	99	37	100	38	21	–	–	801
CK-MB (ng/mL)	1.1	0.3	1.6	0.8	0.5	0.5	0.3	0.6	0.3	0.3	–	–	14.1
MYO ($\mu\text{g/L}$)	69.4	57.5	–	–	28.8	–	–	–	–	–	–	–	–
Serum creatinine ($\mu\text{mol/L}$)	69.4	121.8	174.1	193.1	78.1	53.3	94.9	72.2	72	117.7	64.7	15.3	57.6
Total bilirubin ($\mu\text{mol/L}$)	37.8	26.5	29.6	78.9	11.2	13.7	9.8	7.5	27.6	13.9	12.9	10.2	135
SARS-CoV-2 quantitative RT-PCR	–	Negative	–	Negative	–	–	–	–	–	Negative	–	–	Negative
Excluded	N	Y	N	Y	N	Y	N	N	N	Y	Y	Y	Y
Suspected	Y	N	Y	N	Y	N	Y	Y	Y	N	N	N	N
Confirmed diagnosed	N	N	N	N	N	N	N	N	N	N	N	N	N

ALT, alanine aminotransferase; ASD, atrial septal defect; AST, aspartate aminotransferase; BAV, bicuspid aortic valve; BNP, brain natriuretic peptide; CK, creatinine kinase; CRP, C-reactive protein; cTGA, corrected transposition of great arteries; LDH, lactose dehydrogenase; LVEF, left ventricular ejection fraction; MYO, myohemoglobin; PDA, patent ductus arteriosus; TNI, troponin I; VSD, ventricular septal defect.

Table S3 Surgery information, complications, and outcomes of the cohort

Variable	Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6	Patient 7	Patient 8	Patient 9	Patient 10	Patient 11	Patient 12	Patient 13
Surgery type	Ascending aorta replacement + total arch replacement +stented elephant trunk implantation	Ascending aorta and total arch replacement + stented elephant trunk implantation + CABG	Bentall + total arch replacement + stented elephant trunk implantation	Bentall + total arch replacement + stented elephant trunk implantation	Bentall + CABG	Aortocoronary fistula repair	AVR + evacuation of paravalvular abscess	opCABG	HTx	HTx	Left atrioventricular valve replacement	VSD repair	Arterial switch operation, PFO closure, PDA suture and cut
Operation date	2020.01.20	2020.01.26	2020.01.27	2020.01.30	2020.1.22	2020.1.21	2020.1.19	2020.1.20	2020.1.19	2020.1.17	2020.1.22	2020.1.21	2020.2.11
Operation time (min)	389	675	450	493	523	300	250	250	294	220	352	95	240
w or w/o CPB	w	w	w	w	W	w	w	w/o	w	w	w	w	w
CPB time (min)	190	454	200	278	178	84	132	–	153	174	64	46	111
Cross-clamp time (min)	127	122	132	158	112	–	108	–	32	29	36	27	60
Mechanical ventilation time (h)	80	277	204	90	20	17	20	11	21	92	22	48	69
ICU stay (d)	7.5	17.5	12	7.5	3	2	2.5	2	7.5	16	2	4	Still in ICU
Drainage time (d)	4	8	3	2.5	1.5	2	2	1	5	1.5	1	1	2
Blood transfusion	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
bacterial infection	CRAB	AB	AB	N	N	N	N	N	N	N	N	N	N
Septic shock	N	N	N	N	N	N	N	N	N	N	N	N	N
ARDS	N	N	N	N	N	N	N	N	N	N	N	N	N
Acute renal failure	N	N	N	N	N	N	N	N	N	N	N	N	N
Pneumothorax	N	N	N	N	N	N	Y	N	N	N	N	N	N
Neurological symptoms	N	Right hemiplegia	N	N	N	N	N	N	N	N	N	N	N
Death	N	N	N	N	N	N	N	N	N	N	N	N	N
Postoperative SARS-CoV-2 quantitative RT-PCR	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative

AB, acinetobacter baumannii; AMB, acute marginal branch; ARDS, acute respiratory distress syndrome; AVR, aortic valve replacement; CABG, coronary artery bypass grafting; CRAB, carbapenem resistant acinetobacter baumannii; CRRT, continuous renal replacement therapy; CPB, cardiopulmonary bypass; HTx, heart transplant; ICU, intensive care unit; LAD, left anterior descending artery; LCX, left circumflex coronary artery; PDA, patent ductus arteriosus; PFO, patent foramen ovale; RA, right coronary artery; SV, saphenous vein; VSD, ventricular septal defect.