

**Supplementary Table 1.** Baseline demographic, clinical, electrocardiographic, and laboratory data

Baseline demographic data				
		COVID (n = 70)	Non-COVID (n = 54)	p-value
Gender	Male	33 (47.1%)	26 (48.1%)	0.944
	Female	37 (52.8%)	28 (51.8%)	
Age, mean (SD)		38.9 (12.4)	36.8 (13.2)	0.164
Possible etiology	COVID-19	70 (100%)	–	
	Idiopathic	–	50 (92.6%)	
	Collagen vascular disease	–	3 (5.6%)	
	Drug-induced	–	1 (1.9%)	
Body mass index, mean (SD)		26.4 (4.8)	25 (3.7)	0.101
Hypertension		11 (15.7%)	6 (11.1%)	0.46
Diabetes mellitus		4 (5.7%)	1 (1.9%)	0.278
Dyslipidemia		3 (4.3%)	2 (3.8%)	0.887
Chronic kidney disease		2 (2.9%)	1 (1.9%)	0.718
Smoking status	Non smoker	58 (82.9%)	39 (72.2%)	0.153
	Ex-smoker	–	2 (3.7%)	
	Smoker	12 (17.1%)	13 (24.1%)	
Heart failure (HF)	No HF	69 (98.6%)	51 (94.4%)	0.197
	HFrEF	1 (1.4%)	3 (5.6%)	
	HFpEF	–	–	
History of stroke	No	69 (98.6%)	53 (98.1%)	0.853
	Ischemic stroke	1 (1.4%)	1 (1.9%)	
	Hemorrhagic stroke	–	–	
Clinical manifestations				
Dyspnea	No	15 (21.4%)	29 (53.7%)	< 0.001
	NYHA class I-II	38 (54.3%)	12 (22.2%)	
	NYHA class III-IV	17 (24.3%)	13 (24.1%)	
Chest pain		48 (68.6%)	41 (75.9%)	0.367
Palpitation		47 (67.1%)	10 (18.5%)	< 0.001
Dizziness		7 (10%)	6 (11.1%)	0.841
Syncope/Presyncope		7 (10%)	2 (3.7%)	0.18
Severe fatigue		38 (54.3%)	19 (35.2%)	0.089
Baseline ECG findings				
Rhythm	Normal sinus	58 (87.9%)	48 (90.6%)	0.769
	Atrial	1 (1.5%)	–	
	Atrial fibrillation	1 (1.5%)	2 (3.8%)	
	Junctional	2 (3%)	1 (1.9%)	
	Ventricular	4 (6.1%)	2 (3.8%)	
Tachycardia		15 (22.7%)	4 (7.5%)	0.032
Premature beats		11 (16.4%)	5 (9.8%)	0.219
AV block	No AVB	62 (93.2%)	52 (98.1%)	0.302
	First degree AVB	1 (1.5%)	1 (1.9%)	
	Second degree AVB	–	–	
	Complete AVB	3 (4.5%)	–	
Prolonged QT interval		9 (13.6%)	5 (9.6%)	0.554

Bundle branch block	7 (10.6%)	6 (11.3%)	0.243
Pathologic Q wave	7 (10.6%)	12 (22.6%)	0.061
Low voltage QRS	2 (3%)	3 (5.8%)	0.449
Significant ST-T change	23 (34.8%)	29 (54.7%)	0.057
Baseline laboratory findings			
Hemoglobin, mean (SD)	13.8 (1.5)	14 (1.5)	0.684
Platelet count, mean (SD)	258 (103)	225 (65)	0.148
White blood cell count, median (IQR)	7500 (6400-9000)	8500 (6800-9900)	0.264
Lymphocyte count, mean (SD)	2892 (1134)	2132 (753)	<b>0.001</b>
Neutrophil count, mean (SD)	4456 (2611)	5812 (2210)	<b>0.037</b>
Erythrocyte sedimentation rate (ESR), mean (SD)	21 (17)	16 (15)	0.359
C-reactive protein (CRP), mean (SD)	27.2 (30.9)	26.3 (26)	0.936
Creatinine, median (IQR)	0.9 (0.8-1.1)	1 (0.9-1.1)	0.747
CPK-MB, mean (SD)	21.3 (34.7)	45.6 (37.2)	0.175
High sensitivity troponin I, median (IQR)*	3200 (30-13000)	1460 (108-11662)	0.961

\*Hs-cTnI >100 considered as positive.

**Supplementary Table 2. CMR findings**

		<b>COVID group (n = 70)</b>	<b>Non-COVID group (n = 54)</b>	<b>RR (95% CI)</b>	<b>p-value</b>
Active myocarditis		55 (78.6%)	54 (100%)		
LA enlargement		9 (12.9%)	18 (33.3%)	0.55 (0.38-0.8)	<b>0.006</b>
RA enlargement		3 (4.3%)	6 (11.1%)	0.62 (0.37-1.04)	0.146
LVEF, median (IQR)		52 (46-59)	44.5 (33-52)		<b>&lt; 0.001</b>
LVEDVi, ml/m <sup>2</sup>		81.2 (69.9-92)	79.5 (68.7-101)		0.906
LVSV, ml		79.1 (19.7)	64.1 (21.6)		<b>&lt; 0.001</b>
LV mass index, g/m <sup>2</sup>		44.1 (38.6-50.7)	53 (43-64)		<b>0.009</b>
Significant LV enlargement		2 (2.9%)	9 (16.7%)	0.48 (0.34-0.69)	<b>0.007</b>
Significant LV systolic dysfunction		14 (20%)	23 (42.6%)	0.57 (0.39-0.63)	<b>0.006</b>
LV wall motion abnormality	No WMA	51 (72.9%)	38 (70.4%)		0.74
	Regional	5 (7.1%)	6 (11.1%)		
	Global	14 (20%)	23 (42.6%)		
RVEF, mean (SD)		58.2 (7.5)	44.7 (10.8)		<b>&lt; 0.001</b>
RVEDVI, mean (SD)		70.1 (15.9)	71.1 (20.4)		0.768
RVSV, mean (SD)		77 (21.1)	59.2 (21.5)		<b>&lt; 0.001</b>
Significant RV enlargement		1 (1.4%)	1 (1.9%)	0.86 (0.21-3.52)	0.853
Significant RV systolic dysfunction		1 (1.4%)	11 (20.4%)	0.41 (0.31-0.56)	<b>&lt; 0.001</b>
RV wall motion abnormality	No WMA	67 (95.7%)	48 (88.9%)		0.126
	Regional	3 (4.3%)	3 (5.6%)		
	Global	–	3 (5.6%)		
Pericardial effusion	No PE	59 (84.3%)	38 (70.4%)		0.17
	Mild	10 (14.3%)	15 (27.8%)		
	Moderate	1 (1.4%)	1 (1.9%)		
	Severe	–	–		
LGE presence		66 (94.3%)	50 (92.6%)	1.16 (0.56-2.39)	0.704
Number of segments with LGE	No segment	4 (5.7%)	4 (7.4%)		<b>0.002</b>
	1-2 segments	10 (14.3%)	19 (35.8%)		
	3-4 segments	19 (27.1%)	20 (37.7%)		
	5-6 segments	17 (24.3%)	6 (11.3%)		
	> 6 segments	20 (28.6%)	4 (7.5%)		
LGE location (based on AHA 17-segment model)	Segment 1	2 (2.9%)	8 (15.1%)	0.49 (0.33-0.73)	<b>0.014</b>
	Segment 2 and/or 3	46 (65.7%)	18 (34%)	2.1 (1.35-3.29)	<b>&lt; 0.001</b>
	Segment 4	44 (62.9%)	12 (22.6%)	2.85 (1.67-4.88)	<b>&lt; 0.001</b>
	Segments 5 and/or 6	51 (72.9%)	28 (52.8%)	1.6 (1.08-2.37)	<b>0.022</b>
	Segment 7	2 (2.9%)	8 (15.1%)	0.49 (0.33-0.73)	<b>0.014</b>
	Segment 8 and/or 9	46 (65.7%)	17 (32.1%)	2.22 (1.41-3.5)	<b>&lt; 0.001</b>
	Segment 10	22 (31.4%)	7 (13.2%)	2.02 (1.03-3.99)	<b>0.018</b>
	Segment 11 and/or 12	28 (40%)	25 (47.2%)	0.84 (0.56-1.27)	0.427
	Segment 13	3 (4.3%)	5 (9.4%)	0.66 (0.37-1.19)	0.252
	Segment 14	0	2 (3.8%)	0.42 (0.34-0.51)	0.101
Segment 15	4 (5.7%)	5 (9.4%)	0.75 (0.4-1.41)	0.433	

	Segment 16	8 (11.4%)	4 (7.5%)	1.32 (0.57-3.02)	0.473
	Segment 17	0	0		
LGE pattern	Subepicardial	50 (71.4%)	41 (75.9%)	0.87 (0.54-1.41)	0.574
	Mid wall	53 (75.7%)	33 (61.1%)	1.44 (0.97-2.13)	0.08
	Subendocardial	0	1 (1.9%)		0.253
	Transmural	0	0		
	Patchy	14 (20%)	0		<b>&lt; 0.001</b>
	Linear	34 (48.6%)	7 (13%)	3.31 (1.64-6.68)	<b>&lt; 0.001</b>
	Diffuse	4 (5.7%)	2 (3.7%)	1.31 (0.41-4.17)	0.605
T2 signal intensity ratio, mean (SD)		1.3 (0.3) *	0.7 (0.3)		<b>&lt; 0.001*</b>
Abnormal STIR/T2 weighted image		43 (78.2%) *	42 (77.8%)		0.959 *

\*The data presented is associated with the exclusion of individuals without active myocarditis in COVID group from the analysis.

**Supplementary Table 3.** Baseline and follow-up echocardiographic findings

		COVID		Non-COVID		Baseline <i>p</i> -value	Follow-up <i>p</i> -value
		Baseline ( <i>n</i> = 69)	F/U ( <i>n</i> = 30)	Baseline ( <i>n</i> = 41)	F/U ( <i>n</i> = 33)		
LVEF, median (IQR)		50 (40-55)	55 (45-55)	45 (35-50)	50 (40-50)	<b>0.022</b>	<b>0.014</b>
Significant LV enlargement		5 (7.2%)	2 (6.7%)	3 (7.3%)	3 (9.1%)	0.989	0.722
LV end diastolic diameter		5 (0.7)	4.9 (0.9)	5 (0.8)	5.1 (0.7)	0.968	0.516
Significant LV systolic dysfunction		18 (26.1%)	6 (20%)	15 (36.6%)	10 (31.2%)	0.245	0.312
Significant LV diastolic dysfunction		6 (8.7%)	1 (3.3%)	2 (5.1%)	1 (3%)	0.497	0.945
LV wall motion abnormality	No WMA	38 (55.1%)	22 (73.3%)	16 (40%)	18 (56.2%)	0.273	<b>0.03</b>
	Regional	12 (17.4%)	5 (16.7%)	12 (27.5%)	3 (6.2%)		
	Global	19 (27.5%)	3 (10%)	13 (32.5%)	12 (37.5%)		
Significant RV enlargement		4 (5.8%)	1 (3.3%)	1 (2.5%)	0	0.428	0.29
Significant RV systolic dysfunction		3 (4.3%)	0	6 (41.6%)	0	0.057	
Pericardial effusion	No PE	59 (85.5%)	28 (93.3%)	36 (87.8%)	33 (100%)	0.732	0.132
	Mild	9 (13%)	2 (6.7%)	5 (12.2%)	0		
	Moderate	1 (1.4%)	0	0	0		
	Severe	0	0	0	0		