

Supplementary Table S1a. Patients not treated with Therapeutic Plasma Exchange (TPE). Distribution of clinical parameters over time, from hospital admission until end of follow-up (hospital discharge or death). Hb=Haemoglobin; BUN= Blood Urea Nitrogen; CRP= C Reactive Protein; LDH= lactate dehydrogenase; CPK= Creatine Phosphokinase; ESR= Erythrocyte Sedimentation Rate; ALT= Alanine Aminotransferase; AST= Aspartate aminotrasferase; CT score= Computerized tomography score; NEWS= New Early Warning Score.

Parameter		Admission (base)	Day 3*	p value	Day 6*	p value	Final*	p value
WBC (10 ⁹ cells /L)	Mean ± SD	9.81 ± 7.04	-0.33 ± 5.66	0.379	10.09 ± 6.61	0.192	1.68 ± 8.23	0.137
	Median (IQ)	7.8 (5.2; 11.2)	0.3 (-1.5; 2.7)		2.2 (-1.4; 5.2)		0.6 (-1.7; -6.3)	
Neutrophils (cells/μL)	Mean ± SD	7,175.09 ± 4.418.85	1,337.17 ± 3,396.98	0.057	2,304;16 ± 3.845.90	0.009	3,167.74 ± 7,094.77	0.034
	Median (IQ)	6.630.0 (4.160.0; 8.415.0)	1,524.5 (3.0; 3029.0)		2,494.0 (-1,195.0; 5,695.0)		47.0 (-1,711.0; 7.650.0)	
Lymphocytes (10 ⁹ cells /L)	Mean ± SD	1,136.73 ± 705.69	-232.90 ± 466.84	<0.001	-53.61 ± 768.57	0.369	159.86 ± 837.88	0.844
	Median (IQ)	957.5 (538.0; 1,576.0)	295.0 (-586.0; 65.0)		107 (-648.5; 458.5)		157.0 (-527.0; 719.0)	
Hb (g/dl)	Mean ± SD	13.47 ± 2.07	-1.41 ± 0.99	<0.001	-1.66 ± 1.97	<0.001	-2.53 ± 2.15	<0.001
	Median (IQ)	13.4 (12.8; 14.4)	-1.4 (-1.8; -0.8)		-1.7 (-2.4; -0.2)		-2.5 (-3.6; -1.1)	
Platelets (10 ⁹ cells /L)	Mean ± SD	202.93 ± 87.00	23.92 ± 70.29	0.051	56.64 ± 129.58	0.014	23.18 ± 148.12	0.208
	Median (IQ)	190.0 (151.0; 211.0)	24.0 (-20.0; 53.0)		34.5 (-16.5; 1.06.0)		12.0 (-93.5; 119.0)	
Creatinine (mg/dL)	Mean ± SD	1.55 ± 1.76	-0.01 ± 0.87	0.483	-0.0 ± 1.3	0.494	0.21 ± 1.08	0.164
	Median (IQ)	1.1 (0.8; 1.6)	-0.1 (-0.3; 0.1)		-0.1 (-0.2; 0.3)		0.0 (-0.3; 0.5)	
BUN (mg/dL)	Mean ± SD	23.63 ± 17.45	3.38 ± 10.92	0.053	7.79 ± 14.30	0.004	12.54 ± 22.74	0.005
	Median (IQ)	17.0 (12.0; 30.0)	-3.0 (-0.1; 6.0)		6.0 (0.0; 19.0)		9.0 (0.0; 24.0)	
CRP (mg/L)	Mean ± SD	36.78 ± 40.47					-30.62 ± 41.15	0.010
	Median (IQ)	22.8 (11.2; 50.0)					-7.6 (-64.5; -2.2)	
LDH (U/L)	Mean ± SD	883.81 ± 349.88					145.18 ± 457.76	0.159
	Median (IQ)	819.0 (712.0; 1,066.0)					182.0 (-98.0; 266.0)	
CPK (Units/L)	Mean ± SD	421.31 ± 593.47					0	NA
	Median (IQ)	170.0 (124.5; 516.0)					0	
ESR (mm/hour)	Mean ± SD	60.07 ± 32.02					-7.20 ± 33.31	0.327
	Median (IQ)	54.0 (34.0; 83.5)					0 (-39.5; 21.5)	
ALT (IU/L)	Mean ± SD	54.74 ± 38.23					3.20 ± 51.50	0.424
	Median (IQ)	45.0 (25.0; 79.0)					20.0 (-38.5; 42.5)	
AST (IU/L))	Mean ± SD	48.48 ± 33.88					7.70 ± 40.52	0.281
	Median (IQ)	37.0 (28.0; 56.0)					2.0 (-7.3; 16.5)	
CT score	Mean ± SD	17.70 ± 3.43					-5.22 ± 7.57	0.005
	Median (IQ)	18.0 (15.0; 21.0)					-5.0 (-10.0; 2.0)	
NEWS score	Mean ± SD	5.57 ± 1.70			1.07 ± 2.09	0.034	0.74 ± 5.77	0.255
	Median (IQ)	6.0 (4.8; 7.0)			-1.0 (-2.8; 1.8)		-2.0 (-4.0; 6.0)	

- Difference between day3 and baseline estimate
- ** Difference between day6 and baseline estimate
- *** Difference between final and baseline estimate

Supplementary Table S1b. Patients treated with Therapeutic Plasma Exchange (TPE). Distribution of clinical parameters over time, from hospital admission until end of follow-up (hospital discharge or death). Hb=Haemoglobin; BUN= Blood Urea Nitrogen; CRP= C Reactive Protein; LDH= lactate dehydrogenase; CPK= Creatine Phosphokinase; ESR= Erythrocyte Sedimentation Rate; ALT= Alanine Aminotransferase; AST= Aspartate aminotransferase; CT score= Computerized tomography score; NEWS= New Early Warning Score.

Parameter		Admission (base)	Day 3*	p value	Day 6**	p value	Final**	p value
WBC (10 ⁹ cells /L)	Mean ± SD	8.85 ± 4.86	3.07 ± 4.35	<0.001	4.49 ± 4.04	<0.001	-2.78 ± 4.94	0.001
	Median (IQ)	7.3 (4.9-12.7)	2.9 (6.1; 0.1)		4.9 (7.3; 1.8)		-3.2 (-7.2; -0.4)	
Neutrophils (cells/μL)	Mean ± SD	7,456.88 ± 4,748.86	2,940.83 ± 4,201.52	<0.001	4,325.24 ± 3,149.85	<0.001	-2,303.06 ± 4,815.53	0.005
	Median (IQ)	5,808 (3,885; 10,528)	3,746.0 (0; 5,118.0)		5,204 (6,490.0; 1,739.0)		-2,879.0 (-6,343.0; 381.0)	
Lymphocytes (10 ⁹ cells /L)	Mean ± SD	1,017.59 ± 643.96	-228.13 ± 823.13	0.064	-96.73 ± 1,074.03	0.325	-272.66 ± 933.57	0.047
	Median (IQ)	802.0 (637.0; 1,234.0)	-111.9 (-527.5; 189.0)		62.0 (-405.0; 700.0;)		306.0 (-252.0; 757.0)	
Hb (g/dl)	Mean ± SD	13.65 ± 2.19	1.23 ± 1.42	<0.001	-2.22 ± 2.30	<0.001	-2.39 ± 2.97	<0.001
	Median (IQ)	13.5 (12.4; 14.7)	-1.5 (-2.3; -0.3)		-1.60 (-3.60; -0.70)		-2.4 (-4.5; -0.8)	
Platelets (10 ⁹ cells /L)	Mean ± SD	211.65 ± 95.97	37.81 ± 71.73	0.003	19.29 ± 108.12	0.158	-7.00 ± 108.88	0.353
	Median (IQ)	199.0 (143.0; 258.0)	36.0 (-16.0; 97.0)		-4.5 (-57.5; 84.5)		1.0 (-56.0; 107.0)	
Creatinine (mg/dL)	Mean ± SD	1.50 ± 2.72	-0.42 ± 2.08	0.154	0.34 ± 2.17	0.231	0.38 ± 2.11	0.286
	Median (IQ)	1 (0.9; 1.1)	0.0 (-1.0; 0.0)		0.10 (-0.10; 0.20)		-0.1 (-0.3; 0.0)	
BUN (mg/dL)	Mean ± SD	19.67 ± 13.48	4.03 ± 9.51	0.015	4.43 ± 13.68	0.043	-4.91 ± 16.74	0.046
	Median (IQ)	16.5 (11.0; 22.0)	4.0 (1.0; 8.0)		-0.1 (-0.2; 0.1)		6.0 (-1.0; 12.0)	
CRP (mg/L)	Mean ± SD	22.31 ± 12.07					-0.38 ± 26.47	0.476
	Median (IQ)	21.1 (15.6; 28.4)					-8.3 (-15.8; 7.1)	
LDH (U/L)	Mean ± SD	785.08 ± 251.14					24.82 ± 1,054.45	0.462
	Median (IQ)	697.0 (606.0; 914.0)					-196.0 (-278.0; -93.0)	
CPK (Units/L)	Mean ± SD	180.23 ± 107.67					-20.71 ± 57.18	0.187
	Median (IQ)	155.5 (99.0; 236.0)					-29.0 (-65.0; 21.0)	
ESR (mm/hour)	Mean ± SD	53.63 ± 30.78					-21.51 ± 40.75	0.035
	Median (IQ)	47.0 (34.0; 70.5)					22.6 (-56.0; 9.0)	
ALT (IU/L)	Mean ± SD	95.26 ± 45.28					-12.39 ± 31.79	0.386
	Median (IQ)	97.5 (71.0; 115.0)					-10.0 (-30.0; 17.0)	
AST (IU/L)	Mean ± SD	47.26 ± 28.57					-4.21 ± 62.61	0.058
	Median (IQ)	41.5 (27.0; 55.0)					-9.0 (-52.0; 24.0)	
CT score	Mean ± SD	17.95 ± 3.82					-10.14 ± 4.53	<0.001
	Median (IQ)	19.0 (16.5; 21.0)					-10.0 (-14.0; -7.0)	
NEWS score	Mean ± SD	5.79 ± 2.22			-1.37 ± 3.21	0.005	2.97 ± 4.91	<0.001
	Median (IQ)	6.0 (4.0; 7.0)			-1.0 (-4.0; 0)		-4.0 (-6.0; -2.0)	

- Difference between day3 and baseline estimate
- ** Difference between day6 and baseline estimate
- *** Difference between final and baseline estimate

Supplementary Table S2. Number and average missing values of biologic parameters over time. NA= not available. WBC= White Blood Cells; Hb=Haemoglobin; BUN=Blood Urea Nitrogen; CRP= C Reactive Protein; LDH= lactate dehydrogenase; CPK= Creatine Phosphokinase; ESR= Erythrocyte Sedimentation Rate; ALT= Alanine Aminotransferase; AST= Aspartate aminotransferase.

PARAMETER	ADMISSION	DAY 3	DAY 6	FINAL	AVERAGE
WBC	0	11	13	6	7.5
Neutrophils	10	21	23	17	17.8
Lymphocytes	2	11	17	7	9.3
Hb	0	11	13	9	8.3
Platelets	2	15	15	8	10.0
Creatinine	1	14	15	11	10.3
BUN	1	14	15	11	10.3
AVERAGE	2.3	13.9	15.9	9.9	10.5
CRP	9	NA	NA	39	24
LDH	10	NA	NA	43	26.5
CPK	27	NA	NA	64	45.5
ESR	5	NA	NA	53	29
ALT	12	NA	NA	43	27.5
AST	12	NA	NA	44	28
AVERAGE	12.5			47.7	30.1