THE LANCET

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplementary Table 1. Demographics and baseline characteristics of patients infected with 2019-nCoV according to corticosteroids therapy

Characteristics	Total N = 41	Corticosteroids N = 9	No Corticosteroids N = 32	P
Fever	40 (97.6)	9 (100.0)	31 (96.9)	0.59
Highest temperature (°C)				0.16
< 37.3	1 (2.4)	0 (0.0)	1 (3.1)	
37.3–38.0	8 (19.5)	4 (44.4)	4 (12.5)	
38.1–39.0	18 (43.9)	2 (22.2)	16 (50.0)	
> 39.0	14 (34.1)	3 (33.3)	11 (34.4)	
Cough	31 (75.6)	6 (66.7)	25 (78.1)	0.49
Sputum production	11 (28.2)	3 (33.3)	8 (26.7)	0.70
Hemoptysis	2 (5.1)	1 (11.1)	1 (3.3)	0.35
Headache	3 (7.9)	0 (0.0)	3 (10.3)	0.31
Shortness of breath	22 (55.0)	6 (66.7)	16 (51.6)	0.42
Muscle pain / Fatigue	18 (43.9)	4 (44.4)	14 (43.8)	0.97
Diarrhea	1 (2.6)	0 (0.0)	1 (3.4)	0.57
Duration from illness onset to dyspnea	8.0 (5.0, 13.0)	9.0 (7.0, 18.0)	7.0 (2.0, 13.0)	0.21
Duration from illness onset to admission	7.0 (4.0, 8.0)	7.0 (7.0, 9.0)	6.5 (4.0, 8.0)	0.44
Duration from illness onset to IMV	10.5 (7.0, 14.0)	10.0 (4.0, 11.0)	17.0 (17.0, 17.0)	0.18

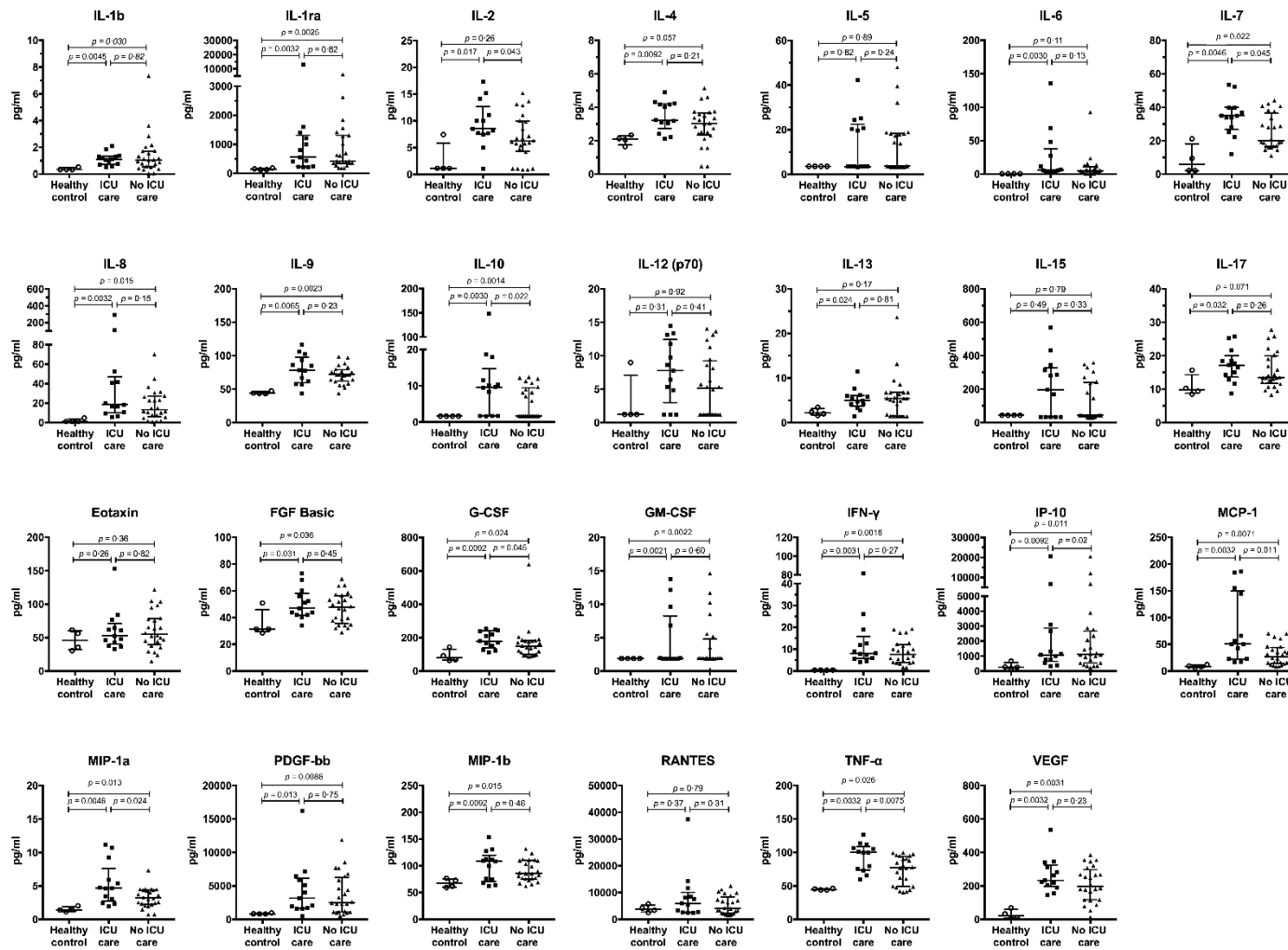| Characteristics	Total N = 41	Corticosteroids N = 9	No Corticosteroids N = 32	P
WBC count ($\times$ 10^9/L)	6.2 (4.1, 10.5)	9.8 (4.5, 12.1)	6.2 (3.8, 10.2)	0.51
$\geqslant$ 1.0	15 (36.6)	2 (22.2)	13 (40.6)	0.30
< 1.0	26 (63.4)	7 (77.8)	19 (59.4)	
Neutrophil count ($\times$ 10^9/L))	5.0 (3.3, 8.9)	6.9 (5.0, 11.8)	4.9 (3.0, 8.4)	0.12
Lymphocyte count ($\times$ 10^9/L))	0.8 (0.6, 1.1)	0.6 (0.2, 0.8)	0.9 (0.6, 1.1)	0.12
$\geqslant$ 100	38 (95.0)	9 (100.0)	29 (93.5)	0.43
< 100	2 (5.0)	0 (0.0)	2 (6.5)	
Hemoglobulin, g/dl	126.0 (118.0, 140.0)	122.0 (111.0, 128.0)	127.5 (119.0, 140.0)	0.31
Platelet count ($\times$ 10^9/L))	164.5 (131.5, 263.0)	179.0 (165.0, 301.0)	158.0 (129.0, 263.0)	0.24
$\leqslant$ 133	37 (90.2)	7 (77.8)	30 (93.8)	0.15
> 133	4 (9.8)	2 (22.2)	2 (6.3)	
Prothrombin time (s)	11.1 (10.1, 12.4)	11.0 (10.3, 20.0)	11.1 (10.1, 12.3)	0.44
APTT (s)	27.0 (24.2, 34.1)	27.8 (21.7, 49.0)	27.0 (24.8, 34.1)	0.96
D-dimer	0.5 (0.3, 1.3)	5.6 (1.2, 14.4)	0.5 (0.3, 0.8)	0.0016
Albumin	31.4 (28.9, 36.0)	27.9 (26.3, 36.2)	32.7 (29.5, 35.9)	0.21
Alanine aminotransferase	32.0 (21.0, 50.0)	49.0 (26.0, 78.0)	30.5 (20.5, 44.0)	0.20
Aspartate aminotransferase	34.0 (26.0, 48.0)	48.0 (40.0, 59.0)	34.0 (24.0, 41.5)	0.061

Characteristics	Total N = 41	Corticosteroids N = 9	No Corticosteroids N = 32	P
⩽ 245	11 (27.5)	0 (0.0)	11 (35.5)	0.0095
> 245	29 (72.5)	9 (100.0)	20 (64.5)	
Total bilirubin	11.7 (9.5, 13.9)	10.9 (9.8, 32.9)	11.8 (9.4, 13.3)	0.34
Potassium (mmol/L)	4.2 (3.8, 4.8)	4.3 (3.8, 4.8)	4.2 (3.8, 4.8)	0.76
Sodium (mmol/L)	139.0 (137.0, 140.0)	138.0 (138.0, 139.0)	139.0 (137.0, 140.0)	0.96
Creatinine (μmol/L)	74.2 (57.5, 85.7)	78.7 (51.7, 106.6)	74.0 (57.5, 85.4)	0.90
⩽ 40	26 (63.4)	3 (33.3)	23 (71.9)	0.037
> 40	15 (36.6)	6 (66.7)	9 (28.1)	
Creatine kinase	132.5 (62.0, 219.0)	379.0 (96.0, 578.0)	106.0 (61.0, 189.0)	0.14
PCT < 0.1	27 (69.2)	5 (62.5)	22 (71.0)	0.20
0.1 ⩽ PCT < 0.25	7 (17.9)	1 (12.5)	6 (19.4)	
0.25 ⩽ PCT < 0.5	2 (5.1)	0 (0.0)	2 (6.5)	
PCT ⩾ 0.5	3 (7.7)	2 (25.0)	1 (3.2)	
Lactate dehydrogenase	286.0 (242.0, 408.0)	400.0 (323.0, 464.0)	281.0 (236.0, 389.0)	0.015
⩽ 185	27 (67.5)	4 (44.4)	23 (74.2)	0.10
> 185	13 (32.5)	5 (55.6)	8 (25.8)	
Troponin I (pg/ml)	3.4 (1.1, 9.1)	3.6 (1.7, 209.0)	3.4 (1.0, 5.7)	0.37

Characteristics	Total N = 41	Corticosteroids N = 9	No Corticosteroids N = 32	P
Troponin I > 28 (pg/ml)	5 (12.2)	3 (33.3)	2 (6.3)	0.046
Procalcitonin (ng/ml)	0.1 (0.1, 0.1)	0.1 (0.1, 0.4)	0.1 (0.1, 0.1)	0.24
Hospitalized	7 (17.1)	0 (0.0)	7 (21.9)	0.010
Discharge	28 (68.3)	5 (55.6)	23 (71.9)	
Death	6 (14.6)	4 (44.4)	2 (6.3)	
Involvement of both lungs	40 (97.6)	9 (100.0)	31 (96.9)	0.59
Days to ICU admission	10.5 (8.0, 17.0)	9.5 (7.0, 18.0)	13.0 (8.0, 16.0)	0.55
ARDS	12 (29.3)	6 (66.7)	6 (18.8)	0.0072
Days to ARDS	9.0 (8.0, 14.0)	8.5 (7.0, 18.0)	12.0 (8.0, 13.0)	0.71
Shock	3 (7.3)	3 (33.3)	0 (0.0)	0.00069
Acute kidney injury	3 (7.3)	3 (33.3)	0 (0.0)	0.00069
CRRT	3 (7.3)	3 (33.3)	0 (0.0)	0.00069
Secondary infection	4 (9.8)	3 (33.3)	1 (3.1)	0.0070
Antiviral	38 (92.7)	8 (88.9)	30 (93.8)	0.62
Antibiotic therapy	41 (100.0)	9 (100.0)	32 (100.0)	NA
respiratory rate > 24/min	12 (29.3)	5 (55.6)	7 (21.9)	0.058
Oxygen support				0.017

Characteristics	Total N = 41	Corticosteroids N = 9	No Corticosteroids N = 32	P
ECMO+IMV	2 (4.9)	1 (11.1)	1 (3.1)	
IMV	2 (4.9)	2 (22.2)	0 (0.0)	
NIMV/HFNC	10 (24.4)	3 (33.3)	7 (21.9)	
Nasal cannula	27 (65.9)	3 (33.3)	24 (75.0)	

Data is presented as numbers (%) or median (IQR). *P* values were calculated by chi-square test, Fisher's exact test, or Mann-Whitney U test, where appropriate.

ICU=intensive care unit, COPD=chronic obstructive pulmonary disease;

Supplementary Figure 1. Plasma level of cytokines and chemokines among healthy controls, ICU patients and non-ICU patients

Comparison of cytokine and chemokine levels among 2019-nCoV ICU patients (n=13), non-ICU patients (n=28), and healthy controls. All plasma samples of patients were from the specimens collected for coronavirus detection in blood. The plasma samples were also collected from 4 healthy adults.

The vertical axes differ for each of the mediators to accommodate the extreme variation in the normal distributed range of cytokine concentrations. Data represent median and interquartile range.

IL = interleukin; FGF = fibroblast growth factors; G-CSF = granulocyte colony-stimulating factor; IFN-γ = interferon γ; IP = induced protein; MCP = monocyte chemoattractant protein; MIP = macrophage inflammatory protein; PDGF = platelet derived growth factor; RANTES = regulated on activation and normally T-cell expressed; TNF-α = tumor necrosis factor α; VEGF = vascular endothelial growth factor.