

Supplementary Table SI. Characteristics of the case-control population

Item	Cases: severe pneumonia patients [N = 370]	Controls [N = 500]	P-value
Age [years]*	69.0 (59.0, 77.0)	68.0 (61.0, 74.0)	0.499
Male/female	223/147	307/193	0.781

*Median [IQR].

Supplementary Table SII. Clinical features of the SCOVID-19 group and non-S-SP group

Variable	SCOVID-19 group	Non-S-SP group	P-value
Age [years]*	70.0 (61.0, 77.0)	68.0 (58.0, 75.0)	0.296
Male/female (patients)	54/41	169/106	0.428
BMI, mean (SD)	24.0 ±3.9	23.5 ±4.3	0.306
CVD [N (%)]	43 (45.2)	99 (36.0)	0.109
Diabetes [N (%)]	13 (13.7)	63 (22.9)	0.406
COPD [N (%)]	9 (9.5)	44 (16.0)	0.117
CKD [N (%)]	13 (13.7)	34 (12.4)	0.739
Neurological disease [N (%)]	7 (7.4)	40 (14.5)	0.070
CLD [N (%)]	5 (5.3)	19 (6.9)	0.574
APACHE II ^a	17.5 ±7.1	18.6 ±7.1	0.188
Respiratory rate [bpm]*	24.0 (20.0, 30.0)	22.0 (20.0, 25.0)	0.007
Thrombotic event [N (%)]	32 (33.7)	56 (15.1)	0.009
IMV time [days]*	10.9 (7.9, 14.8)	7.6 (2.6, 15.0)	0.003
AKI [N (%)]	66 (69.4)	148 (54.8)	0.008
28-day mortality [N (%)]	38 (40.0)	120 (43.6)	0.537

SCOVID-19 – severe coronavirus disease 2019, non-S-SP – SP due to pathogens other than SARS-CoV-2, BMI – body mass index, CVD – cardiovascular disease, COPD – chronic obstructive pulmonary disease, CKD – chronic kidney disease, CLD – chronic liver disease, APACHE II – Acute Physiology and Chronic Health Evaluation, DBP – diastolic blood pressure, IMV – invasive mechanical ventilation, AKI – acute kidney injury; *median [IQR]; ^amean (SD).

Supplementary Table SIII. Haplotype analysis of ADAMTS13 gene SNPs associated with SCOVID-19

Haplotypes	SCOVID-19 [N (%)]	Non-S-SP [N (%)]	OR ^a (95% CI)	P-value ^a
A A C	24.85 (0.131)	53.75 (0.100)	1.316 [0.792–2.186]	0.290
A G C	7.15 (0.038)	6.22 (0.012)	3.254 [1.096–9.659]	0.025
G A T	4.15 (0.022)	18.33 (0.034)	0.615 [0.209–1.809]	0.370
G G T	151.85 (0.799)	439.63 (0.820)	0.748 [0.484–1.156]	0.190

ADAMTS13 – a disintegrin and metalloproteinase with thrombospondin type 1 motif, 13, SNPs – single nucleotide polymorphisms, SCOVID-19 – severe coronavirus disease 2019, non-S-SP – SP due to pathogens other than SARS-CoV-2, OR – odds ratio, CI – confidence interval; ^aadjusted for age and gender.