

Table 1. Demographic and Clinical features

	Total (n=113)	Covid 19 Positive AIS (n=43)	Covid 19 Negative AIS (n=70)	P
Age (Mean±SD)	70.09±12.91	70.56±11.02	69.80±14.02	0.763
NIHSS at admission (Mean±SD)	11.49±7.09	12.51±7.64	10.87±6.71	0.255
	n(%)	n(%)	n(%)	
Sex-Male	76 (67.3 )	33 (76.7 )	43 (61.4 )	0.092
Female	37 (32.7 )	10 (23.3 )	27 (38.6 )	
Hypertension	72 (63.7 )	28 (65.1 )	44 (62.9 )	0.808
Smoking	12 (10.7 )	6 (13.9 )	6 (8.6 )	0.367
Diabetes mellitus	40 (35.4 )	13 (30.2 )	27 (38.6 )	0.368
Hyperlipidemia	43 (38.1 )	14 (32.6 )	29 (41.4 )	0.346
Valvular heart disease	6 (5.3 )	2 (4.7 )	4 (5.7 )	0.807
Atrial Fibrillation	28 (24.7)	8 (18.6 )	20 (27.1)	0.233
Previous stroke	17 (15 )	5 (11.6 )	12 (17.1 )	0.426
<b>Bamford Classification</b>				0.101
Total Anterior Circulation Infarcts (TACI)	28 (24.7 )	10 (23.2)	18 (25.7)	
Partial Anterior Circulation Infarcts (PACI)	29 (25.7)	15 (34.9)	14 (20)	
Posterior Circulation Infarcts (POCI)	40 (35.3)	10 (23.3)	30 (42.9 )	
Lacunar Infarcts	16 (14.2 )	8 (18.6 )	8 (11.4 )	
<b>TOAST Classification</b>				0.520
Large vessel occlusion (LVO)	39 (34.5 )	18 (41.9 )	21 (30 )	
Small vessel disease	14 (12.4 )	6 (14 )	8 (11.4 )	
Cardio-embolic	35 (31 )	12 (27.9 )	23 (32.9 )	
Stroke of Determined Origin	2 (1.8 )	0 (0 )	2 (2.9 )	
Stroke of Undetermined Origin	23 (20.4 )	7 (16.3 )	16 (22.9)	
<b>NIHSS</b>				0.672
Mild (NIHSS 4 or less)	22 (19.5)	8 (18.6)	14(20.0)	
Moderate (NIHSS 5-10)	39 (34.5)	13 (30.2)	26 (37.1)	
Severe (NIHSS > 10)	52 (46)	22 (51.2)	30 (42.9)	
<b>Poor outcome (mRS 3-6)</b>	55 (48.7 )	27 (62.8 )	28 (40.0 )	0.019*
<b>Mortality</b>	25 (22.1 )	15 (34.9 )	10 (14.3 )	0.010*

\*

NIHSS- National Institute of Health Stroke Scale, mRS- Modified Rankin Score. TOAST, Trial of Org 10172 in Acute Stroke Treatment. Significant at 0.05 level; Chi-square test for categorical variables, Student t test for age, Mann whitney u test for NIHSS scores.

Table 2. Comparison of laboratory findings of patients with AIS with and without COVID-19.

<b>Laboratory Findings</b>	Total (n=113)	Covid 19 Positive AIS ( n=43)(Median)	Covid 19 Negative AIS ( n=70) (Median)	P
White blood cell, $\times 10^3/\mu\text{L}$	9.3 [7 -12.4]	8.7 [6.2 -11.8 ]	9.45 [7.5 -12.4 ]	0.093
Neutrophil, $\times 10^3/\mu\text{L}$	6.33 [4.7 -9]	6.9 [4.42 -9.3 ]	6.3 [4.9 -9]	0.552
Lymphocyte , $\times 10^3/\mu\text{L}$	1.43 [0.9 -2.35]	0.9 [0.63 -1.43 ]	1.9 [1.3 -2.54]	0.001*
Monocyte, $\times 10^3/\mu\text{L}$	0.67 [0.46 -0.8]	0.49 [0.4 -0.95 ]	0.7 [0.5 -0.8]	0.041*
Platelet $\times 10^3/\mu\text{L}$	255 [182 -295]	241 [155 -309 ]	257 [206 -289]	0.002*
C reactive protein (CRP), mg/L	13 [3.77 -79]	79.9 [42 -127 ]	5.25 [2.67 -17.2]	0.001*
Ferritin, ng/mL	122.5 [39.5-373]	364 [137.6 -579 ]	42.2 [19.7 -111]	0.001*
Fibrinogen, mg/dL	476.5 [314 -583]	489 [424 -583]	341 [293 -750]	0.343
D-dimer, ng/ml	520 [185 -2780]	1195 [430 -6300]	195 [90 -600]	0.001*
Troponin, ng/mL	10 [4.6 -34 ]	22.45 [8.1 -77.8]	7.8 [3.9 -15.9]	0.001*
Partial Thromboplastin Time (APTT), s	29.35 [23.45-33]	29 [24 -34.1]	29.4 [23.3 -31.6]	0.552
Lactate Dehydrogenase (LDH), U/L	324 [241 -466]	390.5 [316 -565]	271 [206 -380.5]	0.001*
Prothrombin time (PT), s	13.2 [12.1 -14.4]	13.5 [12.4 -15.6 ]	13 [12 -13.8]	0.236
Lymphopenia, (%)	35 (31)	23 (53.5)	12 (17.1)	0.001*
Thrombocytopenia, (%)	13 (11.5)	10 (23.3)	3 (4.3)	0.002*

\*Significant at 0.05 level; Mann whitney u test for numerical variables. Median [25%-75%]

Table 3. Mortality relationship with laboratory parameters in COVID-19-positive patients with AIS

	<b>Mortality</b>		<b>P</b>
	<b>Yes (n=15)</b>	<b>No (n=28)</b>	
<b>Laboratory Findings</b>	<b>Median [25%-75%]</b>	<b>Median [25%-75%]</b>	
White blood cell, $\times 10^3/\mu\text{L}$	8.42 [6.2 -13.93]	9.2 [6.07 -11.4]	0.721

Neutrophil, $\times 10^3/\mu\text{L}$	5.71 [4.23 -8.9]	7.3 [4.55 -9.45]	0.475
Lymphocyte, $\times 10^3/\mu\text{L}$	0.9 [0.53 -1.18]	0.92 [0.64 -1.51]	0.789
Monocyte, $\times 10^3/\mu\text{L}$	0.44 [0.25 -0.77]	0.58 [0.45 -1.01]	0.120
Platelet $\times 10^3/\mu\text{L}$	170 [137 -241]	274.5 [175.5 -317]	0.028*
CRP, mg/L	83 [68 -154]	78.5 [24.5 -124]	0.491
Ferritin, ng/mL	537 [338.9 -745]	321.5 [121.5 -423.25]	0.034*
Fibrinogen, mg/dL	413.5 [234 -583]	518 [441 -574]	0.323
D-dimer, ng/ml	4600 [1610 -7740]	757.35 [415 -2505]	0.027*
Troponin, ng/mL	63.8 [23.8 -200]	14.2 [7.15 -38.45]	0.018*
APTT,s	28.9 [25.9 -33.6]	29.65 [23.65 -34.2]	0.683
LDH, U/L	547.5 [360 -597]	341 [296 -476]	0.063
PT, s	15.1 [12.5 -17.6]	13.35 [12.25 -14.2]	0.185
Lymphopenia, (%)	8 (53.3 )	15 (53.6)	0.988
Thrombocytopenia, (%)	8 (53.3 )	5 (17.9)	0.015*

\*CRP- C Reactive Protein, LDH- Lactate Dehydrogenase, APTT- Partial Thromboplastin Time, PT- Prothrombin time

Table 4. ROC curve analysis results for significant laboratory variables

Variable	AUC $\pm$ SE	P	Cut-off	Sensitivity	95% CI	Specificity	95% CI
Lymphocyte	0.772 $\pm$ 0.05	0.001	$\leq 1.29$	74.42	58.8 - 86.5	75.71	64.0 - 85.2
Monocyte	0.615 $\pm$ 0.06	0.041	$\leq 0.49$	51.16	35.5 - 66.7	81.43	70.3 - 89.7
CRP	0.876 $\pm$ 0.04	0.001	$> 36.8$	76.74	61.4 - 88.2	90.00	80.5 - 95.9
Ferritin	0.858 $\pm$ 0.05	0.001	$> 111$	83.72	69.3 - 93.2	75.56	60.5 - 87.1
D-dimer	0.806 $\pm$ 0.05	0.001	$> 630$	69.77	53.9 - 82.8	77.78	60.8 - 89.9
Troponin	0.717 $\pm$ 0.05	0.001	$> 20$	59.52	43.3-74.4	78.26	66.7 - 87.3
LDH	0.718 $\pm$ 0.05	0.001	$> 294$	80.95	65.9 - 91.4	61.54	47.0 - 74.7

\*CRP- C Reactive Protein, LDH- Lactate Dehydrogenase