



## Letters to the editor

**Reply to :Aminotransferases disorders associated with venous thromboembolic events in patients infected with COVID-19**


Dear Editor,

Zhu et al. published an interesting correspondence [1] regarding the article we published in October 2020 in Annals of Hepatology [2].

We revised our statistics using the same software: for ALT (normal <61IU / L) mean  $57.3 \pm 36.1$  UI/L;  $48.9 \pm 31.5$  in patients without venous thrombo embolism (VTE) event (PNOVTE) versus

$91.5 \pm 71.0$  in patients with VTE (PVTE), p value = 0.059. The p value are the same for the other parameters: D-dimer (in our cohort, only 40 patients/46 had a D-dimer sampling): mean  $2914 \pm 5362$  ng/l:  $1779 \pm 2941$  in PNOVTE versus  $7315 \pm 9550$  in PVTE p = 0.021. For NT-proBNP (39 patients of 46 had a NT-proBNP sampling: mean  $2388 \pm 5361$  pg /mL,  $2879 \pm 5927$  in PNOVTE versus  $2735 \pm 6227$  in PVTE, p = 0.52. For CPK, only 20 patients/46 had a CPK sampling: mean  $124 \pm 83.3$  UI/L,  $134 \pm 83.3$  in PNOVTE versus  $46.5 \pm 19.1$  in PVTE p = 0.079 (Tables 1 and 2). The univariate analysis were estimated with Mann-Whitney test. P values less than 0.05 were considered to indicate statistical significance.

**Table 1**

Descriptive analysis.

	mean (sd)	median [Q25-75]	min	max	n
ALT	57.3 (36.1)	46.5 [28.2; 72.8]	11.0	149	46/46
NT-proBNP	2388 (5361)	362 [128; 1192]	30.0	24514	39/46
CPK	122 (80.0)	116 [62.2; 135]	33.0	328	20/46
D-dimer	2914(5362)	986 [572; 2079]	132	25000	40/46

**Table 2**

Patient characteristics.

VARIABLE	Total 46 patients mean	36 NO VTE mean	10 VTE mean	P value
Age (years)	$67.2 \pm 12.0$	$67.1 \pm 12.1$	$67.6 \pm 12.4$	0.79
F (n,%) M (n,%)	24 (52%) 22 (48%)	20 (56%) 16 (44%)	4 (40%) 6 (60%)	0.48
AST (<37UI/L)	$50.3 \pm 34.1$	$50.4 \pm 34.7$	$50.1 \pm 33.7$	0.94
ALT (<61UI/L)	$57.3 \pm 36.1$	$48.9 \pm 31.5$	$91.5 \pm 71.0$	0.059
Total Biluribin (1 – 17um/L)	$9.90 \pm 4.01$	$10.1 \pm 4.41$	$9.40 \pm 2.84$	1
D-dimer (<500 ng/mL)	$2914 \pm 5362$	$1779 \pm 2941$	$7315 \pm 9550$	0.021
GammaGT (15 – 85 UI/L)	$136 \pm 152$	$128 \pm 155$	$173 \pm 145$	0.41
Alkaline phosphatase (45 – 117 UI/L)	$149 \pm 206$	$159 \pm 230$	$114 \pm 70.7$	0.71
CRP (0 – 3 mg/L)	$83.3 \pm 61.8$	$69.7 \pm 53.1$	$110 \pm 72.8$	0.11
GF >90 ml/min)	$78.6 \pm 30.0$	$78.1 \pm 31.1$	$80.7 \pm 26.5$	1
BMI (kg/m <sup>2</sup> )	$27.9 \pm 4.14$	$27.8 \pm 4.03$	$28.3 \pm 4.74$	0.72
aPTT (0.86 – 1.20)	$1.09 \pm 0.298$	$1.09 \pm 0.236$	$1.10 \pm 0.456$	0.19
NT-proBNP (<194 pg/mL)	$2388 \pm 5361$	$2879 \pm 5927$	$2735 \pm 6227$	0.52
CPK (26 – 192 UI/L)	$124 \pm 83.3$	$134 \pm 83.3$	$46.5 \pm 19.1$	0.079
Hemoglobin (13.5 – 16.9 g/dL)	$12.7 \pm 2.05$	$12.5 \pm 1.87$	$13.2 \pm 2.78$	0.23
LDH (57 – 241 UI/L)	$360 \pm 151$	$361 \pm 159$	$356 \pm 134$	1
Lymphocytes (1.26 – 3.35 × 10.9/L)	$1.28 \pm 1.39$	$1.28 \pm 1.57$	$1.27 \pm 0.475$	0.16
Platelets (166 – 308 × 10.9/L)	$280 \pm 108$	$280 \pm 108$	$301 \pm 87.1$	0.36
WBC (3.91 – 10.9 × 10.9/L)	$7.85 \pm 4.08$	$6.83 \pm 3.52$	$11.2 \pm 4.15$	<0.01
Prothrombin time %	$78.3 \pm 13.9$	$78.3 \pm 15.0$	$78.4 \pm 10.7$	0.91

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Table 2 (Continued)

VARIABLE	Total 46 patients mean	36 NO VTE mean	10 VTE mean	P value
Home ICU Follow-up care Death	8 (18%) 4 (11%) 3(6.5%)	22(63%) 6(17%) 4(11%) 2(8.6%)	7 (70%) 2(20%) 0 (0%) 1(10%)	0.87
Hypertension	25 (54.3%)	22(5.5%)	3(30%)	
Diabetes	7 (15.2%)	7(19.4%)	0(0%)	
Dyslipidemia	11 (24%)	10 (27.8%)	1(10%)	
Digestive symptoms	4 (8.7%)	3 (8.3%)	1 (10%)	
History/liver diseases (n,%)	0 (0%)	0(%)	0(%)	
Smoking	10 (21.7%)	10 (27.8%)	0(0%)	
Lymphopenia	29 (63%)	24(67%)	5(50%)	
Active cancer	0 (0%)	0 (0%)	0 (0%)	
History of cancer (n,%)	3 (6.5%)	3 (8.3%)	0(0%)	
History of VTE (n,%)	3 (6.5%)	2(5.5%)	1(10%)	
Chronic Renal Failure	5 (8.7%)	5 (13.9%)	0(0%)	
Haemodialysis	2(4.3%)	2(5.6%)	0(0%)	
Sleep Apnea Syndrome	6 (13%)	4 (11%)	2(20%)	
Septicaemia	0 (0%)	0 (0%)	0 (0%)	

BMI = Body mass index. CRP = C-reactive protein. LDH = Lactic aciddehydrogenase. ICU = Intensive Care Unit. NT-proBNP = N-terminal prohormone brain natriuretic peptide. aPTT = Activated partial thromblastine time. WBC = White blood cells. CPK = creatine phosphokinase.

### Declaration of funding interests

None.

### Conflict of interest

The authors have no conflict of interest to declare.

### References

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