

Table 1 comparison of baseline characteristics of HBV-ACLF patients with and without SIRS

	SIRS (n=37)	non-SIRS (n=114)	<i>t</i> / χ^2 / <i>Z</i>	<i>P</i>
Male (%)	31 (83.78%)	99 (86.84%)	0.218	0.640
Age (years, $\bar{x} \pm s$)	45.14 $\pm$ 11.66	46.97 $\pm$ 11.44	-0.842	0.401
Laboratory results				
ALB (g /L, $\bar{x} \pm s$)	29.35 $\pm$ 3.97	30.19 $\pm$ 4.50	0.670	0.504
TBIL [μ mol/L, M(P25, P75)]	375.60 (231.20, 517.85)	281.55 (219.60, 386.25)	-2.302	0.021
ALT [U /L, M(P25, P75)]	98.00(58.50, 316.00)	242.00(90.75, 644.75)	-3.070	0.002
AST [U /L, M(P25, P75)]	158.00(118.00,258.50)	228.00(108.00,520.00)	-1.704	0.088
ALP [U /L, M(P25, P75)]	182.50(119.00,223.75)	171.00(140.50,216.50)	-0.099	0.921
GGT [U /L, M(P25, P75)]	83.00(41.75,121.25)	86.00(59.00,122.00)	-0.710	0.478
Cr [μ mol /L, M(P25, P75)]	80.00(64.00,100.50)	80.00(71.00,93.65)	-0.485	0.628
NH3 [μ mol /L, M(P25, P75)]	46.50(30.70,73.10)	43.80(29.38,65.25)	-0.888	0.375
Na [mmol /L, M(P25, P75)]	133.00(130.50,135.50)	135.00(132.00,137.00)	-2.384	0.017
INR [M(P25, P75)]	1.86(1.58,2.36)	1.80(1.62,2.12)	-0.660	0.509
MELD score	24.79 (23.19, 31.14)	24.31 (22.30, 26.93)	-1.454	0.146
LAC [mmol /L, M(P25, P75)]	2.02(1.42,3.22)	1.68(1.45,2.11)	-0.539	0.590
inflammatory indicators				
WBC ($\times 10^9$ /L, $\bar{x} \pm s$)	10.53 $\pm$ 7.88	7.05 $\pm$ 3.01	-2.596	0.013
CRP [mg/L, M(P25, P75)]	12.15(4.70,26.50)	13.37(7.90,19.68)	-0.257	0.797
PCT [ng/mL, M(P25, P75)]	0.77(0.39,1.21)	0.64(0.40,0.91)	-0.189	0.850
Complication				
ascites (%)	33 (89.19%)	95 (83.33%)	0.358	0.550
Hepatic encephalopathy (%)	12 (32.43%)	24 (21.05%)	1.992	0.158
Acute Kidney Injury (%)	13 (35.14%)	32 (28.07%)	0.666	0.414
Upper gastrointestinal hemorrhage (%)	4 (10.81%)	8 (7.02%)	0.153	0.695
Organ failure (EASL)				
Liver	30 (81.19%)	88 (77.19%)	0.247	0.619
Coagulation	6 (16.22%)	14 (12.28%)	0.377	0.539
Cerebral	3 (8.11%)	1 (0.88%)	3.207	0.073
Kidney	2 (5.41%)	2 (1.75%)	0.375	0.540
Lung	0 (0%)	0 (0%)	—	—
Circulation failure	0 (0%)	1 (0.88%)	0.325	0.569

Table 2 comparison of baseline characteristics of HBV-ACLF patients with and without SIRS

	SIRS (n=37)	non-SIRS (n=114)	<i>t</i> / χ^2 / <i>Z</i>	<i>P</i>
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NH3 [μ mol /L, M(P25, P75)]	46.50(30.70,73.10)	43.80(29.38,65.25)	-0.888	0.375
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INR [M(P25, P75)]	1.86(1.58,2.36)	1.80(1.62,2.12)	-0.660	0.509
MELD score	24.79 (23.19, 31.14)	24.31 (22.30, 26.93)	-1.454	0.146
LAC [mmol /L, M(P25, P75)]	2.02(1.42,3.22)	1.68(1.45,2.11)	-0.539	0.590
inflammatory indicators				
WBC ($\times 10^9$ /L, $\bar{x} \pm s$)	10.53 $\pm$ 7.88	7.05 $\pm$ 3.01	-2.596	0.013
CRP [mg/L, M(P25, P75)]	12.15(4.70,26.50)	13.37(7.90,19.68)	-0.257	0.797
PCT [ng/mL, M(P25, P75)]	0.77(0.39,1.21)	0.64(0.40,0.91)	-0.189	0.850
Complication				
ascites (%)	33 (89.19%)	95 (83.33%)	0.358	0.550
Hepatic encephalopathy (%)	12 (32.43%)	24 (21.05%)	1.992	0.158
Acute Kidney Injury (%)	13 (35.14%)	32 (28.07%)	0.666	0.414
Upper gastrointestinal hemorrhage (%)	4 (10.81%)	8 (7.02%)	0.153	0.695
Organ failure (EASL)				
Liver	30 (81.19%)	88 (77.19%)	0.247	0.619
Coagulation	6 (16.22%)	14 (12.28%)	0.377	0.539
Cerebral	3 (8.11%)	1 (0.88%)	3.207	0.073
Kidney	2 (5.41%)	2 (1.75%)	0.375	0.540
Lung	0 (0%)	0 (0%)	—	—
Circulation failure	0 (0%)	1 (0.88%)	0.325	0.569

Table 3 comparison of baseline characteristics of HBV-ACLF patients of 90-day survival and death

	survival group(n=88)	death group (n=63)	<i>t</i> / χ^2 / <i>Z</i>	<i>P</i>
Male (%)	75 (85.23%)	55 (87.30%)	0.132	0.716
Age (years, $\bar{x} \pm s$)	43.48 $\pm$ 11.12	50.76 $\pm$ 10.66	4.037	0.000
Laboratory results				
ALB [g /L, M(P25, P75)]	31.00 (28.75, 33.00)	29.00 (26.25, 32.00)	-1.516	0.129
TBIL (μ mol/L, $\bar{x} \pm s$)	275.75 $\pm$ 119.51	391.45 $\pm$ 145.03	5.362	0.000
ALT [U /L, M(P25, P75)]	117.00 (80.50, 369.25)	142.50 (63.25, 329.50)	-1.351	0.177
AST [U /L, M(P25, P75)]	130.50 (84.50, 239.00)	153.50 (107.25, 351.00)	-0.859	0.391
ALP [U /L, M(P25, P75)]	168.00 (135.50, 200.25)	166.00 (116.00, 221.50)	-0.573	0.566
GGT [U /L, M(P25, P75)]	88.50 (73.75, 121.25)	62.00 (44.50, 104.75)	-1.344	0.179
Cr [μ mol /L, M(P25, P75)]	78.50 (68.00, 91.25)	80.50 (72.25, 106.75)	-1.868	0.062
NH3 (μ mol /L, $\bar{x} \pm s$)	43.70 $\pm$ 22.74	62.14 $\pm$ 37.92	3.724	0.000
Na [mmol /L, M(P25, P75)]	133.50 (131.00, 136.25)	134.00 (130.25, 136.00)	-1.521	0.128
INR ($\bar{x} \pm s$)	1.838 $\pm$ 0.341	2.24 $\pm$ 0.794	4.267	0.000
MELD score	23.92 (21.58, 25.61)	26.5 (23.90, 30.94)	-4.792	0.000
LAC [mmol /L, M(P25, P75)]	1.77 (1.47, 2.10)	1.73 (1.37, 2.52)	-0.057	0.955
inflammatory indicators				
WBC [$\times 10^9$ /L, M(P25, P75)]	5.74 (4.67, 8.70)	6.9350 (4.51, 10.73)	-1.742	0.082
CRP [mg/L, M(P25, P75)]	12.85 (6.95, 18.83)	12.59 (7.84, 26.31)	-1.734	0.083
PCT [ng/mL, M(P25, P75)]	0.49 (0.40, 0.88)	0.71 (0.41, 0.99)	-1.394	0.163
SIRS (例, %)	14 (15.91%)	23 (36.51%)	8.421	0.004
Complication				
ascites (%)	68 (77.27%)	60 (95.24%)	7.839	0.005
Hepatic encephalopathy (%)	11 (12.50%)	25 (39.68%)	14.941	0.000
Acute Kidney Injury (%)	11 (12.50%)	34 (53.97%)	30.180	0.000
Upper gastrointestinal hemorrhage (%)	3 (3.41%)	9 (14.29%)	4.544	0.033
Organ failure (EASL)				
Liver	59 (67.05%)	59 (93.65%)	13.699	0.000
Coagulation	4 (4.55%)	18 (28.57%)	15.152	0.000
Cerebral	0 (0%)	4 (6.35%)	5.701	0.017
Kidney	3 (3.41%)	1 (1.59%)	0.030	0.862
Lung	0 (0%)	0 (0%)	—	—
Circulation failure	0 (0%)	1 (1.59%)	1.397	0.237

Table 4 Multivariate analysis of various factors with 90-day survival and death

	B	S.E.	Wald	p	OR	95% EXP(B)	
Model 1:							
SIRS	1.552	0.609	6.490	0.011	4.720	1.430	15.575
age	0.103	0.026	16.114	0.000	1.108	1.054	1.165
TBIL	0.008	0.002	13.252	0.000	1.008	1.004	1.012
INR	2.028	0.661	9.419	0.002	7.596	2.081	27.732
AKI	2.076	0.565	13.511	0.000	7.969	2.635	24.101
constant	-13.352	2.508	28.352	0.000	0.000		
Model 2:							
SIRS	1.444	0.564	6.550	0.010	4.237	1.402	12.800
age	0.085	0.023	13.479	0.000	1.088	1.040	1.139
AKI	1.594	0.507	9.878	0.002	4.923	1.822	13.302
MELD	0.279	0.078	12.915	0.000	1.322	1.135	1.539
constant	-13.105	2.679	23.935	0.000	0.000		
Model 3:							
SIRS	1.924	0.622	9.561	0.002	6.851	2.023	23.201
age	0.101	0.026	14.733	0.000	1.106	1.050	1.164
AKI	2.408	0.609	15.627	0.000	11.115	3.368	36.683
liver failure	2.413	0.768	9.863	0.002	11.172	2.478	50.377
coagulation	2.426	0.772	9.885	0.002	11.311	2.493	51.319
constant	-9.023	1.817	24.666	0.000	0.000		

Table 5 univariate and multivariate analysis of various factors with the development of SIRS after admission

	univariate				multivariate	
	SIRS development (n=21)	non-SIRS development (n=114)	$t/\chi^2/Z$	P	HR(95%CI)	p
Male (%)	16 (76.19%)	99 (86.84%)	1.594	0.207		
Age (years, $x\pm s$)	47.10±12.20	46.83±11.54	-0.095	0.925		
Laboratory results						
ALB (g /L, $x\pm s$)	28.67±3.76	30.25±4.35	1.567	0.119		
TBIL [μ mol/L, M(P25, P75)]	400.32±159.37	309.20±134.37	-2.772	0.006	1.004 (1.000-1.008)	0.030
ALT [U /L, M(P25, P75)]	76.00(59.00, 208.00)	242.00(92.50, 623.25)	-2.887	0.004		
AST [U /L, M(P25, P75)]	146.00(97.00, 223.00)	228.00(108.00, 505.00)	-1.799	0.072		
ALP [U /L, M(P25, P75)]	192.50(114.50, 250.50)	174.00(141.00, 214.00)	-0.053	0.957		
GGT [U /L, M(P25, P75)]	54.00(39.50, 124.00)	86.00(59.00, 122.00)	-0.866	0.387		
Cr [μ mol /L, M(P25, P75)]	80.00(59.00, 101.00)	79.50(71.00, 93.00)	-0.455	0.649		
NH3 [μ mol /L, M(P25, P75)]	46.10(29.20, 103.70)	43.80(28.73, 64.95)	-1.263	0.207		
Na (mmol /L, $x\pm s$)	133.10±3.74	134.75±3.93	1.783	0.077		
INR [M(P25, P75)]	1.74(1.55, 2.77)	1.79(1.61, 2.11)	-0.246	0.806		
MELD 评分	25.29 (23.14, 32.72)	24.15 (22.24, 26.93)	-1.921	0.055		
LAC [mmol /L, M(P25, P75)]	1.67(1.46, 3.30)	1.68(1.41, 2.10)	-0.637	0.524		
inflammatory indicators						
WBC ($\times 10^9$ /L, $x\pm s$)	11.39±8.56	6.96±2.97	-2.348	0.029	1.172 (1.058-1.298)	0.002
CRP [mg/L, M(P25, P75)]	12.15(4.70, 25.35)	13.38(7.43, 19.08)	-0.333	0.739		
PCT [ng/mL, M(P25, P75)]	0.74(0.37, 1.25)	0.59(0.40, 0.93)	-0.738	0.460		
Complication						
ascites (%)	20 (95.24%)	94 (82.46%)	2.206	0.138		
Hepatic encephalopathy (%)	6 (28.67%)	23 (20.18%)	0.741	0.389		
Acute Kidney Injury (%)	8 (38.10%)	32 (28.07%)	0.855	0.355		
Upper gastrointestinal hemorrhage (%)	2 (9.52%)	8 (7.02%)	0.162	0.687		
Organ failure (EASL)						
Liver	18 (85.71%)	88 (77.19%)	0.763	0.382		
Coagulation	5 (23.81%)	14 (12.28%)	1.949	0.163		
Cerebral	1 (4.76%)	1 (0.88%)	1.834	0.176		
Kidney	1 (4.76%)	2 (1.75%)	0.738	0.390		
Lung	0 (0%)	0 (0%)	—	—		
Circulation failure	0 (0%)	1 (0.9%)	0.184	0.668		

