

Supplementary Table 1 Previous comorbidities, CHB related status and mortality for co-infected cirrhotic patients with severe diseases

Characteristic	Death (n = 20)	Survival (n = 53)	P value
Baseline characteristics			
Age, y (Q1-Q3)	57.5 (18.3-66.8)	55 (44.5-61.0)	0.356
Male sex, n (%)	19 (95)	42 (79.3)	0.160
Alcohol, n (%)	9 (45)	18 (34)	0.384
Smoker, n (%)	11 (55)	20 (37.7)	0.183
Medicine with potential liver toxicity, n (%)	2 (10)	6 (11.3)	0.998
Pre-existing comorbidities, n (%)			
Hypertension	1 (5)	7 (13.2)	0.432
Diabetes	2 (10)	7 (13.2)	0.965
Respiratory diseases	1 (5)	3 (5.7)	0.984
Kidney diseases	7 (35)	2 (3.8)	0.056
Other liver diseases	7 (35)	14 (26.4)	0.470
HBeAg positive, n (%)	4 (20)	18 (34)	0.246
HBV DNA positivity, n (%)	13 (65)	39 (73.6)	0.470
HBV DNA < 500 IU/mL	7 (35)	14 (26.4)	0.470
500 ≤ HBV DNA < 5*10 ⁵ IU/mL	9 (45)	13 (24.5)	0.089
HBV DNA ≥ 5*10 ⁵ IU/mL	4 (20)	26 (49.1)	<0.05
Pre-anti-HBV therapy, n (%)	6 (30)	13 (24.5)	0.635
Effective	2 (10)	7 (13.2)	0.965
Post-anti-HBV therapy, n (%)	6 (30)	28 (52.8)	0.081

Data are presented as median (Q1-Q3) or number of patients (%).

P value derived from comparisons between mild and severe cases.

The severe cases included patients with liver failure, liver decompensation or both; The remaining were regarded as mild cases. Respiratory diseases: chronic obstructive pulmonary disease, bronchial asthma, bronchiectasis, tuberculosis, phthisis; Kidney diseases: kidney stone, renal cyst, chronic renal insufficiency, chronic glomerulonephritis; Other liver diseases: chronic hepatitis C, alcoholic liver disease, fatty liver, autoimmune liver diseases, schistosomiasis, primary hepatic carcinoma, hepatic cyst, hepatic hemangioma. Pre-anti-HBV therapy consisted of nucleos/tide analogues for more than 3 mo before the disease onset; Post-anti-HBV therapy consisted of IFNα within 3 mo from the disease onset; Therapeutic efficacy was defined as

HBV DNA reduction by 2 log after stable antiviral treatment for 3 mo.

Supplementary Table 2 Risk factors for disease severity in cirrhotic HBV-HEV co-infected patients

Risk factor	Odds ratio for severe liver diseases	
	^a Odds ratio (95%CI)	^a P value
<i>Cirrhotic patients (n = 94)</i>		
Male sex	3.1 (1.1-9.2)	<0.05
Age	1 (0.9-1.1)	0.294
Alcohol	3.5 (1.0-13.1)	0.060
Smoker	3.6 (0.8-16.8)	0.105
Potential hepatotoxic medications	NA	0.998
Diabetes	2.8 (0.3-23.6)	0.340
Hypertension	0.5 (0.1-2.0)	0.334
Respiratory diseases	NA	0.997
Kidney diseases	2.8 (0.3-23.6)	0.340
Other liver disease	2.4 (0.7-9.1)	0.190
HBeAg positive	0.5 (0.2-1.3)	0.141
HBV DNA status		
HBV DNA < 500 IU/mL	Reference	0.499
500 ≤ HBV DNA < 5*10 ⁵ IU/mL	1.4 (0.4-5.3)	0.618
HBV DNA ≥ 5*10 ⁵ IU/mL	0.7 (0.2-2.0)	0.446
Pre-anti-HBV therapy	0.6 (0.2-1.6)	0.285
Effective	1.3 (0.3-6.7)	0.725
Post-anti-HBV therapy	2.2 (0.8-6.2)	0.147

With HBV DNA < 500IU/mL as reference category respectively. Multivariate logistic regression models were used to assess the association between various risk factors and severe disease. ^aOdds ratio (95%CI) and ^aP value refer to single factor analysis.

The severe cases included patients with liver failure, liver decompensation or both; The remaining were regarded as mild cases. Respiratory diseases: chronic obstructive pulmonary disease, bronchial asthma, bronchiectasis, tuberculosis, phthisis; Kidney diseases: kidney stone, renal cyst, chronic renal insufficiency, chronic glomerulonephritis; Other liver diseases: chronic hepatitis C, alcoholic liver disease, fatty liver, autoimmune liver diseases, schistosomiasis, primary hepatic carcinoma, hepatic cyst, hepatic hemangioma. Pre-anti-HBV therapy consisted of nucleos/tide analogues for more than 3 mo before the disease onset; Post-anti-HBV therapy consisted of IFNα within 3 mo from the disease onset; Therapeutic efficacy was defined as

HBV DNA reduction by 2 log after stable antiviral treatment for 3 mo.

Supplementary Table 3 Risk factors for mortality in cirrhotic HBV-HEV co-infected patients with severe liver diseases

Risk factor	Odds ratio for death	
	Odds ratio (95%CI)	P value
<i>Severe cirrhotic patients (n = 73)</i>		
Male sex	5 (0.6-41.4)	0.137
Age	1 (0.9-1.1)	0.310
Alcohol	1.6 (0.6-4.5)	0.385
Smoker	2 (0.7-5.7)	0.187
Potential hepatotoxic medications	0.9 (0.2-4.7)	0.872
Diabetes	0.7 (0.1-3.9)	0.711
Hypertension	0.9 (0.2-4.7)	0.872
Respiratory diseases	0.9 (0.1-8.0)	0.912
Kidney diseases	13.7 (2.6-74.1)	<0.01
Other liver disease	1.5 (0.5-4.5)	0.471
HBeAg positive	0.5 (0.14-1.7)	0.252
HBV DNA status		
HBV DNA < 500 IU/mL	Reference	0.083
500 ≤ HBV DNA < 5*10 ⁵ IU/mL	1.4 (0.4-4.8)	0.608
HBV DNA ≥ 5*10 ⁵ IU/mL	0.3 (0.1-1.2)	0.096
Pre-anti-HBV therapy	1.3 (0.4-4.1)	0.635
Effective	0.9 (0.1-9.0)	0.932
Post-anti-HBV therapy	0.4 (0.1-1.2)	0.086

With HBV DNA < 500 IU/mL as reference category respectively. Multivariate logistic regression models were used to assess the association between various risk factors and severe disease. ^aOdds ratio (95%CI) and ^aP value refer to single factor analysis.

The severe cases included patients with liver failure, liver decompensation or both; The remaining were regarded as mild cases. Respiratory diseases: chronic obstructive pulmonary disease, bronchial asthma, bronchiectasis, tuberculosis, phthisis; Kidney diseases: kidney stone, renal cyst, chronic renal insufficiency, chronic glomerulonephritis; Other liver diseases: chronic hepatitis C, alcoholic liver disease, fatty liver, autoimmune liver diseases, schistosomiasis, primary hepatic carcinoma, hepatic cyst, hepatic hemangioma. Pre-anti-HBV therapy consisted of nucleos/tide analogues for more than 3 mo before the disease onset; Post-anti-HBV therapy consisted of IFNα within 3 mo from the disease onset; Therapeutic efficacy was defined as

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