

Supplementary Table 2. Predictors for the death of HE

| First Author, Journal (year) | Country | Study design | Characteristics of patients | HE classify | Mortality of HE (Death/All) | Length of follow-up | Results of univariate analysis | Results of multivariate analysis |
|---|-------------------|----------------------|---------------------------------------|-------------|-----------------------------|---------------------|---|---|
| Bustamante, <i>Journal of hepatology</i> (1999) | Spain | Retrospective cohort | Liver cirrhosis with HE | Overt HE | 73.9% (82/111) | 1 year | Sex, HBV infection, Maximal grade of HE, Renal/electrolyte disturbances, Diuretic therapy, Ascites, TBIL, AKP, ALB, BUN, Na, K, PT, Child-Pugh score | Sex, TBIL, AKP, ALB, BUN, K |
| Fichet, <i>Journal of critical care</i> (2009) | France | Retrospective cohort | Chronic hepatic disease with overt HE | Overt HE | 58.6% (41/70) | 1 year | Simplified acute physiology score, ARF or HRS, Sepsis, ALB, Vasopressor use, Red blood cell transfusion, | Vasopressor use, ARF or HRS, |
| Cordoba, <i>Journal of hepatology</i> (2014) | Spain | Prospective cohort | Liver cirrhosis with HE | Overt HE | 42.8% (197/460) | 1 year | NA | Age, TBIL, INR, Creatinine, Na, and HE grade |
| Jeong, <i>Medicine</i> (2016) | Republic of Korea | Retrospective cohort | Alcoholic liver cirrhosis with HE | Overt HE | 6.7% (7/105) | 30 days | HRS, WBC, INR, TBIL, MELD score, CLIF-SOFA score, SIRS | CLIF-SOFA score, SIRS |
| Cui, <i>Metabolic brain disease</i> (2019)* | China | Retrospective cohort | Liver cirrhosis with HE | Overt HE | 67.7% (412/609) | 3 months | Age, Severe HE, HBV infection, Ascites, SBP, MELD score, Child-Pugh score, HRS, Hyponatremia, Upper gastrointestinal bleeding, High-protein diet, WBC, RBC, Hb, PLT, TBIL, ALT, AST, Na, Creatinine, BUN, PT, INR | RBC, TBIL, HE grade, HRS, Upper gastrointestinal bleeding |
| <i>Current study</i> | China | Retrospective cohort | Liver cirrhosis with HE | Overt HE | 11.0% (20/183) | In hospitalizations | WBC, TBIL, ALB, AST, BUN, K, APTT, Child-Pugh score, MELD score | WBC, TBIL, ALB |

Note: *: In this study, the patients with low serum ALB level were supplemented with HA.

Abbreviations: RBC: Red Blood Cell; ACLF: Acute-Chronic Liver Failure; MELD: Model for End-stage Liver Disease; ALB: Albumin; BUN: Blood Urea Nitrogen; TBIL: Total Bilirubin; Hb: Hemoglobin; Na: Sodium; CRP: C-Reactive Protein; ALT: Alanine amino Transferase; AST: Aspartate amino Transferase; PT: Prothrombin Time; PLT: Platelet; WBC: White Blood Cell; SBP: Spontaneous Bacteria Peritonitis; APTT: Activated Partial Thromboplastin Time; ARF: Acute Renal Failure; HRS: Hepatorenal Syndrome, CLIF-SOFA: Chronic Liver Failure-Sequential Organ Failure Assessment; SIRS: Systemic Inflammatory Response Syndrome; NA: Not Available; HA: Human Albumin.