**Supplement Table 1. Study population and patient characteristics according to the development of PHLF in 71 cases of HCC patient**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Characteristics | Total (N = 71)  | PHLF (+) (n = 17)  | PHLF (-) (n = 54)  | P |
| Patient factors |  |  |  |  |
| Sex |  |  |  | 0.140 |
|  Male | 53 (74.65%) | 15 (88.24%) | 38 (70.37%) |  |
|  Female | 18 (25.35%) | 2 (11.76%) | 16 (29.63%) |  |
| Age, (year) | 56.86±11.304 | 55.12±11.412 | 57.41±11.321 | 0.470 |
| Hypertension |  |  |  | 0.085 |
| no | 53 (74.65%) | 15 (88.24%) | 38 (70.37%) |  |
| yes | 18 (25.35%) | 2 (11.76%) | 17 (29.63%) |  |
| Diabetes |  |  |  | 0.069 |
| no | 60 (84.51%) | 12 (70.59%) | 48 (88.89%) |  |
| yes | 11 (15.49%) | 5 (29.41%) | 6 (11.11%) |  |
| Smoking history |  |  |  | 0.646 |
| no | 41 (57.75%) | 9 (52.94%) | 32 (59.26%) |  |
| yes | 30 (42.25%) | 8 (47.06%) | 22 (40.74%) |  |
| Drinking history |  |  |  | 0.230 |
| no | 50 (70.42%) | 10 (58.82%) | 40 (74.07%) |  |
| yes | 21 (29.58%) | 7 (41.18%) | 14 (25.93%) |  |
| Tumor number | 1.32±0.968 | 1.59±1.326 | 1.24±0.823 | 0.199 |
| Tumor size, (cm) | 5.54±3.731 | 5.35±3.096 | 5.60±3.934 | 0.812 |
| Antivirus |  |  |  | 0.555 |
| no | 46 (64.79%) | 10 (58.82%) | 36 (66.67%) |  |
| yes | 25 (35.21%) | 7 (41.18%) | 18 (33.33%) |  |
| HBVDNA |  |  |  | 0.109 |
| <50IU/ml | 45 (63.38%) | 8 (47.06%) | 37 (68.52%) |  |
| ≥50IU/ml | 26 (36.62%) | 9 (52.94%) | 17 (31.48%) |  |
| Cirrhosis |  |  |  | 0.015 |
| no | 26 (36.62%) | 2 (11.76%) | 24 (44.44%) |  |
| yes | 45 (63.38%) | 15 (88.24%) | 30 (55.56%) |  |
| Preoperative AST, (IU/L) | 37.55±33.348 | 40.35±23.334 | 36.67±36.071 | 0.694 |
| Preoperative PLT, (109/L) | 159.82±73.569 | 139.76±72.982 | 166.13±73.287 |  |
| APRI |  |  |  | 0.383 |
| <2 | 66 (92.96%) | 15 (88.24%) | 51 (94.44%) |  |
| ≥2 | 5 (7.04%) | 2 (11.76%) | 3 (5.56%) |  |
| Preoperative bilirubin, (umol/L) | 20.83±25.129 | 27.35±37.405 | 18.78±19.842 | 0.223 |
| Preoperative albumin, (g/L) | 42.24±4.065 | 40.46±4.251 | 42.80±3.877 | 0.037 |
| ALBI |  |  |  | 0.085 |
| ≤-2.6 | 53 (74.65%) | 10 (58.82%) | 43 (79.63%) |  |
| -2.6 to -1.39 | 18 (25.35%) | 7 (41.18%) | 11 (20.37%) |  |
| >-1.39 | 0 | 0 | 0 |  |
| Operative factors |  |  |  |  |
| Hepatic portal blocking |  |  |  | 0.402 |
| no | 54 (76.06%) | 15 (88.24%) | 39 (72.22%) |  |
| yes | 17 (23.94%) | 2 (11.76%) | 15 (27.78%) |  |
| Pringle maneuver, (min) | 21.24±19.561 | 23.53±21.098 | 20.52±19.204 | 0.584 |
| Blood loss (ml) | 337.32±317.323 | 379.41±394.120 | 324.07±292.152 | 0.534 |
| Transfusion  |  |  |  | 0.523 |
| no | 58 (81.7%) | 13 (76.5%) | 45 (83.3%) |  |
| yes | 13 (18.3%) | 4 (23.5%) | 9 (16.7%) |  |
| Transfusion (ml) | 245.77±563.899 | 394.12±734.609 | 199.07±497.777 | 0.216 |
| Resection range |  |  |  | 0.554 |
|  <3Liver segment | 50 (70.42%) | 11 (64.71%) | 39 (72.22%) |  |
|  ≥3Liver segment | 21 (29.58%) | 6 (35.29%) | 15 (27.78%) |  |
| Postoperative factors |  |  |  |  |
| Somnipathy |  |  |  | 0.014 |
| no | 67 (94.37%) | 14 (82.35%) | 53 (98.15%) |  |
| yes | 4 (5.63%) | 3 (17.65%) | 1 (1.85%) |  |
| Hemostatics |  |  |  | 0.015 |
| no | 39 (54.93%) | 5 (29.41%) | 34 (62.96%) |  |
| yes | 32 (45.07%) | 12 (70.59%) | 20 (37.04%) |  |
| Seroperitoneum |  |  |  | 0.056 |
| no | 47 (66.20%) | 8 (47.06%) | 39 (72.22%) |  |
| yes | 24 (33.80%) | 9 (52.94%) | 15 (27.78%) |  |
| Anticoagulants |  |  |  | 0.005 |
| no | 19 (26.76%) | 9 (52.94%) | 10 (18.52%) |  |
| yes | 52 (73.24%) | 8 (47.06%) | 44 (81.48%) |  |

HCC, Hepatocellular carcinoma; PHLF, Post-hepatectomy liver failure; HBV, Hepatitis B virus; APRI, Aspartate aminotransferase-to-platelet ratio index; ALBI, Albumin-bilirubin; PLT, Platelets; AST, Aspartate aminotransferase;