**Supplemental Table 1. Characteristics of the 97 patients assessed at day-1 according to type of ventilation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | All patients(n=97) | MV (n=62) | SB(n=35) | *p* value |
| Age (years) | 73 (62, 82) | 71 (60, 80) | 79 (64, 83) | 0.062 |
| Male sex | 68 (70%) | 44 (71%) | 24 (69%) | 0.804 |
| BMI (kg.m,2) | 24 (21, 29) | 24 (22, 29) | 24 (21, 29) | 0.396 |
| SAPS II at ICU admission | 54 (42, 69) | 59 (46, 78) | 46 (36, 57) | <0.001 |
| SOFA score at ICU admission | 6 (4, 9) | 8 (5, 9) | 4 (2, 6) | <0.001 |
| *Comorbidity* |  |  |  |  |
| Heart disease | 41 (42%) | 24 (39%) | 17 (49%) | 0.395 |
| Hypertension | 37 (38%) | 21 (34%) | 16 (46%) | 0.249 |
| Smoking | 36 (37%) | 23 (37%) | 13 (37%) | 0.996 |
| COPD | 29 (30%) | 20 (32%) | 9 (26%) | 0.499 |
| Diabetes | 28 (30%) | 16 (26%) | 12 (34%) | 0.376 |
| *Diagnosis at ICU admission* |  |  |  |  |
| RCA | 7 (7%) | 7 (11%) | 0 (0%) | 0.047 |
| Sepsis | 17 (17%) | 10 (16%) | 7 (20%) | 0.630 |
| ARF | 31 (32%) | 22 (35%) | 9 (26%) | 0.322 |
| Decompensation of CRI | 9 (9%) | 4 (6%) | 5 (14%) | 0.202 |
| Coma | 11 (11%) | 10 (16%) | 1 (3%) | 0.048 |
| AKI | 7 (7%) | 1 (2%) | 6 (17%) | 0.008 |
| Post,operative | 1 (1%) | 1 (2%) | 0 (0%) | 0.450 |
| Other | 14 (14%) | 7 (11%) | 7 (20%) | 0.241 |
| Diaphragm thickness (mm) | 2.4 (2, 2.9) | 2.3 (2, 2.9) | 2.7 (2, 3) | 0.340 |
| Pectoral thickness (mm) | 5.9 (4.7, 7.2) | 5.8 (4.7, 7.3) | 6 (4.6, 7.1) | 0.961 |

*Data are n (%) or median (IQR); MV, mechanical ventilation; SB, spontaneous breathing; BMI, body mass index; SAPS II, Simplified Acute Physiology Score II; SOFA, Sequential Organ Failure Assessment; ICU, intensive care unit; COPD, chronic obstructive pulmonary disease; RCA, recovered cardiopulmonary arrest; ARF, acute respiratory failure; CRI, chronic respiratory insufficiency; AKI, acute kidney injury.*