**Supplementary Table 1. Characteristics and perioperative data between patients excluded from and included in the study.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Excluded  N = 38 | Included  N = 125 | *t*/*Z*/χ2 | *p* value |
| Gender  Male  Female | 15 (39.5%)  23 (60.5%) | 47 (37.6%)  78 (62.4%) | 0.043 | 0.835 |
| Age (years) | 73 [70, 78] | 71 [68, 78] | -1.307 | 0.191 |
| Age group (years)  65-75  ≥ 75 | 22 (57.9%)  16 (42.1%) | 77 (61.6%)  48 (38.4%) | 0.168 | 0.682 |
| Education  Primary  Secondary  Tertiary | 24 (63.2%)  13 (34.2%)  1 (2.6%) | 77 (61.6%)  37 (29.6%)  11 (8.8%) | 1.719 | 0.423 |
| BMI (kg/m2) | 23.88 ± 2.63 | 24.17 ± 3.69 | -0.525 | 0.601 |
| Preoperative Pain  Mild  Moderate-severe | 26 (68.4%)  12 (31.6%) | 81 (64.8%)  44 (35.2%) | 0.169 | 0.681 |
| Smoking | 6 (15.8%) | 19 (15.2%) | 0.008 | 0.930 |
| Drinking | 8 (21.1%) | 18 (14.4%) | 0.962 | 0.327 |
| CHD | 7 (18.4%) | 19 (15.2%) | 0.226 | 0.635 |
| Hypertension | 28 (73.7%) | 81 (64.8%) | 1.038 | 0.308 |
| Diabetes | 9 (23.7%) | 29 (23.2%) | 0.004 | 0.951 |
| MMSE | 25 [23, 27.75] | 25 [23, 27] | -0.456 | 0.649 |
| MMSE |  |  | 0.464 | 0.496 |
| < 25 | 16 (42.1%) | 45 (36.0%) |  |  |
| 25-30 | 22 (57.9%) | 80 (64.0%) |  |  |
| ACCI | 4 [3, 5] | 4 [3, 5] | -0.546 | 0.585 |
| Anxiety | 1 (2.6%) | 4 (3.2%) | 0.000 | 1.000 |
| Depression | 4 (10.5%) | 5 (4.0%) | 1.293 | 0.256 |
| WBC (\*109/L)  3.5-9.5  > 9.5  <3.5 | 32 (84.2%)  4 (10.5%)  2 (5.3%) | 108 (86.4%)  14 (11.2%)  3 (2.4%) | - | 0.684 |
| RBC (\*1012/L) |  |  | 0.054 | 0.817 |
| 4.3-5.8 | 12 (31.6%) | 42 (33.6%) |  |  |
| < 4.3 | 26 (68.4%) | 83 (66.4%) |  |  |
| Anemia | 9 (23.7%) | 25 (20.0%) | 0.240 | 0.624 |
| CRP (mg/L) |  |  | 0.020 | 0.889 |
| 0-3 | 29 (76.3%) | 94 (75.2%) |  |  |
| > 3 | 9 (23.7%) | 31 (24.8%) |  |  |
| ALB (g/L)  > 40  30-40  < 30 | 17 (44.7%)  19 (50.0%)  2 (5.3%) | 52 (41.6%)  69 (55.2%)  4 (3.6%) | - | 0.669 |
| ASA classification  II  III | 24 (63.2%)  14 (36.8%) | 75 (60.0%)  50 (40.0%) | 0.122 | 0.727 |
| Surgery type  Arthroplasty  TLIF | 14 (36.8%)  24 (63.2%) | 43 (34.4%)  82 (65.6%) | 0.076 | 0.782 |
| Remifentanil (mg) | 0.72 [0.60, 1.03] | 0.73 [0.52, 0.90] | -1.158 | 0.247 |
| Sevoflurane (mL) | 24.15 [19.14, 27.22] | 25.00 [20.18, 30.36] | -1.608 | 0.108 |
| Surgery duration (min) | 145 [131, 160] | 140 [113, 170] | -0.416 | 0.677 |
| Anesthesia duration (min) | 167.5 [155, 185] | 165 [135, 195] | -0.181 | 0.857 |
| POD | 2 (5.3%) | 11 (8.8%) | 0.132 | 0.717 |
| ICU admission | 2 (5.3%) | 10 (8.0%) | 0.045 | 0.833 |
| LOS (d) | 10.5 [9, 11.75] | 10 [8, 13] | -0.231 | 0.817 |
| Preoperative LOS (d) | 3 [2.25, 4] | 3 [2, 5] | -0.340 | 0.734 |
| Postoperative LOS (d) | 7 [6, 7] | 7 [5, 8] | -0.492 | 0.623 |

Continues variables are presented as mean ± SD or median (IQR). Counting data are presented as numbers and percentages.