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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 2. Description of serum sodium over entire ICU stay for all patients and a subgroup of patients with an increase of serum sodium during the first 48 hours of ICU admission (∆48h-[Na] >5 mmol/L)** | | | | | | | | | | | | |
|  | **Severe hyponatremia [Na]1st <125 mmol/L**  **n=479** | |  | **Mild hyponatremia [Na]1st 125-135 mmol/L**  **n=8,068** | |  | **Normonatremia [Na]1st 135-145 mmol/L**  **n=25,965** | |  | **Hypernatremia [Na]1st >145 mmol/L**  **n=2,130** | |  |
|  | **Survivors** | **Non-survivors** | **p** | **Survivors** | **Non-survivors** | **p** | **Survivors** | **Non-survivors** | **p** | **Survivors** | **Non-survivors** | **p** |
| **All patients** | | | | | | | | | | | | |
| Number patients | 348 | 149 |  | 6,190 | 1,878 |  | 20,926 | 5,039 |  | 1,411 | 719 |  |
| [Na]1st, mean(SD), mmol/L | 119.4 (4.9) | 121.0 (3.6) | <0.01 | 131.9 (2.3) | 131.4 (2.5) | <0.01 | 138.4 (2.4) | 138.7 (2.5) | <0.01 | 147.8 (3.8) | 148.5 (4.0) | <0.01 |
| ∆48h-[Na], mean(SD), mmol/L | 9.1 (5.3) | 7.6(4.9) | <0.01 | 2.9 (3.6) | 3.8 (4.0) | <0.01 | 0.0 (3.4) | 1.3 (4.3) | <0.01 | -2.5 (4.8) | -1.2 (5.5) | <0.01 |
| [Na]max, mean(SD), mmol/L | 134.6 (7.9) | 135.9 (8.8) | 0.10 | 138.5 (5.5) | 140.5 (6.8) | <0.01 | 141.9 (4.6) | 144.7 (6) | <0.01 | 149.8 (5.2) | 152.0 (6.3) | <0.01 |
| time to [Na] max, median(IQR), hours | 45.0 (29.7-87.1) | 53.6 (34.7-115.1) | 0.04 | 31.9 (14.6-62.9) | 40.3 (20.8-109.0) | <0.01 | 20.3 (6.5-48.0) | 31.4 (11.2-78.2) | <0.01 | 12.5 (3.6-34.8) | 16.5 (4.4-40.5) | 0.01 |
| V-[Na]max, median (IQR), mmol/L/24hours | 5.8 (3.7-9.4) | 4.8 (3.2-8.5) | 0.01 | 3.6 (1.9-6.6) | 3.5 (1.9-6.6) | 0.37 | 2.1 (0.4-5.1) | 2.8 (1.1-6.2) | <0.01 | 1.2 (0-4.7) | 2.4 (0-6.9) | <0.01 |
| **Subgroup ∆48h-[Na] >5 mmol/L** | | | | | | | | | | | | |
| Number of patients | 276 | 103 |  | 1,685 | 650 |  | 1,606 | 817 |  | 89 | 85 |  |
| [Na]1st, mean(SD), mmol/L | 118.7 (5.2) | 120.9 (3.9) | <0.01 | 130.9 (2.6) | 130.6 (2.7) | 0.02 | 137.8 (2.4) | 138.4 (2.1) | <0.01 | 146.7 (2.2) | 147.8 (2.8) | 0.01 |
| ∆48h-[Na] , mean(SD), mmol/L | 10.8 (4.7) | 9.9 (4.0) | 0.10 | 7.5 (2.4) | 8.0 (3.4) | 0.01 | 6.8 (2.2) | 8.1 (3.8) | <0.01 | 6.7 (2.2) | 8.5 (3.4) | <0.01 |
| [Na] max, mean(SD), mmol/L | 135.9 (7.8) | 137.1 (7.8) | 0.13 | 141.9 (5.4) | 143.4 (6.3) | <0.01 | 147.4 (4.9) | 150.1 (5.8) | <0.01 | 155.7 (4.1 | 159.5 (5.5) | <0.01 |
| time to [Na] max, median(IQR), hours | 48.1 (31.0-94.4) | 50.9 (34.4-105.8) | 0.47 | 39.5 (27.6-65.5) | 41.2 (26.5-82.5) | 0.22 | 36.7 (25.6-53.9) | 37.7 (25.1-55.2) | 0.67 | 35.6 (26.1-51.7) | 30.7 (22.6-46.0) | 0.05 |
| V-[Na] max, median (IQR), mmol/L/24hours | 6.6 (4.3-9.8) | 5.7 (3.9-9.0) | 0.13 | 5.2 (3.7-7.8) | 5.5 (3.6-9.0) | 0.09 | 5.2 (3.8-7.7) | 6.0 (4.2-10.3) | <0.01 | 5.1 (3.9-7.2) | 7.2 (5.4-11.5) | <0.01 |
| [Na]1st: first serum sodium measurement at ICU admission , ∆48h-[Na]: difference between mean of sodium measurements 24-48 hours after ICU admission and [Na]1st, [Na] max: maximum serum sodium measurement during entire ICU admission, v-[Na] max: velocity of reaching [Na] max during entire ICU stay. Data are presented separately for survivors and non-survivors. Data is shown for all patients and separately for a subgroup of patients with a ∆48h-[Na] >5mmol/L. Continuous data are presented as mean with standard deviation (SD) and median with interquartile range (IQR). The p-values represent the difference between survivors and non-survivors, a p-value of <0.05 was considered statistically significant. | | | | | | | | | | | | |