**SUPPLEMENTARY MATERIAL**

**Suppl. Table 1**. Characteristics of the studied patients at admission to the emergency department.

**Suppl. Table 2**. Characteristics of the patients at the time of AKI detection.

**Suppl. Figure 1.** Number of patients with acute kidney injury according to the day of hospitalization.

**Supplementary Table 1**. Characteristics of the studied patients at admission to the emergency department.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | No AKI  n=821 | CA-AKI  n=224 | HA-AKI  n=125 | p-value |
| **Demographics** |  |  |  |  |
| Age, *years* | 52 (43-62) | 61 (49-71) | 50 (43-61) | <0.001 |
| Male, *n (%)* | 488 (59) | 158 (71) | 84 (67) | 0.001 |
|  |  |  |  |  |
| **Comorbidities** |  |  |  |  |
| Charlson comorbidity index | 1 (0-2) | 2 (1-4) | 1 (0-2) | <0.001 |
| Diabetes, *n (%)* | 200 (24) | 90 (40) | 39 (31) | <0.001 |
| Hypertension, *n (%)* | 204 (25) | 100 (45) | 31 (25) | <0.001 |
| Obesity, *n (%)* | 359 (44) | 93 (42) | 70 (56) | <0.001 |
| Chronic kidney disease, *n (%)* | 11 (1) | 22 (10) | 3 (2) | <0.001 |
|  |  |  |  |  |
| **Medications** |  |  |  |  |
| RAAS inhibitors, *n (%)* | 158 (19) | 75 (34) | 26 (21) | <0.001 |
| Angiotensin receptor blocker, *n (%)* | 106 (13) | 57 (25) | 19 (15) | <0.001 |
|  |  |  |  |  |
| **Emergency room evaluation** |  |  |  |  |
| Days from the start of symptoms | 8 (6-10) | 7 (5-11) | 7 (6-9) | 0.201 |
| Mean arterial pressure, *mmHg* | 92 (83-100) | 86 (76-97) | 90 (81-97) | <0.001 |
| Respiratory rate, *breaths per min* | 26 (22-32) | 30 (26-38) | 30 (24-36) | <0.001 |
| Oxygen saturation, *%* | 86 (78-89) | 78 (59-85) | 80 (64-86) | <0.001 |
|  |  |  |  |  |
| **Laboratory at admission or AKI development** | |  |  |  |
| Leukocytes, *x103/mm3* | 7.80 (5.70-10.4) | 10.4 (7.6-15.0) | 9.40 (6.85-12.9) | <0.001 |
| Neutrophils, *x103/mm3* | 6.26 (4.33-8.84) | 8.91 (6.44-13.4) | 8.09 (5.62-11.4) | <0.001 |
| Lymphocytes, *x103/mm3* | 0.81 (0.56-1.08) | 0.62 (0.43-0.88) | 0.75 (0.54-0.99) | <0.001 |
| N/L ratio | 7.64 (4.58-13.4) | 15.3 (8.43-24.4) | 10.7 (7.41-14.9) | <0.001 |
| Hemoglobin, *g/dL* | 15.4 (14.3-16.4) | 15.0 (13.6-16.3) | 15.2 (13.9-16.5) | 0.025 |
| Platelets, *x103/mm3* | 229 (183-298) | 229 (181-305) | 212 (173-276) | 0.126 |
| Glucose, *mg/dL* | 118 (103-150) | 160 (116-235) | 140 (113-221) | <0.001 |
| Creatinine, *mg/dL* | 0.87 (0.73-1.01) | 1.52 (1.25-2.01) | 1.0 (0.8-1.2) | <0.001 |
| Albumin, *g/dL* | 3.8 (3.4-4.1) | 3.4 (3.1-3.7) | 3.5 (3.3-3.9) | <0.001 |
| Creatine kinase, *U/L* | 92 (53-179) | 118 (63-276) | 119 (68-245) | <0.001 |
| Lactate dehydrogenase, *U/L* | 353 (280-454) | 467 (337-629) | 447 (338-545) | <0.001 |
| C-reactive protein, *mg/dL* | 13.5 (6.2-20.3) | 20.2 (13.8-29.5) | 18.4 (12.5-24.8) | <0.001 |
| Ferritin, *ng/mL* | 527 (275-962) | 766 (406-1326) | 698 (409-1069) | <0.001 |
| D-dimer, *ng/mL* | 788 (476-1188) | 1120 (718-2502) | 729 (525-1307) | <0.001 |
| Fibrinogen, *mg/dL* | 653 (490-785) | 706 (557-866) | 697 (548-832) | <0.001 |
| Troponin I > ULN | 79 (10) | 82 (37) | 35 (28) | <0.001 |
| PaO2/FiO2 ratio | 238 (170-283) | 159 (100-236) | 171 (110-254) | <0.001 |
| SaO2/FiO2 ratio | 318 (232-419) | 191 (150-316) | 236 (153-345) | <0.001 |
|  |  |  |  |  |
| **Severity scores at admission** |  |  |  |  |
| NEWS-2 | 7 (5-8) | 8 (7-9) | 8 (6-9) | <0.001 |
| SOFA score | 2 (2-3) | 4 (3-5) | 3 (2-4) | <0.001 |
| COVID-GRAM, ICU probability % | 22 (12-39) | 52 (32-74) | 33 (19-53) | <0.001 |
| ABC-GOALS, ICU probability, % | 35 (23-40) | 53 (35-81) | 40 (35-64) | <0.001 |
|  |  |  |  |  |

**Abbreviations.** CA-AKI, community-acquired acute kidney injury; HA-AKI, hospital-acquired acute kidney injury; RAAS, renin-angiotensin-aldosterone system; N/L, neutrophil to lymphocyte ratio; ULN, upper limit of normal, NEWS-2, National Early Warning Score; SOFA, sequential organ failure assessment score.

**Supplementary Table 2**. Characteristics of the patients at the time of AKI detection.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **No AKI**  **n=821** | **CA-AKI**  **n=224** | **HA-AKI**  **n=125** | **p-value** |
| **Demographics** |  |  |  |  |
| Age, *years* | 52 (43-62) | 61 (49-71) | 50 (43-61) | <0.001 |
| Male, *n (%)* | 488 (59) | 158 (71) | 84 (67) | 0.001 |
| **Comorbidities** |  |  |  |  |
| Charlson comorbidity index, *points* | 1 (0-2) | 2 (1-4) | 1 (0-2) | <0.001 |
| Diabetes, *n (%)* | 200 (24) | 90 (40) | 39 (31) | <0.001 |
| Hypertension, *n (%)* | 204 (25) | 100 (45) | 31 (25) | <0.001 |
| Obesity, *n (%)* | 359 (44) | 93 (42) | 70 (56) | <0.001 |
| Chronic kidney disease, *n (%)* | 11 (1) | 22 (10) | 3 (2) | <0.001 |
| **Medications** |  |  |  |  |
| RAAS inhibitors, *n (%)* | 158 (19) | 75 (34) | 26 (21) | <0.001 |
| ARB, *n (%)* | 106 (13) | 57 (25) | 19 (15) | <0.001 |
| **Emergency room evaluation** |  |  |  |  |
| Days from the start of symptoms | 8 (6-10) | 7 (5-11) | 7 (6-9) | 0.201 |
| Mean arterial pressure, *mmHg* | 92 (83-100) | 86 (76-97) | 90 (81-97) | <0.001 |
| Oxygen saturation, *%* | 86 (78-89) | 78 (59-85) | 80 (64-86) | <0.001 |
| **Laboratory at admission or AKI development** | |  |  |  |
| Total Leukocytes, x *103/mm3* | 7.80 (5.70-10.4) | 10.4 (7.6-15.0) | 10.1 (8.00-13.0) | <0.001 |
| Neutrophil to lymphocyte ratio | 7.64 (4.58-13.4) | 15.3 (8.43-24.4) | 8.42 (5.18-12.7) | <0.001 |
| Hemoglobin, *g/dL* | 15.4 (14.3-16.4) | 15.0 (13.6-16.3) | 13.1 (11.7-14.8) | 0.025 |
| Platelets, *x 103/mm3* | 229 (183-298) | 229 (181-305) | 273 (212-393) | 0.126 |
| Glucose, *mg/dL* | 118 (103-150) | 160 (116-235) | 132 (101-176) | <0.001 |
| Creatine kinase, *U/L* | 92 (53-179) | 118 (63-276) | 250 (76-802) | <0.001 |
| Lactate dehydrogenase, *U/L* | 353 (280-454) | 467 (337-629) | 428 (318-548) | <0.001 |
| C-reactive protein, *mg/dL* | 13.5 (6.2-20.3) | 20.2 (13.8-29.5) | 19.5 (7.8-30.1) | <0.001 |
| Ferritin, *ng/mL* | 527 (275-962) | 766 (406-1326) | 890 (508-1387) | <0.001 |
| D-dimer, *ng/mL* | 788 (476-1188) | 1120 (718-2502) | 2398 (1087-5451) | <0.001 |
| Troponin I > ULN, *n (%)* | 79 (10) | 82 (37) | NA | <0.001 |
| PaO2/FiO2 ratio | 238 (170-283) | 159 (100-236) | 131 (91-166) | <0.001 |
| SOFA score, *points* | 2 (2-3) | 4 (3-5) | 7 (6-9) | <0.001 |
| **Kidney function and critical support** | | |  |  |
| Admission SCr *(mg/dL)* | 0.87 (0.73-1.01) | 1.52 (1.25-2.01) | 1.0 (0.8-1.2) | <0.001 |
| SCr AKI diagnosis *(mg/dL)* | - | 1.52 (1.25-2.01) | 1.40 (1.11-2.12) | <0.001 |
| Peak SCr *(mg/dL)* | 0.94 (0.78-1.12) | 1.6 (1.3-2.5) | 1.8 (1.3-4.1) | <0.001 |
| Discharge SCr *(mg/dL)* | 0.84 (0.70-1.02) | 1.0 (0.8-1.6) | 1.1 (0.7-2.3) | <0.001 |
| Acute kidney injury |  |  |  |  |
| Stage 1, *n (%)* | - | 134 (60) | 47 (38) | <0.001 |
| Stage 2, *n (%)* | - | 50 (22) | 30 (24) | <0.001 |
| Stage 3, *n (%)* | - | 40 (18) | 48 (38) | <0.001 |
| Days from admission | - | 0 (0-0) | 4 (2-8) | <0.001 |
| Days from symptoms | - | 7 (5-11) | 13 (9-19) | <0.001 |
| Renal replacement therapy, *n (%)* | - | 16 (7) | 34 (27) | <0.001 |
| Intubated before AKI, *n (%)* | - | - | 109 (87) | - |
| Intubated at any time, *n (%)* | 71 (9) | 66 (30) | 110 (88) | <0.001 |
| Vasopressor before AKI, *n (%)* | - | - | 110 (88) | - |
| AKI resolved, *n (%)* | - | 167 (75) | 74 (59) | <0.001 |
| **Patient disposition** |  |  |  |  |
| General ward, *n (%)* | 637 (78) | 82 (37) | 8 (6) | <0.001 |
| CCU, *n (%)* | 184 (22) | 142 (63) | 117 (94) | <0.001 |
| **Outcomes** |  |  |  |  |
| Discharged, *n (%)* | 682 (83) | 105 (47) | 62 (50) | <0.001 |
| Length of hospitalization, *days* | 6 (4-9) | 10 (7-19) | 26 (19-33) | <0.001 |
| Death, *n (%)* | 139 (17) | 119 (53) | 63 (50) | <0.001 |
| Length of hospitalization, *days* | 4 (2-7) | 4 (2-8) | 9 (5-17) | <0.001 |

**Abbreviations**. CA-AKI, community-acquired acute kidney injury; HA-AKI, hospital-acquired acute kidney injury; RAAS, renin-angiotensin-aldosterone system; ARB, angiotensin receptor blockers; ULN, upper limit of normal; SOFA, sequential organ failure assessment score; SCr, serum creatinine; CCU, critical care unit.

**Supplementary Figure 1.** Number of patients with acute kidney injury according to the day of hospitalization.

