Table 1 – Main demographic and clinical characteristics of the study sample.

|  |  |
| --- | --- |
|  | TotalN=60 |
| **Male,** n (%) | 47 (78.3) |
| **Age (**years)1 | 63.5 (46.0-72.3) |
| **Comorbidities,** n (%)AlcoholismChronic Heart FailureChronic Kidney Disease Chronic Liver Disease Chronic Respiratory Failure Diabetes MellitusDrug addictionHIV/AIDSNeoplasiaNeurological Disease/TBI | 42 (70)10 (16.7)1 (1.7)9(15.0)2 (3.3)5 (8.3)17 (28.3)2 (3.3)1 (1.7)11 (18.3)11 (18.3) |
| **SAPS II at ICU admission (**points)1 | 49.0 (32.8-65.5)  |
| **Community-Acquired Pneumonia**, n (%)Microbiological documentation, n (%) | 21 (35) 12 (57.1)  |
| **Aspiration Pneumonia**, n (%)Microbiological documentation, n (%) | 19 (31.7)15 (78.9) |
| **Bacteremia** Community-acquiredICU-acquiredHospital-acquiredPrimarySecondaryEndovascularIntra-abdominalPulmonaryUrological | 20 (33.3)5 (25.0)6 (30.0)9 (45.0)4 (20.0)16 (80.0) 3 (18.8)6 (37.5)2 (12.5)5 (31.3) |
| **Median highest lactate concentration of the day,** (mmol/l)1Day 0aDay 4bDay 7c | 2.2 (1.3-3.1)1.4 (1.1-1.9)1.3 (0.9-1.6) |
| **Vasopressor support, n (%)** | 39 (65) |
| **Appropriate antibiotic therapy, n (%)** | 39 (83.0) |
| **Overall antibiotic therapy duration** (days)1 | 9.0 (7.0-14.0) |
| **Appropriate antibiotic therapy duration**d **(**days)1 | 10.0 (8.0-14.0) |
| **ICU length of stay, (**days)1 | 11.5 (6.3-21.8) |
| **Hospital length of stay,** days1 | 26.5 (14.3-43.0) |
| **ICU Mortality, n (%)** | 5 (8.3) |
| **Hospital mortality, n (%)** | 12 (20) |
| **28-days mortality, n (%)** | 8 (13.3) |
| **6 months mortality, n (%)** | 19 (31.7) |
| **1 year mortality, n (%)** | 31 (51.7) |

n=number of participants; 1data presented as median (25th-75th percentile); CAP-community acquired pneumonia, AP – aspiration pneumonia, TBI – traumatic brain injury. Relative frequencies of CAP, AP and Bacteremia are related to those diseases. Microbiologic documentation is related to CAP and AP. Missing data for: a – 8 patients, b -14 patients, c - 26 patients, d - 21 patients.

Table 2 – Mortality in the different C-reactive protein kinetic groups.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | **Risk of death within…** |
| **CRP Kinetic group** | N |  | **ICU**n(%) | **Hospital**n(%) | **28 days**n(%) | **6 months**n(%) | **1 year**n(%) |
| **FR**  | 12 |  | 1 (8.3) | 1 (8.3) | 1 (8.3) | 3 (25.0) | 3 (25.0) |
| **DFR**  | 17 |  | 0 (0.0) | 2 (11.8) | 2 (11.8) | 6 (35.3) | 7 (41.2) |
| **DSR**  | 31 |  | 4 (12.9) | 9 (29.0) | 5 (16.1) | 10 (32.3) | 11 (35.5) |
| p-value |  |  | 0.388\* | 0.262\* | 0.890\* | 0.873\* | 0.673\* |

CRP – C-reactive protein; CRP Kinetic groups: FR – Fast Response, DFR – Delayed but fast response and DSR – Delayed and slow response; ICU – Intensive Care Unit; N= number of participants. Variables were compared by the Fisher’s Exact Test. \*none of the p-value were statistically significant, p>0.05.

Table 3 – Antibiotic therapy appropriateness by C-reactive protein kinetic group.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | **CRP kinetic group**  |
| **Antibiotic therapy appropriateness** | **N** |  | **FR****n(%)** | **DFR****n(%)** | **DSR****n(%)** |
| AAT | 39 |  | 11 (28.2) | 8 (20.5) | 20 (51.3) |
| IAT | 8 |  | 0 (0.0) | 3 (37.5) | 5 (62.5) |
| p-value |  |  |  |  | 0.265\* |

Figure 1: CRP median evolution in 7 days by three different groups: fast response, delayed response and delayed and slow response

Antibiotic therapy appropriateness: AAT - Appropriate antibiotic therapy, IAT - Inappropriate antibiotic therapy; CRP kinetic groups: FR – Fast Response, DFR – Delayed but fast response and DSR – Delayed and slow response. Variables were compared by the Fisher’s Exact Test.\* p-value no statistically significant, p-value>0.05.