Category :**Infections + antimicrobials**

**A284 -** *Acquired infections in Intensive Care Unit (ICU) Covid-19 patients*

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## Introduction:
Patients with COVID-19 admitted to the ICU are at high risk of developing infectious complications during their ICU stay. Data on acquired(AI) in Portuguese critical COVID-19 patients are scarce. The aim of this study was to investigate the characteristics and risk factors for AI in critical patients with COVID-19 pneumonia admitted to the ICU.

## Methods:
Retrospective cohort of patients with COVID-19 pneumonia admitted to an ICU in a tertiary hospital, between September 2020 and June 2021. AI considered were ventilator-associated pneumonia (VAP) or tracheobronchitis (VAT), bacteremia, CVC associated infections, urinary tract infections and soft skin tissue infections. Baseline characteristics, 3-months previous antibiotic (ATB) exposure, ATB treatment at ICU-admission and clinical management of COVID-19 pneumonia were analyzed.

## Results:
Of the 159 patients included, with a median (IQR) age of 66 (57–72) and 63.5% males, 14 (8.8%) had no known comorbidities. A total of 63 patients(39.6%) developed AI: 45(71.4%) VAP, 20(33.3%) VAT, 28 (45.2%) UTI, 6 (9.5%) CVC associated infections and 3(4.8%) soft skin tissue infections. In univariate analysis, both SOFA score at admission ($p<0.001$), acute cardiovascular ($p=0.003$) and neurologic ($p=0.006$) disfunction at ICU admission were associated with the development of AI. AI were also correlated to need of tracheostomy ($p<0.001$), development of delirium ($p<0.001$) or shock ($p<0.001$); and with longer ICU and in-hospital stay ($p<0.001$) and ICU and hospital mortality ($p=0.011$ and $p=0.011$, respectively). None of the COVID-19 pharmacologic treatments considered (remdesivir, steroids and tocilizumab), neither different regimens of ATB therapy at ICU admission were significantly associated with AI.

## Conclusion:
In this cohort, almost 40% of the patients developed AI, that was associated with 4 times higher hazard of needing mechanical ventilation and higher rate of adverse events such as delirium, shock during in-ICU stay and longer length of ICU and in-hospital stay.